

Escambia County Hazard Mitigation Plan



2015 Plan Update



This page left intentionally blank

Prepared under the direction of the Hazard Mitigation Planning Committee
and the Escambia County Emergency Management Agency
by:



236 Town Mart

Clanton, AL 35045

Office (205) 280-3027, Fax (205) 280-0543

www.leehelmsllc.com

This page left intentionally blank

Escambia County Hazard Mitigation Plan

Table of Contents

Introduction		11
Section One	Planning Process	
	Plan Update Process	13
	Continued Public Participation	13
	Hazard Mitigation Planning Committee	14
	Participation Guidelines	15
	Committee and Public Meeting Schedule and Participation	16
	Interagency and Intergovernmental Coordination	35
	Integration with Existing Plans	36
	Plan Adoption	36
Section Two	General Characteristics	41
	Growth Trends	42
	General Geology	47
Section Three	Risk Assessment	51
	I. Thunderstorms	69
	II. Lightning	71
	III. Hail	75
	IV. Tornados	79
	V. Floods/Flash Floods	85
	VI. Drought/Extreme Heat	93
	VII. Winter Storms/Frost Freezes/Heavy Snow/Ice Storms/Winter Weather/Extreme Cold	99
	VIII. Hurricanes/ Tropical Storms/Tropical Depressions/ High Winds/Strong Winds	103

	IX. Sinkholes/ Expansive Soils	109
	X. Landslide	117
	XI. Earthquake	123
	XII. Wildfires	135
	XIII. Dam/Levee Failures	139
Section Four	Vulnerability Assessment	147
	Hazard Impacts	147
	Socially Vulnerable Populations	154
	Vulnerable Structures	163
	Critical Facility Inventory	165
	Development Trends	166
	Methods of Warning	169
	Vulnerability Summary	171
	Estimated Loss Projections	171
	Mitigating Potential Losses	177
Section Five	Jurisdictional Assessments	189
	City of Atmore	191
	City of Brewton	207
	City of East Brewton	221
	Town of Flomaton	239
	Town of Pollard	253
	Town of Riverview	273
	Poarch Band of Creek Indians	293
Section Six	Mitigation Plan Maintenance	303
	Incorporation into Existing Planning Mechanisms	305
	Continued Public Participation	306

APPENDIX I	Adopting Resolutions	319
	Escambia County EMA	321
	Escambia County	323
	City of Atmore	325
	City of Brewton	327
	City of East Brewton	329
	Town of Flomaton	331
	Town of Pollard	333
	Town of Riverview	335
	Poarch Band of Creek Indians	337

LIST OF MAPS, FIGURES, & TABLES

Maps		Page
2-1	Escambia County General Location	44
2-2	Escambia County Population Density	45
2-3	Geology of Alabama	49
4-1	Escambia County Land Use Land Cover	168
Figures		
3-1	Generalized Tornado Paths	81
3-2	Wind Zones in the United States	82

3-3	Escambia County Sinkhole Susceptibility	111
3-4	General Soils of Alabama	113
3-5	Escambia County Landslide Susceptibility	119
3-6	National Seismic Hazard Map	129
3-7	Seismic Zones of the Southeastern United States	131

Tables

1-1	Escambia County Existing Plans by Jurisdiction	39
2-1	Growth Trends 1990-2013	43
3-1	Escambia County Hazard Probability of Future Occurrence	55
3-2	Escambia County Hazard Identification by Jurisdiction	57
3-3	Escambia County Prioritized Occurrence Threat by Jurisdiction	59
3-4	Escambia County Mitigation Actions Prioritization	61
3-5	Escambia County Hazard Events	63
3-6	Estimating Hail Size	75
3-7	Fujita Tornado Scales	83
3-8	Flood Probability Terms	87
3-9	Escambia County NFIP Status by Jurisdiction	90
3-10	Heat Index/Heat Disorders	97
3-11	Saffir-Simpson Hurricane Wind Scale	104
3-12	Earthquake PGA, Magnitude and Intensity Comparison	125
3-13	Escambia County Dams Risk Categories	143
3-14	Escambia County Dam Inventory List	145
4-1	Escambia County Population Characteristics	157
4-2	Escambia County Income Data	161
4-3	Escambia County Housing Characteristics	163

4-4	Escambia County Building Stock by General Occupancy	164
4-5	Escambia County Building Exposure	164
4-6	Escambia County Building Contents Exposure	165
4-7	Escambia County Critical Facilities	166
4-8	Population Projections	167
4-9	2014 Values used for Monetary Conversion of Tornado Injuries and Deaths	172
4-10	Escambia County Vulnerability Summary	173
4-11	Escambia County Estimated Loss Projections from Specified Hazards	175
4-12	Escambia County Mitigation Actions	179
5-1	City of Atmore Risk & Vulnerability Overview	193
5-2	City of Atmore Hazard Events	195
5-3	City of Atmore Hazard Probability Assessment	198
5-4	City of Atmore Critical Facilities	199
5-5	City of Atmore Estimated Loss Projections from Specified Hazards	200
5-6	City of Atmore Mitigation Actions	201
5-7	City of Brewton Risk & Vulnerability Overview	209
5-8	City of Brewton Hazard Events	211
5-9	City of Brewton Hazard Probability Assessment	214
5-10	City of Brewton Critical Facilities	215
5-11	City of Brewton Estimated Loss Projections from Specified Hazards	216
5-12	City of Brewton Mitigation Actions	217
5-13	City of East Brewton Risk & Vulnerability Overview	223
5-14	City of East Brewton Hazard Events	225
5-15	City of East Brewton Hazard Probability Assessment	228
5-16	City of East Brewton Critical Facilities	229
5-17	City of East Brewton Estimated Loss Projections from Specified Hazards	230
5-18	City of East Brewton Mitigation Actions	231
5-19	Town of Flomaton Risk & Vulnerability Overview	241
5-20	Town of Flomaton Hazard Events	243

5-21	Town of Flomaton Hazard Probability Assessment	246
5-22	Town of Flomaton Critical Facilities	247
5-23	Town of Flomaton Estimated Loss Projections from Specified Hazards	248
5-24	Town of Flomaton Mitigation Actions	249
5-25	Town of Pollard Risk & Vulnerability Overview	255
5-26	Town of Pollard Hazard Events	257
5-27	Town of Pollard Hazard Probability Assessment	260
5-28	Town of Pollard Critical Facilities	261
5-29	Town of Pollard Estimated Loss Projections from Specified Hazards	262
5-30	Town of Pollard Mitigation Actions	263
5-31	Town of Riverview Risk & Vulnerability Overview	275
5-32	Town of Riverview Hazard Events	277
5-33	Town of Riverview Hazard Probability Assessment	280
5-34	Town of Riverview Critical Facilities	281
5-35	Town of Riverview Estimated Loss Projections from Specified Hazards	281
5-36	Town of Riverview Mitigation Actions	283
5-37	Poarch Band of Creek Indians Critical Facilities	295
5-38	Poarch Band of Creek Indians Mitigation Actions	297

Introduction

Escambia County Hazard Mitigation Plan

The Escambia County Hazard Mitigation Plan is a multi-jurisdictional, multi-hazard mitigation plan. This plan fulfills the requirements set forth by the Federal Disaster Mitigation Act of 2000 (DMA 2000). It meets all eligibility requirements set forth by the Federal Emergency Management Agency (FEMA) for grant assistance. To date, assistance is available from the following grant programs: the Hazard Mitigation Grant Program (HMGP), Flood Mitigation Assistance Program (FMA), and Pre-Disaster Mitigation Program (PDM). The Biggert-Waters Flood Insurance Reform Act of 2012 eliminated the Repetitive Flood Claims Grant Program (RFC) and Severe Repetitive Loss Program (SRL) and incorporated these elements into the FMA Program. The FMA Program now allows for up to 100% federal cost share for severe repetitive loss properties; 90% federal cost share for repetitive loss properties; and 75% federal cost share for repetitive loss properties.

This plan covers the entire county including all unincorporated areas, the Cities of Atmore, Brewton, and East Brewton, the Towns of Flomaton, Pollard, and Riverview and the Poarch Band of Creek Indians.

Authority

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 Section 201 of the Disaster Mitigation Act of 2000 requires that all state and local governments develop a Hazard Mitigation Plan as a condition of receiving federal disaster assistance.

Funding

Funding for this plan update was made available through the Hazard Mitigation Grant Program (HMGP). The Escambia County Emergency Management Agency (AEMA) and Lee Helms Associates, L. L. C. entered into an agreement to update the 2010 plan.

Scope

The Escambia County Hazard Mitigation Plan includes all incorporated and unincorporated areas in Escambia County. All hazards that may affect Escambia County and its residents are identified. Hazard mitigation strategies are discussed in terms of goals, objectives and mitigation actions. Responsibility for implementation of strategies is discussed and possible funding sources are identified.

Purpose

“Mitigation is the cornerstone of emergency management. It's the ongoing effort to lessen the impact disasters have on people's lives and property through damage prevention and flood insurance (<http://www.fema.gov/fima/>).” The Escambia County Hazard Mitigation Plan is an effort to identify mitigation strategies that address the hazards to which Escambia County is the most vulnerable. This plan is only one of many actions Escambia County will take to achieve a safer, more hazard resistant environment for its residents.

Section One: Planning Process

Plan update process

The hazard mitigation planning update process began in May of 2015 after Escambia County EMA was awarded a planning grant from the Alabama Emergency Management Agency (AEMA). The Escambia County EMA received 75 percent funding from the Federal Emergency Management Agency (FEMA). The remaining 25 percent was provided locally through in-kind services.

The Escambia County mitigation plan is the representation of the county's commitment to reduce risks from natural and man-made hazards. In doing this, the number, location, extent and probability of natural and manmade disasters occurring within the area was assessed. Previous 2010 plan information was provided to each jurisdiction/local government Hazard Mitigation Planning Committee members participating in the plan update. This information, which included updating of each jurisdiction's data tables, critical facilities and mitigation strategies, were the basis for the plan. Next, actions that would reduce the loss of life or property in the area were considered. In doing this, all jurisdictions, local governments, private-non-profits, first responders (police, fire and medical), neighboring counties, and the general public were invited and encouraged to participate. All jurisdictions, planning committee members, the public, and neighboring communities actively participated by attending meetings and providing input by phone, fax, email, postal mail and one-on-one contacts made by the EMA Director or the consultant revising the plan.

Continued Public Participation

After the initial plan was completed in 2010 and revision made in 2015, it was made available for ongoing public view and comment at the Escambia County Emergency Operations Center, all City and Town Halls, and the Escambia County Commission. Each local government was instructed that amendments or additions could be made to that plan at any time. Additional opportunities for comment were provided at quarterly meetings held by the Escambia County EMA. No meeting notes or sign-in sheets were created and saved for these past meetings; however, they will be a requirement and placed in the next plan revision.

In the future, the County EMA will strive to gain more public participation in the maintenance and updates of the county's hazard mitigation plan by encouraging Parent Teacher Organizations, Senior Citizens Clubs, Chamber of Commerce, Kiwanis Club, etc. by mail, telephone, and personal contacts. In addition, the County EMA will encourage the county and municipalities with websites to place the 2015 plan on their site and offer the public a place to comment on the plan. Jurisdictions having websites are: Escambia County – www.co.escambia.at.us; Atmore – www.cityofatmore.com; Brewton – www.cityofbrewton.org; East Brewton – www.eastbrewton.org; and The Poarch Band of Creek Indians – www.poarchcreekindians.org. Jurisdictions not having websites are: Flomaton, Pollard, and Riverview.

Hazard Mitigation Planning Committee

Before beginning the plan update process, LHA staff coordinated with Mr. David Adams, Escambia County EMA Director, to review the hazard mitigation planning committee. Existing members were confirmed to continue service. Replacements were made to fill vacancies as needed and new members were added to represent local governments participating in the plan for the first time. Mr. Adams assumed the responsibility as Chairman of the Hazard Mitigation Planning Committee. The Hazard Mitigation Committee consisted of the following members:

Escambia County

Kenny Smith, Manager, West Escambia Utilities

Justin Cole, EMS Director, D. W. McMillen EMS

Brandon Douglas, Building Superintendent, Escambia County Commission

Janet Richburg, Lt./Admin., Escambia County Sheriff's Office

David S. Martin, ARES

Bill Bridges, County Engineer, Escambia County

David Adams, Director, Escambia County EMA

City of Atmore

Gerry McGhee, Chief, Atmore Fire

Cindy Lee, Administrator, Atmore Nursing Center

Karen Jay, President, Atmore Ambulance

Chris Black, Building Inspector, City of Atmore

City of Brewton

Lawton Shipp, Building Inspector/Code Enforcement, City of Brewton

Kenneth Varner, Superintendent, Brewton City Schools

Debbie Stokes, Teacher, Brewton Elementary

Jeff Salter, Fire Chief, City of Brewton

City of East Brewton

Karen Singleton, City Clerk, City of East Brewton

Debrah King, Compliance Officer, City of East Brewton

Town of Flomaton

Cameron Fillingim, Lt. Patrol Supervisor, Flomaton Police Department

Town of Pollard

Valeria Osby, Mayor, Town of Pollard

Town of Riverview

Carl Smith, Mayor, Town of Riverview

Poarch Band of Creek Indians

April Sells, Emergency Management Director (participated through one-on-one visits)

Participation Guidelines

The Chairman of the Hazard Mitigation Planning Committee set forth a list of participation guidelines for the Hazard Mitigation Planning Committee:

1. At least one appointed representative from each participating local government should attend all committee meetings. In the event of extenuating circumstances, the local government may send a non-appointed representative. If a committee member cannot attend the meetings, he or she will be contacted in person, by phone, by email, or by mail in order to obtain the jurisdiction's participation in the plan revision. Committee members are also encouraged to attend neighboring communities' HMPC meetings and participate in their plan updates. Each local government should submit requested information to Escambia County EMA or LHA in

a timely manner. Local governments should meet timeframes and deadlines established by the committee. In the event of extenuating circumstances, the Hazard Mitigation Planning Committee Chairman may approve late submissions.

2. Committee members should fully cooperate with the Escambia County EMA and LHA staff during the update and finalization of the Escambia County Hazard Mitigation Plan by providing the best available information necessary to complete the plan.
3. Each participating local government must submit a list of prioritized mitigation actions. The local government must provide mitigation measures and the method used to prioritize the actions. The selected actions must identify the hazard(s) being mitigated.

Committee and Public Meeting Schedule and Participation

Each local government was invited to participate in each of the committee meetings. In the event they were unable to attend the meetings they were required to obtain meeting materials from the Escambia County EMA or LHA prior to or immediately following the missed meeting. Meeting materials were completed and returned via mail, fax, email, or by scheduling an individual meeting with the Escambia County EMA and/or LHA for the local government to be counted as an active participant in the planning process. Surrounding neighbors were invited by email and encouraged to attend all committee meetings and provide input. The public was also invited and encouraged to participate in all meetings. A public meeting notice was published in the Tri-City Ledger as it has countywide circulation, whereas the others do not.

Attendees at the meetings were asked to group themselves by jurisdiction in order to review and complete meeting materials that required collaboration, and provide other needed data. Some individuals participated with and contributed to more than one jurisdiction as deemed appropriate. A “Citizen Input on Hazard Mitigation Plan” form (sample found in this section) was available at all meetings for general public citizens to complete. Committee representatives were asked to take these forms and for their concerned citizens to complete. No forms were completed during the planning process.

The initial public meeting of the Escambia County Hazard Mitigation Planning Committee was held on May 19, 2015 at 10 a.m. in the auditorium at 175 Ag Science Drive in Brewton, Alabama. No public citizens attended the meeting. The mid-term public meeting of

the Escambia County Hazard Mitigation Planning Committee was held on July 7, 2015 at 10 a.m. in the auditorium at 175 Ag Science Drive in Brewton, Alabama. No public citizens attended the meeting.

The final public meeting of the Escambia County Hazard Mitigation Planning Committee will be held during a regular Escambia County Commission Meeting following FEMA's plan approval pending adoption resolutions. The public will be given an opportunity to comment and input information into the plan prior to the plan's approval by the county and participating jurisdictions.

This page left intentionally blank

ESCAMBIA COUNTY

Tuesday, May 19, 2015 at 10 a.m. – Auditorium - 175 Ag Science Drive, Brewton, AL 36427

INITIAL HAZARD-MITIGATION PLANNING MEETING SIGN-IN SHEET

(PLEASE PRINT CLEARLY)

NAME	AGENCY OR DEPARTMENT/ JOB TITLE	PHONE/ FAX	E-MAIL
Laura SAIPP	Agency: City of Brewton Job Title: Code Enforcement	Phone: 251-809-1762 Fax:	lshipp@cityofbrewton.org
DAVID S. MARTIN	Agency: ARES Job Title:	Phone: 251-867-3467 Fax:	DAVID480@BELL-SOUTH.NET
Cindy Lee	Agency: Amore Nursing Center Job Title: Administrator	Phone: 251-368-9121 Fax: 251-368-6552	cle@crasremmanagement.com
Bill Bridges	Agency: Escambia County Job Title: County Engineer	Phone: 251-867-0236 Fax: 251-809-8810	bbridges@co.escambia.al.us
Lee Helms	Agency: Lee Helms Assoc Job Title: Owner/Contractor	Phone: 205-280-3027 Fax: 205-280-0543	lee@leehelmsllc.com
David Adams	Agency: Escambia Co EMA Job Title: Director	Phone: 251-867-0232 Fax:	dadams@co.escambia.al.us



This page left intentionally blank

CITIZEN INPUT ON HAZARD MITIGATION PLANNING

Where in the county do you live (Which city or township?)	
What is your zip code at home?	
Do you work with Law Enforcement, Fire Service, Emergency Medical Services, Public Health, or Emergency Management? (Yes or No)	

Which of these emergency events have occurred at your home or in your neighborhood during the past ten years?

	EVENT	YES	NO
A	Brush or grass fire?		
B	Building fire?		
C	Severe thunderstorm?		
D	Tornado?		
E	Winter Weather?		
F	Terrorism?		
G	Drought?		
H	Hazardous material spill or release from pipelines, trucks, trains, or aircraft?		
I	Hazardous material spill or release from a facility?		
J	Power failure for more than two or three hours?		
K	Earthquake		

Did you have to leave your home because of any of these events?
 If so, which ones? List by letter designation: _____

Did you lose time from work or school because of any of these events?
 If so, which ones? List by letter designation: _____

Which of the following events are you concerned about in the next 12 months?

	EVENT	YES	NO
A	Brush or grass fire?		
B	Building fire?		
C	Severe thunderstorm?		
D	Tornado?		
E	Winter Weather?		
F	Terrorism?		
G	Drought?		
H	Hazardous material spill or release from pipelines, trucks, trains, or aircraft?		

I	Hazardous material spill or release from a facility?		
J	Power failure for more than two or three hours?		
K	Earthquake		

Of the concerns listed in question eight, please list the ones that you think are most likely to happen. List in priority by letter designation:

Of the concerns that you think are most likely to happen from question 9, which one do you think would affect most of the population of your County? _____

Of the concerns listed in question eight, please list the ones you think are least likely to happen. List by letter designation: _____

Do you own a NOAA weather radio? YES _____ NO _____

If yes, is it on right now? YES _____ NO _____

Are you familiar with the Emergency Alert System YES _____ NO _____

Do you have a device that can sound an alarm to alert you to emergencies? YES _____
NO _____

Can you receive emergency warning information on your pager, cell phone, or wireless messaging devices? YES _____ NO__ If no, would you like to? YES ___ NO__

Do you have a family emergency plan for events such as a home fire? YES _____ NO _____

Do you have a safe place for shelter in or around your home? YES _____ NO _____

Are there emergency plans at your place of employment? YES _____ NO _____

If you are willing to, please provide your name, address, and a telephone number so that the County Emergency Management or the community representative may contact you if further input is needed:

Name	
Mailing Address	
Contact Number	
E-Mail	

Questions?

AREA NEWS

Held without bond

time," Lee said in his letter. "This has taken a great deal of my time and something I truly love doing. When God calls you to do something, we often have to step out on faith and do his will. With that in mind and after many hours of consideration, I respectfully submit my resignation from the Flomaton Town Council effective May 31, 2015. I want to continue the work God has called me into and I feel this would give me more time to concentrate on that."

Lee said he appreciated the opportunity to serve the people of Flomaton and hopes he was able to contribute back to make a difference.

"Unfortunately, during my service, I have seen many disagreements within the council and the public in general in which lifelong friendships were ended because of politics," Lee stated. "That is so sad. In closing, I want to thank the mayor and council for the opportunity to work with each of them. I also want to thank Ms. Diane for her dedication to the town as clerk. Her knowledge and expertise is extremely important to our community and my hopes are that this does not go unnoticed."

When contacted, Lee said

comptroller. Judge Rice appointed the to the restroom and the meeting to step down. "All that last night helped

Brother

Continued from front

When the threats continued, James Scott apparently fired one shot that struck his head. "I was sad."

PUBLIC MEETING

The Escambia County Emergency Management Agency is scheduling a public meeting on May 19, 2015 at 10 a.m. to update its Hazard Mitigation Plan. The meeting will take place at the Escambia County Agricultural Science Center, 175 Ag Science Drive, Brewton, AL 36426. The public, private non-profits, municipalities, school boards, universities/colleges, water/sewer boards, fire departments and elected officials are among those invited and encouraged to attend. Participation is required in order to apply for federal hazard mitigation grants in the future.

For more information please contact
David Adams at 251-867-0232.

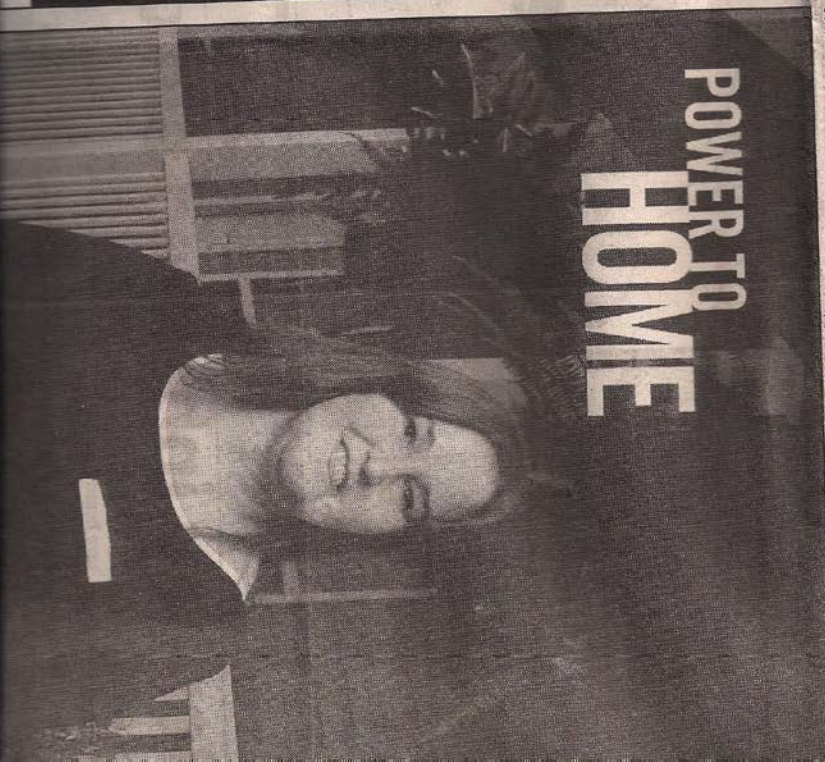
Replacement Windows
 189 Installed
 CONSOLE AT \$1,000
 *Ask for details. Max size 36" x 50".

Window World
 Simply the Best for Less!
 Windows • Storm • Doors • Hurricane Protection
 FREE In-Home Estimates
 850-484-9998
 870 Industrial Ct., Pensacola
 WindowWorldPensacola.com

"Not only do we stand behind our windows... we stand on them!"
 Local Operator,
 Mark Biles



POWER TO HOME



SOUTH ALABAMA METAL SALES
 Hardware • Feed • Seed • Fertilizer
Farmers

This page left intentionally blank

Tuesday, May 19, 2015 at 10 a.m.

In the Auditorium at 175 Ag Science Drive, Brewton, AL 36427

Escambia County Hazard Mitigation Planning Committee Meeting 1

The Chairman of the Hazard Mitigation Planning Committee, Mr. David Adams, opened the meeting. Lee Helms Associates, L. L. C. reviewed the 2010 plan with committee members and attendees and explained the update process. Attendees were given worksheets and other materials related to the agenda topics in order to review and provide data for the update. A total of 11 committee members or designees attended the meeting, along with 1 LHA representative. No members of the general public were in attendance. Those in attendance included:

- Lee Helms, LHA Owner/Contractor
- David Adams, Director, Escambia County EMA
- Kenny Smith, Manager, West Escambia Utilities
- Gerry McGhee, Chief, Atmore Fire
- Cameron Fillingim, Lt. Patrol Supervisor, Flomaton Police Department
- Justin Cole, EMS Director, D. W. McMillen EMS
- Brandon Douglas, Building Superintendent, Escambia County Commission
- Janet Richburg, Lt./Admin., Escambia Co. Sheriff's Office
- Lawton Shipp, Code Enforcement, City of Brewton
- David S. Martin, ARES
- Cindy Lee, Administrator, Atmore Nursing Center
- Bill Bridges, County Engineer, Escambia County

From: David Adams

Sent: Tuesday, May 12, 2015 4:14 PM

To: 'April Sells'; 'Becca Smith'; 'Bill Bridges'; 'Bill Perkins'; 'Brandon Douglas'; 'Brian Davis'; 'Cameron Fillingim'; 'Casey Grant'; 'Celia Lambert'; 'Chris Black'; 'Chris Griffin'; 'Chris Smith'; 'Cindy Lee'; 'Commissioner Quarker'; 'Commissioner Smith'; 'Commissioner Stokes'; 'Commissioner White'; 'Commissioner Wiggins'; 'David Martin'; 'Diane Killam'; 'DTA'; 'Gerry McGhee'; 'Glenn Carlee'; 'Janet Richburg Haveard'; 'Jeff Salter'; 'John Knott'; 'Justin Cole'; 'Karen Jay'; 'Karen Singleton'; 'Kenny Smith'; 'Lawton Shipp'; 'Lynn Smith'; 'Mark Manning'; 'Mayor Bondurant'; 'Mayor Lovelace'; 'Mayor Staff'; 'Michael Tyler'; 'Mike Lambert'; 'Monte McGougin'; 'Nick Beasley'; 'Ray Madden'; 'Representative Baker'; 'Ricky Elliott'; 'Sandy Zuiderhoek'; 'Sandy Zuiderhoek'; 'Shaun Moye'; 'Sheriff Grover Smith'; 'Steve Yuhasz'; 'Tony Sanks'; 'Tony Wheeler'; 'Valeria Osby'

Cc: Renee Helms; Lee Helms

Subject: Hazard Mitigation Planning Meeting

Good Afternoon All,

It is time to review and update the Escambia County Hazard Mitigation Plan. This update is required every five years. As you know, this plan identifies any projects that, when completed, will reduce the impact to life and property in the event of a disaster. Hazard mitigation funds are made available after a presidentially declared disaster. To be eligible for those funds, the requesting entity must participate in the planning process and the requested project must be identified in the plan.

The first planning meeting is scheduled for 10:00 a.m. on Tuesday, May 19, 2015 at the Escambia County Agricultural Science Center, 175 Ag Science Drive, Brewton, AL 36426. I encourage each of you or your designee to attend this meeting to insure that your mitigation needs are included in the plan update. Please invite any other persons that you feel may contribute to the planning process.

The update is partially funded by grant funds and the match portion of the grant will be covered with in-kind personnel time involved in the planning process. I need your help with documentation of this time. As you and your staff review the plan and attend the meetings (any time working on this project) please record the time and expenses on the attached forms and return them to me. You can return them as the process moves forward or you can continue to add data to the forms and they can be collected at the end of the process.

If you need any other information, do not hesitate to contact me.

Thank you,

David Adams

Escambia County AL

Emergency Management

314 Belleville Ave.

Post Office Box 848

Brewton, AL 36427

Office 251-867-0232

Fax 251-867-3772

dadams@co.escambia.al.us

From: David Adams

Sent: Saturday, June 20, 2015 1:35 PM

To: 'April Sells'; 'Becca Smith'; 'Bill Bridges'; 'Bill Perkins'; 'Brandon Douglas'; 'Brian Davis'; 'Cameron Fillingim'; 'Casey Grant'; 'Celia Lambert'; 'Chris Black'; 'Chris Griffin'; 'Chris Smith'; 'Cindy Lee'; 'Commissioner Quarker'; 'Commissioner Smith'; 'Commissioner Stokes'; 'Commissioner White'; 'Commissioner Wiggins'; 'David Martin'; 'Diane Killam'; 'DTA'; 'Gerry McGhee'; 'Glenn Carlee'; 'Janet Richburg Haveard'; 'Jeff Salter'; 'John Knott'; 'Justin Cole'; 'Karen Jay'; 'Karen Singleton'; 'Kenny Smith'; 'Lawton Shipp'; 'Lynn Smith'; 'Mark Manning'; 'Mayor Bondurant'; 'Mayor Lovelace'; 'Mayor Staff'; 'Michael Tyler'; 'Mike Lambert'; 'Monte McGougin'; 'Nick Beasley'; 'Ray Madden'; 'Representative Baker'; 'Ricky Elliott'; 'Sandy Zuiderhoek'; 'Sandy Zuiderhoek'; 'Shaun Moye'; 'Sheriff Grover Smith'; 'Steve Yuhasz'; 'Tony Sanks'; 'Tony Wheeler'; 'Valeria Osby'

Cc: Renee Helms; Lee Helms

Subject: Hazard Mitigation Planning Meeting

All,

Thank you for your participation in the updating of the Escambia County Hazard Mitigation Plan. Our first in a series of meetings was held on May 19, 2015. Information was provided to the participants on what the Hazard Mitigation Plan is and its value to the local government and other not for profit agencies. As was discussed, it is very important to participate in the planning process and submit information and any needed projects to be included in the plan to insure eligibility for hazard mitigation funding if and when it becomes available.

The link below is to the FEMA document titled "Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards". This is the document that Mr. Helms had at the first meeting. This document may prove useful to you as you review your projects. You can download this document at no cost and it can be printed if you wish.

http://www.fema.gov/media-library-data/20130726-1904-25045-0186/fema_mitigation_ideas_final508.pdf

Please be sure to document any and all time that you or any of your staff spend working on this (meeting time, research time, phone time, discussion time, etc.) and submit the documentation to me. This documented time is essential to meeting the fund match requirement for the planning grant. For your convenience, I have attached copies of the form for documenting the time. Mileage traveled to and from meetings and other mileage incurred in working on this project can also be used. The form to document mileage is also attached.

The next meeting will be held on July 7, 2015 at 10:00 a.m. at the Ag Science Building in Brewton. If I can provide any assistance on this, do not hesitate to contact me.

Thank you,

David Adams

Escambia County AL
Emergency Management
314 Belleville Ave.
Post Office Box 848
Brewton, AL 36427
Office 251-867-0232
Fax 251-867-3772
dadams@co.escambia.al.us



INITIAL MEETING AGENDA ESCAMBIA COUNTY HAZARD MITIGATION PLAN UPDATE

Tuesday, May 19, 2015 @ 10 a.m.
Auditorium - 175 Ag Science Drive, Brewton, AL

1. Introductions
 - Sign-in sheets – please print and make sure your email is on the form
2. Project Background
 - 2010 plan update was prepared by Lee Helms Associates, L. L. C. under the direction of the Hazard Mitigation Planning Committee, the Local Emergency Planning Committee, and the Escambia County Emergency Management Agency and adopted by:
 - Escambia County – Unincorporated
 - Atmore - City
 - Brewton - City
 - East Brewton - City
 - Flomaton - Town
 - Poarch Band of Creek Indians – Indian Tribal Government
 - Pollard - Town
 - Riverview - Town
 - 2015 plan update will be prepared by Lee Helms Associates, L. L. C. under the direction of the Hazard Mitigation Planning Committee, the Local Emergency Planning Committee, and the Escambia County Emergency Management Agency
3. Project Participation
 - Identify opportunities for public input into the 2015 plan update
 - Identify potential plan meeting participants that are not present today (municipalities, school boards, engineers, hospitals, surrounding county EMAs, fire departments, etc.)
 - PNP's are their own applicant
4. Project Schedule
 - 2010 plan update expires September 28, 2015 with the exception of the Poarch Band of Creek Indians plan expires May 2, 2017
 - Period of Performance for the grant is November 18, 2013 – November 18, 2015
 - AEMA/Local Review = 30 days; Local response to a request for information (RFI) = 30 days; AEMA review of local response to RFI = 30 days; FEMA Review = 45 days (allowing 135 days at the least for plan approval)
 - There will be an initial, mid-term, and final meeting. Committee members will be made aware of the meetings via email unless other means is requested. Information may be sent to LHA by fax 205-280-0543 or email to renee@leehelmsllc.com. If you have any questions or need assistance, call LHA at 205-280-3027.
5. Project Tasks for this Meeting
 - All general public attendees are to complete the form titled: “Citizen Input on Hazard Mitigation Planning” and leave completed form with LHA representative
 - Update 2010 plan information – see handouts
 - Discuss in-kind contributions for local match to this planning grant
 - Set date and location for next meeting

From: David Adams

Sent: Monday, July 06, 2015 4:01 PM

To: 'April Sells'; 'Becca Smith'; 'Bill Bridges'; 'Bill Perkins'; 'Brandon Douglas'; 'Brian Davis'; 'Cameron Fillingim'; 'Casey Grant'; 'Celia Lambert'; 'Chris Black'; 'Chris Griffin'; 'Chris Smith'; 'Cindy Lee'; 'Commissioner Quarker'; 'Commissioner Smith'; 'Commissioner Stokes'; 'Commissioner White'; 'Commissioner Wiggins'; 'David Martin'; 'Diane Killam'; 'DTA'; 'Gerry McGhee'; 'Glenn Carlee'; 'Janet Richburg Haveard'; 'Jeff Salter'; 'John Knott'; 'Justin Cole'; 'Karen Jay'; 'Karen Singleton'; 'Kenny Smith'; 'Lawton Shipp'; 'Lynn Smith'; 'Mark Manning'; 'Mayor Bondurant'; 'Mayor Lovelace'; 'Mayor Staff'; 'Michael Tyler'; 'Mike Lambert'; 'Monte McGougin'; 'Nick Beasley'; 'Ray Madden'; 'Representative Baker'; 'Ricky Elliott'; 'Sandy Zuiderhoek'; 'Sandy Zuiderhoek'; 'Shaun Moye'; 'Sheriff Grover Smith'; 'Steve Yuhasz'; 'Tony Sanks'; 'Tony Wheeler'; 'Valeria Osby'

Cc: Renee Helms; Lee Helms

Subject: Hazard Mitigation Planning Meeting

All,

This is to correct the start time for the meeting tomorrow. **The correct time should be 10:00 a.m.** Sorry for any confusion this may have caused.

Thanks,

David

From: David Adams

Sent: Monday, July 06, 2015 3:53 PM

To: 'April Sells'; 'Becca Smith'; 'Bill Bridges'; 'Bill Perkins'; 'Brandon Douglas'; 'Brian Davis'; 'Cameron Fillingim'; 'Casey Grant'; 'Celia Lambert'; 'Chris Black'; 'Chris Griffin'; 'Chris Smith'; 'Cindy Lee'; 'Commissioner Quarker'; 'Commissioner Smith'; 'Commissioner Stokes'; 'Commissioner White'; 'Commissioner Wiggins'; 'David Martin'; 'Diane Killam'; 'DTA'; 'Gerry McGhee'; 'Glenn Carlee'; 'Janet Richburg Haveard'; 'Jeff Salter'; 'John Knott'; 'Justin Cole'; 'Karen Jay'; 'Karen Singleton'; 'Kenny Smith'; 'Lawton Shipp'; 'Lynn Smith'; 'Mark Manning'; 'Mayor Bondurant'; 'Mayor Lovelace'; 'Mayor Staff'; 'Michael Tyler'; 'Mike Lambert'; 'Monte McGougin'; 'Nick Beasley'; 'Ray Madden'; 'Representative Baker'; 'Ricky Elliott'; 'Sandy Zuiderhoek'; 'Sandy Zuiderhoek'; 'Shaun Moye'; 'Sheriff Grover Smith'; 'Steve Yuhasz'; 'Tony Sanks'; 'Tony Wheeler'; 'Valeria Osby'

Cc: Renee Helms; Lee Helms

Subject: Hazard Mitigation Planning Meeting

All,

This is a reminder of the Hazard Mitigation Plan Update Meeting scheduled for tomorrow July 7th at 9:00 a.m. The meeting will be in the Ag Science Building at 175 Ag Science Drive, Brewton. If you have the planning documentation completed, please bring it with you. If you have questions, this will be a good time to ask them.

Thank you,

David Adams

Escambia County AL
Emergency Management
314 Belleville Ave.
Post Office Box 848
Brewton, AL 36427
Office 251-867-0232
Fax 251-867-3772
dadams@co.escambia.al.us

AH

ESCAMBIA COUNTY

Tuesday, July 8, 2015 at 10 a.m. – Auditorium - 175 Ag Science Drive, Brewton, AL 36427
MID-TERM HAZARD-MITIGATION PLANNING MEETING SIGN-IN SHEET

(PLEASE PRINT CLEARLY)

NAME	AGENCY OR DEPARTMENT/ JOB TITLE	PHONE/ FAX	E-MAIL
Cardo Smith	Agency: Mayor Job Title: TOWN OF RIVERDALE	Phone: 251-867-5378 Fax: 809-2441	None
Valeria P. Osby	Agency: Mayor Job Title: Town of Pollard	Phone: 251-236-1511 Cell Fax: (251) 867-0261	Valeria-osbyjames@yahoo.com vosby@co.escambia.al.us
	Agency: Job Title:	Phone: Fax:	
	Agency: Job Title:	Phone: Fax:	
	Agency: Job Title:	Phone: Fax:	
	Agency: Job Title:	Phone: Fax:	



7/4

ESCAMBIA COUNTY

Tuesday, July 8, 2015 at 10 a.m. – Auditorium - 175 Ag Science Drive, Brewton, AL 36427
MID-TERM HAZARD-MITIGATION PLANNING MEETING SIGN-IN SHEET

(PLEASE PRINT CLEARLY)

NAME	AGENCY OR DEPARTMENT/ JOB TITLE	PHONE/ FAX	E-MAIL
Bill Bridges	Agency: Escambia County Job Title: County Engineer	Phone: 251-867-0236 Fax: 251-809-8810	bbridges@co.escambia-al.us
Kenneth Varner	Agency: Brewton City Schools Job Title: Syn. Mstr	Phone: 251-867-8400 Fax:	dkennethvarner@gmail.com
Debbie Stokes	Agency: Brewton Elementary Job Title: Teacher	Phone: 867-8410 Fax:	dmstokes26@hotmail.com
Karen Jay	Agency: Atmore Ambulance Job Title: President	Phone: 251-253-5502 Fax: 251-368-2517	Karendavisjay@yahoo.com
Karen Singleton	Agency: City of East Brewton Job Title: City Clerk	Phone: 251-867-6092 Fax: 251-867-6615	khsingleton@bellsouth.net
Hebrah King	Agency: City of East Brewton Job Title: Compliance Officer	Phone: 251-867-6092 Fax: 251-867-6615	eastbrewton@gmail.com



A₁₇ UK

ESCAMBIA COUNTY

Tuesday, July 8, 2015 at 10 a.m. – Auditorium - 175 Ag Science Drive, Brewton, AL 36427
MID-TERM HAZARD-MITIGATION PLANNING MEETING SIGN-IN SHEET

(PLEASE PRINT CLEARLY)

NAME	AGENCY OR DEPARTMENT/ JOB TITLE	PHONE/ FAX	E-MAIL
LEE HELMS	Agency: LHA Job Title: OWNER	Phone: 205-280-3027 Fax: 205-280-0543	lee@leehelmsllc.com
David Adams	Agency: Esc Co. EOA Job Title: DIRECTOR	Phone: 251-867-0230 Fax:	dadams@co.escambia.e al.us
KERRY SMITH	Agency: West Escambia Job Title: MANAGER	Phone: 251-368-2207 Fax:	KerrySmith@Frontier.com
CHRIS BLACK	Agency: City of Atmore Job Title: Bldg. Insp	Phone: 251-368-2253 Fax: 251-368-1841	chrisb@cityofatmore.com
Laura Shipp	Agency: City of Brewton Job Title: Bldg Insp	Phone: 251-809-1762 Fax: 251-809-1764	lshipp@cityofbrewton.org
Jeff Salter	Agency: City of Brewton Job Title: Fire Chief	Phone: 251-867-7165 Fax: 251-809-1752	jsalter@cityofbrewton.org



MID-TERM MEETING AGENDA

2015 ESCAMBIA COUNTY HAZARD MITIGATION PLAN UPDATE

Tuesday, July 7, 2015 @ 10 a.m.

Auditorium – 175 Ag Science Drive, Brewton, AL 36427

1. Introductions

- Sign-in sheets – please print and make sure your email is on the form.

2. Project Schedule Reminder

- 2010 plan update expires September 28, 2015
- Period of Performance for the grant is November 18, 2013 – Nov. 18, 2015
 - AEMA/Local Review = 30 days; Local response to a request for information (RFI) = 30 days; AEMA review of local response to RFI = 30 days; FEMA Review = 45 days (allowing 135 days at the least for plan approval)
- There will be an initial, mid-term, and final meeting. Committee members will be made aware of the meetings via email unless other means is requested. Information may be sent to LHA by fax 205-280-0543 or email to renee@leehelmsllc.com. If you have any questions or need assistance, call LHA at 205-280-3027.

3. Project Tasks for this Meeting

- All general public attendees are to complete the form titled: “Citizen Input on Hazard Mitigation Planning” and leave completed form with LHA representative
- Local EMA Director is to provide LHA with a copy of the media release for this meeting if applicable
- Update 2010 plan information – see handouts Discuss in-kind contributions for local match to this planning grant



Tuesday, July 7, 2015 at 10 a.m.

In the Auditorium at 175 Ag Science Drive, Brewton, AL 36427

Escambia County Hazard Mitigation Planning Committee Meeting 2

The Chairman of the Hazard Mitigation Committee, Mr. David Adams, opened the meeting. Lee Helms of Lee Helms Associates, L. L. C. reminded the committee members and attendees of the project schedule. Attendees were given worksheets and other materials related to the agenda topics in order to review and provide data for the update. These worksheets were previously emailed to participants with instructions on what information needs updating. A total of 13 committee members or designees attended the meeting, along with one LHA representative. No members of the general public attended. Those in attendance included:

- Lee Helms, LHA Owner
- David Adams, EMA Director
- Carl Smith, Mayor, Town of Riverview
- Valeria Osby, Mayor, Town of Pollard
- Bill Bridges, County Engineer, Escambia County
- Kenneth Varner, Superintendent, Brewton City Schools
- Debbie Stokes, Teacher, Brewton Elementary
- Karen Jay, President, Atmore Ambulance
- Karen Singleton, City Clerk, City of East Brewton
- Debrah King, Compliance Officer, City of East Brewton
- Kenny Smith, Manager, West Escambia
- Chris Black, Building Inspector, City of Atmore
- Lawton Shipp, Building Inspector, City of Brewton
- Jeff Salter, Fire Chief, City of Brewton

Attendees from the initial meeting returned their updated worksheets to LHA by email or fax. For the information that was missing, LHA contacted each participant by telephone and gathered the information. Attendees of Meeting 2 were provided the same worksheets and will be responded to in the same way.

Interagency and Intergovernmental Coordination

Interagency and intergovernmental coordination also played a vital part in the development of this plan. Each of the agencies listed below were contacted via mail, email, fax, or telephone requesting the best available data that they could contribute to the development of the plan. All information provided was beneficial in completing the risk and vulnerability assessments.

Federal Agencies

- National Weather Service provided storm event data
- United States Geological Survey provided information on general geology, earthquakes, sinkholes, land subsidence, and landslides
- U.S. Army Corp of Engineers and HAZUS-MH 2.1 provided information on dams
- Federal Emergency Management Agency provided information throughout the plan, including the National Flood Insurance Program information
- U.S. Department of Transportation's Hazardous Material Information System provided event data
- U.S. Department of Agriculture – Census of Agriculture provided land value per acre
- HAZUS-MH 2.1 provided estimation information on potential damage, economic loss, and social impacts from natural disasters

State Agencies

- Alabama Emergency Management Agency provided hazard information throughout the plan
- Geological Survey of Alabama provided information on general geology, earthquakes, sinkholes, and landslides
- Alabama Department of Economic and Community Affairs provided the Alabama Drought Management Plan, National Flood Insurance Program information and FEMA flood map update information
- Forestry Commission provided information regarding wildfires

Regional Agencies

- West Alabama Regional Commission provided area planning and development and transportation planning information, as well as maps pertaining to plan information

Local Agencies

- Escambia County Emergency Management Agency provided assistance in gathering data

Academia

- University of Alabama - Department of Geology

Surrounding counties in Alabama (Baldwin, Monroe, Conecuh and Covington) were also invited and encouraged by email, phone or in person to participate in the development of the plan. None of the surrounding communities attended any of the meetings; however during mutual aid meetings and through our mutual aid agreement, all expressed their willingness to help in the event of a disaster.

Integration with Existing Plans

Careful attention was taken when updating the plan so that it would not contradict or conflict with any existing local subdivision regulations, zoning ordinances, comprehensive plans, or standard building codes. **Table 1-1** provides a list of the existing plans by jurisdiction. Wherever appropriate, the South Alabama Regional Planning Commission's (SARPC) economic development planning efforts have been integrated into this plan revision.

Plan Adoption

All jurisdictions in Escambia County, along with the Poarch Band of Creek Indians have actively participated in the planning process by attending meetings and providing input. Representatives from each local government served on the Hazard Mitigation Planning Committee and attended the meetings. The committee was responsible for updating materials, reviewing sections of the plan, and recommending changes to the plan. Upon completion of the plan each of the six municipalities (Atmore, Brewton, East Brewton, Flomaton, Pollard, and Riverview) along with the Escambia County Commission and the Poarch Band of Creek Indians will pass formal resolutions adopting the Escambia County Hazard Mitigation Plan. By adopting

this multi-jurisdictional hazard mitigation plan, Escambia County and the listed local governments within will be eligible applicants for mitigation grant funds through the Pre-Disaster Mitigation Program, Hazard Mitigation Grant Program, and the Flood Mitigation Assistance Program. Adopting Resolutions can be found in Appendix I.

This page left intentionally blank

**Table 1-1: Escambia County
Existing Plans by Jurisdiction**

PLAN/POLICY	Atmore (include the Poarch Band of Creek Indians)	Brewton	East Brewton	Flomaton	Pollard	Riverview	County
Comprehensive Plan	Y	Y	N	N	N	N	Y
Strategic Plan	N	N	N	N	N	N	N
Growth Management Plan	N	N	N	N	N	N	N
Capital Improvement Plan	N	N	N	N	N	N	Y
Zoning Ordinance	Y	Y	Y	N	N	N	N
Building Code	Y	Y	Y	N	N	N	N
Flood Plain Management Plan	Y	Y	Y	Y	Y	Y	Y
Elevation Certificates	Y	Y	Y	Y	Y	Y	Y
Drainage Ordinance	Y	Y	Y	N	N	N	Y
Emergency Management Plan	Y	Y	Y	Y	Y	Y	Y
Critical Facilities Map	N	N	N	N	N	N	N
Existing Land Use Map	N	N	N	N	N	N	N
State Plan	N	N	N	N	N	N	Y
Hazard Mitigation	Y	Y	Y	Y	Y	Y	Y
Strategic National Stockpile Plan	Y	Y	Y	Y	Y	Y	Y
Other							

(Source: Participating Jurisdiction, 2015)

This page left intentionally blank

Section Two: General Characteristics

Escambia County is located in Southeast Alabama. Baldwin, Monroe, Conecuh and Covington Counties border Escambia County. The county has 945 square miles of land area and approximately 8.1 square miles of water area as reported by the 2010 Census. The county contains six municipalities: the Cities of Atmore, Brewton, and East Brewton and the Towns of Flomaton, Pollard and Riverview. See **Map 2-1: Escambia County General Location**. Escambia County is governed by County Commissioners elected by citizens in their commission districts. An elected mayor and council serve each municipality. The City of Brewton serves as the Escambia County seat and is the center for local business and trade. The City of Atmore is the largest city.

Escambia County has two airports: one located in Atmore and one in Brewton. Atmore is a public general aviation facility having one asphalt paved runway. Brewton is a public/military general aviation facility having three asphalt paved runways. Atmore is serviced by Amtrak. The county is serviced by the railways of CSX in Atmore and Brewton(east-west rails) and Alabama Gulf Coast Railway (AGR) in Atmore (north-south rails). Brewton is serviced by Southwest Alabama Transit Bus System. Utilities in Escambia County include electricity, gas, water, sewer, and solid waste. Alabama Power, PowerSouth, and Southern Pine Electric Cooperative provides electrical service and gas is supplied by the City of Brewton and West Escambia Utilities. AT&T, Frontier Communications, Mediacom, Exede, DIRECTV, Dish, and HughesNet provide telecommunication services. Water and sewer service is performed by municipal or rural systems – Canoe Water Works, City of Brewton Utilities, East Brewton Water Department, Freemanville Water System, Poarch Creek Indian Water System, McCall Water System, West Escambia Utilities and Riverview Water System. The City of Brewton Utilities and West Escambia Utilities provide solid waste services. Most unincorporated areas are serviced only by septic tanks.

Escambia County, Alabama provides a quality of life unique for a county its size. It's location along the Florida state line opens residents up to a short drive to amazing beaches along the Gulf Coast. The mild year-round temperate offers exceptional outdoor recreational activities to visitors and residents alike. The Atmore Community Hospital and D.W. McMillan Memorial

Hospital in Brewton provide 24 hour emergency care and helicopter service to major medical facilities in the region. Atmore and Brewton are home to high-quality YMCAs with a variety of programs and facility amenities to suit the residents of Escambia County. With exceptional public schools and higher institutes of learning both in the county or located nearby, residents of Escambia County can be sure the future generation has all the opportunities needed for a quality education. (Source: *www.escambiaida.com, Escambia County Industrial Development Authority – Accessed August 17, 2015*)

Escambia County is mostly a rural county. The county relies on the South Alabama Regional Planning Commission for assistance in land use development. The following is acreage usage in order of most use to least use in Escambia County: Agricultural, Forest, Commercial, Transportation, Industrial, Residential, and Public.

Escambia County is governed by a five-member county commission. Each commissioner serves a four-year term and must reside in the district he or she represents. Brewton is the county seat. The six municipalities located in the county utilize a mayor/city council form of government.

The Poarch Creek Indian Reservation is located near the City of Atmore; therefore due to their proximity to the City of Atmore, the risk assessments applicable to the City of Atmore also apply to the Tribe as well. The reservation consists of 230 acres of federal trust land and is governed by a nine-member Tribal Council. There are approximately 1,000 members living on the reservation and approximately 3,024 enrolled members. The Poarch Creek Indian Band is an active participant in the revision of this plan.

Growth Trends

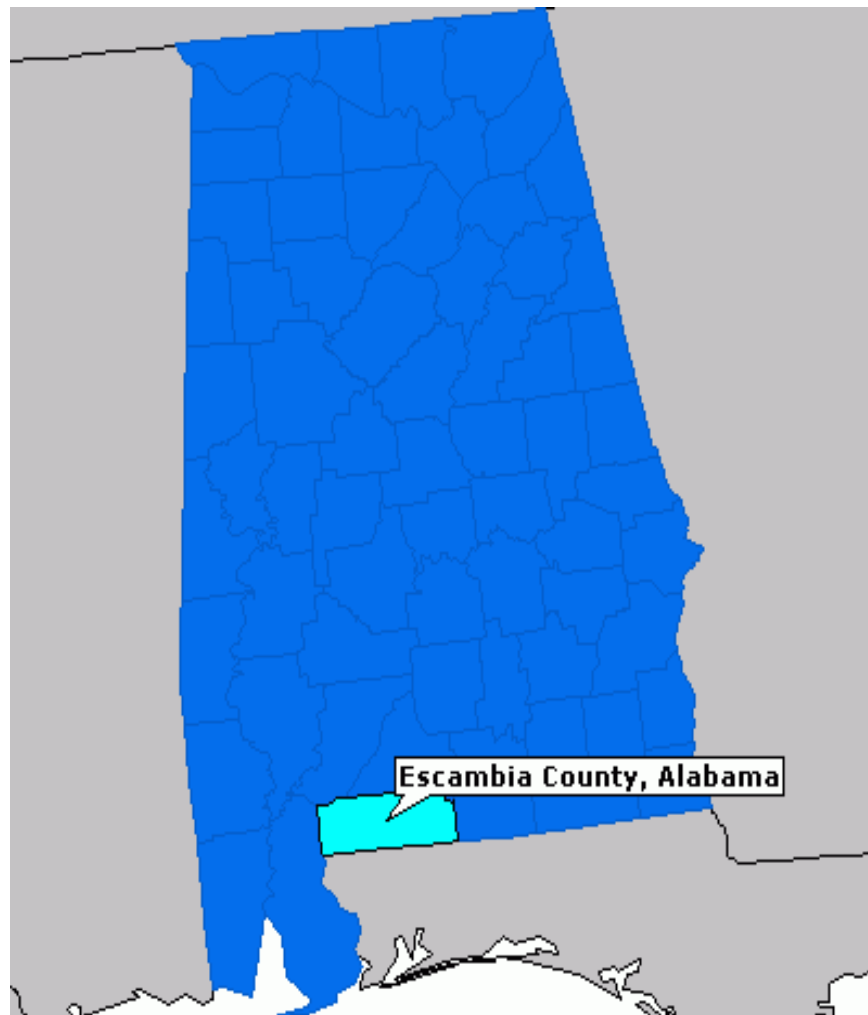
Escambia County's population has grown slightly over the past twenty-five years. **Map 2-1:** Escambia County General Location and **Map 2-2:** Escambia County Population Density depicts the newest 2010 Census Tracts and population concentrations in Escambia County. **Table 2-1** below shows the growth trends for the county and its municipalities compared to the State of Alabama.

Table 2-1: Growth Trends 1990-2015

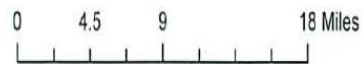
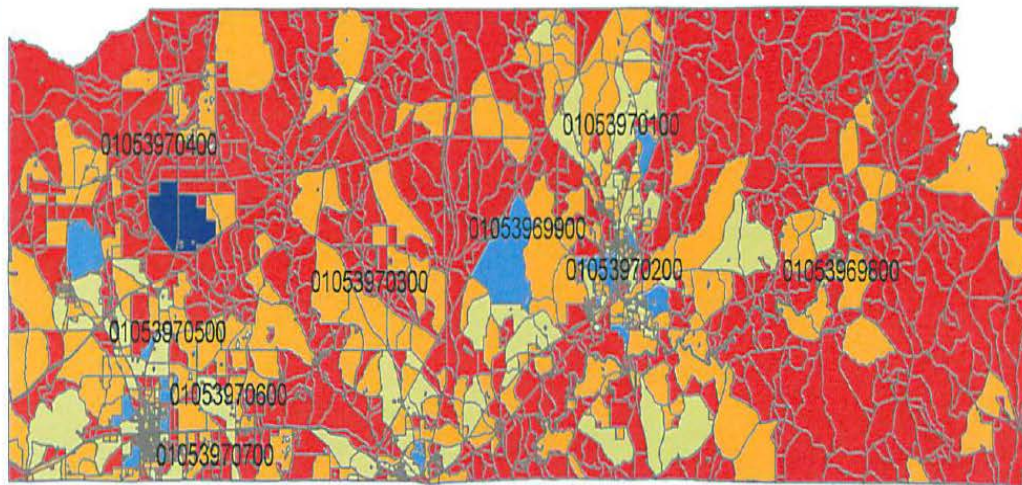
Change 1990-2015

	4/1/1990	4/1/2000	4/1/2010	1/1/2015	Number	Percent
Atmore (includes the Poarch Band of Creek Indians)	9,984	10,166	10,194	10,096	112	1%
Brewton	5,978	5,706	5,408	5,339	639	11%
East Brewton	2,407	2,425	2,478	2,433	260	1%
Flomaton	1,447	1,465	1,440	1,427	-20	-1%
Pollard	105	119	137	135	30	29%
Riverview	208	177	184	183	-25	12%
Escambia County	35,532	38,440	38,319	37,898	2,366	7%
Alabama	4,041,281	4,447,032	4,779,736	4,869,719	828,438	21%
<i>Source: U.S. Bureau of Census; easidemographics.com; Calculations by LHA</i>						

MAP 2-1: ESCAMBIA COUNTY GENERAL LOCATION



MAP 2-2: POPULATION DENSITY AND CENSUS TRACTS



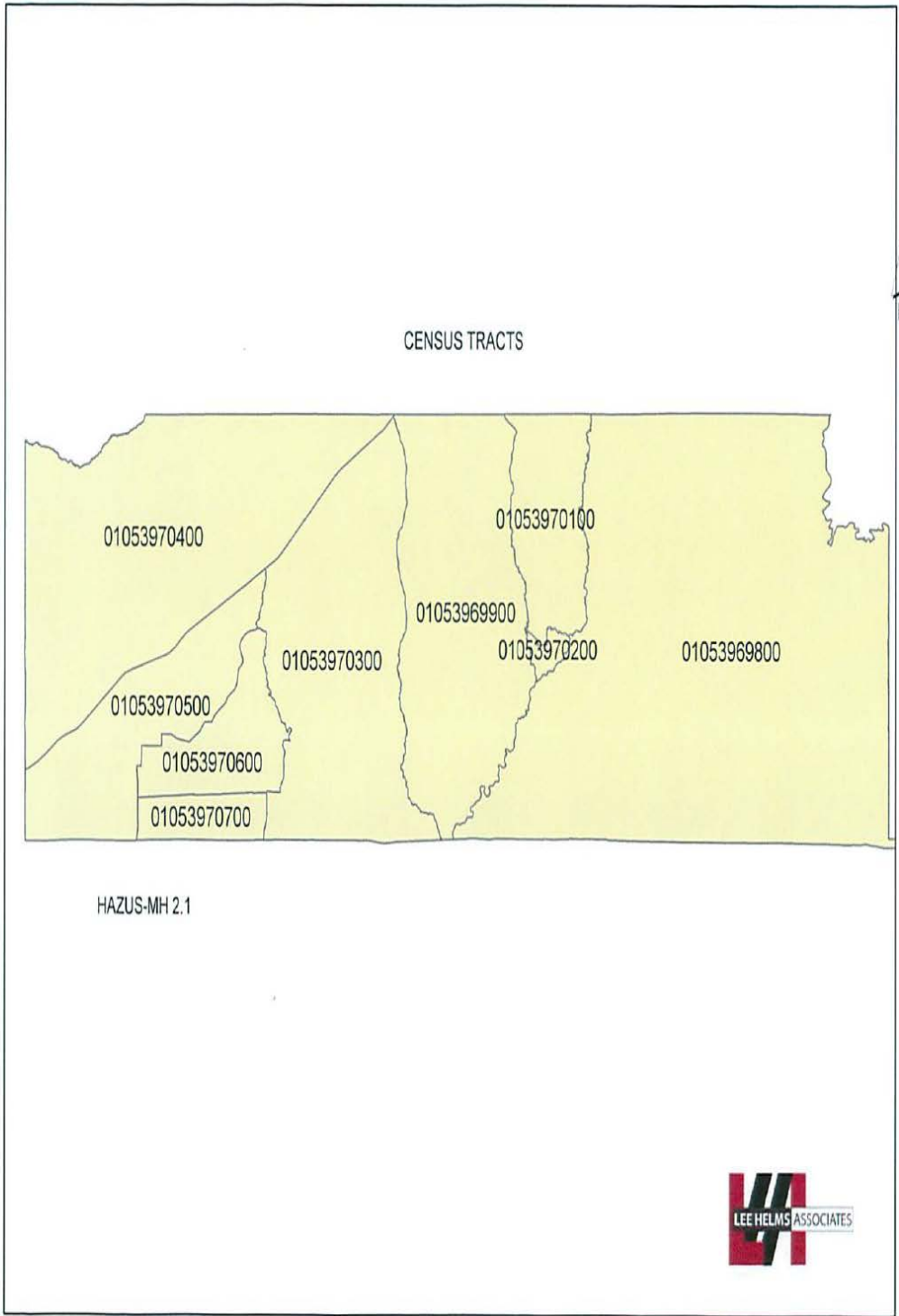
Legend

Population Density

Population

-  0.00 to 16.00
-  16.00 to 59.00
-  59.00 to 146.00
-  146.00 to 330.00
-  330.00 to 1347.00





General Geology

(Source: U. S. Department of the Interior/U. S. Geological Survey)

Geologic units in Escambia County help determine the risks and vulnerabilities of earthquakes, landslides, sinkholes, and land subsidence events and their occurrences in the county. The county's geologic units are shown on **Map 2-3: Geology in Alabama** and include the following:

High Terrace Deposits (Pleistocene) at surface, covers 3% of this area. High terrace deposits are varicolored lenticular beds of poorly sorted sand, ferruginous sand, silt, clay, and gravelly sand. Sand consists primarily of very fine to very coarse poorly sorted quartz grains; gravel composed of quartz, quartzite and chert pebbles. Lithology: terrace.

Citronelle Formation (Pleistocene-Pliocene) at surface, covers 3 % of this area. Citronelle formation is moderate-reddish-brown deeply weathered fine to very coarse quartz sand and varicolored typically mottled lenticular beds of clay and clay-like gravel. Limonite pebbles and lenses of limonite cemented sand occur locally in weathered exposures. Gravel is composed of chert and quartz pebbles. Lithology: sand; clay or mud; gravel; chert.

Oligocene Series undifferentiated (Oligocene) at surface, covers 3 % of this area. Descriptions of the units of the Oligocene Series follow in descending order. Paynes Hammock Sand - locally fossiliferous, calcareous, argillaceous medium to coarse sand; pale-blue-green clay; and thin-bedded sandy limestone; exposed at Paynes Hammock and at St. Stephens. Chickasawhay Limestone - white to yellowish-grey fossiliferous, glauconitic limestone and soft marl. Byram Formation includes three members in descending order: Bucatunna Clay Member - dark, bentonitic, carbonaceous, sparsely fossiliferous clay and greyish-yellow sand; unnamed marl member - light-grey to yellowish-grey sandy, glauconitic, fossiliferous marl; Glendon Limestone Member - irregularly indurated coquinoid and crystalline limestone, weathering to indurated rock containing large tubular cavities, locally known as 'horsebone'. Marianna Limestone - white to yellowish-grey soft, porous, very fossiliferous limestone. Forest Hill sand - dark-greenish-grey carbonaceous clay with lenses of glauconitic fossiliferous sand; extends eastward from MS into Choctaw, Clarke and Washington Counties. Red Bluff Clay - greenish-gray calcareous clay locally containing selenite crystals, yellowish-grey glauconitic, fossiliferous

limestone; and light-gray silty clay with interbeds of sand (Forest Hill equivalent); from Tombigbee River eastward grades into glauconitic fossiliferous limestone equivalent to the Bumpnose Limestone. Bumpnose Limestone - very light-gray to yellowish-gray chalky, subcoquinoid, glauconitic, argillaceous, fossiliferous limestone; intertongues with Red Bluff Clay in vicinity of the Alabama River and is readily differentiated eastward from the Sepulga River. Lithology: limestone; clay or mud; sand; bentonite.

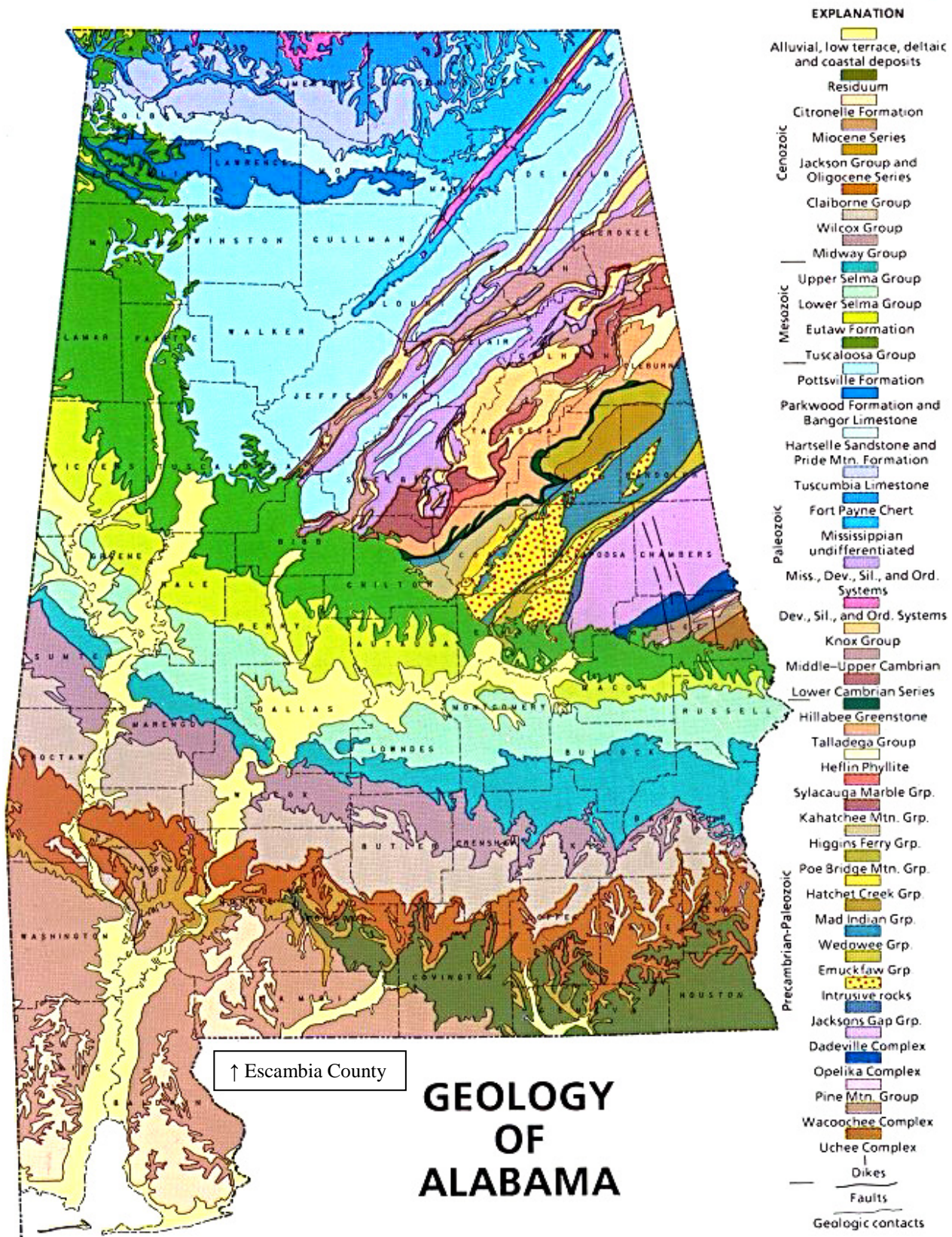
Miocene Series undifferentiated (Miocene) at surface, covers 3 % of this area.

Miocene Series undifferentiated is moderate-yellowish-orange thin-bedded to massive fine to coarse sand, gravelly sand, thin-bedded to massive clay and sandy clay. Clays are plastic in part. Limonite pellets occur in places along clay-sand contacts. Gravel is composed of quartz and chert granules and pebbles. Locally the upper part of the unit is Pliocene in age. Lithology: sand; clay or mud; gravel; chert.

Alluvial, coastal and low terrace deposits (Holocene) at surface, covers 3 % of this area.

Alluvial, coastal and low terrace deposits are varicolored fine to coarse quartz sand containing clay lenses and gravel in places. Gravel composed of quartz and chert pebbles and assorted metamorphic and igneous rock fragments in streams near the Piedmont. In areas of the Valley and Ridge province gravel composed of angular to subrounded chert, quartz, and quartzite pebbles. Coastal deposits include fine to medium quartz sand with shell fragments and accessory heavy minerals along Gulf beaches and fine to medium quartz sand, silt, clay, peat, mud and ooze in the Mississippi Sound, Little Lagoon, bays, lakes, streams, and estuaries. Lithology: beach sand; alluvium.

**Map 2-3: Geology of Alabama
2015**



Source: The University of Alabama - Geology Department

This page left intentionally blank

Section Three: Risk Assessment

The risk assessment process is necessary to identify those natural and man-made hazards that pose a threat to Escambia County and its municipal jurisdictions. This process used information provided by members of the Escambia County Hazard Mitigation Planning Committee to identify these hazards.

The county's Hazard Probability Assessment Summary is shown in **Table 3-1**. A zero denotes no data is available to determine the probability or affected area. Each jurisdiction has an individual hazard probability assessment shown in Section Five of the plan. The Poarch Creek Indian Reservation is located near the City of Atmore; therefore due to their proximity to the City of Atmore, the risk assessments applicable to the City of Atmore also apply to the Tribe as well.

Table 3-2 shows the hazards that pose a threat to each jurisdiction. Each jurisdiction was responsible for identifying the hazards that pose a threat to their community. During the 2010 plan update and for subsequent plan updates, tsunami/volcano/ typhoon was removed from the plan based on committee consensus that the hazard(s) did not pose a threat to the county or its jurisdictions. Due to the nature of all man-made hazards being possible, however unlikely, each jurisdiction identified them as posing a threat.

Table 3-3 provides the prioritized occurrence threat by jurisdiction based on past events. Occurrence prioritizations were based on the National Oceanic and Atmospheric Administration (NOAA)-National Climatic Data Center (NCDC) reports of occurrences. Hazards are prioritized highest to least threat designating the hazard with the highest threat of occurrence as number one.

Table 3-4 provides the mitigation actions prioritization by jurisdiction. Each jurisdiction was responsible for prioritizing their proposed mitigation actions for the next five years. The jurisdictions took into consideration the impacts of hazards they had experienced over the past five years, as well as the mitigation actions available to help protect their jurisdictions and citizens.

Tables 3-5 is the cornerstone for the hazard profiles that follow in this section. This table contains data from the NOAA NCDC for a defined ten-year study period of January 1, 2003 – December 31, 2013 (which is the beginning year of this grant). The table shows events for all

hazard types and provides the location, date, type, magnitude, deaths and injuries, dollar amounts for property and crop damages, and total damages.

As FEMA guidelines request that detailed event data be provided, the Hazard Mitigation Committee agreed upon the new ten-year study period as a means of establishing a corrected historical reference that utilized verifiable sources.

Event locations in the table labeled as “countywide” refer to an event that affected the entire county, including all municipalities within. If there is an associated amount of damages, they are assumed to be countywide. Countywide events are also listed in each municipality’s event table in the individual Jurisdiction Assessment located in Section Five. There are events labeled for specific unincorporated areas of the county that were identified as affected. Such events will not be repeated in the individual jurisdiction tables since the location was site specific and did not affect an incorporated jurisdiction.

Some events provided by the NOAA/NCDC are reported as statewide occurrences. Hurricanes, droughts, and winter storms often have this type of far-reaching impact. In cases such as this, the event is shown as a countywide event that affected all municipalities. The county’s extent and probability of a hazard will be listed under each event description.

The extent of the hazard provides the range of magnitude or strength that could be experienced by the county if such an event occurred. The hazard is classified using terms of major, minor, and minimum based on the probability of future damage estimates providing information on the range of magnitude or severity the county can anticipate from potential hazardous events. A major ranking requires continuous action and participation from the entire community and has a 100% or greater chance of an annual occurrence. A minor ranking involves fewer people, effort, and area of community and has a 50% - 99% chance of an annual occurrence. A minimum ranking involves a small number of people and plans for a specific action and has a 49% or less chance of an annual occurrence.

Probability is the likelihood that events of particular severities will occur. The ability of scientists and engineers to calculate probability varies considerably depending on the hazard in question. In many areas, flood studies of various kinds can provide reasonably accurate estimates of how often water will reach particular places and elevations. On the other hand, tornadoes and earthquakes are nearly impossible to predict, except in the most general sense. The probability

(frequency) of the various hazards is drawn from a combination of sources, expertise, and the NCDC Storm Event Database for Alabama.

For the 2015 plan update, the probability (%) that an identified hazard will occur on an annual basis was determined using the following formula:

Number of historical or reported events in a time period divided by the number of years the incidents occurred within = Probability of Future Annual Event Occurrences

Example: 13 Extreme Temperature events experienced divided by a 6 year period; $13 \div 6 = >100\%$

A similar formula was used to determine an estimate of the expected damages from each event:

Total amount of damages (in dollars) for each historical or reported event divided by the number of damage causing events within the time period = Estimate of expected future damages

Example: \$172,000 total reported hail damage from 2003-2013 with 21 of those being reported as damage causing; $\$172,000/21=\$8,190$

This page left intentionally blank

**Table 3-1: Escambia County
Hazard Probability of Future Occurrence**

Natural Hazards	Number of Occurrences Between 2003-2013	Probability of Future Occurrence	Area Affected
Thunderstorm	37	>100%	Countywide
Lightning	2	20%	Countywide
Hail	20	>100%	Countywide
Tornado	8	80%	Countywide
Flood/Flash Flood	22	>100%	Countywide
Droughts/Extreme Heat	0	Unknown	Countywide
Winter Storm/Frost Freeze/Heavy Snow/ Ice Storm/Winter Weather/ Extreme Cold	4	40%	Countywide
Hurricane/Tropical Storm/Tropical Depression/High Wind/ Strong Wind	4	40%	Countywide
Sinkhole/Expansive Soil	Unknown	Unknown	Countywide
Landslide	Unknown	Unknown	Countywide
Earthquake	3	Unknown	Countywide
Dam/Levee Failure	Unknown	Unknown	Unincorporated Areas
Wildfire (3-year study period – 1,095 days)	260	>100%	Countywide
<i>Sources: NOAA NCDC Storm Events Database; Alabama Forestry Commission; Alabama Geological Survey, 2015</i>			
Methodology: Probability of Future Occurrences was expressed by dividing the total number of occurrences by the ten-year study period, with the exception of wildfire being a 3-year study period. Zero or unknown denotes no data available to determine the probability of future occurrence or areas affected.			

This page left intentionally blank

**Table 3-2: Escambia County
Hazard Identification by Jurisdiction**

Natural Hazards	Atmore (includes the Poarch Band of Creek Indians)	Brewton	East Brewton	Flomaton	Pollard	Riverview	Escambia County
Thunderstorm	X	X	X	X	X	X	X
Lightning	X	X	X	X	X	X	X
Hail	X	X	X	X	X	X	X
Tornado	X	X	X	X	X	X	X
Flood/Flash Flood	X	X	X	X	X	X	X
Drought/Extreme Heat	X	X	X	X	X	X	X
Winter Storm/Frost Freeze/ Heavy Snow/Ice Storm/ Winter Weather/ Extreme Cold	X	X	X	X	X	X	X
Hurricane/Tropical Storm/ Tropical Depression/High Wind/Strong Wind	X	X	X	X	X	X	X
Sinkhole/Expansive Soil	X	X	X	X	X	X	X
Landslide	X	X	X	X	X	X	X
Earthquake	X	X	X	X	X	X	X
Wildfire	X	X	X	X	X	X	X
Dam/Levee Failure	X	X	X	X	X	X	X

(Source: Participating Jurisdictions and NOAA.gov, 2015)

This page left intentionally blank

**Table 3-3: Escambia County
Prioritized Occurrence Threat by Jurisdiction Based on Past Events**

Natural Hazards	Atmore (includes the Poarch Band of Creek Indians)	Brewton	East Brewton	Flomaton	Pollard	Riverview	Escambia County
Thunderstorm	4	2	5	3	4	3	2
Lightning	6	7	5	5	4	5	7
Hail	3	3	4	5	4	5	4
Tornado	5	7	5	5	4	5	5
Flood/Flash Flood	2	4	2	2	4	2	3
Drought/Extreme Heat	6	7	5	5	4	5	8
Winter Storm/Frost Freeze/ Heavy Snow/ Ice Storm/ Winter Weather/Extreme Cold	3	5	2	3	2	3	6
Hurricane/Tropical Storm/ Tropical Depression/High Wind/Strong Wind	3	5	2	3	2	3	6
Sinkhole/Expansive Soil	6	7	5	5	4	5	8
Landslide	6	7	5	5	4	5	8
Earthquake	3	6	3	4	3	4	6
Wildfire	1	1	1	1	1	1	1
Dam/Levee Failure	6	7	5	5	4	5	8

(Sources: NOAA NCDC Storm Events Database; Alabama Forestry Commission; National Forestry Service; Alabama Geological Survey, 2015)

Hazards are prioritized with the highest threat of occurrence assigned number one based on hazardous events that have occurred within each jurisdiction over the past ten years, with the exception of wildfires that were based on events that have occurred over the past three years. Some natural hazards have equal threats to a jurisdiction; therefore, their threat number will be the same. These prioritized threats may or may not be the same as the mitigation actions prioritization.

This page left intentionally blank

**Table 3-4: Escambia County
Mitigation Actions Prioritization**

Natural Hazards	Atmore (includes the Poarch Band of Creek Indians)	Brewton	East Brewton	Flomaton	Pollard	Riverview	Escambia County
Thunderstorm	2	2	2	2	2	2	2
Lightning	3	3	4	3	6	4	4
Hail	2	2	2	2	4	3	3
Tornado	2	2	2	2	2	2	2
Flood/Flash Flood	1	1	1	1	1	1	1
Drought/Extreme Heat	3	3	4	3	6	4	4
Winter Storm/Frost Freeze/ Heavy Snow/ Ice Storm/Winter Weather/Extreme Cold	3	3	4	3	5	4	4
Hurricane/Tropical Storm/ Tropical Depression/High Wind/Strong Wind	2	2	3	2	3	2	2
Sinkhole/Expansive Soil	3	3	4	3	6	4	4
Landslide	3	3	4	3	6	4	4
Earthquake	3	3	4	3	6	4	4
Wildfire	3	3	4	3	6	4	4
Dam/Levee Failure	3	3	4	3	6	4	4

(Source: Participating Jurisdictions, 2015)

Hazards are prioritized by jurisdictions based on past hazard experiences, vulnerabilities, and available mitigation actions with the hazard having highest priority of mitigation assigned number one. The mitigation actions prioritization may or may not be the same as the prioritized occurrence threats.

This page left intentionally blank

TABLE 3-5: ESCAMBIA COUNTY HAZARD EVENTS

37 Thunderstorm Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database)

<u>Location</u>	<u>County/Zone</u>	<u>St.</u>	<u>Date</u>	<u>Time</u>	<u>T.Z.</u>	<u>Type</u>	<u>Mag</u>	<u>Dth</u>	<u>Inj</u>	<u>PrD</u>	<u>CrD</u>
FLOMATON	ESCAMBIA CO.	AL	04/25/2003	04:10	CST	Thunderstorm Wind	50 kts. EG	0	0	15.00K	0.00K
APPLETON	ESCAMBIA CO.	AL	01/26/2004	05:00	CST	Thunderstorm Wind	50 kts. EG	0	0	8.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	01/26/2004	05:40	CST	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
LITTLE ROCK	ESCAMBIA CO.	AL	06/12/2004	17:30	CST	Thunderstorm Wind	50 kts. EG	0	0	8.00K	0.00K
HUXFORD	ESCAMBIA CO.	AL	06/24/2004	14:30	CST	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
BOYKIN	ESCAMBIA CO.	AL	06/27/2004	13:15	CST	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
ATMORE	ESCAMBIA CO.	AL	05/24/2005	20:10	CST	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	08/15/2006	19:20	CST	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	08/30/2006	16:55	CST	Thunderstorm Wind	50 kts. EG	0	0	12.00K	0.00K
FLOMATON	ESCAMBIA CO.	AL	11/15/2006	07:40	CST-6	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	02/12/2008	18:00	CST-6	Thunderstorm Wind	50 kts. MG	0	0	12.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	02/12/2008	18:10	CST-6	Thunderstorm Wind	56 kts. MG	0	0	0.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	02/17/2008	14:43	CST-6	Thunderstorm Wind	50 kts. EG	0	0	12.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	03/26/2009	03:50	CST-6	Thunderstorm Wind	52 kts. MG	0	0	12.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	03/27/2009	03:58	CST-6	Thunderstorm Wind	60 kts. EG	0	0	35.00K	0.00K
DIXIE	ESCAMBIA CO.	AL	03/27/2009	04:10	CST-6	Thunderstorm Wind	60 kts. EG	0	0	25.00K	0.00K
ROBINSONVILLE	ESCAMBIA CO.	AL	04/13/2009	03:55	CST-6	Thunderstorm Wind	60 kts. EG	0	0	70.00K	0.00K
FLOMATON	ESCAMBIA CO.	AL	05/11/2009	19:00	CST-6	Thunderstorm Wind	52 kts. EG	0	0	20.00K	0.00K
KEEGO	ESCAMBIA CO.	AL	07/02/2009	17:00	CST-6	Thunderstorm Wind	45 kts. EG	0	1	20.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	07/02/2009	17:10	CST-6	Thunderstorm Wind	52 kts. EG	0	1	100.00K	0.00K
ROBERTS	ESCAMBIA CO.	AL	07/26/2009	16:01	CST-6	Thunderstorm Wind	52 kts. EG	0	0	10.00K	0.00K
APPLETON	ESCAMBIA CO.	AL	08/04/2010	16:24	CST-6	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
ROBERTS	ESCAMBIA CO.	AL	10/24/2010	22:00	CST-6	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
FLOMATON	ESCAMBIA CO.	AL	03/09/2011	09:30	CST-6	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	03/09/2011	09:40	CST-6	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
WAWBEEK	ESCAMBIA CO.	AL	05/13/2011	13:40	CST-6	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	06/07/2011	15:14	CST-6	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	06/07/2011	15:15	CST-6	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	06/07/2011	15:15	CST-6	Thunderstorm Wind	52 kts. EG	0	0	10.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	06/07/2011	16:15	CST-6	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
NOKOMIS	ESCAMBIA CO.	AL	07/02/2011	12:20	CST-6	Thunderstorm Wind	52 kts. EG	0	0	7.00K	0.00K
POARCH	ESCAMBIA CO.	AL	02/18/2012	15:24	CST-6	Thunderstorm Wind	52 kts. EG	0	0	2.00K	0.00K
FREEMANVILLE	ESCAMBIA CO.	AL	02/18/2012	15:24	CST-6	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
APPLETON	ESCAMBIA CO.	AL	02/18/2012	15:48	CST-6	Thunderstorm Wind	61 kts. EG	0	0	5.00K	0.00K
ATMORE	ESCAMBIA CO.	AL	06/14/2012	19:25	CST-6	Thunderstorm Wind	56 kts. MG	0	0	0.00K	0.00K
FREEMANVILLE	ESCAMBIA CO.	AL	12/25/2012	20:35	CST-6	Thunderstorm Wind	70 kts. EG	0	0	50.00K	0.00K
ROCKHILL	ESCAMBIA CO.	AL	09/24/2013	17:30	CST-6	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
Totals:								0	2	517.00K	0.00K

2 Lightning Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database)

Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
APPLETON	ESCAMBIA CO.	AL	07/30/2003	16:00	CST	Lightning		0	0	3.00K	0.00K
WAWBEEK	ESCAMBIA CO.	AL	07/06/2009	07:45	CST-6	Lightning		1	0	0.00K	0.00K
Totals:								1	0	3.00K	0.00K

20 Hail Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database)

Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
BREWTON	ESCAMBIA CO.	AL	03/09/2003	08:50	CST	Hail	1.00 in.	0	0	0.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	03/09/2003	09:25	CST	Hail	1.00 in.	0	0	0.00K	0.00K
ATMORE	ESCAMBIA CO.	AL	03/14/2003	17:20	CST	Hail	1.75 in.	0	0	4.00K	0.00K
ATMORE	ESCAMBIA CO.	AL	04/25/2003	18:30	CST	Hail	0.75 in.	0	0	0.00K	0.00K
HUXFORD	ESCAMBIA CO.	AL	05/02/2003	18:10	CST	Hail	1.00 in.	0	0	0.00K	0.00K
WALLACE	ESCAMBIA CO.	AL	05/02/2003	19:15	CST	Hail	0.75 in.	0	0	0.00K	0.00K
ATMORE	ESCAMBIA CO.	AL	05/02/2003	21:25	CST	Hail	0.75 in.	0	0	0.00K	0.00K
FOSHEE	ESCAMBIA CO.	AL	05/03/2003	02:50	CST	Hail	1.00 in.	0	0	0.00K	0.00K
POARCH	ESCAMBIA CO.	AL	05/03/2003	09:35	CST	Hail	0.75 in.	0	0	0.00K	0.00K
ATMORE	ESCAMBIA CO.	AL	05/18/2004	14:10	CST	Hail	0.75 in.	0	0	0.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	04/21/2005	17:40	CST	Hail	0.88 in.	0	0	0.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	05/08/2006	19:10	CST	Hail	1.00 in.	0	0	0.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	05/09/2006	19:35	CST	Hail	2.00 in.	0	0	40.00K	0.00K
EAST BREWTON	ESCAMBIA CO.	AL	06/26/2008	12:00	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	04/02/2009	12:20	CST-6	Hail	0.88 in.	0	0	0.00K	0.00K
WALLACE	ESCAMBIA CO.	AL	04/13/2009	04:15	CST-6	Hail	1.75 in.	0	0	0.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	04/13/2009	04:25	CST-6	Hail	0.75 in.	0	0	0.00K	0.00K
APPLETON	ESCAMBIA CO.	AL	08/04/2010	15:40	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	07/17/2012	15:20	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	07/17/2012	15:42	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
Totals:								0	0	44.00K	0.00K

8 Tornado Events – 01/01/2003 thru 12/31/2013 (4018 days)
 (Source: NOAA NCDC Storm Events Database)

<u>Location</u>	<u>County/Zone</u>	<u>St.</u>	<u>Date</u>	<u>Time</u>	<u>T.Z.</u>	<u>Type</u>	<u>Mag</u>	<u>Dth</u>	<u>Inj</u>	<u>PrD</u>	<u>CrD</u>
WALLACE	ESCAMBIA CO.	AL	02/21/2003	23:35	CST	Tornado	F0	0	0	8.00K	0.00K
DIXIE	ESCAMBIA CO.	AL	09/15/2004	18:20	CST	Tornado	F0	0	0	3.00K	0.00K
ATMORE	ESCAMBIA CO.	AL	07/06/2005	06:20	CST	Tornado	F0	0	0	5.00K	0.00K
HUXFORD	ESCAMBIA CO.	AL	08/29/2005	06:30	CST	Tornado	F0	0	0	5.00K	0.00K
PARKER SPGS	ESCAMBIA CO.	AL	02/17/2008	13:04	CST-6	Tornado	EF2	0	0	700.00K	0.00K
APPLETON	ESCAMBIA CO.	AL	03/26/2009	05:55	CST-6	Tornado	EF1	0	0	30.00K	0.00K
WALLACE	ESCAMBIA CO.	AL	04/15/2011	22:45	CST-6	Tornado	EF1	0	0	100.00K	0.00K
BOYKIN	ESCAMBIA CO.	AL	04/15/2011	23:08	CST-6	Tornado	EF2	0	0	2.600M	0.00K
Totals:								0	0	3.451M	0.00K

22 Flood/Flash Flood Events – 01/01/2003 thru 12/31/2013 (4018 days)
 (Source: NOAA NCDC Storm Events Database)

<u>Location</u>	<u>County/Zone</u>	<u>St.</u>	<u>Date</u>	<u>Time</u>	<u>T.Z.</u>	<u>Type</u>	<u>Mag</u>	<u>Dth</u>	<u>Inj</u>	<u>PrD</u>	<u>CrD</u>
APPLETON	ESCAMBIA CO.	AL	12/14/2009	19:00	CST-6	Flood		0	0	400.00K	0.00K
FLOMATON	ESCAMBIA CO.	AL	12/14/2009	22:00	CST-6	Flood		0	0	362.00K	0.00K
ATMORE	ESCAMBIA CO.	AL	09/24/2013	18:30	CST-6	Flood		0	0	5.00K	0.00K
WEST CENTRAL PORTION	ESCAMBIA CO.	AL	06/06/2003	17:00	CST	Flash Flood		0	0	0.00K	0.00K
COUNTYWIDE	ESCAMBIA CO.	AL	06/30/2003	21:00	CST	Flash Flood		0	0	0.00K	0.00K
COUNTYWIDE	ESCAMBIA CO.	AL	07/01/2003	00:00	CST	Flash Flood		0	0	0.00K	0.00K
POARCH	ESCAMBIA CO.	AL	06/02/2004	10:15	CST	Flash Flood		0	0	0.00K	0.00K
WEST PORTION	ESCAMBIA CO.	AL	09/16/2004	05:00	CST	Flash Flood		0	0	0.00K	0.00K
CENTRAL PORTION	ESCAMBIA CO.	AL	10/19/2004	10:00	CST	Flash Flood		0	0	0.00K	0.00K
COUNTYWIDE	ESCAMBIA CO.	AL	07/10/2005	17:00	CST	Flash Flood		0	0	0.00K	0.00K
COUNTYWIDE	ESCAMBIA CO.	AL	08/29/2005	12:00	CST	Flash Flood		0	0	0.00K	0.00K
ATMORE	ESCAMBIA CO.	AL	11/15/2006	12:00	CST-6	Flash Flood		0	0	0.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	04/01/2007	20:15	CST-6	Flash Flood		0	0	0.00K	0.00K
WALLACE	ESCAMBIA CO.	AL	04/14/2007	17:30	CST-6	Flash Flood		0	0	0.00K	0.00K
BOYKIN	ESCAMBIA CO.	AL	01/31/2008	21:00	CST-6	Flash Flood		0	0	0.00K	0.00K
APPLETON	ESCAMBIA CO.	AL	12/10/2008	07:18	CST-6	Flash Flood		0	0	0.00K	0.00K
ATMORE	ESCAMBIA CO.	AL	12/14/2009	17:50	CST-6	Flash Flood		0	0	1.250M	0.00K
ATMORE	ESCAMBIA CO.	AL	12/14/2009	17:50	CST-6	Flash Flood		0	0	250.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	12/14/2009	18:40	CST-6	Flash Flood		0	0	0.00K	0.00K
ATMORE	ESCAMBIA CO.	AL	05/03/2010	08:00	CST-6	Flash Flood		0	0	0.00K	0.00K
ATMORE	ESCAMBIA CO.	AL	03/09/2011	10:00	CST-6	Flash Flood		0	0	0.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	03/09/2011	10:30	CST-6	Flash Flood		0	0	0.00K	0.00K
Totals:								0	0	2.267M	0.00K

0 Drought/Extreme Heat Events – 01/01/2003 thru 12/31/2013 (4018 days)
 (Source: NOAA NCDC Storm Events Database)

No drought/extreme heat events were reported during 01/01/2003 thru 12/31/2013 by the NOAA NCDC Storm Events Database or Local

4 Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold Events – 01/01/2003 thru 12/31/2013 (4018 days)
 (Source: NOAA NCDC Storm Events Database)

Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	02/12/2010	00:00	CST-6	Winter Storm		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	02/12/2010	00:00	CST-6	Winter Storm		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	02/12/2010	00:00	CST-6	Winter Storm		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	02/12/2010	00:00	CST-6	Winter Storm		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

4 Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind Events – 01/01/2003 thru 12/31/2013 (4018 days)
 (Source: NOAA NCDC Storm Events Database)

Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	09/13/2004	21:00	CST	Hurricane (typhoon)		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	07/09/2005	03:00	CST	Hurricane (typhoon)		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	07/10/2005	14:45	CST	Hurricane (typhoon)		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	06/10/2005	03:00	CST	Tropical Storm		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

0 Sinkhole Event – 01/01/2003 thru 12/31/2013 (4018 days)

No sinkhole events were reported during 01/01/2003 thru 12/31/2013 by the NOAA NCDC Storm Events Database/U.S. Geological Survey or Local

0 Landslide Events – 01/01/2003 thru 12/31/2013 (4018 days)

No landslide events were reported during 01/01/2003 thru 12/31/2013 by the NOAA NCDC Storm Events Database/U.S. Geological Survey/Local

4 Earthquake Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: www.homefacts.com/earthquakes/Alabama.html)

<u>Location</u>	<u>St.</u>	<u>Date</u>	<u>Time</u>	<u>Type</u>	<u>Depth</u>	<u>Mag</u>	<u>Dth</u>	<u>Inj</u>	<u>PrD</u>	<u>CrD</u>
Atmore	AL	9/30/2003		Earthquake	10 miles	3.3	0	0	0.00K	0.00K
Escambia Co.	AL	11/7/2004	11:20 a.m.	Earthquake	3.1 miles	4.4	0	0	0.00K	0.00K
Escambia Co.	AL	2/10/2006	4:14 a.m.	Earthquake	3.1 miles	5.3	0	0	0.00K	0.00K
Escambia Co.	AL	9/10/2006	2:56 p.m.	Earthquake	8.7 miles	5.9	0	0	0.00K	0.00K

No earthquake events were reported during 01/01/2003 thru 12/31/2013 by the NOAA NCDC Storm Events Database/U.S. Geological Survey/Alabama Geological Survey

260 Wildfire Events – 1/1/2010 thru 12/31/2013

(Source: Alabama Forestry Commission)

County	Total # of Fires 2010-2013	Average # of Fires Per Year	Total Acres Burned 2010-2013	Average Acres Burned Per Year	Average Fire Size in Acres Per Year
Escambia	260	87	5537.56	1,846	21

0 Dam/Levee Failure Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database/Local Input)

No dam/levee failure events occurred or were reported during 01/01/2003 thru 12/31/2013.

This page left intentionally blank

Hazard Profiles

I. Thunderstorms

A thunderstorm is a convective cloud that often produces heavy rain, wind gusts, thunder, lightning, and hail. Escambia County experiences many thunderstorms each year. The county is most susceptible to thunderstorms during the spring, summer, and late fall. Most of the damage caused by thunderstorms results from straight-line winds, lightning, flash flooding, and hail. Occasionally, thunderstorms will spawn tornados. The Poarch Creek Indian Reservation is located near the City of Atmore; therefore due to their proximity to the City of Atmore, the thunderstorm profile applicable to the City of Atmore also applies to the Tribe as well.

Primary Effects from thunderstorms in Escambia County would include:

1. High Winds, Straight-line Winds
2. Lightning
3. Flooding
4. Hail
5. Spawning Tornados

Hazardous results from significant thunderstorms in Escambia County would include:

1. High winds can cause downed trees and electrical lines resulting in loss of power
2. Severe storms are capable of producing intense lightning that poses many threats to people and infrastructure and can ignite fires.
3. Heavy rains can produce severe storm water run-off in developed areas, and cause bodies of water to breach their banks.
4. Large hail can injure people and livestock and damage crops.
5. Severe thunderstorms can produce tornados that destroy anything in its path, resulting in loss of power, shelter, and potential loss of life.

The National Weather Service reported 37 severe thunderstorms during the ten-year study period of 2003 - 2013. An estimated \$517,000 in property damage and no crop damage resulted from these storms. Two injuries and no deaths were reported during these thunderstorm

events. **Table 3-5** shows the historical occurrences of severe thunderstorms during the study period. Each jurisdiction is at risk for thunderstorm events. Of the storms reported, none affected the entire county, 16 occurred in an unincorporated county area, and the remaining 21 affected only specific municipalities.

On July 2, 2009, a thunderstorm produced strong winds that caused damage to Southwest Alabama. Wind gusts estimated at 60 mph blew down a tree onto a brick framed house and trapped a 70 year old female inside. She suffered minor injuries, while the house was a total loss. No crop damages were reported. Property damages of \$100,000 were reported as a result of this event. Another event on this same day and during the same storm system occurred in the Keego (unincorporated) area downing several trees south of County Road 18 a few miles west of Brewton. A McCall area woman was injured and trapped in her residence when strong winds sent a large oak tree crashing through her home at 141 Brantley Lane. The McCall VFD was dispatched to the residence of Wanda Straiton at 6:18 p.m. CDT. While in route to the scene, the fire department had to clear several trees blocking Jernigan Road, restricting access to Brantley Lane. Mrs. Straiton was treated for her injuries and released at a local area hospital that evening. No crop damages were reported. Property damages of \$20,000 were reported as a result of this event.

On December 25, 2012, a powerful storm system moved out of the plains and produced numerous strong thunderstorm events. Winds estimated at 81 mph caused damage near the Fast Lane Gas Station on Jack Springs Road ½ mile south of Exit 54 and I65. The strong winds overturned 18 wheelers. A house behind the gas station caught fire. No injuries or deaths were reported. Property damages of \$50,000 resulted.

Escambia County experienced 37 thunderstorm events in a 10 year period resulting in a greater than 100% (3.70) probability that a thunderstorm event will occur on an annual basis. The total amount of damages for the 37 thunderstorm events was \$517,000 with 33 thunderstorm events causing damage resulting in an estimated \$15,667 of expected annual damages from future events. The referenced thunderstorm event(s) are the ones that resulted in the most damages, deaths, and injuries during the past ten year period and serves as the extent/range of magnitude or severity that could be experienced by Escambia County due to a thunderstorm

event; the ranking is minor to major. The extent of thunderstorm winds for Escambia County is 81 miles per hour winds.

II. Lightning

Lightning is a natural phenomenon associated with all thunderstorms but can occur in the absence of a storm. Lightning typically occurs as a by-product of a thunderstorm. Lightning is a giant spark of electricity in the atmosphere or between the atmosphere and the ground. In the initial stages of development, air acts as an insulator between the positive and negative charges in the cloud and between the cloud and the ground; however, when the differences in charges becomes too great, this insulating capacity of the air breaks down and there is a rapid discharge of electricity that we know as lightning. Lightning can occur between opposite charges within the thunderstorm cloud (Intra Cloud Lightning) or between opposite charges in the cloud and on the ground (Cloud-To-Ground Lightning). Cloud-to-ground lightning is divided two different types of flashes depending on the charge in the cloud where the lightning originates. Thunder is the sound made by a flash of lightning. As lightning passes through the air it heats the air quickly. This causes the air to expand rapidly and creates the sound wave we hear as thunder. Normally, you can hear thunder about 10 miles from a lightning strike. Since lightning can strike outward 10 miles from a thunderstorm, if you hear thunder, you are likely within striking distance from the storm. Cloud-to-ground lightning can kill or injure people by either direct or indirect means. The lightning current can branch off to strike a person from a tree, fence, pole, or other tall object. It is not known if all people are killed who are directly struck by the flash itself. In addition, electrical current may be conducted through the ground to a person after lightning strikes a nearby tree, antenna, or other tall object. The current also may travel through power lines, telephone lines, or plumbing pipes to a person who is in contact with an electric appliance, telephone, or plumbing fixture. Lightning may use similar processes to damage property or cause fires.

The action of rising and descending air in a thunderstorm separates positive and negative charges, with lightning the result of the buildup and discharge of energy between positive and negative charge areas. Water and ice particles may also affect the distribution of the electrical charge. In only a few millionths of a second, the air near a lightning strike is heated to 50,000°F, a temperature hotter than the surface of the sun. Thunder is the result of the very rapid heating and cooling of air near the lightning that causes a shock wave.

The hazard posed by lightning is significantly underrated. High winds, rainfall, and a darkening cloud cover are the warning signs for possible cloud-to-ground lightning strikes. While many lightning casualties happen at the beginning of an approaching storm, more than half of lightning deaths occur after a thunderstorm has passed. The lightning threat diminishes after the last sound of thunder, but may persist for more than 30 minutes. When thunderstorms are in the area, but not overhead, the lightning threat can exist when skies are clear. Lightning has been known to strike more than 10 miles from the storm in an area with clear sky above. Lightning strikes can cause power outages, fires, electrocution, disruptions to communication systems, personal injuries, and deaths. **Table 3-5** shows the historical occurrences of lightning during the study period. The Poarch Creek Indian Reservation is located near the City of Atmore; therefore due to their proximity to the City of Atmore, the lightning profile applicable to the City of Atmore also applies to the Tribe as well.

According to the National Oceanic and Atmospheric Administration (NOAA), an average of 20 million cloud-to-ground flashes has been detected every year in the continental United States. About half of all flashes have more than one ground strike point, so at least 30 million points on the ground is struck on the average each year. In addition, there are roughly 5 to 10 times as many cloud-to-cloud flashes as there are to cloud-to-ground flashes (NOAA, July 7, 2003). During the years 2004-2013, Alabama experienced 11 deaths due to lightning (NOAA, December 18, 2014). The months of June through September are the deadliest as far as lightning is concerned. In an average year, three people will be struck and killed by lightning in Alabama and at least six will be injured. (*Source: National Weather Service/Lightning Safety Accessed 11/16/14; NOAA, December 18, 2014*).

The NOAA NCDC reported two lightning events during the ten-year study period of 2003-2013 with one death reported. The entire planning area of the county is equally at risk for a lightning event.

On July 30, 2003, lightning struck an abandoned oil storage tank near Appleton. The tank only had a small amount of oil in it; therefore, the fire department was able to extinguish the flames before the fire spread. No injuries or deaths occurred. Property damages of \$3,000 resulted and no crop damages were reported.

On the morning of July 6, 2009, Mrs. Dawn Yoder of Atmore, Alabama was struck and seriously injured while taking out the garbage at her residence. She was found 10 to 15 minutes after the lightning strike by her family members and transported to the hospital where she passed away on July 8. No property or crop damages were reported.

Escambia County experienced 2 lightning events in a 10 year period resulting in a 20% (0.20) or probability that a lightning event will occur on an annual basis. The total amount of damages for the 2 lightning events was \$0.00 with 0 lightning events causing damage resulting in an estimated \$0 (unknown) of expected annual damages from future events. The referenced lightning event(s) are the ones that resulted in the most damages, deaths, and injuries during the past ten year period and serves as the extent/range of magnitude or severity that could be experienced by Escambia County due to a lightning event; the ranking is minimum to minor. According to Vaisala's National Lightning Detection Network (NLDN), Escambia County's lightning extent is 6 -28 flashes per square mile per year.

Primary effects from lightning in Escambia County would include:

1. Power Outages
2. Wild Fires
3. Electrocutation
4. Disruption of Communication Waves

Hazardous results from significant lightning in Escambia County would include:

1. Power outages result in tremendous losses for food distributors and individuals due to loss of refrigeration as well as disruptions to routine business operations.
2. Fires destroy most everything it comes in contact with and also can be detrimental to the health of any living organism due to the massive smoke cloud it produces.
3. Electrocutation of electronic device such as water and sewer pumps can cause disruption in service leading to unsanitary conditions and lack of potable water.
4. Disrupted communications from electrical storms can result in inability to communicate with other agencies, making preparation or recovery from a storm nearly impossible.

This page left intentionally blank

III. Hail

Hail is frequently associated with severe thunderstorms. Hail is an outgrowth of severe thunderstorms and develops within a low-pressure front as warm air rises rapidly in to the upper atmosphere and is subsequently cooled, leading to the formation of ice crystals. These are bounced about by high-velocity updraft winds and accumulate into frozen droplets, falling as precipitation after developing enough weight (FEMA, 1997).

The National Weather Service (NWS) defines severe thunderstorms as those with downdraft winds in excess of 58 miles an hour and/or hail at least 3/4 inches in diameter. While only about 10 percent of thunderstorms are classified as severe, all thunderstorms are dangerous because they produce numerous dangerous conditions, including one or more of the following – hail, strong winds, lightning, tornadoes, and flash flooding (National Weather Service – Flagstaff). The size of hailstones varies and is related to the severity and size of the thunderstorm that produced it. The higher the temperatures at the Earth’s surface, the greater the strength of the updrafts, and the greater the amount of time the hailstones are suspended, giving the hailstones more time to increase in size. Hailstones vary widely in size, as shown in **Table 3-6**. Note that penny size (3/4 inches in diameter) or larger hail is considered severe.

Table 3-6: Estimating Hail Size

Size	Inches in Diameter
Pea	.25 - .50 inch
Penny	.75 inch
Nickel	.88 inch
Quarter	1 inch
Half Dollar	1.25 inches
Walnut/Ping-Pong Ball	1.50 inches
Golf Ball	1.75 inches
Hen Egg	2 inches
Tennis Ball	2.5 inches
Baseball	2.75 inches
Tea Cup	3 inches
Grapefruit	4 inches
Softball	4.5 inches
<i>Source: NCDC.NOAA.gov, 2016</i>	

Hailstorms occur most frequently during the late spring and early summer, when the jet stream moves northward across the Great Plains. During this period, extreme temperature changes occur from the surface up to the jet stream, resulting in the strong updrafts required for hail formation.

The NOAA NCDC reported 20 hail events during the ten-year study period of 2003-2013. An estimated \$44,000 in property damage resulted from these events. No crop damage, injuries, or deaths were reported during these hail events. **Table 3-5** shows the historical occurrences of hail events during the study period. Each jurisdiction is at risk for hail. Of the events reported, none affected the entire county, 5 occurred in an unincorporated county area, and the remaining 15 affected only specific municipalities. The Poarch Creek Indian Reservation is located near the City of Atmore; therefore due to their proximity to the City of Atmore, the hail profile applicable to the City of Atmore also applies to the Tribe as well.

On March 14, 2003, hail up to golf ball size (1.75 inches) fell, resulting in \$4,000 in property damage. Golf ball sized hail from a thunderstorm broke several automobile windshields along I-65 near Atmore. Several trees also had leaves stripped from them as a result of the large hail. The hail lasted for several minutes. Vehicles had to pull off the interstate because of low visibilities. (*Source: NCDC NOAA*)

On May 9, 2006, hail (2 inches in diameter) hen egg sized damaged several vehicles in and around the Brewton area. This event lasted about ten minutes and resulted in \$40,000 property damages. No injuries, deaths or crop damages were reported.

Escambia County experienced 20 hail events in a 10 year period resulting in a greater than 100% (2.00) probability that a hail event will occur on an annual basis. The total amount of damages for the 20 hail events was \$44,000 with 2 hail events causing damage resulting in an estimated \$22,000 of expected annual damages from future events. The referenced hail event(s) is/are the one(s) that resulted in the most damages, deaths, and injuries during the past ten year period and serves as the extent/range of magnitude or severity that could be experienced by

Escambia County due to a hail event; the ranking is minor to major. The hail extent for Escambia County is two inches in diameter which is hen egg sized hail.

Primary Effects from Hail in Escambia County would include:

1. Property Damage
2. Crop Damage
3. Communication equipment damage
4. Livestock loss and injury

Hazardous results from significant Hail in Escambia County would include:

1. Any size hail can damage exposed real and personal property. Hail is a major problem for car dealerships, as the unprotected lots of cars receive major damage.
2. Heavy hail is capable of destroying entire crop yields. Farmers of above ground crops are especially concerned with hail as it is extremely detrimental to the crop.
3. Communication equipment, such as receivers, is susceptible to large hail. These instruments can be seriously damaged or destroyed by large hail.
4. Large hail is a danger to livestock of all sorts and is a threat farmers must consider. Hundreds of thousands of dollars are invested in these animals which may be injured or killed in a hailstorm.

This page left intentionally blank

IV. Tornadoes

Tornadoes are rotating columns of air extending downward to the ground with recorded winds in excess of 300 miles per hour. Most tornadoes last less than 30 minutes, but can exist for more than an hour. In Alabama the typical tornado season extends from March through early June, with April and June being peak months for tornado activity. Additionally, Alabama experiences a secondary tornado season from November through December. **Figure 3-1** shows the general paths of tornadoes across the United States.

Figure 3-2 shows the FEMA designated wind zones in the United States. Escambia County is located in Zone III which warrants profiling. A total of 8 tornadoes occurred in Escambia County according to NOAA NCDC during 2003 - 2013. An estimated \$3,451,000 in property damage, no crop damage, deaths or injuries occurred as a result of the reported tornadoes.

Each jurisdiction has been affected by tornado activity in the past. The location of Escambia County in Wind Zone III, past occurrences of tornadoes, and the potential for future occurrences to cause damage, death, and injuries leaves Escambia County vulnerable to and at risk for tornadoes. The Poarch Creek Indian Reservation is located near the City of Atmore; therefore due to their proximity to the City of Atmore, the tornado profile applicable to the City of Atmore also applies to the Tribe as well.

On April 15, 2011, an EF2 tornado, 5.82 miles in length and 300 yards wide, touched down approximately one half mile west of Damascus Road. Near and along Damascus Road the tornado destroyed one wood frame home and severely damaged or affected several other brick homes and adjacent manufactured homes. The tornado rolled one single-wide manufactured home onto its roof trapping the occupants inside for several minutes. Several minor injuries were reported, yet not identified by NOAA.gov. The tornado continued east crossing Eddie Jackson Road, Hoomesville Road and Brooklyn Road where trees were snapped or uprooted along a 200 yard wide path. The tornado continued moving northeast into Conecuh County. Alabama Forestry Commission estimated the timber losses along this tornado track to be near \$2.1 million dollars. Property damage to homes was estimated to be near \$500,000 dollars. A total of \$2.6

million in property damages resulted from this tornado event. No deaths, injuries, or crop damages were reported.

On February 17, 2008, an EF2 tornado, 8.7 miles in length and 500 yards wide, touched down over a heavily forested area about 5 miles southwest of Dixie and then moved northeast across the forest, crossing Highway 29 just to the west of Dixie. The tornado then continued northeast across heavily forested areas moving into Western Covington County 3.1 miles northeast of Dixie. Significant tree damage occurred along the track of the tornado with structural damage confined to the populated area of Dixie. Three homes were destroyed in Dixie and two large towers were damaged. Two occupants of one of the homes that were destroyed in Dixie got into an interior bathroom on the lowest floor of the two story house and covered themselves with cushions. The tornado tore off the top story of the home and damaged the lower floor, but the two residents were unharmed. Some century old headstones were blown over in a cemetery just north of Dixie. No injuries, deaths, or crop damages were reported. Property damages of \$700,000 resulted.

Escambia County experienced 8 tornado events in a 10 year period resulting in a greater than 80% (0.80) probability that a tornado event will occur on an annual basis. The total amount of damages for the 8 tornado events was \$3,451,000 with 8 tornado events causing damage resulting in an estimated \$431,375 of expected annual damages from future events. The referenced tornado event(s) are the ones that resulted in the most damages, deaths, and injuries during the past ten year period and serves as the extent/range of magnitude or severity that could be experienced by Escambia County due to a tornado event; the ranking is major. The tornado extent for Escambia County is an EF2 having 111-135 three second gust miles per hour winds according to NOAA's Operational EF Scale.

Primary effects from Tornadoes in Escambia County would include:

1. Loss of life
2. Property damage
3. Infrastructure destruction and damage
4. Sanitation and water delivery interruption

Hazardous results from significant Tornadoes in Escambia County would include:

1. Collapse of structures can leave people homeless.
2. Roadways may become blocked by debris. Damage may destroy automobiles, creating additional hardships to individuals and families and business operations.
3. High wind speeds associated with a tornado can destroy anything in its path. Power poles topple, communication receivers are destroyed, and water sanitation and treatment plants are offline.
4. Due to destruction, sanitation crews are unable to remove massive amounts of waste, and water delivery is disrupted. This can lead to an increase in disease-carrying insects and lack of potable water.

Figure 3-1: Generalized Tornado Paths

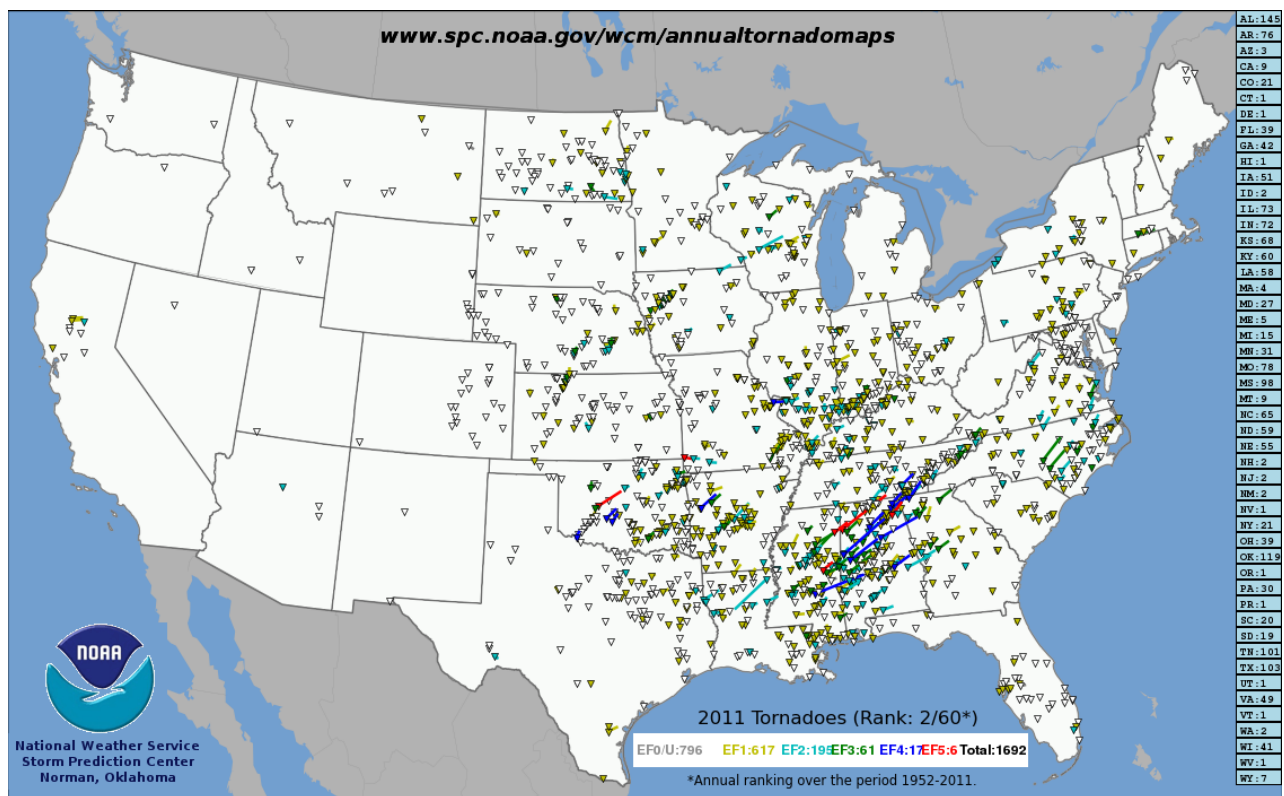


Figure 3-2: Wind Zones in the United States

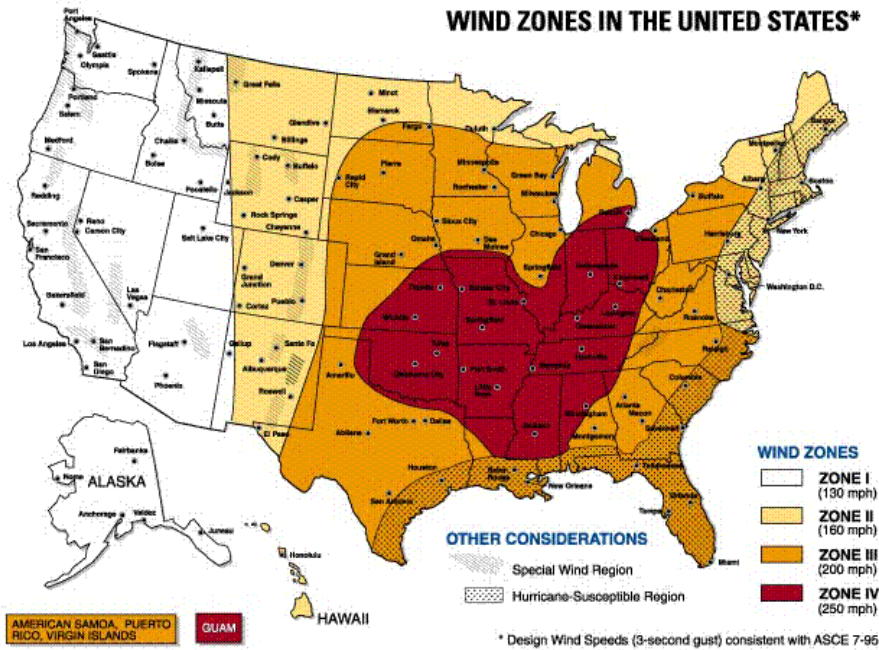


Figure 1.2 Wind zones in the United States
 Source: www.fema.gov

Tornados are now measured using the new Enhanced Fujita Tornado Scale by examining the damage caused by the tornado after it passes over man-made structures and vegetation. The new scale was put into use in February of 2007. Due to the study period of the plan, 2003-2013, events shown in **Table 3-5** express the magnitude of tornados using the original Fujita scale and the enhanced Fujita scale. Below is a table comparing the estimated winds in the original F-scale and the operational EF-scale that is currently in use by the National Weather Service, as well as damage descriptions of each category. Like the original Fujita scale, there are six categories from zero to five that represent damage in increasing degrees. The new scale incorporates the use of 28 Damage Indicators and 8 Degrees of Damage to assign a rating.

Table 3-7: Fujita Tornado Scales

Fujita Tornado Scale

Category	Wind Speed	Description of Damage
F0	40-72 mph	Light damage. Some damage to chimneys; break branches off trees; push over shallow-rooted trees; damage to sign boards.
F1	73-112 mph	Moderate damage. The lower limit is the beginning of hurricane speed. Roof surfaces peeled off; mobile homes pushed off foundations or overturned; moving autos pushed off roads.
F2	113-157 mph	Considerable damage. Roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light-object missiles generated.
F3	158-206 mph	Severe damage. Roofs and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted; cars lifted off ground and thrown.
F4	207-260 mph	Devastating damage. Well-constructed houses leveled; structures with weak foundations blown off some distance; cars thrown and large missiles generated.
F5	261-318 mph	Incredible damage. Strong frame houses lifted off foundations and carried considerable distance to disintegrate; automobile-sized missiles fly through the air in excess of 100-yards; trees debarked.

Enhanced Fujita Tornado Scale

Category	Wind Speed	Description of Damage
EF0	65-85 mph	Light damage. Peels surface off some roofs; some damage to gutters or siding; branches broken off trees; shallow-rooted trees pushed over.
EF1	86-110 mph	Moderate damage. Roofs severely stripped; mobile homes overturned or badly damaged; loss of exterior doors; windows and other glass broken.
EF2	111-135 mph	Considerable damage. Roofs torn off well-constructed houses; foundations of frame homes shifted; mobile homes completely destroyed; large trees snapped or uprooted; light-object missiles generated; cars lifted off ground.
EF3	136-165 mph	Severe damage. Entire stories of well-constructed houses destroyed; severe damage to large buildings such as shopping malls; trains overturned; trees debarked; heavy cars lifted off the ground and thrown; structures with weak foundations blown away some distance.
EF4	166-200 mph	Devastating damage. Well-constructed houses and whole frame houses completely leveled; cars thrown and small missiles generated.
EF5	>200 mph	Incredible damage. Strong frame houses leveled off foundations and swept away; automobile-sized missiles fly through the air in excess of 100 m (109 yd); high-rise buildings have significant structural deformation; incredible phenomena will occur. So far only one EF5 tornado has been recorded since the Enhanced Fujita Scale was introduced on February 1, 2007.

Source: NOAA, NWS, Storm Prediction Center, 2007.

This page left intentionally blank

V. Floods/Flash Floods

There are three types of flooding that affect Escambia County: (1) general flooding, (2) storm water runoff, and (3) flash flooding. General flooding occurs in areas where development has encroached into flood-prone areas. Storm water runoff causes flooding in areas that have inadequate drainage systems. Flash flooding is caused when a large amount of rain falls within a short period of time. **Table 3-5** shows severe flooding events in Escambia County recorded by NOAA NCDC. Between 2003 and 2013 there were 19 occurrences of flash flooding and 3 floods in the county. Damages from these events totaled \$2,267,000 in property damages, no crop damages, deaths or injuries were reported.

Flash floods involve a rapid rise in water level, high velocity, and large amounts of debris, which can lead to significant damage that includes the tearing out of trees, undermining of buildings and bridges, and scouring new channels. The intensity of flash flooding is a function of the intensity and duration of rainfall, steepness of the watershed, stream gradients, watershed vegetation, natural and artificial flood storage areas, and configuration of the streambed and floodplain. Dam failure and ice jams may also lead to flash flooding.

Dam-break floods may occur due to structural failures (e.g., progressive erosion), overtopping or breach from flooding, or earthquakes. Dam failures are potentially the worst flood events. Dam safety has been an ongoing hazard mitigation issue in the State of Alabama for the past decade, especially for small dams that are privately owned and poorly maintained. No state law currently exists to regulate any private dams or the construction of new private dams, nor do private dams require federal licenses or inspections. There have been several attempts in the State of Alabama to pass legislation that would require inspection of dams on bodies of water over 50 acre-feet or dams higher than 25 feet. Enactment has been hampered by the opposition of agricultural interest groups and insurance companies.

Approximately 1,700 privately owned dams would fit into the category proposed by the law. According to *HAZUS MH 2.1*, Escambia County has 18 High Density Polyethylene (HPDE - Earth) Dams, including one that is mostly in Conecuh County but on the Escambia-Conecuh County line. No historical records are available of dam/levee failures in Escambia County. When a dam fails, a large quantity of water is suddenly released downstream, destroying

anything in its path. The area impacted by the water emitted by dam failure would encounter the same risks as those in a flood zone during periods of flooding. The area directly affected by the water released during a dam failure is not county wide.

The probability of future occurrences of dam/levee failure events cannot be characterized on a countywide basis because of the lack of information available. The qualitative probability is rated low because the overall area affected is low and impacts are localized. This rating is intended only for general comparison to other hazards that are being considered.

Local drainage floods may occur outside of recognized drainage channels or delineated flood plains for a variety of reasons, including concentrated local precipitation, a lack of infiltration, inadequate facilities for drainage and storm water conveyance, and/or increased surface runoff. Such events often occur in flat areas, particularly during winter and spring in areas with frozen ground, and also in urbanized areas with large impermeable surfaces. High groundwater flooding is a seasonal occurrence in some areas, but may occur in other areas after prolonged periods of above-average precipitation. The Poarch Creek Indian Reservation is located near the City of Atmore; therefore due to their proximity to the City of Atmore, the flood/flash flood profile applicable to the City of Atmore also applies to the Tribe as well.

Floods are described in terms of their extent (including the horizontal area affected and the vertical depth of floodwaters) and the related probability of occurrence. Flood studies use historical records to determine the probability of occurrence for different extents of flooding. The probability of occurrence is expressed in percentages as the chance of a flood of a specific extent occurring in any given year. It is also often referred to as the “100-year flood” since its probability of occurrence suggests it should only occur once every 100 years. This expression is, however, merely a simple and general way to express the statistical likelihood of a flood; actual recurrence periods are variable from place to place. Smaller floods occur more often than larger (deeper and more widespread) floods. Thus, a “10-year” flood has a greater likelihood of occurring than a “100-year” flood. **Table 3-8** shows a range of flood recurrence intervals and their probabilities of occurrence.

Table 3-8: Flood Probability Terms	
Flood Recurrence Intervals	Percent Chance of Annual Occurrence
10-Year	10.0%
50-Year	2.0%
100-Year	1.0%
500-Year	0.2%
<i>(Source: FEMA, August 2001)</i>	

On December 14, 2009, heavy rain produced widespread flash flooding in Atmore, Flomaton and Brewton. In Atmore, numerous homes, businesses, and roads were flooded. Several cars were stranded in the streets of downtown Atmore. Property damages of \$1,500,000 resulted. On this same day, a flooding event occurred as significant water level rose along the Big Escambia Creek due to persistent heavy rains falling in the river basin resulted in significant flooding of several homes and businesses in the northern sections of Flomaton. Property damages of \$362,000 resulted. Another flooding event occurred in Appleton. Flooding along the Burnt Corn Creek and Murder Creek resulted in major flooding of downtown businesses in Brewton. Property damages of \$400,000 resulted. No deaths, injuries or crop damages were reported.

Escambia County experienced 22 flood/flash flood events in a 10 year period resulting in a 100% (2.20) probability that a flood/flash flood event will occur on an annual basis. The total amount of damages for the 22 flood/flash flood events was \$2,267,000 with 5 flood/flash flood events causing damage resulting in an estimated \$453,400 of expected annual damages from future events. The referenced flood/flash flood event(s) are the ones that resulted in the most damages, deaths, and injuries during the past ten year period and serves as the extent/range of magnitude or severity that could be experienced by Escambia County due to a flood/flash flood event; the ranking is minor to major. According to NCDC.NOAA.gov, the extent of floods/flash floods in Escambia County is eight to ten inches of water over roadways.

Primary Effects from Floods in Escambia County would include:

1. Loss of life
2. Property damage
3. Crop damage
4. Dam and levee failure

Hazardous results from significant flood in Escambia County would include:

1. Rising water levels can quickly sweep people along in its path.
2. Rapidly moving water destroys anything in its path and also leaves hazardous mold and breed insects.
3. Periods of standing water kill inadaptible plants, and flowing water removes sediment and nutrients from the soil.
4. Breached dams and levees allow water to flood into the surrounding floodplain resulting in destruction of crops and property.

Dam failures may result from one or more the following:

1. Prolonged periods of rainfall and flooding (the cause of most failures)
2. Inadequate spillway capacity which causes excess overtopping flows
3. Internal erosion erosions due to embankment or foundation leakage or piping
4. Improper maintenance
5. Improper design
6. Negligent operation
7. Failure of upstream dams
8. Landslides into reservoirs
9. High winds
10. Earthquakes

Flood Assessment Tools

Programs

Escambia County participates in the *National Flood Insurance Program (NFIP)*. The *NFIP* allows property owners to purchase federally sponsored flood insurance. The *NFIP* maps

communities in order to establish Flood Risk Zones or Special Flood Hazards Areas. These hazard areas are then mapped on the *Flood Insurance Rate Maps (FIRMS)*. *FIRMS* are used to assess the risks of floods and aid in proper floodplain management. The National Flood Insurance Program (NFIP) requires local participation. **Table 3-9** shows the current NFIP status of each jurisdiction. Flood Mitigation Assistance Program (FMA) - This program now allows for additional cost share flexibility: up to 100% federal cost share for severe repetitive loss properties; up to 90% federal costs share for repetitive loss properties; and 75% federal cost share for NFIP insured properties.

The Repetitive Flood Claims (RFC) and Severe Repetitive Loss (SRL) Grant Programs were eliminated by the Biggert-Waters Flood Insurance Reform Act of 2012. Elements of these flood grant programs have been incorporated into FMA.

Regulations

The *National Pollutant Discharge Elimination System (NPDES)* requires cities to obtain a NPDES permit for the discharge of wastewater/storm water. This program will address residential and commercial land uses, illicit discharges and improper disposal, industrial facilities, and construction sites.

Additionally, Escambia County and each jurisdiction have various plans and regulatory tools in place to aid in hazard mitigation as shown earlier in the plan in **Table 1-1**.

Table 3-9: Escambia County National Flood Insurance Program Status by Jurisdiction						
CID	Community Name	Initial FHBM Identified	Initial FIRM Identified	Current Eff. Map Date	Reg-Emer Date	Tribal
010251#	Escambia County	10/27/78	09/28/07	06/05/12	09/28/07	No
010071#	City of Atmore	04/05/74	06/24/77	06/05/12 (M)	06/24/77	No
010072#	City of Brewton	12/07/73	12/18/79	06/05/12	12/18/79	No
010073#	City of East Brewton	11/23/73	12/04/79	06/05/12	12/04/79	No
010074#	Town of Flomaton	11/23/73	12/17/87	06/05/12	12/17/87	No
010075#	Town of Pollard	01/31/75	09/28/07	06/05/12 (M)	09/28/07	No
010076#	Town of Riverview	08/30/74	09/04/86	06/05/12	09/04/86	No
<i>Source: FEMA Community Status Book Report as of May 6, 2015</i> <i>Key: (M) = No Elevation Determined – All Zone A, C and X</i>						

Repetitive Loss Properties

Repetitive loss properties are those for which two or more losses of at least \$1,000 each have been paid under the National Flood Insurance Program (NFIP) within any 10-year period since 1978. *FEMA – Local Multi-Hazard Mitigation Planning Guidance, July 1, 2008.*

Escambia County has no reported Repetitive Loss properties or Severe Repetitive Loss properties at this time.

Flood Prone Areas

Escambia County is prone to flooding along the Burnt Corn and Murder Creeks. The confluence of these creeks is located between Brewton and East Brewton and has been the source of major flooding in the past. The river that causes flooding in the county is the Conecuh River and its tributary. Riverview along the tributaries of the Conecuh River and Crossway Creek; West Brewton along the tributary of Burnt Corn Creek; Brewton along the tributary of Murder Creek and the Creeks of Little Juniper and Murder; Southwest Brewton along May Branch; Northeast Pollard along the tributary of Jernigan Creek; Chrysler along Little River; Kirkland along the tributary of Murder Creek; Little River Church along Jim Boone Branch; South Pollard along the off stream of Murder Creek and along Mill Creek; and Pollard along Jernigan Creek tributary are also prone to flooding.

This page left intentionally blank

VI. Droughts/Extreme Heat

Drought occurs when there is a deficiency of precipitation over an extended period of time. Climatic factors, such as high temperature, high winds, and low relative humidity, can contribute to the severity of a drought. No society is immune to the social, economic, and environmental impacts of a drought. There are two primary types of drought: meteorological and hydrological droughts. These events can result in agricultural and socioeconomic droughts.

Meteorological droughts are defined as the degree of dryness as compared to the normal precipitation for the area over the duration of the dry season. This type of drought is specific to a given region since atmospheric conditions and precipitation vary from one region to the next.

Hydrological droughts are associated with the effects of precipitation deficiencies on surface or groundwater supplies. Hydrological droughts do not occur as often as meteorological or agricultural droughts. It takes longer for precipitation deficiencies to show up in soil moisture, stream flow, groundwater levels, and reservoir levels. Hydrological droughts have an immediate impact on crop production, but reservoirs may not be affected for several months. Climate, changes in land use, land degradation, and the construction of dams can have adverse effects on the hydrological system especially in drought conditions.

Agricultural droughts occur when the moisture in the soil no longer meets the needs of the crops.

Socioeconomic droughts occur when physical water shortage begins to affect people and their quality of life.

A drought's severity depends on numerous factors, including duration, intensity, and geographic extent as well as regional water supply demands by humans and vegetation. Due to its multidimensional nature, drought is difficult to define in exact terms and also poses difficulties in terms of comprehensive risk assessments.

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.

Droughts may cause a shortage of water for human and industrial consumption, hydroelectric power, recreation, and navigation. Water quality may also decline and the number and severity of wildfires may increase. Severe droughts may result in the loss of agricultural crops and forest products, undernourished wildlife and livestock, lower land values, and higher unemployment.

Extreme summer heat is the combination of very high temperatures and exceptionally humid conditions. If such conditions persist for an extended period of time, it is called a heat wave (FEMA, 1997). Heat stress can be indexed by combining the effects of temperature and humidity, as shown in **Table 3-10**. The index estimates the relationship between dry bulb temperatures (at different humidity) and the skin's resistance to heat and moisture transfer - the higher the temperature or humidity, the higher the apparent temperature.

In addition to affecting people, severe heat places significant stress on plants and animals. The effects of severe heat on agricultural products, such as cotton, may include reduced yields and even loss of crops (Brown and Zeiher, 1997). Similarly, cows may become overheated, leading to reduced milk production and other problems. (Garcia, September 2002).

Drought is a natural event that, unlike floods or tornadoes, does not occur in a violent burst but gradually happens; furthermore, the duration and extent of drought conditions are unknown because rainfall is unpredictable in amount, duration and location. Drought events can potentially affect the entire county. The Poarch Creek Indian Reservation is located near the City of Atmore; therefore due to their proximity to the City of Atmore, the drought/extreme heat profile applicable to the City of Atmore also applies to the Tribe as well.

The Draft Alabama Drought Management Plan (DMP), developed by the Alabama Department of Economic and Community Affairs – Office of Water Resources (ADECA-OWR), defines drought in terms of several indices that describe the relative amounts of surface water flow, groundwater levels, and recent precipitation as compared to localized norms. Because

drought is defined in relative terms, it can be stated that all areas of the county are susceptible to drought.

The National Weather Service uses two indexes to categorize drought. The most accurate index of short-term drought is the Crop Moisture Index (CMI). This index is effective in determining short-term dryness or wetness affecting agriculture. The most accurate index of long-term drought is the Palmer Index (PI). It has become the semi-official index of drought.

During the past ten years, Escambia County has not experienced drought or excessive heat events; therefore, there are no events to reference.

Escambia County experienced 0 or unknown drought/extreme heat events in a 10 year period resulting in an unknown probability that a drought/extreme heat event will occur on an annual basis. The total amount of damages for the drought/extreme heat events is unknown with an unknown number of drought/extreme heat events causing damage resulting in an unknown amount of expected annual damages from future events. No deaths or injuries were reported. There are no referenced drought/extreme heat event(s) that resulted in the most damages, deaths, and injuries during the past ten year period and serves as the extent/range of magnitude or severity that could be experienced by Escambia County due to a drought/extreme heat event; the ranking is minimum to minor.

Primary effects from Drought and Excessive Heat in Escambia County would include:

1. Crop and other agricultural damage
2. Water supply shortage - water wells, creeks, rivers, and lakes dry up
3. Increase vulnerability to forest fires and sinkholes
4. Heat exhaustion; heat stroke; heat syncope; and heat cramps

Hazardous results from significant Drought and Excessive Heat in Escambia County would include:

1. Agricultural damage from drought will result in economic losses of crops and livestock.
2. A water supply shortage will result in the necessity for water to be trucked into the area, damage to the sewer system and lack of hydroelectric power.
3. Forest fires can devastate vast acreages and burn homes and businesses.

4. Heat exhaustion can be debilitating and result in a hospital stay. Heat stroke can cause death.
5. Energy prices will inflate due to loss of hydro-power

Temperatures that hover 10 degrees or more above the average high temperature for the region and last for several weeks are defined as extreme heat. Humid or muggy conditions occur when a “dome” of high atmospheric pressure traps hazy, damp air near the ground. The combination of high temperatures and humid conditions increase the level of discomfort and the potential for danger to humans. A sibling to the heat wave is the drought. Droughts occur when a long period passes without any substantial rainfall. A heat wave combined with a drought is a very dangerous situation.

The human risks associated with extreme heat include heatstroke, heat exhaustion, heat syncope, heat cramps. A description of each of these conditions follows:

- Heatstroke is considered a medical emergency and is often fatal. It exists when rectal temperature rises above 105°F as a result of environmental temperatures. Patients may be delirious, stuporous, or comatose. The death to care ratio in reported cases averages about 15%.
- Heat Exhaustion is much less severe than heatstroke. The body temperature may be normal or slightly elevated. A person suffering from heat exhaustion may complain of dizziness, weakness or fatigue. The primary cause of heat exhaustion is fluid and electrolyte imbalance. The normalization of fluids will typically alleviate the situation.
- Heat Syncope is typically associated with exercise by people who are not acclimated to exercise. The symptom is a sudden loss of consciousness. Consciousness returns promptly when the person lies down. The cause is primarily associated with circulatory instability as a result of heat. The condition typically causes little or no harm to the individual.
- Heat Cramps are typically a problem for individuals who exercise outdoors but are unaccustomed to heat. Similar to heat exhaustion it is thought to be a result of a mild imbalance of fluids and electrolytes.

In 1979 R. G. Steadman, a meteorologist, developed the heat index, which is a relationship between dry bulb temperatures (at different humidity) and the skin’s resistance to heat and moisture transfer. Utilizing Steadman’s heat index, the following table was developed to show the risk associated with ranges in apparent temperature or heat index.

Table 3-10: Heat Index/Heat Disorders

Danger Category	Heat Disorder	Apparent Temperature (°F)
IV Extreme Danger	Heatstroke or sunstroke imminent.	>130
III Danger	Sunstroke, heat cramps, or heat exhaustion likely, heat stroke possible with prolonged exposure and physical activity.	105-130
II Extreme Caution	Sunstroke, heat cramps, and heat exhaustion possible with prolonged exposure and physical activity.	90-105
I Caution	Fatigue possible with prolonged exposure and physical activity.	80-90

(Source: National Weather Service, 1997)

Droughts and heat waves have a county-wide impact. The future incidence of drought is highly unpredictable, conditions may be localized or widespread, and not much historical data is available making it difficult to determine the future probability of drought conditions with any accuracy. The qualitative probability rating for drought is high.

Table 3-5 reflects that the NOAA NCDC had no reported instances of drought or extreme heat for Escambia County from 2003-2013. No deaths, injuries, crop or property damages were reported.

Statewide, 31 counties were declared a disaster area. Alabama farmers received one million dollars in federal disaster aid along with other grant assistance. It was during this time that the State implemented its Drought Monitoring System. An initial five wells were selected to track water levels around the state, with plans to increase the number of monitoring wells to 25. Drought conditions continued to escalate into 2007 and by August the Federal Government declared all 67 Alabama counties Natural Disaster areas. West-central Alabama reported a rainfall deficit that reached nearly 30 inches by 2007. Impacts were felt by farmers of all crops, including timber, livestock producers, and the forestry service. Additionally, electricity providers were affected as river and lake levels dropped and some municipalities were forced to place restrictions on water consumption as supplies became strained. State Agriculture Commissioner Ron Sparks referred to this event as the worst drought in 30-40 years.

VII. Winter Storms/Frost Freezes/Heavy Snow/Ice Storms/Winter Weather/Extreme Cold

Escambia County is vulnerable to extreme winter weather conditions such as extreme cold temperatures, snow, and ice. **Table 3-5** shows the winter storm/extreme cold/frost freeze/heavy snow/ice storm/winter weather events that have affected Escambia County from 2003- 2013. In the category of winter storms/frost freezes/heavy snow/ice storms/winter weather/extreme cold events, four storms were reported for Escambia County between 2003 and 2013 – all of which were winter storms. The entire planning area is equally at risk to all hazards in this category. The Poarch Creek Indian Reservation is located near the City of Atmore; therefore due to their proximity to the City of Atmore, the winter storm/frost freeze/heavy snow/ice storm/winter weather/extreme cold profile applicable to the City of Atmore also applies to the Tribe as well.

The most common impacts of severe winter weather are power failure due to downed power lines and traffic hazards. Winter storm occurrences tend to be very disruptive to transportation and commerce as the county and its citizens are unaccustomed to them. Trees, cars, roads, and other surfaces develop a coating or glaze of ice, making even small accumulations of ice extremely hazardous to motorists and pedestrians. The most prevalent impacts of heavy accumulations of ice are slippery roads and walkways that lead to vehicle and pedestrian accidents; collapsed roofs from fallen trees and limbs and heavy ice and snow loads; and fallen trees, telephone poles and lines, electrical wires, and communication towers. As a result of severe ice storms, telecommunications and power can be disrupted for days. Also many homes and buildings, especially in rural areas, lack proper insulation or heating, leading to risk of hypothermia. Extremely cold temperatures accompanied by strong winds can result in wind chills that cause bodily injury such as frostbite and death.

On February 12, 2010, Escambia County experienced a winter storm event from an area of low pressure that moved across the Northern Gulf of Mexico and passed to the south of the Mobile area. Heavy rain changed over to snow across portions of the central gulf coast as the low moved to the east. Snowfall accumulations ranged from a dusting along the I-10 corridor to as

much as 5 inches across portions of interior southwest Alabama. The public reported 1 inch of snow in Brewton, while WEBJ Radio reported 2.5 inches of snow in Brewton. A spotter measured 2 inches of snow in Atmore. Broadcast media reported 6 inches of snow in Wallace. No deaths, injuries, property or crop damages were reported.

Escambia County experienced 4 storms in the category of winter storm/extreme cold/frost freeze/heavy snow/ice storm/winter weather events in a 10 year period resulting in a less than 40% (0.40) probability that a winter storm/extreme cold/frost freeze/heavy snow/ice storm/winter weather event will occur on an annual basis. The total amount of damages for the 4 winter storm/extreme cold/frost freeze/heavy snow/ice storm/winter weather events was \$0 or unknown with no winter storm/extreme cold/frost freeze/heavy snow/ice storm/winter weather events causing damage resulting in an estimated unknown amount of expected annual damages from future events. The referenced events are the ones that resulted in the most damages, deaths, and injuries during the past ten year period and serve as the extent/range of magnitude or severity that could be experienced by Escambia County due to such events; the ranking is minimum to minor. According to NCDC.NOAA.gov, the extent of winter weather in Escambia County is snow dusting to five inches of snow.

Primary effects from winter storms in Escambia County would include:

1. Injury and damage from downed trees and utility lines due to the snow and ice load
2. Widespread impassable roads and bridges
3. Disruption of services and response capabilities
4. Crop and other agricultural damage

Hazardous results from winter storms in Escambia County would include:

1. Loss of power, communications, and fires are common results of severe winter storms. Widespread power outages close down businesses and impact hospitals, nursing homes, and adult and child care facilities serving special needs populations.
2. Loss of transportation ability will affect emergency response, recovery and supply of food and materials.
3. Numerous vehicle accidents in a winter storm can stretch thin the resources of fire rescue and law enforcement.

4. Stranded motorists and the homeless can create a food and housing shortage within the community.
5. The widespread nature of winter storms usually creates a strain on police, fire and medical providers due to the volume of calls for service.

This page left intentionally blank

VIII. Hurricanes/Tropical Storms/Tropical Depressions/High Winds/Strong Winds

Hurricane season in the northern Atlantic Ocean, which affects the United States, begins on June 1 and ends on November 31. These months accompany warmer sea surface temperatures which is a required element to produce the necessary environment for tropical cyclone/hurricane development.

According to data from the National Oceanic and Atmospheric Administration's National Hurricane Center, there are three classification levels of storms based on wind speed. The first, a tropical depression, is "an organized system of clouds and thunderstorms with a defined surface cyclonic closed circulation and maximum sustained winds of 38 mph or less." A tropical storm is the second level and is described as "an organized system of strong thunderstorms with a defined surface circulation and maximum sustained winds of 39-73 mph." A "hurricane," which is the third classification level, is "an intense tropical weather system of strong thunderstorms with a well-defined surface circulation and maximum sustained winds of 74 mph or higher." Individual hurricanes vary in intensity and are categorized using the Saffir-Simpson Hurricane Scale.

NOAA measures wind speeds for thunderstorm/wind and hurricane events in knots (kts) while the Saffir-Simpson scale, shown later in the Hurricane profile, measures wind speed in miles per hour. Both knots and miles per hour is a speed measured by a number of units of distance covered in certain amount of time. Here is how knots compare to MPH:

- 1 knot = 1 nautical mile per hour = 6076.12 feet per hour
- 1 MPH = 1 mile per hour = 5280 feet per hour

To convert knots into miles per hour, multiply the number of knots by 1.151.

Saffir-Simpson Hurricane Wind Scale

Once a tropical storm reaches the level of a hurricane, it is then classified by the storm's intensity. Intensity levels, or categories, are used to assign a number (e.g., Category 1) to a hurricane based on the storm's intensity at the current time. The Saffir-Simpson Hurricane Wind Scale, **Table 3-11**, is a 1 to 5 rating based on a hurricane's sustained wind speed. This scale estimates potential property damage. Hurricanes reaching Category 3 and higher are considered major hurricanes because of their potential for significant loss of life and damage. With the scale

in place, people within the hurricane’s tract can better estimate the type of damage they should expect (i.e., wind, storm surge, and/or flooding impacts) due to the intensity of the oncoming hurricane.

Table 3-11: 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 – NOAA)

Threats Related to Hurricanes

Hurricanes impact regions in a variety of ways. The intensity of the storm, the speed of the winds, whether the storm moves through a region quickly or whether it stalls over one area all are variables toward the physical damage the storm will cause. Storm surges, high winds, and

heavy rains are the three primary elements of hurricanes, while tornados and inland flooding are potential secondary elements caused in the wake of the storm. During the plan's study period, 2003-2013, Escambia County experienced three hurricanes and one tropical storm.

On September 13-16, 2004, Hurricane Ivan made landfall near Gulf Shores, Alabama on September 16. An interesting note, as Ivan approached the Alabama coast during the day on the 15th, a buoy just south of the Alabama coastal waters recorded a peak wave height of 52 feet, before breaking loose of its mooring. This was one of the highest wave heights ever observed. As Ivan moved ashore during the morning hours of September 16th, the winds caused major damage to trees along and east of the track of the storm. Hurricane force winds were felt across the entire area, including all inland counties. Most of the area probably had hurricane force winds for two to four hours. This caused 100 year old trees to break due to the constant force from the strong winds. Many of the trees fell on homes and vehicles and damaged them. While some structural wind damage would have been expected, most of the major structural damage that occurred over inland areas would not have been as substantial if it had not been for fallen trees. It was estimated that in Alabama over \$500,000,000 damage was done to timber. Power was out for a week or more across the inland areas due to trees across lines. Along the immediate coast, power was not restored for an additional several weeks, until much of the infrastructure was rebuilt. It was estimated that six weak tornadoes occurred across the area during the afternoon and early evening of September 15th as Ivan neared the coast. These weak tornadoes occurred in Escambia and Conecuh in Alabama and produced only minor damages. Ivan will be remembered as being one of the most damaging hurricanes to affect the coastal counties of Baldwin, Escambia and Santa Rosa in modern history. It will also be remembered as one of the most damaging hurricanes to affect the inland counties of Escambia, Clarke, Monroe, Conecuh and Butler in Southwest Alabama.

On July 9-10, 2005, Hurricane Dennis made landfall around 130 PM CST as a Category 3 Hurricane near Navarre Beach in Santa Rosa County Florida. Dennis then moved north northwest across Santa Rosa and Northeast Escambia County in Florida. The weakening storm then moved across the west part of Escambia, the south part of Monroe, the east part of Clarke and the northeast part of Choctaw Counties in Alabama. Dennis had a very small eye and winds

around the eyewall of the storm caused significant damage as the storm moved north. An aerial survey of the damage showed a five to ten mile wide area of destruction, with most of the damage east of the eye of the storm. As Dennis moved north into Alabama the damage diminished and was confined to a smaller area. A lot of the damage looked like a giant tornado, except the trees were all facing in the same general direction. An Inland Hurricane Warning was issued for most of the inland counties in Alabama on July 9. Most of the warnings were dropped on July 10 as Dennis weakened as it moved inland. Major beach erosion occurred from Pensacola Beach to east of Destin. Minor beach erosion occurred from Dauphin Island to Orange Beach. Major flash flooding occurred along and east of the center of Dennis during the afternoon and evening of July 10 across northwest Florida and southwest Alabama. As Dennis moved inland, tornado like damage occurred near the eyewall of storm. No direct deaths were reported with Dennis, but one indirect death was reported - one individual died from electrocution in Escambia County Alabama, related to the improper use of an emergency generator. High winds from the eyewall of Hurricane Dennis blew down numerous trees in the western portion of the county. Several of the trees fell on structures and damaged them. No dollar amount of property or crop damages were reported for Escambia County, Alabama.

On June 10-11, 2005, Tropical Storm Arlene moved across the area during the afternoon and evening of June 11. The area was put under a Tropical Storm Watch on June 10, then a Tropical Storm Warning and a Hurricane Watch on June 10. The area was then put under a Hurricane Warning on June 10. The Hurricane Warning was dropped to a Tropical Storm Warning on June 11. All Tropical Warnings were dropped on June 11 as the remains of Arlene moved inland across Southwest Alabama. Arlene made landfall near Perdido Key Saturday afternoon. Arlene tracked north northwest across Southwest Alabama along a similar track that Ivan had taken a few months earlier. Since Arlene followed along a similar track as Ivan took only nine months earlier, trees that had been damaged by Ivan were blown down as Arlene moved inland. Trees and power lines were blown down along the track of Arlene with most of the damage near the center of the storm. Except for some trees falling onto homes, very little structural damage was reported. No deaths, injuries, property or crop damages were reported.

Escambia County experienced 4 hurricane/tropical storm/tropical depression/high wind/strong wind events in a 10 year period resulting in a 40% (0.40) probability that a hurricane/tropical storm/tropical depression/high wind/strong wind event will occur on an annual basis. The total amount of damages for the 4 hurricane/tropical storm/tropical depression/high wind/strong wind events is unknown resulting in an unknown amount of expected annual damages from future events. No deaths or injuries were reported. The referenced hurricane/tropical storm/tropical depression/high wind/strong wind event(s) are the ones that resulted in the most damages, deaths, and injuries during the past ten year period and serves as the extent/range of magnitude or severity that could be experienced by Escambia County due to a hurricane/tropical storm/tropical depression/high wind/strong wind event; the ranking is minor to major. According to NCDC.NOAA.gov, the extent for Escambia County is 103.59 miles per hour winds from hurricane/tropical storm/tropical depression/high wind/strong wind events.

Primary Effects of Hurricanes:

1. Storm Surges
 - a. Primary cause of deaths in hurricanes
 - b. Large volumes of ocean water that are driven onshore by a land-falling hurricane or tropical storm
 - c. Can increase mean water level by 15 feet+ if accompanied by tide
2. Wind
 - a. Secondary cause of deaths related to hurricanes
 - b. Continue causing destruction as storm travels miles inland
 - c. Able to completely destroy towns and structures that fall within storm path
 - d. Winds near perimeter of eye of storm are strongest and most intense
 - e. Oftentimes produce tornados
3. Heavy Rains
 - a. Rain levels during hurricanes can easily exceed 15 to 20 inches
 - b. Cause flooding beyond coastal regions

Secondary Effects of Hurricanes:

1. Tornados

- a. Usually found in right-front quadrant of storm or embedded in rain bands
 - b. Some hurricanes capable of producing multiple twisters
 - c. Usually not accompanied by hail or numerous lightning strikes
 - d. Tornado production can occur for days after the hurricane makes landfall
 - e. Can develop at any time of the day or night during landfall of a hurricane
2. Inland Flooding
- a. Statistically responsible for greatest number of fatalities over last 30 years
 - b. Stronger storms not necessarily cause of most flooding; weaker storms that move slowly across the landscape can deposit large amounts of rain, causing significant flooding

Escambia County is at a low risk for a direct hit by a hurricane due to its position several miles inland from the Alabama coastline. Although Escambia County does not feel the effects of storm surges, other effects including heavy rain, flooding, winds, and tornados often have significant impacts on Escambia County. The Poarch Creek Indian Reservation is located near the City of Atmore; therefore due to their proximity to the City of Atmore, the hurricane/tropical storm/tropical depression/high wind/strong wind profile applicable to the City of Atmore also applies to the Tribe as well.

X. Sinkholes/ Expansive Soils

Sinkholes

Naturally occurring Sinkholes occur where limestone, carbonate rock, salt beds, or rocks can be dissolved by ground water circulating through them. As the rock dissolves, spaces and caverns develop underground. The land usually stays intact until the underground spaces become too large to support the ground at the surface. When the ground loses its support it will collapse, forming a sinkhole. Sinkholes can be small or so extreme they consume an automobile or a house. The most damage from sinkholes tends to occur in Florida, Texas, Alabama, Missouri, Kentucky, Tennessee, and Pennsylvania.

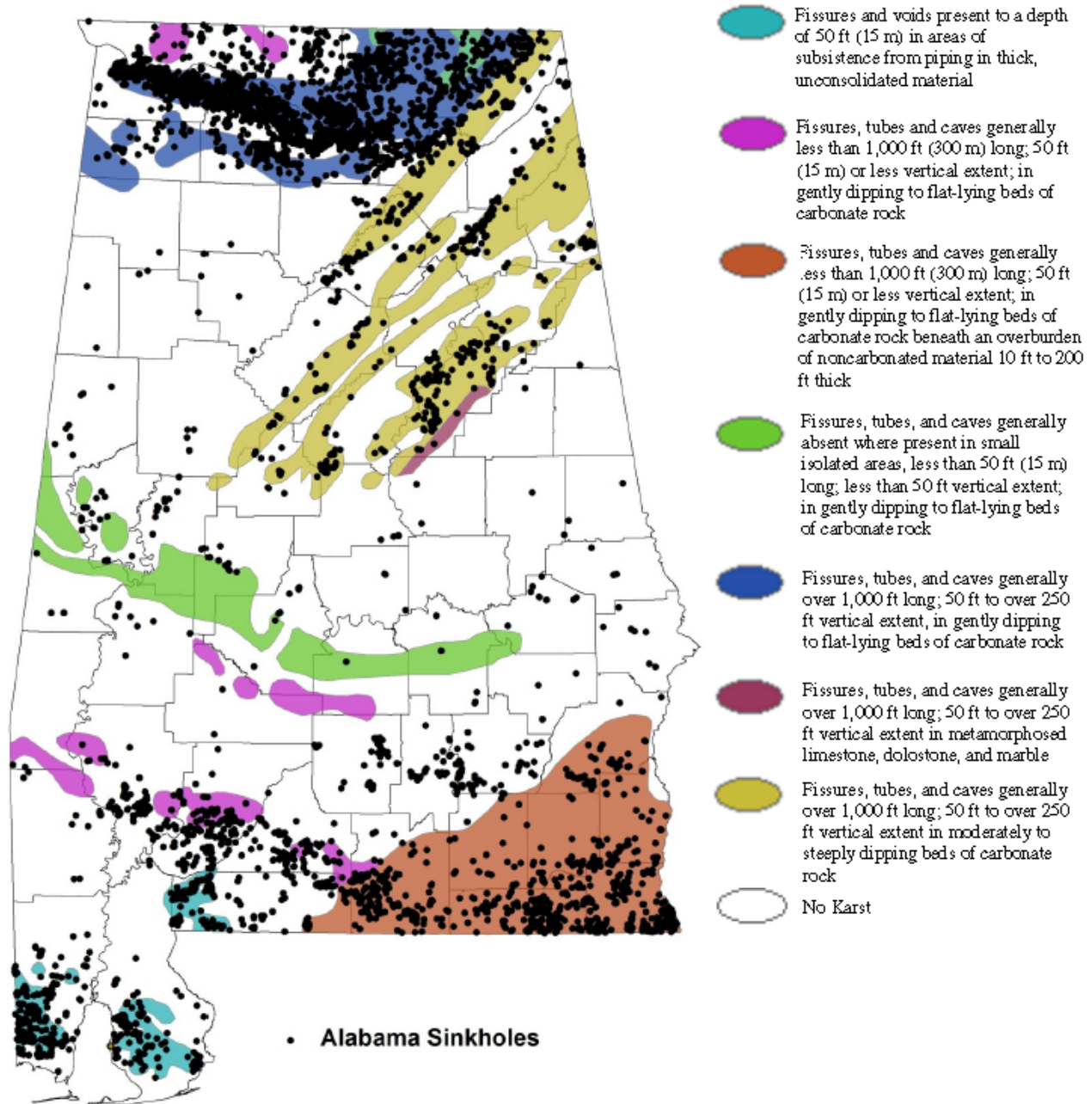
Escambia County is located on the active fault line, Gilbertown-Pollard Fault. According to the Geological Survey of Alabama's sinkhole data as of 2010, Escambia County has experienced sinkholes; however, the sinkhole density in Escambia County is low. **Figure 3-3** shows sinkholes susceptibility in Escambia County. The Poarch Creek Indian Reservation is located near the City of Atmore; therefore due to their proximity to the City of Atmore, the sinkhole profile applicable to the City of Atmore also applies to the Tribe as well.

Expansive Soils

Expansive soils are soils that swell when they come in contact with water. The presence of clay is generally the cause of such behavior. **Figure 3-4** shows the general soil areas for the state. Escambia County has coastal plains and major flood plains and terraces. There were no expansive soils reported for Escambia County from NOAA or local sources during the time frame covered by the plan. Though these soils have shrink-swell potential, the committee does not feel a profile is necessary.

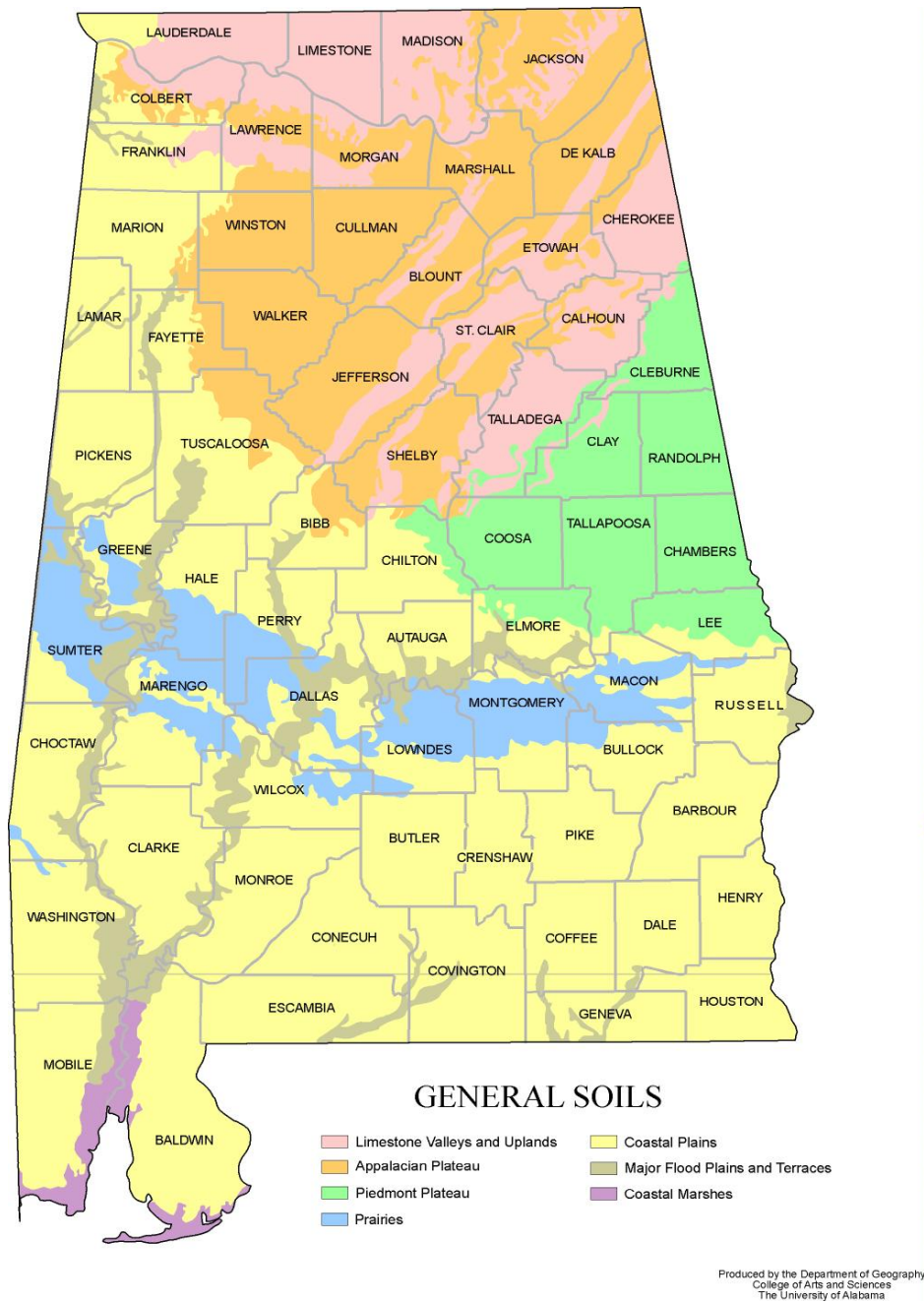
This page left intentionally blank

Figure 3-3: Escambia County Sinkhole Susceptibility
 (Source: Alabama State Hazard Mitigation Plan, April 2013)



This page left intentionally blank

Figure 3-4: General Soils of Alabama



This page left intentionally blank

There were no active sinkholes reported from NOAA during the plan's study period, 2003-2013. According to the Geological Survey of Alabama, the bauxite mines that spread across Escambia County pose the greatest threat for land subsidence. These ancient, pre-Cretaceous sinkholes have hardened, for the most part, lowering the risk of further land subsidence. However, there is a potential risk of smaller sinkholes forming in areas close in proximity to these mines. A sudden drop in the water level could possibly trigger these smaller sinkholes. Despite these risks, few incidents of damage caused by these sinkholes have been reported, as they mostly occur far away from valuable property. As development continues in rural areas of Escambia County it is likely that sinkholes will begin to have a greater impact on communities. When subsidence occurs in developed areas it can have a significant impact on communities including loss of property values, increased insurance costs and potential injuries.

Escambia County experienced unknown sinkhole events in a 10 year period resulting in an unknown probability that a sinkhole event will occur on an annual basis. The total amount of damages for a sinkhole event is unknown as is expected annual damages from future events. No deaths or injuries were reported. The referenced sinkhole event(s) are the ones that resulted in the most damages, deaths, and injuries during the past ten year period and serves as the extent/range of magnitude or severity that could be experienced by Escambia County due to a sinkhole event; the ranking is minimum to minor. The extent of sinkholes/land subsidence in Escambia County is fissures and voids present to a depth of 50 feet (15 miles) in areas of subsidence from piping in thick, unconsolidated material to fissures, tubes, and caves generally less than 1,000 feet (300 miles) long; 50 feet (15 miles) or less vertical extent; in gently dipping to flat-lying beds of carbonate rock beneath an overburden of noncarbonated material 10 feet to 200 feet thick.

Primary effects from sinkholes in Escambia County would include:

1. Property damage
2. Underground infrastructure damage
3. Impassable roads
4. Building collapse

Hazardous results from significant sinkholes in Escambia County would include:

1. Formation of sinkholes can destroy any structure it underlies. Houses, businesses, and government buildings are extremely susceptible to this damage.
2. Underground power, gas, and water lines can be broken causing leakage and breaks that can disrupt service and have negative environmental effects.
3. The ground underneath a road sinks and either leaves the road unsupported or destroys it completely. This is extremely dangerous for unsuspecting motorists and repair crews.
4. Unsupported foundations of buildings allow for collapse of the foundation and possibly the entire structure resulting in mass amounts of injury and damage as well as possible death.

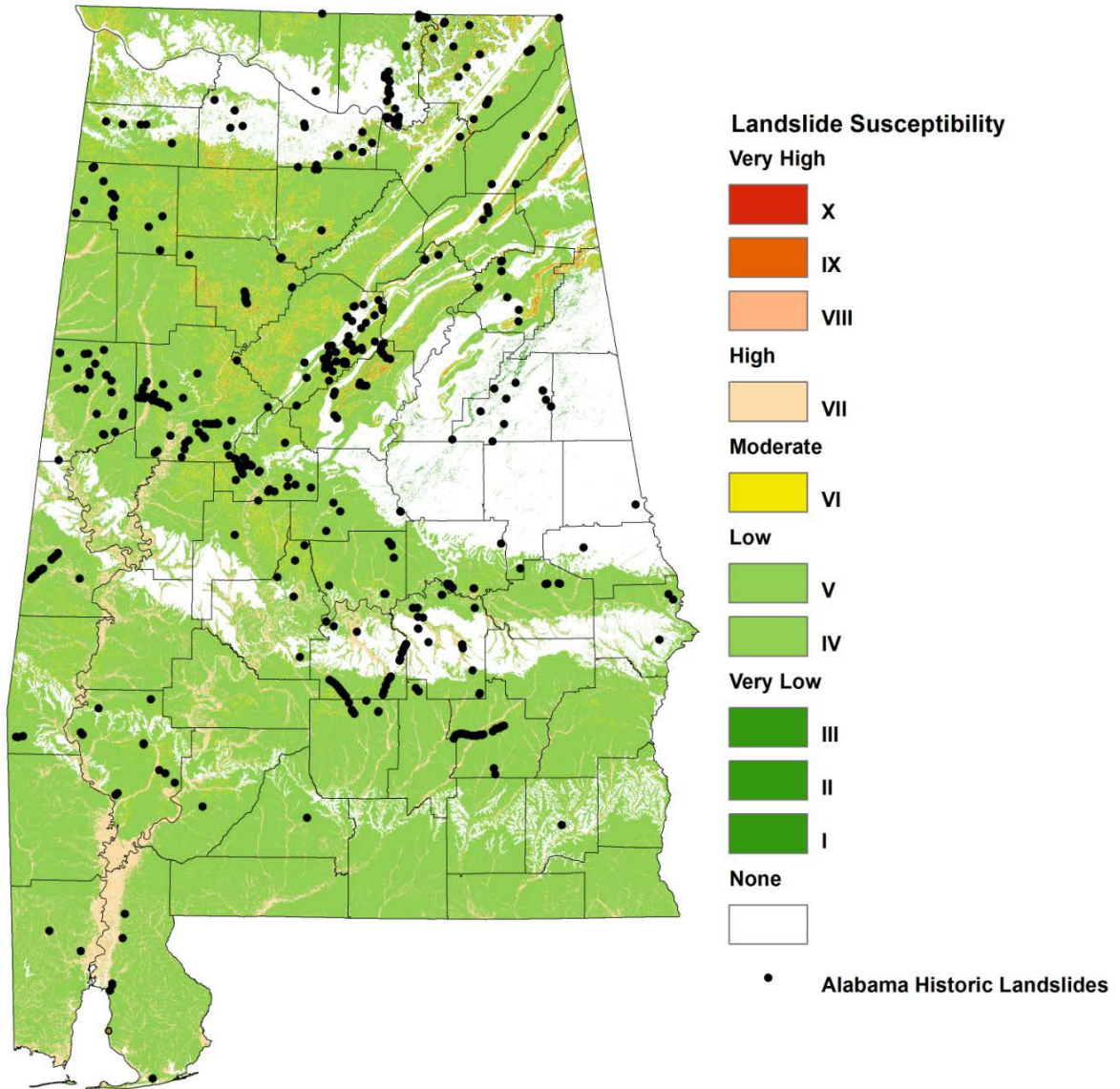
X. Landslides

A landslide is defined by the United States Geologic Survey as the movement of rock, debris, or earth down a slope. Various natural and man-induced triggers can cause a landslide. Naturally induced landslides occur as a result of weakened rock composition, heavy rain, changes in groundwater levels, and seismic activity. Geologic formations in a given area are key factors when determining landslide susceptibility. The three underlying geologic formations present within the region are the Coker, Gordo, and Tuscaloosa groups. These groups are classified as having low to moderate susceptibility to slope failure. **Figure 3-5** shows that most of Escambia County is at a low risk of incidence. There were no landslides reported from NOAA or the U.S. Geological Survey during the time frame covered by this plan.

Escambia County experienced an unknown number of landslide events in a 10 year period resulting in an unknown probability that a landslide event will occur on an annual basis. The total amount of damages for a landslide event is unknown as is the expected annual damages from future events. No deaths or injuries were reported. There are no landslide event(s) to reference as the ones that resulted in the most damages, deaths, and injuries during the past ten year period and serves as the extent/range of magnitude or severity that could be experienced by Escambia County due to a landslide event; the ranking is minimum to minor. The Poarch Creek Indian Reservation is located near the City of Atmore; therefore due to their proximity to the City of Atmore, the landslide profile applicable to the City of Atmore also applies to the Tribe as well.

This page left intentionally blank

Figure 3-5: Escambia County Landslide Susceptibility
(Source: Alabama State Hazard Mitigation Plan, April 2013)



This page left intentionally blank

Primary effects from landslide in Escambia County would include:

1. Property damage
2. Impassable roads
3. Sediment erosion
4. Underground infrastructure damage

Hazardous results from landslide in Escambia County would include:

1. Landslides move with tremendous force capable of destroying most structures in their path while carrying anything it comes in contact with.
2. Material from landslides can damage and destroy roads as well as block them with debris resulting in disruption to business and other activity.
3. Removed sediment can leave the surrounding area bare and prone to erosion.
4. The flow of a landslide can rip underground pipes and wiring from an area as well as bury them deeper under debris creating a loss of services.

This page left intentionally blank

XI. Earthquakes

An earthquake is a sudden slip on a fault and the resulting ground shaking and radiated seismic energy caused by an abrupt release of accumulated strain in the tectonic plates that comprise the earth's crust. These rigid plates, known as tectonic plates, are some 50 to 60 miles in thickness and move slowly and continuously over the earth's interior. The plates meet along their edges, where they move away, past or under each other at rates varying from less than a fraction of an inch up to five inches per year. While this sounds small, at a rate of two inches per year, a distance of 30 miles would be covered in approximately one million years (FEMA, 1997).

The tectonic plates continually bump, slide, catch, and hold as they move past each other which causes stress to accumulate along faults. When this stress exceeds the elastic limit of the rock, an earthquake occurs, immediately causing sudden ground motion and seismic activity. Secondary hazards may also occur, such as surface faulting, sinkholes, and landslides. While the majority of earthquakes occur near the edges of the tectonic plates, earthquakes may also occur at the interior of plates.

The vibration or shaking of the ground during an earthquake is described by ground motion. The severity of ground motion generally increases with the amount of energy released and decreases with distance from the fault or epicenter of the earthquake. Ground motion causes waves in the earth's interior, also known as seismic waves, and along the earth's surface, known as surface waves. The following are the two kinds of seismic waves:

- P (primary) waves are longitudinal or compression waves similar in character to sound waves that cause back-and-forth oscillation along the direction of travel (vertical motion), with particle motion in the same direction as wave travel. They move through the earth at approximately 15,000 MPH.
- S (secondary) waves, also known as shear waves, are slower than P waves and cause structures to vibrate from side-to-side (horizontal motion) due to particle motion at right angles to the direction of wave travel. Unreinforced buildings are more easily damaged by S waves. There are also two kinds of surface waves, Raleigh waves and Love waves. These waves travel more slowly and typically are significantly less damaging than seismic waves.

Seismic activity is commonly described in terms of magnitude and intensity. Magnitude (M) describes the total energy released and intensity (I) subjectively describes the effects at a particular location. Although an earthquake has only one magnitude, its intensity varies by location.

Magnitude is the measure of the amplitude of the seismic wave and is expressed by the Richter scale. The Richter scale is a logarithmic measurement, where an increase in the scale by one whole number represents a tenfold increase in measured amplitude of the earthquake. Intensity is a measure of the strength of the shock at a particular location and is expressed by the Modified Mercalli Intensity (MMI) scale.

Another way of expressing an earthquake's severity is to compare its acceleration to the normal acceleration due to gravity. If an object is dropped while standing on the surface of the earth (ignoring wind resistance), it will fall towards earth and accelerate faster and faster until reaching terminal velocity. The acceleration due to gravity is often called "g" and is equal to 9.8 meters per second squared (980 cm/sec/sec). This means that every second something falls towards earth, its velocity increases by 9.8 meters per second. Peak ground acceleration (PGA) measures the rate of change of motion relative to the rate of acceleration due to gravity. For example, acceleration of the ground surface of 244 cm/sec/sec equals a PGA of 25.0 percent. It is possible to approximate the relationship between PGA, the Richter scale, and the MMI, as shown in **Table 3-12**. The relationships are, at best, approximate, and also depend upon such specifics as the distance from the epicenter and depth of the epicenter. An earthquake with 10.0 percent PGA would roughly correspond to an MMI intensity of V or VI, described as being felt by everyone, overturning unstable objects, or moving heavy furniture.

Table 3-12: Earthquake PGA, Magnitude and Intensity Comparison

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. 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: <http://earthquake.usgs.gov>)

Earthquake-related ground failure, due to liquefaction, is a common potential hazard from strong earthquakes in the central and eastern United States. Liquefaction occurs when seismic waves pass through saturated granular soil, distorting its granular structure, and causing some of the empty spaces between granules to collapse. Pore-water pressure may also increase

sufficiently to cause the soil to behave like a fluid (rather than a soil) for a brief period and causing deformations. Liquefaction causes lateral spreads (horizontal movement commonly 10-15 feet, but up to 100 feet), flow failures (massive flows of soil, typically hundreds of feet, but up to 12 miles), and loss of bearing strength (soil deformations causing structures to settle or tip). Sands blows were common following major New Madrid earthquakes in the central United States.

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 caused by a particular fault were to occur. Losses depend on several factors including the nature of building construction, population density, topography and soil conditions, and distance from the epicenter.

Interestingly, an earthquake's magnitude can be a poor indicator of hazard impact because the duration of ground shaking, and resulting increased damages, is not factored into the magnitude concept. The majority of losses are due to collapsing houses and other structures, the most vulnerable being those of unreinforced masonry and adobe. Structures built with more flexible materials such as steel framing are preferred. Wood frame construction, which constitutes a high percentage of homes in the United States, also tends to flex rather than collapse but is more susceptible to fire. Building codes have historically been utilized to address construction standards to mitigate damages for earthquakes and other hazards. However, older structures, non-compliance, and incomplete knowledge of needed measures remain a problem. In order to reduce losses to lives and property, wider adoption of improved construction methods for both residential and important critical facilities such as hospitals, schools, dams, power, water, and sewer utilities is needed.

Three zones of frequent earthquake activity affecting Alabama are the New Madrid Seismic Zone (NMSZ), the Southern Appalachian Seismic Zone (SASZ) (also called the Eastern Tennessee Seismic Zone), and the South Carolina Seismic Zone (SCSZ). The NMSZ lies within the central Mississippi Valley, extending from northeast Arkansas through southeast Missouri, western Tennessee, and western Kentucky, to southern Illinois. The SASZ

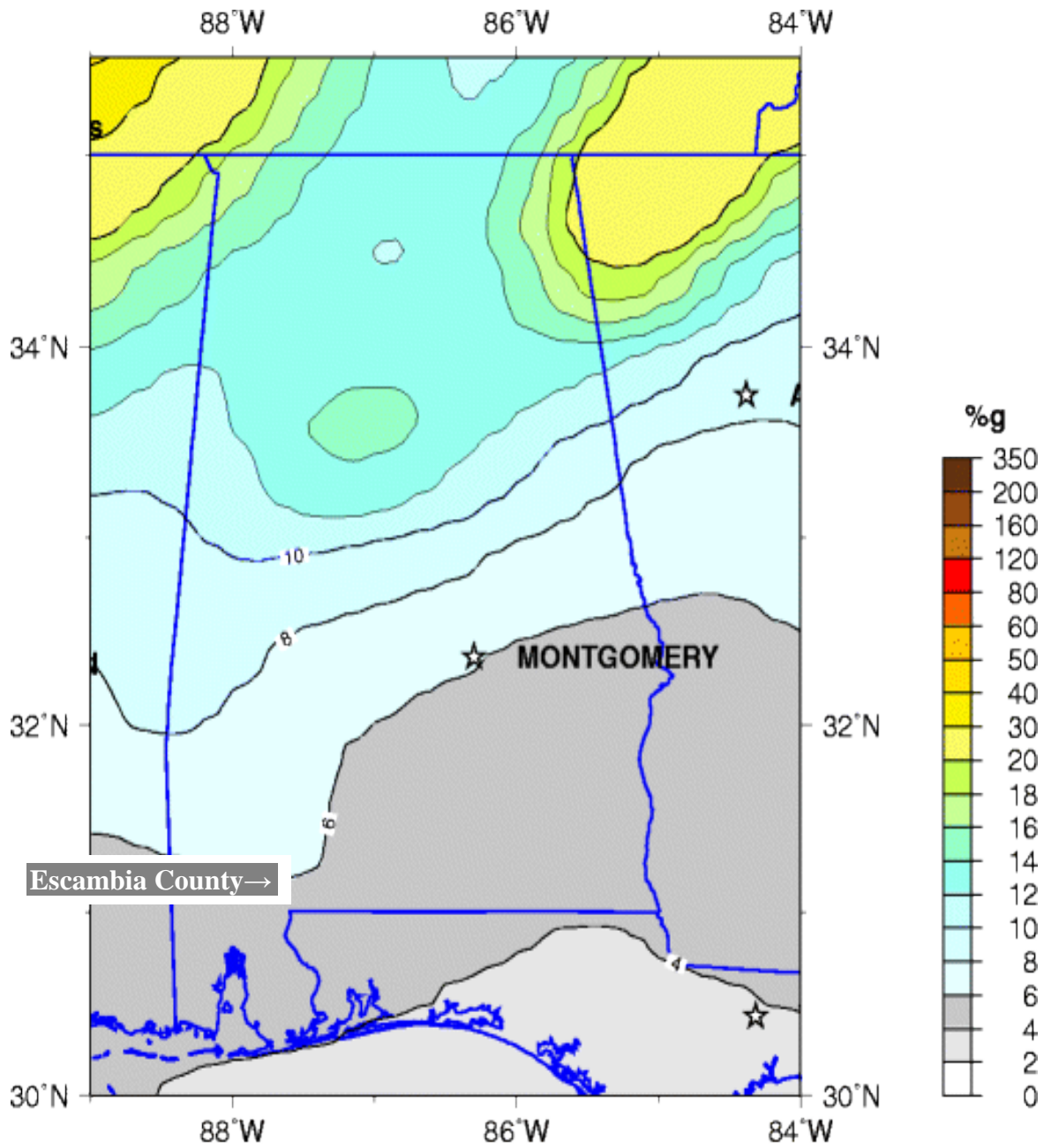
extends from near Roanoke in southwestern Virginia southwestward to central Alabama. Considered a zone of moderate risk, the SASZ includes the Appalachian Mountains. Most of the earthquakes felt in Alabama are centered in the SASZ. The hypocenters of earthquakes in this zone are on deeply buried faults. The SCSZ is centered near Charleston South Carolina and encompasses nearly the whole State. Escambia County is at risk for earthquakes. The Poarch Creek Indian Reservation is located near the City of Atmore; therefore due to their proximity to the City of Atmore, the earthquake profile applicable to the City of Atmore also applies to the Tribe as well.

Earthquakes occurring in Escambia County are predominantly low magnitude events. However, there is growing concern that a high magnitude event is inevitable and earthquakes are becoming a much larger concern to the county. GSA is currently working to better define seismic hazards and impacts throughout the county. **Figure 3-6** shows the Percent Ground Acceleration (PGA) with two percent 50 year exceedance probability. The USGS database shows that there is a 4-6% chance of a major earthquake (= or > 5.0 magnitude) within 31 miles of Escambia County, AL within the next 50 years. The risk of a significant, damage-causing earthquake in Escambia County is low to moderate.

Although many areas of the United States are better known for their susceptibility, earthquakes do occur in Alabama. **Figure 3-7** shows the seismic zones of the Southeastern United States, which includes Alabama, as well as the epicenters of earthquakes recorded in the state from 1886-2007 as provided by the Geological Survey of Alabama and noted in the Alabama EMA Earthquake Book 2002. According to the Alabama EMA Earthquake Book 2002, there have been an increasing number of recorded earthquakes in Southwest Alabama. One of these was a 4.9 magnitude event on October 24, 1997, in Escambia County. This was the largest quake at that time recorded by seismographs in Alabama and the largest in the Southeast in the preceding 30 years. Historically, the southwestern part of Alabama has had minimal seismic activity, but this quake indicates activity on the BFSZ, an ancient basement fault zone that underlies the area. Escambia County has experienced earthquakes from 2.0 to 4.9 in magnitude.

According to www.homefacts.com, Escambia County experienced four earthquake events in the past ten years (January 1, 2003 – December 31, 2013) as noted in **Table 3-5**. On September 30, 2003 an earthquake 10 miles in depth and 3.3 magnitude occurred 3.7612 miles from Atmore, AL. On November 7, 2004 at 11:20 a.m., an earthquake 3.1 miles in depth and 4.4 magnitude occurred 114.5 miles from the county's center. On February 10, 2006 at 4:14 p.m., an earthquake 3.1 miles in depth and 5.3 magnitude occurred 288.9 from the county's center. On September 10, 2006 at 2:56 p.m., an earthquake 8.7 miles in depth and 5.9 magnitude occurred 337.7 miles from the county's center. No deaths, injuries, property or crop damages were reported from these two earthquake events. No earthquake events were reported to NOAA NCDC Storm Events, U. S. Geological Survey or the Alabama Geological Survey during the plan's study period.

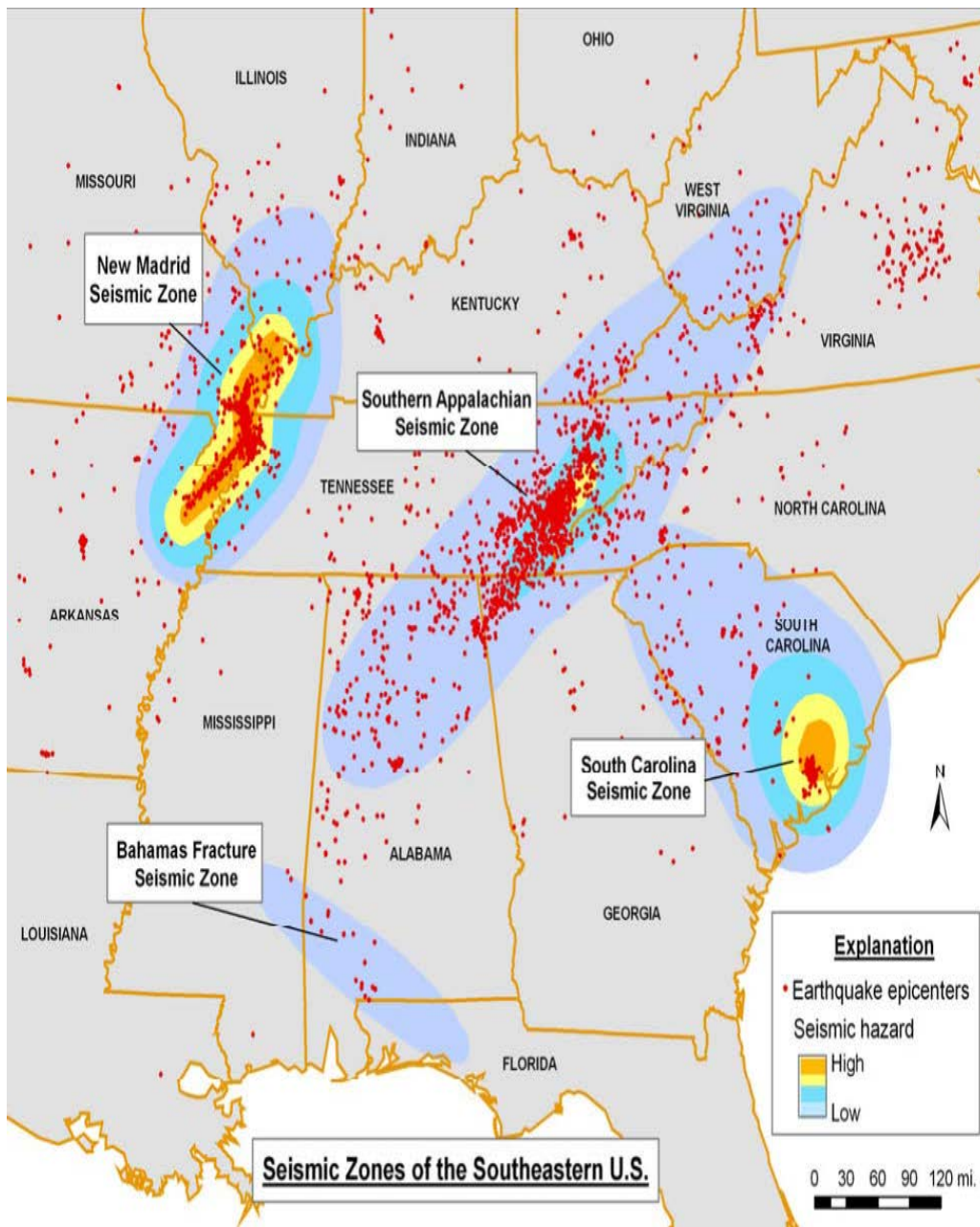
Two zones of frequent earthquake activity that could potentially impact Escambia County are the New Madrid Seismic Zone and the Southern Appalachian Seismic Zone. Damage could be significant in Escambia County if a powerful earthquake were to occur because buildings in this part of the country have not been constructed to withstand such a powerful force. In 1916 on October 18, a strong earthquake occurred on an unnamed fault east of Birmingham. It was apparently most strong at Easonville. Near the epicenter, chimneys were knocked down, windows broken, and frame buildings were greatly shaken. It was noted by residents in seven states and covered 100,000 square miles. The 1895 New Madrid earthquake registered a 6.8 on the Richter scale and was moderately felt throughout the southeastern United States. The New Madrid Fault line runs along the Mississippi River. Geologists agree that another major earthquake along the New Madrid Fault line could cause chimneys to fall, glass to break, and walls to crack in Escambia County.



**Peak Acceleration (%g) with 2% Probability of Exceedance in 50 Years
 site: NEHRP B-C boundary
 National Seismic Hazard Mapping Project (2008)
 Figure 3-6**

This page left intentionally blank

Figure 3-7: Seismic Zones of the Southeastern United States



Source: Geological Survey of Alabama, 2010

This page left intentionally blank

In the eastern United States strong earthquakes occur less frequently than other parts of the country; however, this does not mean that the damage in this area would be any less catastrophic should a powerful quake occur. There are two important reasons for this. The first is that the type of rock present in the eastern part of the country transmits seismic waves more effectively. This in turn creates better transmission of earthquake energy and results in higher damage over a wider area. Second, because buildings and other structures in the eastern United States have not been designed to withstand severe earth shaking, they will sustain more damage.

Escambia County experienced four earthquake events in a 10 year period resulting in a less than 40% (0.40) probability that an earthquake event will occur on an annual basis. The total amount of damages for the two earthquake events is unknown as is the estimated amount of expected annual damages from future events. No deaths or injuries were reported. The referenced earthquake event(s) are the ones that resulted in the most damages, deaths, and injuries during the past ten year period and serves as the extent/range of magnitude or severity that could be experienced by Escambia County due to a earthquake event; the ranking is minimum to minor.

Primary effects from earthquake in Escambia County would include:

1. Property Damage
2. Underground infrastructure damage
3. Building collapse
4. Trigger for other natural disasters

Hazardous results from earthquake in Escambia County would include:

1. Shaking can cause cracking of roads, bridges, or buildings, which may also lead to collapse.
2. Pipes and wiring underground could be severely damaged due to the movement of the earth. This would result in interruption of service and long periods of repair before lines were serviceable again.
3. Buildings in Escambia County are not built to meet the rigors of earthquakes; collapsing structures could kill or injure occupants.
4. Earthquakes can create other disasters such as landslides, flooding, and sinkholes.

5. Shifting of underlying soil and breaching of dams are examples of possible results from an earthquake.

XII. Wildfires

Wildfires are responsible for burning thousands of acres of land across the United States each year. They are large, fast moving, disastrous fires that occur in the wilderness or rural areas. These fires are uncontrolled and in dry conditions can spread rapidly through the surrounding vegetation and structures. Escambia County is susceptible to wild/forest fires especially during times of drought. According to the Alabama Forestry Commission's Forest Resource Report of 2012, Escambia County has a total of 468,232 acres of forestland, which accounts for 77 percent of the total land area in the county – acres are made up of 293,228 acres of softwoods; 56,814 acres of oak-pine; and 118,190 acres of hardwoods. The Poarch Creek Indian Reservation is located near the City of Atmore; therefore due to their proximity to the City of Atmore, the wildfire profile applicable to the City of Atmore also applies to the Tribe as well.

The frequency and severity of wildfires is dependent on weather and on human activity. If not promptly controlled, wildfires may grow into an emergency or disaster. Even small fires can threaten lives, damage forest resources and destroy structures. **Table 3-5** shows the number of fires and acres burned during the period 2010 to 2013, as recorded by the Alabama Forestry Commission. Escambia County had a total of 260 fires during this three year period, affecting a total of 5,538 acres.

Fire suppression programs were developed in the 1930s to protect regenerating forests, but the suppression of fires in many areas has created an increase in fuel load for eventual wildfires, putting large numbers of people in the wildland-urban interface at risk. To reduce these increased fuel accumulations and the risk of high intensity wildfires, managers now use prescribed fires and other fuel reduction techniques to reduce fuel loads. These actions help mitigate wildfire hazards that might otherwise cause catastrophic losses to forest stands, nearby structures, and other resource values at risk. Because Alabama's wildfire problem is so widespread and the fuels grow back so quickly, resources are stretched thin leaving many areas in need of fuel reduction treatments. Fire managers in Alabama face complex challenges regarding current and future fire risk assessment and management. These challenges are compounded by increasing fire intensities due to accumulation of vegetation, continued

residential growth into fire-prone areas, and increasing firefighting costs. As important as it is to suppress wildfires, the need for prescribed burning is greater now than ever. Prescribed burning reduces dangerous fuel buildups, reducing the severity of wildfires, and many forest ecosystems, including but not limited to those characterized by longleaf pine, require regular burning for natural regeneration and maintenance of biodiversity. Responsible prescribed burning has both environmental and safety benefits.

Escambia County is located in an area where the current fire danger conditions are low to moderate, according to the fire danger map provided by the U. S. Forestry Service. Wildfires are a threat in Escambia County as the county is heavily cultivated with longleaf pines.

Escambia County experienced 260 wildfire events in a three year period resulting in a greater than 100% (26.00) probability that wildfire event will occur on an annual basis. The total amount of acres burned was 5,537.56 multiplied by \$1,900 (the average market value for an acre of land in Escambia County) equals \$10,521,364 damages for the 260 wildfire events with 260 wildfire events causing damage resulting in an estimated \$40,467 multiplied by 1.09 (projected loss expresses an estimated damage amount per future occurrence by converting the average loss figures from a midpoint of 2008 dollars to 2014 dollars - \$1 in 2008 = \$1.09 in 2014...a cumulative rate of inflation of 9%) equals a total of \$44,109 of expected annual damages from future events. No deaths or injuries were reported. The referenced wildfire event(s) are the ones that resulted in the most damages, deaths, and injuries during the past ten year period and serves as the extent/range of magnitude or severity that could be experienced by Escambia County due to a wildfire event; the ranking is minor to major. The extent/range of magnitude or severity that could be experienced by Escambia County due to a wildfire event is minimum to minor.

Primary effects from wildfire in Escambia County would include:

1. Loss of property
2. Loss of livestock
3. Destruction of wilderness
4. Crop destruction

Hazardous results from significant wildfire in Escambia County would include:

1. Widespread fire destroys everything flammable, leaving people homeless and businesses destroyed.
2. Fenced in livestock have no way of escaping the path of a wildfire and most are lost due to smoke inhalation.
3. Most wildfires actually help forests grow because they rid the forest of underbrush, but exceptionally hot fires that have a long duration destroy entire forests.
4. An entire year's crop can be lost by burning through all vegetation.

This page left intentionally blank

XIII. Dam/Levee Failures

A dam is barriers constructed across a watercourse in order to store, control, or divert water. Dams are usually constructed of earth, rock, concrete, or mine tailings. The water impounded behind a dam is referred to as the reservoir and is measured in acre-feet, with one acre-foot being the volume of water that covers one acre of land to a depth of one foot. Due to topography, even a small dam may have a reservoir containing many acre-feet of water. A dam failure is the collapse, breach, or other failure of a dam that causes downstream flooding. Dam failures may result from natural events, human-caused events, or a combination thereof. Due to the lack of advance warning, failures resulting from natural events, such as hurricanes, earthquakes, or landslides, may be particularly severe. Prolonged rainfall that produces flooding is the most common cause of dam failure (FEMA, 1997).

Dam failures usually occur when the spillway capacity is inadequate and water overtops the dam or when internal erosion through the dam 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 erosions due to embankment or foundation leakage or piping
- Improper maintenance
- Improper design
- Negligent operation
- Failure of upstream dams
- Landslides into reservoirs
- High winds
- Earthquakes

Dam failures are potentially the worst flood events. A dam failure is usually the result of neglect, poor design, or structural damage caused by a major event such as an earthquake. Historical records of dam/levee failures for Escambia County are not available. When a dam

fails, a large quantity of water is suddenly released downstream, destroying anything in its path. The area impacted by the water emitted by dam failure would encounter the same risks as those in a flood zone during periods of flooding. The area directly affected by the water released during a dam failure is not county wide. The risks associated with dam/levee failures are the same as those risks associated with flooding. There have been no significant dam or levee failures reported in Escambia County during 2003 - 2013. The Poarch Creek Indian Reservation is located near the City of Atmore; therefore due to their proximity to the City of Atmore, the dam failure profile applicable to the City of Atmore also applies to the Tribe as well.

Dam safety has been an ongoing hazard mitigation issue in the State of Alabama, especially for small dams that are privately owned and poorly maintained. No state law currently exists to regulate any private dams or the construction of new private dams, nor do private dams require federal licenses or inspections. There have been several attempts in the State of Alabama to pass legislation that would require inspection of dams on bodies of water over 50 acre-feet or dams higher than 25 feet. Enactment has been hampered by the opposition of agricultural interest groups and insurance companies. Once established, the program will provide an up-to-date inventory of dams in Escambia County. A full inventory of dams will help to benefit public safety and emergency response operations in the event of a natural or other disaster. It will also provide for the inspection and permitting certification of certain dams in order to protect the citizens of Alabama by reducing the risk of failure of such dams. According to *HAZUS-MH 2.1* and *NOAA*, Escambia County has 18 HPDE – Earth Dams. One dam, W. J. Ellis dam located in Conecuh County but near the Escambia County line is classified as having high hazard potential, meaning failure or misoperation would probably result in the loss of human life even in Escambia County. None of the dams is located in a municipality. All are located in sparsely populated areas scattered throughout the unincorporated jurisdiction. **Table 3-13** shows risk categories of dams. **Table 3-14** provides an inventory listing of all the dams in Escambia County and includes additional data on each.

An estimated 2,228 dams are located in Alabama. As of March 2010 the 2009 dams are listed in the National Inventory of Dams (NID) and maintained by the USACE. The Tennessee

Valley Authority (TVA), USACE, Alabama Power Company (APCo), and the Alabama Electric Cooperative, Inc. have jurisdiction over approximately 32 federally regulated hydroelectric, navigation, and flood control project dams in Alabama. Some existing dams have inadequate spillways and embankments. Many dams are poorly maintained. (Source: *Alabama State Hazard Mitigation 2013 Plan Update*)

The probability of future occurrences cannot be characterized on a countywide basis because of the lack of information available. The qualitative probability is rated low because the overall area affected is low and impacts are localized. This rating is intended only for general comparison to other hazards that are being considered.

Primary effects from Dam failure in Escambia County would include:

1. Loss of life
2. Destruction of property
3. Unregulated water flow to surrounding areas
4. Increased amount of disease and disease-carrying animals in the area

Hazardous results from dam failure in Escambia County would include:

1. Heavy flooding would be a direct result of a dam failure, causing many deaths by injuring and trapping people in structures.
2. Large amounts of water would sweep with it property and severely damage any property that remained in the area.
3. Chemical spills from local factories caused by rushing water would pollute the area and destroy crops and other property.
4. The river would be able to flow naturally once the dam was breached - damaging any structures in the path, as well as interrupting wildlife cycles and hydrologic power supply.
5. There would be increased diseases as a result of the unsanitary conditions.

This page left intentionally blank

Table 3-13: Escambia County Dams Risk Categories

Risk Categories	Number of Dams
High - loss of one human life is likely if the dam fails	1
Significant - possible loss of human life and likely significant property or environmental destruction if the dam fails if the dam fails	6
Low - no loss of life and low economic or environmental damage	11
Total	18
<i>(Source: HAZUS MH 2.1)</i>	

This page left intentionally blank

Table 3-14: Escambia County Dam Inventory List

Dam ID	Dam Name	River	Dam Type	Hazard	Latitude	Longitude
AL00090	COOKS	TR CONECUH RIVER	HPDE	L	31.151669	-86.866669
AL00091	W R SHERRER	TR BURNT CORN CREEK	HPDE	L	31.128329	-87.11
AL00089	E J MORAN NUMBER TWO	TR MURDER CREEK	HPDE	L	31.159999	-87.038329
AL00087	ODIE SHERRER	MAY BRANCH	HPDE	S	31.11	-87.103329
AL00085	MCMILLAN	LITTLE JUNIPER CREEK	HPDE	L	31.229999	-87.069999
AL00084	RANDOLPH JERNIGAN	TR JERNIGAN CREEK	HPDE	L	31.045	-87.186669
AL00082	LITTLE RIVER STATE PARK	LITTLE RIVER	HPDE	S	31.25667	-87.48667
AL00081	MARSHALL PATTERSON		HPDE	S	31.03	-87.524999
AL00093	W J ELLIS	TR-MURDER CREEK	HPDE	S	31.26	-87.03
AL01809	GEORGE E WHITE DAM	JIM BOONE BRANCH	HPDE	L	31.22167	-87.58667
AL01808	BREWTON SEWAGE LAGOON DAM	MURDER CREEK OFFSTREAM	HPDE	L	31.079999	-87.084999
AL01810	CONTAINER CORPORATION TREATMENT DAM	MHILL CREEK	HPDE	L	31.073329	-87.11
AL02014	W J ELLIS	TLR-MURDER CKS	HPDE	H	31.25	-87.03333
AL00088	ED L MCMILLAN II #1	TLR MURDER CREEK	HPDE	L	31.161669	-87.04333
AL00092	C C HUXFORD LAKE	TR BURNT CORN CREEK	HPDE	L	31.138329	-87.106669
AL01395	RANDOLPH JERNIGAN #1	TR JERNIGAN CREEK	HPDE	S	31.045	-87.186669
AL02065	RANDOLPH JERNIGAN #2	TR-JERNIGAN CREEK	HPDE	S	31.03333	-87.2
AL02066	T R MILLER MILL CO	TR-CROSSWAY CREEK	HPDE	L	31.16667	-86.91667

(Source: HAZUS-MH 2.1; 2015)

This page left intentionally blank

Section Four: Vulnerability Assessment

In Section Three, the primary effects and hazardous results were considered for all identified hazards. In this section each hazard was further reviewed to identify the impacts on the county and its jurisdictions. Impact in terms of dollar value for past hazard occurrences are shown for the county in **Table 3-5** and for each jurisdiction in their individual Hazard Event table in Section Five of this plan.

Vulnerability is the extent to which something is damaged by a hazard. Vulnerability is very often measured using “damage functions.” These are based on studies of how buildings perform when they are exposed to hazards. Similar functions are available for infrastructure and other physical assets. Injury and mortality functions (how many people are injured or die during events) are also sometimes used as indicators of vulnerability, but these are generally not as reliable as functions for physical assets because there are many more variables. The Poarch Creek Indian Reservation is located near the City of Atmore; therefore due to their proximity to the City of Atmore, the hazard vulnerabilities applicable to the City of Atmore also apply to the Tribe as well.

Hazard Impacts

Thunderstorms (Source: NCDC NOAA)

Damage from thunderstorms can have a wide range of severity. All jurisdictions are vulnerable to thunderstorm events. Escambia County experiences storms every year with varying frequency and intensity. One event having the most property damages occurred in Brewton on July 2, 2009 and resulted in property damages of \$120,000 and two injuries. Numerous trees were blown down, including one that fell on a brick framed house and trapped a 70 year old female inside. She suffered minor injuries; however, the house was a total loss. A McCall area woman was injured and trapped in her residence when strong winds sent a large oak tree crashing through her home at 141 Brantley Lane. The McCall Volunteer Fire Department was dispatched to the residence of Wanda Straiton at 6:18 p.m. CDT. While in route to the scene, the fire department had to clear several trees blocking Jernigan Road, restricting access to

Brantley Lane. Mrs. Straiton was treated for her injuries and released at a local area hospital that evening. A thunderstorm event having the highest winds occurred on December 25, 2012 in the Freemanville Community in Escambia County. The wind magnitude was 81 miles per hour (70 kts.) ahead of a cold front associated with a strong upper level storm system. Winds estimated at 60 mph caused damage near Fast Lane Gas Station on Jack Springs Road, 1/2 mile south of Exit 54 and I-65. The strong winds overturned 18 wheelers. Also a house behind the gas station caught fire.

Lightning (Source: NCDC NOAA)

Lightning can cause substantial property damage and loss of human lives. All jurisdictions are vulnerable to lightning events. Escambia County experienced two lightning events during the plan's study period of 2003-2013. One event on July 30, 2003 struck an abandoned oil storage tank near Appleton; however, the fire department was able to extinguish the flames before the fire spread. No injuries or deaths occurred. Property damages of \$3,000 resulted and no crop damages were reported. Another event on July 6, 2009 resulted in the death of one woman struck by lightning while taking out her garbage.

Hail (Source: NCDC NOAA)

All jurisdictions are vulnerable to hail events. Escambia County has experienced golf ball sized to tennis ball sized hail, 2 inches in diameter. Vehicles were damaged, as was other property in the amount of \$40,000.

Tornados (Source: NCDC NOAA)

The impacts of tornados can be far-reaching. Life, property, and personal items are at risk. Tornados do not follow a definite path; all jurisdictions are vulnerable to tornado events. Property damage, injury, and death can result from the weakest tornados. Interruption of electrical services, communications, and other utilities may occur. Transportation corridors may be blocked or even destroyed. Debris removal can take time and can be costly. Residents may

suffer from post-traumatic stress disorder, depression, anxiety, and grief for lost loved ones. Longer response times results from having limited emergency personnel.

Areas with higher population densities pose the greatest potential for property damage, injury, and death. Census Tract 9702 is the most densely populated area in the county, having 502.48 persons per square mile. Communities with a high concentration of mobile homes are extremely vulnerable to tornados. Mobile homes are not capable of withstanding the strong winds associated with tornados. Escambia County has a total of 3,622 mobile homes countywide, 21.92% of the total housing stock. The municipality with the greatest percentage of mobile homes is in the Town of Riverview where 75.93% of the total housing units are mobile homes. (*Sources: U.S. Census Bureau, 2010-2012 American Community Survey and Easidemographics.com*)

Escambia County experienced four F0 tornadoes, two EF1 tornadoes and two EF2 tornadoes during this plan's study period. In April 2011, an EF2 tornado resulted in \$2.6 million property damages. In February 2008 an EF2 resulted in \$700,000 property damages. An EF1 tornado resulted in \$100,000 property damages.

Floods/Flash Floods (*Source: NCDC NOAA*)

Flooding can occur along the banks of the creeks and streams that flow throughout the county and where development has encroached in the floodplain. Flash flooding can occur anywhere in the county due to inadequate or clogged drainage systems and excessive rainfall. Unpaved dirt roads, common in the rural areas, are particularly vulnerable. Impacts in developed areas such as the Cities of Atmore, Brewton and East Brewton include street flooding and water backing up into homes and buildings. In addition to damaging homes, flooding can adversely impact crops, water and sewer systems, and dams and levees. To date, there are no Repetitive Loss properties in Escambia County to indicate any significant impact areas. Impacts for both flood types includes property and crop damage, contamination or failure of water and sewer systems, increase in waterborne disease, and possible dam or levee failure. All jurisdictions are vulnerable to flood events.

During 2003-2013, Escambia County experienced three flood events and 19 flash flood events. No deaths, injuries or crop damages resulted. The three flood events resulted in \$767,000 property damages, while the 19 flash flood events resulted in \$1,500,000 property damages. One of the most expensive flash flood events occurred in Atmore on December 14, 2009, resulting in \$1.250 million property damages. The most expensive flood event occurred in Appleton on this same date and resulted in \$400,000 property damages.

Drought/Extreme Heat (Source: NCDC NOAA)

All jurisdictions are vulnerable to occurrences of drought and extreme heat. Droughts may cause a shortage of water for human and industrial consumption, hydroelectric power, recreation, and navigation. Water quality may also decline and the number and severity of wildfires may increase. Severe droughts may result in the loss of agricultural crops and forest products, undernourished wildlife and livestock, lower land values, and higher unemployment. The effects are far reaching and impact people, livestock, crops, and hydrologic systems. Droughts create conditions of increased vulnerability to wild fires that can destroy lives and property, and also lead to water supply shortages as reservoirs and ground water levels drop. Heat exhaustion and stroke are common and can disproportionately impact the elderly and low-income residents who cannot afford air conditioning.

The categories of drought are defined as follows (Source <http://droughtmonitor.unl.edu>) Accessed 11/16/14: **Abnormally Dry (D0)** - Going into drought: short-term dryness slowing planting, growth of crops or pastures; fire risk above average. Coming out of drought: some lingering water deficits; pastures or crops not fully recovered. **Moderate Drought (D1)** - Some damage to crops, pastures; fire risk high; streams, reservoirs, or wells low, some water shortages developing or imminent, voluntary water use restrictions requested. **Severe Drought (D2)** - Crop or pasture losses likely; fire risk very high; water shortages common; water restrictions imposed. **Extreme Drought (D3)** - Major crop/pasture losses; extreme fire danger; widespread water shortages or restrictions. **Exceptional Drought (D4)** - Exceptional and widespread crop/pasture losses; exceptional fire risk; shortages of water in reservoirs, streams, and wells, creating water emergencies.

No drought events or extreme heat events were reported to the NCDC NOAA during this plan's study period of 2003-2013.

Extreme summer heat is the combination of very high temperatures and exceptionally humid conditions. If such conditions persist for an extended period of time, it is called a heat wave (FEMA). Heat stress can be indexed by combining the effects of temperature and humidity. The index estimates the relationship between dry bulb temperatures (at different humidity) and the skin's resistance to heat and moisture transfer - the higher the temperature or humidity, the higher the apparent temperature. The human risks associated with extreme heat include heatstroke, heat exhaustion, heat syncope, heat cramps. During 2003-2013, no Escambia County extreme heat events were reported to the NCDC NOAA.

Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold
(Source: NCDC NOAA)

During 2003-2013, Escambia County has been affected by four winter storm events resulting in snow. Ice and small amounts of snow can cripple the county, leaving roads impassable, effectively crippling residents from traveling to school, work, or the grocery store, creating a panic of activity and traffic congestion in advance of a predicted storm. Drivers are not accustomed to driving in these conditions, therefore many accidents occur. Snow and ice can weigh down tree limbs and power lines causing them to break, resulting in power failures and property damages. Local businesses and residents are not equipped with generators to restore power during these severe winter weather events. Also, many homes may not be properly insulated, leading to health concerns and even death. The most significant impacts from an actual event are power outages and consequential loss of heat, numerous transportation related accidents, and stranded motorists. Much like drought, extreme cold has more impact on disadvantaged populations, especially the homeless. Since these storms have no defined track, all residents of Escambia County are vulnerable to severe winter storm events.

Hurricane/Tropical Storm/Tropical Depression/Strong Wind/High Wind
(Source: NCDC NOAA)

Hurricanes and tropical storms such as Ivan, Arlene and Dennis have affected Escambia County. The most significant impacts have been related to excessive rainfall, damaging wind, and tornados. Residents suffer loss of power, damage to homes, blocked roadways from associated storm debris, and loss of other crucial utilities. Mobile homes are particularly vulnerable and are impacted more than conventionally built structures. Mobile homes in the county represent 21.92% of the housing stock. Effects of these storms generally impact the entire county and are not limited to a specific location. The fact that other surrounding counties will have also been affected by the same event only adds to the burden, as utility crews are often overwhelmed by the needs of an entire region or state.

On September 13, 2004, Hurricane Ivan resulted in peak winds of 90 knots or 104 mph and weak tornadoes. On July 9-10, 2005, Hurricane Dennis impacted the county. No direct deaths were reported with Dennis, but one indirect death was reported - one individual died from electrocution in Escambia County Alabama, related to the improper use of an emergency generator. High winds from the eye wall of Hurricane Dennis blew down numerous trees in the western portion of the county. Several of the trees fell on structures and damaged them. On June 10-11, 2005, Tropical Storm Arlene moved across the area during the afternoon and evening of June 11. Trees and power lines were blown down along the track of Arlene with most of the damage near the center of the storm. Except for some trees falling onto homes, very little structural damage was reported. No deaths, injuries, property or crop damages were reported to NOAA NCDC for these events.

Sinkholes and Expansive Soils (Sources: NCDC NOAA; Geological Survey; Local Input)

Impacts of sinkhole events are damages to property, infrastructure, and/or roadways. Areas of denser development such as the Cities of Atmore, Brewton and East Brewton could experience more significant impact and loss due to increased number and concentration of structures and associated utility services. All jurisdictions except Woodstock identified this hazard. There are limited adverse effects and shrink-swell potential of soils in Escambia County. No sinkholes or expansive soils were reported by the NOAA NCDC Storm Events Database or the U. S. Geological Survey.

Landslides (Sources: NCDC NOAA; Geological Survey; Local Input)

Like sinkholes, landslides are possible in Escambia County, but seldom occur. Road construction itself is often the source of potential landslide events as existing slopes and hillsides are cut to accommodate the road construction; the associated roadway receives the most impact of these types of landslides. The potential impacts to Escambia County as a result of landslides include property damages, impassable roads, sediment erosion, and possible infrastructure damages. Naturally occurring landslides have not been reported in the county. No landslides were reported by the NOAA NCDC Storm Events Database or the U. S. Geological Survey during this plan's study period of 2003-2013.

Earthquakes (Sources: www.homefacts.com/earthquakes/Alabama.html; Accessed Dec. 15, 2015)

While earthquakes can and do occur in Escambia County, their impact has historically been minimal and insignificant. Previous events have occurred in the county, but did not result in any damages, injuries, or deaths. One event was reported on September 30, 2003, 3.7612 miles from Atmore, having a depth of 10 miles and magnitude of 3.3. On November 7, 2004, an earthquake occurred 114.5 miles from the county's center, having a depth of 3.1 miles and magnitude of 4.4. On February 10, 2006, an earthquake occurred 288.9 miles from the county's center, having a depth of 3.1 miles and magnitude of 5.3. On September 10, 2006, an earthquake occurred 337.7 miles from the county's center, having a depth of 8.7 miles and magnitude of 5.9. Construction of many buildings on steep slopes susceptible to landslides and in karst terrains susceptible to sinkholes will be a major contributing factor to damage from future earthquakes in the county. Earthquakes can trigger other natural disasters such as landslides and sinkholes. No earthquakes were reported by the NOAA NCDC Storm Events Database during this plan's study period of 2003-2013.

Wildfires (Source: Alabama Forestry Commission)

During 2010-2013, Escambia County experienced 260 wildfire events resulting in 5537.56 total acres being burned. Based on this data, the average number of wildfires per year is 21; average acres burned per year is 1,846; and the average fire size in acres per year is 21. Alabama's forest products industries are vital to the state's economy. Alabama forests generate over \$21 billion in timber production and processing revenue and provide over 122,000 jobs. The forest industry produces an estimated \$12.78 billion worth of products in 2010, making the forestry industry the state's second largest manufacturing industry. Both rural and urban areas in all jurisdictions are impacted by wildfires and result in loss of wilderness, crops, livestock and other property. Loss of human life, both residents and firefighters, is also possible.

Dam and Levee Failures (Sources: HAZUS MH 2.1; Local Input)

There are 17 dams located in Escambia County and one dam on the Escambia/Conecuh County line. All dams are earth dams. One dam is identified as having being a high hazard. The impact of a dam failure in the county is low given their location in remote areas with little residential occupancy. Potential impacts would be limited or unregulated water flow, associated damages to property and crops, and a potential increase in water borne disease. The risks associated with dam/levee failures are also the same as those risks associated with flooding. There have been no significant dam or levee failures reported in Escambia County during 2003 - 2013.

Socially Vulnerable Populations

Certain populations are generally more affected by hazard events. These populations can be defined in terms of social, racial, and economic characteristics. Data provided in the section was obtained from the 2010 Census using breakouts for entire municipalities and census tracts. Escambia County has 945 square miles of land and 41 persons per square mile.

Table 4-1 shows the county's population characteristics by jurisdiction and by census tract. The City of Atmore is the most populated jurisdiction, followed by the City of Brewton, City of East Brewton and the Towns of Flomaton, Riverview and Pollard.

Map 2-1 shows the county's census tracts. In terms of vulnerability, the larger the population of an area the more people and structures that could possibly be damaged or destroyed. Tract 9698 is the most populated tract and contains portions of the Cities of Brewton and East Brewton; however, it also includes portions of Castleberry in Conecuh County and Wing and Andalusia in Covington County. Tract 9704 is the second most populated tract and contains portions of the Cities of Atmore and Brewton and the Huxford Community. Tract 9705 is the third most populated tract and contains portions of the City of Atmore and Perdido in Baldwin County. Tract 9702 is the least populated tract and contains portions of the City of Brewton.

This page left intentionally blank

Table 4-1: Escambia County Population Characteristics

Geographic Area	<i>Population</i>	<i>Race-White</i>	<i>Race-Black</i>	<i>Race-Other*</i>	<i>Under 19 years</i>	<i>Age 20-64 years</i>	<i>Age 65 and Over</i>
Escambia County	38,319	23,784	12,220	2,315	9,708	22,799	5,812
Atmore (includes the Poarch Band of Creek Indians)	10,194	4,073	5,672	449	2,133	6,476	1,315
Brewton	5,408	2,927	2,304	177	1,371	3,001	1,036
East Brewton	2,478	1,851	516	111	743	1,381	354
Flomaton	1,440	1,001	391	480	427	794	219
Pollard	137	81	38	18	33	84	20
Riverview	184	183	0	1	45	97	42
Census Tracts							
9698 16.17 persons per sq mi	5,955	4,479	1,267	209	1,654	3,424	877
9699 36.09 persons per sq mi	4,361	3,545	592	224	1,122	2,531	708
9701 109.93 persons per sq mi	4,516	3,370	1,025	121	1,149	2,443	924
9702 502.48 persons per sq mi	1,739	470	1,240	29	424	1,050	265
9703 28.22 persons per sq mi	3,632	3,080	420	132	1,003	2,077	552
9704 32.59 persons per sq mi	5,744	2,677	2,231	4,908	813	4,474	457
9705 73.67 persons per sq mi	4,819	2,808	1,595	416	1,354	2,712	753
9706 119.61 persons per sq mi	4,305	912	3,025	368	1,275	2,212	548
9707 227.52 persons per sq mi	3,518	2,443	825	250	914	1,876	728

(Source: 2010 Census)

This page left intentionally blank

Minority populations are generally considered to be more vulnerable to hazard events. These populations may not have the resources necessary to recover as quickly or completely from disasters. Minorities generally have higher percentages of inadequate medical insurance, inadequate home insurance, and homes that may be deemed as substandard housing.

Populations over sixty-five years of age and those under eighteen years of age are more vulnerable than other population groups. These groups are at higher risk for injury and medical complications that may occur during or as a result of a disaster. These special needs populations may require more attention during evacuation and may require special shelters.

In addition to the racial and age composition within the county, income levels are important when identifying vulnerable populations. Lower income individuals may not have the resources to prepare for or recover from disasters. **Table 4-2** shows the median household income, per capita income, and poverty level data for the jurisdictions and census tracts in Escambia County.

The median household income for the State of Alabama is \$43,160. The median household income for the United States is \$53,046. Tract 9707 is the only tract that exceeds the state average, but is below the national average; all remaining tracts are less than the state and national averages. The county and its municipalities do not have a median household income that equals or exceeds either the state or national average. (*Source: 2010 Census; 2008-2012 Census Data at USA.com*)

Per capita income is the average obtained by dividing aggregate income by the total population of an area. The per capita income for the State of Alabama is \$23,587. The per capita income for the United States is \$28,051. All tracts are lower than the state and national averages. The county and its municipalities do not have a per capita income that equals or exceeds either the state or national average. (*Source: 2010 Census; 2008-2012 Census Data at USA.com*)

The percent of persons below the poverty level in the State of Alabama is 18.1%. The corresponding rate for the United States is 14.9%. Tracts 9699, 9701, 9707 and the City of Brewton are below the State of Alabama poverty level percentage. Tract 9707 is below the State and U. S. poverty level percentages. All other jurisdictions and tracts are above the State and

U.S. poverty level percentages. Tract 9706 and the Town of Pollard have the highest poverty rates. (*Source: 2010 Census; 2008-2012 Census Data at USA.com*)

According to the 2010 Census, the total population of Escambia County is 38,319, which is 0.31% less than it was in 2000. The population growth rate is much lower than the state average rate of 7.48% and much lower as the national average rate of 9.71%. The Escambia County population density is 40.20 people per square mile, which is much lower than the state 91.18 and national 81.32 average densities of people per square mile. The most prevalent race in Escambia County is white, which represents 62.07% of the total population. The average Escambia County education level is lower than the state and national averages.

As of 2010 Census Data, the per capita income of Escambia County is \$16,294, which is lower than the state average of \$23,587 and national average of \$28,051. Escambia County median household income is \$31,075, which has increased by 9.73% since 2000. The median household income growth rate is much lower than the state average rate of 26.44% and national average rate of 26.32%.

As of 2010 Census Data, the median price of a house in Escambia County is \$85,300, which is lower than the state average of \$122,300 and national average of \$181,400. The Escambia County median house value has increased by 27.89% since 2000. The growth rate for the price of a house in Escambia County is lower than the state average rate of 43.71% and national average rate of 51.67%. The median year that a house in Escambia County was built is 1979, which is about the same as the median year for a house built in the state which is 1980 and newer than the median year for a house built in the USA which is 1975.

Table 4-2: Escambia County Income Data

Geographic Area	Median Household Income	Per Capita Income	Population Below Poverty Level	Population Percent Below Poverty Level
Escambia County	\$31,075	\$16,294	8,849	24.91%
Atmore (includes the Poarch Band of Creek Indians)	\$29,141	\$15,420	2,120	26.80%
Brewton	\$31,723	\$19,229	918	18.02%
East Brewton	\$22,846	\$15,306	751	32.79%
Flomaton	\$30,222	\$14,605	543	28.90%
Pollard	\$31,563	\$12,864	85	41.46%
Riverview	\$35,278	\$12,251	33	24.26%
Census Tracts				
9698	\$23,832	\$14,611	1,686	32.09%
9699	\$37,450	\$19,157	654	15.86%
9701	\$33,484	\$20,541	705	17.43%
9702	\$27,624	\$13,771	577	30.53%
9703	\$29,631	\$15,669	1,328	32.89%
9704	\$35,139	\$11,159	854	24.47%
9705	\$31,075	\$16,294	8,849	24.91%
9706	\$20,946	\$15,227	1,211	33.04%
9707	\$44,735	\$21,569	313	8.58%
<i>(Source: 2010 Census; USA.com)</i>				

This page left intentionally blank

Vulnerable Structures

Housing is an important consideration of mitigation planning. The concentration and the type of housing are two primary factors. In Escambia County there are a total of 16,525 housing units. **Table 4-3** shows the housing characteristics of the county by jurisdiction.

Atmore has the greatest number of housing units, followed by Brewton, East Brewton, Flomaton, Riverview and Pollard. Atmore has the highest number of mobile home units within a municipality; while, Riverview has the highest percent of mobile homes within a municipality. Mobile home units are historically very vulnerable to a variety of hazards and prone to high amounts of damage and complete destruction.

Table 4-3: Escambia County Housing Characteristics			
Geographic Area	Total Housing Units	Mobile Home Units	Mobile Home %
Escambia County	16,525	3,622	21.92%
Atmore (includes the Poarch Band of Creek Indians)	3,626	487	13.43%
Brewton	2,384	99	4.15%
East Brewton	1,239	63	5.08%
Flomaton	808	196	24.26%
Pollard	67	25	37.31%
Riverview	108	82	75.93%
<i>(Source: 2010 Census; Easidemographics.com; Percent calculations by LHA)</i>			

Table 4-4 and **Table 4-5** reflect information taken from HAZUS-MH 2.1. **Table 4-4** shows the building stock in Escambia County by general occupancy. The data provides the number of buildings by use and is shown by Census Tract. Complementing this information is **Table 4-5** that provides the value totals for these building types and **Table 4-6** that provides the content value for these building types, each table is shown by Census Tract.

Table 4-4: Escambia County Building Stock by General Occupancy

Census Tract	Residential	Commercial	Industrial	Agriculture	Religious	Government	Education	Building Count
9698	2,968	113	41	8	23	8	2	3,163
9699	2,334	76	30	12	11	4	4	2,471
9701	2,166	103	16	6	8	4	4	2,307
9702	920	93	39	6	15	8	4	1,085
9703	2,064	76	33	0	13	6	2	2,194
9704	1,289	52	13	15	10	8	2	1,389
9705	2,152	94	64	13	12	4	5	2,344
9706	2,107	86	21	6	14	4	2	2,240
9707	1,768	152	20	6	16	1	6	1,969
TOTAL	17,768	845	277	72	122	47	31	19,162

(Source: HAZUS-MH 2.1)

Table 4-5: Escambia County Building Exposure
(Numbers shown in thousands of dollars)

Census Tract	Residential	Commercial	Industrial	Agriculture	Religious	Government	Education	Building Count
9698	205,666	25,814	19,801	876	13,520	5,140	3,377	274,194
9699	174,575	29,576	15,645	1,092	6,308	1,252	3,077	231,525
9701	230,949	106,290	2,593	508	2,691	1,476	4,692	349,199
9702	71,371	44,217	61,624	703	10,847	5,990	2,507	197,259
9703	123,272	21,654	10,809	0	8,680	2,666	516	167,597
9704	185,890	11,018	6,501	1,603	3,681	6,611	2,272	217,576
9705	154,842	97,517	74,346	1,205	5,278	1,395	5,910	340,493
9706	144,944	26,200	4,494	897	4,997	1,991	1,141	184,664
9707	171,289	61,815	6,599	789	9,605	109	4,755	254,961
TOTAL	1,462,798	424,101	202,412	7,673	65,607	26,630	28,247	2,217,468

(Source: HAZUS-MH 2.1)

Table 4-6: Escambia County Building Contents Exposure
(Numbers shown in thousands of dollars)

Census Tract	Residential	Commercial	Industrial	Agriculture	Religious	Government	Education	Building Count
9698	103,016	26,887	28,217	876	13,520	7,172	3,377	183,065
9699	87,497	29,692	22,563	1,092	6,308	1,473	3,384	152,009
9701	115,638	142,062	3,130	508	2,691	1,476	5,476	270,981
9702	35,719	45,629	91,772	703	10,847	6,317	2,507	193,494
9703	61,841	22,204	15,021	0	8,680	3,750	516	112,012
9704	93,037	11,192	9,517	1,603	3,681	7,151	2,272	128,453
9705	77,517	98,344	110,029	1,205	5,278	1,641	7,558	301,572
9706	72,609	26,586	5,373	897	4,997	2,357	1,141	113,960
9707	85,765	69,530	9,400	789	9,605	109	4,755	179,953
TOTAL	732,639	472,126	295,022	7,673	65,607	31,446	30,986	1,635,499

(Source: HAZUS-MH 2.1)

Critical Facility Inventory

Critical facilities are crucial to the daily operation of Escambia County. Critical facilities help maintain a certain quality of life. Loss of operation could result in severe impacts on the community. Each of the critical facilities listed in **Table 4-7** is vulnerable to each of the hazards identified in the risk assessment. Critical facilities include but are not limited to the following:

- Governmental services
- Police and Fire Departments
- Public Works
- Education
- Industrial
- Medical

Each jurisdiction listed critical facilities based on the location of the facility. The county’s list will show only what is located in the unincorporated areas. Each jurisdiction also provided addresses and approximate values for the facilities listed, using replacement values from their insurance policies when available. *HAZUS-MH 2.1* was also utilized for building and content values.

Critical facilities were reviewed to consider vulnerability to special flood hazard areas. The determination utilized the review of existing FIRMs or FHBMs.

Future Critical Facilities:

Construction of other critical facilities and infrastructure will follow future development.

TABLE 4-7: Escambia County Critical Facilities

FACILITY TYPE	REPLACEMENT VALUE
D. W. McMillan Memorial Hospital	\$45,000,000
Physician Office Complex #1	\$7,500,000
Physician Office Complex #2	\$1,500,000
Poarch Tribal Police Dept., 5811 Jack Springs Rd.	\$38,415
Huxford VFD, 451 Front St., Huxford	\$16,464
Castleberry FD, P. O. Box 97, Castleberry	\$16,464
Sandcut VFD, Rural Route 2, Castleberry	\$16,464
Escambia County Fire & Rescue, 1409 Shoffner St., East Brewton	\$16,464
Huxford Elementary School, 637 Huxford Rd., Huxford	\$2,970,620
Escambia County Middle School, 100 Martin Luther, Atmore	\$6,510,690
Escambia Academy, 268 Cowpen Creek, Atmore	\$2,315,760
Escambia County High School, 1215 S. Presley St., Atmore	\$6,017,170
Total	\$71,918,511

Source: Larry Padgett, Director of Purchasing, D. W. McMillan Memorial Hospital and HAZUS-MH 2.1

Development Trends

Escambia County’s population has decreased slightly over the past fifteen years and projections continue this decrease. **Table 4-8** provides the population projections for Escambia County. **Map 4-1** shows current land use cover in Escambia County.

Table 4-8: Population Projections

County	2000	2010	2015	2020	2025	2030	2035	2040	Number Difference	Percent Difference
Escambia	38,440	38,319	38,281	38,173	37,956	37,677	37,435	37,286	-1,033	-2.7

Note: These projections are driven by population change between Census 2000 and Census 2010. Recent data on births and deaths from the Alabama Department of Public Health are used to derive birth and death rates for the state and each county.

Source: U.S. Census Bureau and Center for Business and Economic Research, The University of Alabama, Fall 2012 – As noted in the Alabama State Hazard Mitigation Plan, April 2013

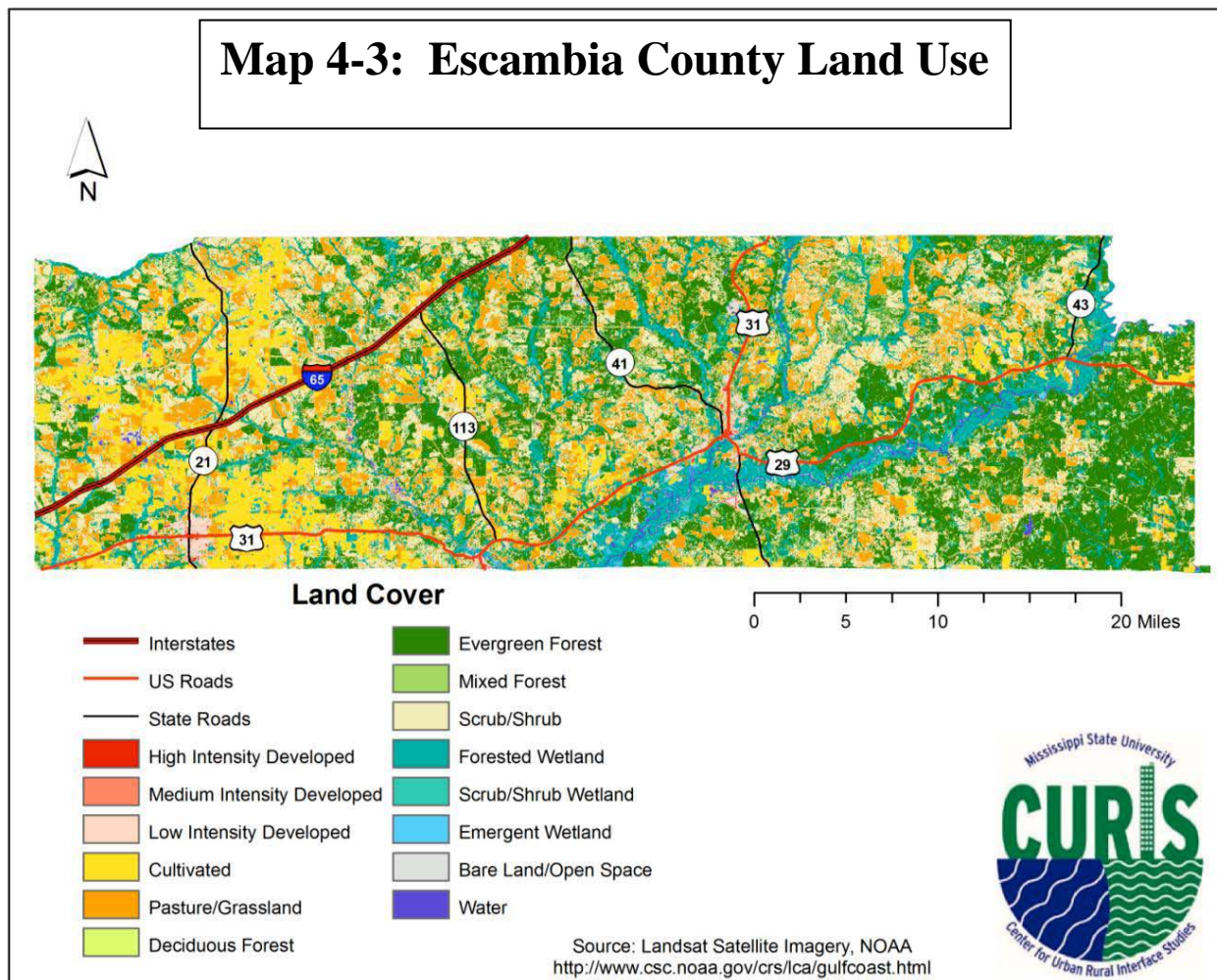
The Sizemore Creek Beverages in Atmore created three new jobs and Thompson Engineering Company created one new job during the past five years. The development trends in the county do not indicate any marked increase in vulnerability to identified hazards. At present, land use patterns are not expected to change, and development is expected to remain consistent within existing patterns.

According to the Mississippi State University Coastal Research and Extension Center, development in the county is positioned to increase more in some of the towns in the county than in others. Much of the economic base for development stems from coastal industries in Baldwin County. The State Port in Mobile is a hub for a lot of jobs and stems future industries for the county. Certain specialty parts and materials are manufactured in Escambia County and then shipped to the coast for use.

There are businesses manufacturing parts for other companies within the region. Increased partnering with neighboring Escambia County, Florida and Baldwin and Mobile Counties in Alabama is essential. Atmore has a new industrial park that is modern and ready for expansion. The city is located around the I-65 corridor, which is a gateway to many Metropolitan areas. Brewton also has an industrial park, although expansion of the existing park is suggested to allow for more diverse industries to become established. Railroads brought industry to the county in the nineteenth century and are still a viable shipping channel for many products manufactured in the county. The CSX provides east-west main line rail service in Atmore and Brewton, the Alabama and Gulf Coast Railway provides north-south main line rail in Atmore and the CSX provides rail service at the Atmore Industrial Park.

The county as a whole has quite a diversified economic base. County businesses

manufacture automotive parts, carpets, wood products, castings, and other goods. Forestry and agriculture provide jobs for many residents. The educational system consists of public and private pre-kindergarten through high school and the Jefferson Davis Community College has a campus in Brewton and Atmore. There are many state and federal agencies located throughout the county and two hospitals; the Atmore Community Hospital and the D.W. McMillan Memorial Hospital in Brewton provide 24 hour emergency care and helicopter service to major medical facilities in the region. YMCA's in Brewton and Atmore provide a variety of programs and facility amenities for the county. Finally, tourism includes canoeing, camping, horseback riding, hunting, golf courses, and the Creek Entertainment Center casino.



Methods of Warning

Escambia County Emergency Management Agency and the county's jurisdictions have constructed a warning system that provides multiple ways to receive weather watches, warnings, and other emergency messages.

NOAA Weather Radio

NOAA Weather Radio is a nationwide network of radio stations broadcasting weather and other emergency information 24 hours a day. All National Weather Service issued watches, warnings, forecasts and other emergency messages are broadcast on one of seven frequencies.

National Weather Service personnel at offices in Mobile record weather information that plays in a cyclical pattern repeating every three to six minutes. Broadcasts generally include local area five-day forecasts, current weather conditions, radar reports, weather summaries, climatic data, river and lake stage readings, and other weather information. The broadcasts are continuously updated to provide the listener with the latest information.

NOAA Weather Radio is useful any time for the latest weather information but becomes even more important during severe or hazardous weather. During episodes of severe weather, the normal broadcast cycle is interrupted and focus shifted to the local severe weather threat. Watches, warnings, and statements are given the highest priority and are updated frequently as conditions change.

In an emergency, each transmitter is capable of transmitting a warning alarm tone signal and the new Specific Area Message Encoding (SAME) signal followed by information on the emergency situation. These signals will activate specially designed receivers, either bringing up the volume or producing a visual and/or audible alarm. Not all weather band receivers have this capability, but all radios that receive NOAA Weather Radio transmissions can receive the emergency broadcasts. The warning alarm device is tested each Wednesday between 11 am and noon, weather permitting.

CodeRED Emergency Notification Warning System

The CodeRED Warning System is easy to use under any conditions. Authorized users launch messages via telephone or Internet from anywhere at any time. The system can support thousands of users. CodeRED utilizes technology that ensures messages are delivered in their entirety whether the call is picked up live by a person or an answering device. Real time reporting allows users to view the status of every communication. Multiple redundancies are built in to ensure delivery of critical communications. CodeRED is a massive dialing system that is capable of transmitting millions of messages an hour. The system's resources are allocated to match local telephone infrastructure, resulting in less disconnected calls, network congestion, and busy signals during an emergency situation.

ALERT FM Emergency Communication Warning System

The ALERT FM Warning System allows emergency officials the ability to communicate directly with their community in the event of a public emergency. Messages can be targeted to specific geographical areas, organizational groups, citizens, first responders, and/or government personnel. Emergency communication warning messages can be sent via multiple ways in seconds.

Outdoor Warning Sirens

Escambia County has no outdoor warning sirens in place. The Poarch Band of Creek Indians has three outdoor warning sirens on tribal lands and the City of Atmore has two, all of which are maintained by the respective jurisdictions. The City of Brewton has two outdoor warning sirens and the City of East Brewton has one, each of which are inoperative at this time. Atmore, Brewton, East Brewton and Flomaton have all expressed interest in installing and/or upgrading outdoor warning sirens. The costs of purchasing, installing, and maintaining outdoor warning sirens became very expensive and unaffordable for the county. Police and fire units throughout the county can be instructed to sound their sirens for warnings in lieu of outdoor warning sirens.

The existing sirens are owned and operated by their specific jurisdiction. The Atmore police/fire dispatch operates those in Atmore, which the Poarch Band of Creek Indians' police/fire dispatch operates those in their area. The general public is advised not to depend on hearing the sirens inside a building. The sirens are designed to be heard outdoors only and are installed near recreational areas and shopping malls where there are large outdoor populations.

Broadcast Media

One of the key elements of the Countywide Warning System is broadcast media. Most of the radio, television, and cable companies that serve Escambia County residents are dedicated to informing their audiences of impending emergencies. These broadcasters have partnered with the Escambia County Emergency Management Agency to bring their listeners and viewers fast, accurate, and important severe weather and civil emergency information via EAS and traditional newsgathering methods. Most of the television stations serving the Escambia County market (ABC WEAR 3, CBS WKRG 5, NBC WPMI 15, and Fox WALA 10) feature live Doppler radar and certificated meteorologists. Many of the radio stations maintain continuous severe weather coverage.

Vulnerability Summary

Table 4-12 provides a summary of Escambia County's vulnerability to specified hazards by jurisdiction. Each jurisdiction was tasked with considering how vulnerable they are to each hazard by considering the percentage of potential damage and the frequency of occurrences. Using information from the Risk Assessment in Section Three as well as the data in the earlier parts of this section as a basis for evaluation, the committee members assigned either N/A: Not Applicable, L: Low Risk, M: Medium Risk, and H: High Risk as defined in the Table Key.

Estimated Loss Projections

Table 4-10 shows the figures used for valuation of deaths and injuries are approximations based on FEMA guidance used in benefit-cost analysis of hazard mitigation measures. Major and minor injuries are combined in the NOAA data, so it was necessary to use a blended number in the valuation.

Table 4-12 shows the estimated loss projections for each hazard. The average number of occurrences per year is shown along with total number of deaths and injuries. The average amount of loss per event was determined by combining crop and property loss damages for each event type and then dividing by the corresponding total number of events reported during the ten-year study period. This amount is shown under the column heading Average Crop and Property Loss. There are instances where the Average Crop and Property Loss (per event) and Projected Loss (per Event) for an identified hazard could not be determined due to the absence of historical event data. This is a data limitation beyond the control of an affected jurisdiction.

Table 4-10: 2014 Values used for Monetary Conversion of Tornado Injuries and Deaths	
Damage Category	Value
Injury (blended major and minor)	\$23,175
Death	\$3,660,003
<i>(Source: FEMA)</i>	

The Projected Loss is shown per event by hazard type. Due to the fluctuations in the value of a dollar over the ten-year study period, the year 2008 was chosen as a midpoint year. The Projected Loss was then calculated by adjusting the 2008 value of \$1 up to \$1.09, a 9 % increase to reflect the value of the dollar in 2014. Average loss amounts were increased by 9% to achieve a 2014 value for an estimated projected loss per event occurrence. *(Source: U. S. Inflation Calculator based on the U. S. Government Consumer Price Index Data)*

Table 4-11: Escambia County Vulnerability Summary

Natural Hazards	Atmore (includes the Poarch Band of Creek Indians)	Brewton	East Brewton	Flomaton	Pollard	Riverview	Escambia County
Thunderstorm	M	H	L	M	M	M	H
Lightning	L	L	L	L	L	L	L
Hail	L	M	L	L	L	L	M
Tornado	M	L	L	L	L	M	M
Flood/Flash Flood	M	M	M	M	L	L	H
Drought/Extreme Heat	L	L	L	L	L	H	L
Winter Storm/Frost Freeze/ Heavy Snow/Ice Storm/ Winter Weather/ Extreme Cold	L	L	M	M	M	M	L
Hurricane/Tropical Storm/ Tropical Depression/High Wind/Strong Wind	M	M	M	M	M	M	M
Sinkhole/Expansive Soil	L	L	L	L	L	L	L
Landslide	L	L	L	L	L	L	L
Earthquake	L	L	L	L	L	L	L
Wildfire	M	M	M	M	M	M	M
Dam/Levee Failure	L	L	L	L	L	L	L

KEY:

NA – Not Applicable; not a hazard to the jurisdiction

L – Low Risk; little damage potential (damage to less than 5% of the jurisdiction)

M – Medium Risk; moderate damage potential (damage to 5-10% of jurisdiction, infrequent occurrence)

H – High Risk; significant risk/major damage potential (damage to over 10% of jurisdiction, regular occurrence)

(Source: Participating Jurisdictions)

This page left intentionally blank

**Table 4-12: Escambia County
Estimated Loss Projections from Specified Hazards**

Natural Hazards	Average Occurrences (per year)	Total Deaths	Total Injuries	Average Death and Injury Loss (per event)	Average Crop and Property Loss (per event)	Projected Loss (per event)
Thunderstorm	3.7	0	2	\$626	\$13,973	\$15,913
Lightning	0.2	1	0	\$1,833,002	\$1,500	\$1,999,607
Hail	2.0	0	0	Unknown	\$2,200	\$2,398
Tornado	0.8	0	0	Unknown	\$431,375	\$470,199
Flood/Flash Flood	2.2	0	0	Unknown	\$103,046	\$112,320
Drought/Extreme Heat	Unknown	0	0	Unknown	Unknown	Unknown
Winter Storm/Frost Freeze/ Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	0.4	0	0	Unknown	Unknown	Unknown
Hurricane/Tropical Storm/ Tropical Depression/High Wind/Strong Wind	0.6	0	0	Unknown	Unknown	Unknown
Sinkhole/Expansive Soil	Unknown	0	0	Unknown	Unknown	Unknown
Landslide	Unknown	0	0	Unknown	Unknown	Unknown
Earthquake	Unknown	0	0	Unknown	Unknown	Unknown
Wildfire (3 year study period)	87	0	0	\$0	\$39,900	\$43,491
Dam/Levee Failure	Unknown	0	0	Unknown	Unknown	Unknown

Sources: NOAA NCDC; U. S. Inflation Calculator/Consumer Price Index; Local Input; USDA Census of Agriculture; Alabama Forestry Commission and National Forestry Service; Alabama Geological Survey

Methodology: Average occurrences were expressed annually by dividing the total number of occurrences by the ten-year period. Deaths and injuries were taken from the hazard event data. Average losses were calculated by dividing the total amount of all damages by the total number of occurrences causing damage during the ten-year period with the exception of wildfire which is a 3-year period. Projected loss expresses an estimated damage amount per future occurrence by converting the average loss figures from a midpoint of 2008 dollars to 2014 dollars (\$1 in 2008 = \$1.09 in 2014...a cumulative rate of inflation of 9%). Zero and Unknown denote there is no data available to determine the average occurrences, average loss or projected loss per event.

This page left intentionally blank

Mitigating Potential Losses

The Hazard Mitigation Planning Committee set forth mitigation goals and objectives for the county and its jurisdictions. Each jurisdiction sets forth its own mitigation action plan located in Section Five.

Mitigation Strategy

In the preparation of the mitigation strategy, the Hazard Mitigation Planning Committee reviewed the goals and objectives of the 2010 plan revision. The committee agreed the goals and objectives would remain the same for this plan revision.

Mitigation Actions

Mitigation ideas can be found on the FEMA.gov website. FEMA summarizes mitigation actions into four types: Local Planning and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, Education and Awareness.

Jurisdictions sought and selected their own mitigation actions to support the goals and objectives of the mitigation strategy. The identification of mitigation actions has been shaped by the events that occurred over the past five years, vulnerabilities, and available mitigation actions. Each significant event revealed strengths and weaknesses within the hazard mitigation program; therefore, jurisdictions adjusted their mitigation actions to address these weaknesses accordingly. Because of these events, the prioritization of actions has been re-evaluated and ranked as follows:

Actions identify the activity, what hazard(s) are addressed, whether the activity applies to a new or existing asset, and an estimated cost. The action also identifies the planning mechanism, possible funding sources, and a time frame for completion of the activity.

Action Priority and Cost Benefit Review

In the selection and prioritization of mitigation actions, each member was asked to consider the following: funding options, political support, public support, legality, preservation of the environment, and staff capability. The committee then looked at each strategy in terms of costs and benefits. Not only were direct costs and benefits considered, but indirect costs and

benefits were also acknowledged. Indirect costs and/or benefits are often intangible attributes such as social effects.

Priority mitigation actions will be implemented only if they are cost beneficial; maximum benefits must outweigh the associated costs of the proposed actions. The committee performed a general evaluation of each mitigation measure which might require FEMA funds. The committee weighed the estimated costs for each mitigation measure against the projected benefits of the action. A more detailed benefit-cost analysis will be required for each priority action to determine economic feasibility during the project planning phase. Projects will also require a more detailed evaluation for eligibility and feasibility including social impact, environmental impact, technical feasibility, and other criteria that measure project effectiveness. This detailed evaluation of projects will be performed in the pre-application phase of a grant request. Further, implementation of actions will be subject to the availability of FEMA grants and other sources of funding from year-to-year.

Mitigation Status

During the plan update mitigation actions were reviewed in order to identify completed, deferred, or deleted actions from the previous plan and incorporate actions added during annual updates.

Projects will be labeled high, medium, and low in priority. Projects labeled high in priority are those projects having the most funding options, political support and cost benefits (both direct and indirect). Projects labeled medium in priority are those projects having a funding option, some political support and direct cost benefits. Projects labeled low in priority are those projects having little to no funding and low political support, yet the cost benefits are good. All actions will be addressed as soon as possible depending on available funding and resources; however, actions labeled high in priority will be addressed first, medium in priority will be addressed secondly, and low in priority will be addressed last. The most important determination is funding, which greatly affects which projects can be completed.

Table 4-13 shows Escambia County's mitigation actions for the 2015 plan update. During the plan update process new actions were identified and added to the plan. Current statuses can be found under Benchmark in the tables.

Table 4-13: Escambia County 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 for this Action	Flood Plain Manager
Estimated Time Frame for Completion	2019
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	Escambia County continues training local flood plain manager. The planning committee reviewed this action and Escambia County wishes to keep it in this plan update.
Mitigation Action - DELETED	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 for this Action	Flood Plain Manager
Estimated Time Frame for Completion	2018
Estimated Cost	TBD
Funding Sources	HMGP (FEMA Map Modernization Program)
Priority	Low
Benchmark	Completed in 2012
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	2020
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	Escambia County continues participating in the National Flood Insurance Program. The planning committee reviewed this action and Escambia County wishes to keep it in this plan update.
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 for this Action	EMA
Estimated Time Frame for Completion	2019
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	Escambia County continues promoting flood insurance. The planning committee reviewed this action and Escambia County wishes to keep it in this plan update.
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	2019

Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	Escambia County continues drainage system maintenance. The planning committee reviewed this action and Escambia County wishes to keep it in this plan update.
Mitigation Action	Distribute FEMA Publication 320- <u>Taking Shelter From the Storm: Building a Safe Room in Your House</u> – 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	2020
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	Escambia County continues distributing FEMA publications. The planning committee reviewed this action and Escambia County wishes to keep it in this plan update.
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	2018

Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	Low
Benchmark	Escambia County continues publicizing the availability of FIRM information. The planning committee reviewed this action and Escambia County wishes to keep it in this plan update.
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	2020
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. The planning committee reviewed this action and Escambia County wishes to keep it in this plan update.
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	2018
Estimated Cost	TBD

Funding Sources	HMGP, Local
Priority	Medium
Benchmark	Escambia County continues obtaining and depositing materials with local libraries. The planning committee reviewed this action and Escambia County wishes to keep it in this plan update.
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	2017
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	Escambia County continues distributing hazard mitigation brochures. The planning committee reviewed this action and Escambia County wishes to keep it in this plan update.
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	2019
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High

Benchmark	Escambia County continues promoting the use of weather radios. The planning committee reviewed this action and Escambia County wishes to keep it in this plan update.
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	2018
Estimated Cost	TBD
Funding Sources	HMGP, ACES, AFC
Priority	Low
Benchmark	Escambia County continues seeking technical assistance. The planning committee reviewed this action and Escambia County wishes to keep it in this plan update.
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	2019
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. The planning committee reviewed this action and Escambia County wishes to keep it in this plan update.
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 hospital in Brewton (1.6 MHz) including installation (\$1.2 million); an emergency generator for the Physician Office Complex #1 at the Brewton Medical Center (150 KW) including installation (\$250,000); 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 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	2020
Estimated Cost	\$1,500 - \$35,000 each
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	Action items listed in the 2010 plan for municipalities have been removed from this

	list for the county. Escambia County will purchase and update generators as funds become available. The planning committee reviewed this action and Escambia County wishes to keep it in this plan update.
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)	
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. The planning committee reviewed this action and Escambia County wishes to keep it in this plan update.
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	All Hazards
Applies to new/existing asset(s)	Existing
Point of Contact for this Action	EMA, Flood Plain Manager
Estimated Time Frame for Completion	2020
Estimated Cost	TBD

Funding Sources	Local Government, HUD CDBG, HMGP, PDM
Priority	MEDIUM
Benchmark	Escambia County continues seeking funding sources. The planning committee reviewed this action and Escambia County wishes to keep it in this plan update.
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	2017
Estimated Cost	\$125,000 and up each
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	Escambia County continues encouraging the construction of safe rooms. The planning committee reviewed this action and Escambia County wishes to keep it in this plan update.
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	2020
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. The planning committee reviewed this action and Escambia County wishes to keep it in this plan update.
Mitigation Action - NEW	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	2020
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	New Action
Mitigation Action - NEW	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	2020
Estimated Cost	TBD
Funding Sources	HMGP, Local, DOT
Priority	High
Benchmark	New Action

Section Five:

Jurisdiction Assessments

This page left intentionally blank

City of Atmore

This page left intentionally blank

**Table 5-1: City of Atmore
Risk and Vulnerability Overview**

Natural Hazards	Hazard Identification	Mitigation Actions Prioritization	Prioritized Occurrence Threat	Vulnerability
Thunderstorm	X	2	4	M
Lightning	X	3	6	L
Hail	X	2	3	L
Tornado	X	2	5	M
Flood/Flash Flood	X	1	2	M
Drought/Extreme Heat	X	3	6	L
Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/ Winter Weather/ Extreme Cold	X	3	3	L
Hurricane/Tropical Storm/ Tropical Depression/High Wind/Strong Wind	X	2	3	M
Sinkhole/Expansive Soil	X	3	6	L
Landslide	X	3	6	L
Earthquake	X	3	3	L
Wildfire	X	3	1	M
Dam/Levee Failure	X	3	6	L

KEY:

Hazard Identification – Identified by local jurisdictions

Mitigation Actions Prioritization - Hazards are prioritized by jurisdictions based on past hazard experiences, vulnerabilities, and available mitigation actions with the hazard having highest priority of mitigation assigned number one.

Prioritized Occurrence Threat - Hazards are prioritized with the highest threat of occurrence assigned number one based on hazardous events that have occurred within each jurisdiction over the past ten years, with the exception of wildfires that were based on events that have occurred over the past three years. Some natural hazards have equal threats to a jurisdiction; therefore, their threat number will be the same. These prioritized threats may or may not be the same as the mitigation actions prioritization.

Vulnerability – Identified by local jurisdictions. NA – Not Applicable; not a hazard to the jurisdiction; L – Low Risk; little damage potential (damage to less than 5% of the jurisdiction); M – Medium Risk; moderate damage potential (damage to 5-10% of jurisdiction, infrequent occurrence); and H – High Risk; significant risk/major damage potential (damage to over 10% of jurisdiction, regular occurrence)

(Source: NOAA NCDC Storm Events Database; Alabama Forestry Commission; National Forestry Service; Alabama Geological Survey; Participating Jurisdictions)

This page left intentionally blank

TABLE 5-2: CITY OF ATMORE HAZARD EVENTS

2 Thunderstorm Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database)

<u>Location</u>	<u>County/Zone</u>	<u>St.</u>	<u>Date</u>	<u>Time</u>	<u>T.Z.</u>	<u>Type</u>	<u>Mag</u>	<u>Dth</u>	<u>Inj</u>	<u>PrD</u>	<u>CrD</u>
ATMORE	ESCAMBIA CO.	AL	05/24/2005	20:10	CST	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
ATMORE	ESCAMBIA CO.	AL	06/14/2012	19:25	CST-6	Thunderstorm Wind	56 kts. MG	0	0	0.00K	0.00K
Totals:								0	0	10.00K	0.00K

0 Lightning Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database)

No lightning events occurred or were reported during 01/01/2003 thru 12/31/2013.

4 Hail Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database)

<u>Location</u>	<u>County/Zone</u>	<u>St.</u>	<u>Date</u>	<u>Time</u>	<u>T.Z.</u>	<u>Type</u>	<u>Mag</u>	<u>Dth</u>	<u>Inj</u>	<u>PrD</u>	<u>CrD</u>
ATMORE	ESCAMBIA CO.	AL	03/14/2003	17:20	CST	Hail	1.75 in.	0	0	4.00K	0.00K
ATMORE	ESCAMBIA CO.	AL	04/25/2003	18:30	CST	Hail	0.75 in.	0	0	0.00K	0.00K
ATMORE	ESCAMBIA CO.	AL	05/02/2003	21:25	CST	Hail	0.75 in.	0	0	0.00K	0.00K
ATMORE	ESCAMBIA CO.	AL	05/18/2004	14:10	CST	Hail	0.75 in.	0	0	0.00K	0.00K
Totals:								0	0	4.00K	0.00K

1 Tornado Event – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database)

<u>Location</u>	<u>County/Zone</u>	<u>St.</u>	<u>Date</u>	<u>Time</u>	<u>T.Z.</u>	<u>Type</u>	<u>Mag</u>	<u>Dth</u>	<u>Inj</u>	<u>PrD</u>	<u>CrD</u>
ATMORE	ESCAMBIA CO.	AL	07/06/2005	06:20	CST	Tornado	F0	0	0	5.00K	0.00K
Totals:								0	0	5.00K	0.00K

10 Flood/Flash Flood Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database)

<u>Location</u>	<u>County/Zone</u>	<u>St.</u>	<u>Date</u>	<u>Time</u>	<u>T.Z.</u>	<u>Type</u>	<u>Mag</u>	<u>Dth</u>	<u>Inj</u>	<u>PrD</u>	<u>CrD</u>
ATMORE	ESCAMBIA CO.	AL	09/24/2013	18:30	CST-6	Flood		0	0	5.00K	0.00K
COUNTYWIDE	ESCAMBIA CO.	AL	06/30/2003	21:00	CST	Flash Flood		0	0	0.00K	0.00K
COUNTYWIDE	ESCAMBIA CO.	AL	07/01/2003	00:00	CST	Flash Flood		0	0	0.00K	0.00K
COUNTYWIDE	ESCAMBIA CO.	AL	07/10/2005	17:00	CST	Flash Flood		0	0	0.00K	0.00K
COUNTYWIDE	ESCAMBIA CO.	AL	08/29/2005	12:00	CST	Flash Flood		0	0	0.00K	0.00K
ATMORE	ESCAMBIA CO.	AL	11/15/2006	12:00	CST-6	Flash Flood		0	0	0.00K	0.00K
ATMORE	ESCAMBIA CO.	AL	12/14/2009	17:50	CST-6	Flash Flood		0	0	1.250M	0.00K
ATMORE	ESCAMBIA CO.	AL	12/14/2009	17:50	CST-6	Flash Flood		0	0	250.00K	0.00K
ATMORE	ESCAMBIA CO.	AL	05/03/2010	08:00	CST-6	Flash Flood		0	0	0.00K	0.00K
ATMORE	ESCAMBIA CO.	AL	03/09/2011	10:00	CST-6	Flash Flood		0	0	0.00K	0.00K
Totals:								0	0	1.505M	0.00K

0 Drought/Extreme Heat Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database)

No drought/extreme heat events were reported during 01/01/2003 thru 12/31/2013 by the NOAA NCDC Storm Events Database or Local

4 Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database)

Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	02/12/2010	00:00	CST-6	Winter Storm		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	02/12/2010	00:00	CST-6	Winter Storm		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	02/12/2010	00:00	CST-6	Winter Storm		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	02/12/2010	00:00	CST-6	Winter Storm		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

4 Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database)

Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	09/13/2004	21:00	CST	Hurricane (typhoon)		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	07/09/2005	03:00	CST	Hurricane (typhoon)		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	07/10/2005	14:45	CST	Hurricane (typhoon)		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	06/10/2005	03:00	CST	Tropical Storm		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

0 Sinkhole/Expansive Soil Events - 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database/U.S. Geological Survey)

No events occurred or were reported during 01/01/2003 thru 12/31/2013.

0 Landslide Events - 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database/U.S. Geological Survey)

No events occurred or were reported during 01/01/2003 thru 12/31/2013.

4 Earthquake Events - 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database/U.S. Geological Survey)

Location	St.	Date	Time	Type	Depth	Mag	Dth	Inj	PrD	CrD
Atmore	AL	9/30/2003		Earthquake	10 miles	3.3	0	0	0.00K	0.00K
Escambia Co.	AL	11/7/2004	11:20 a.m.	Earthquake	3.1 miles	4.4	0	0	0.00K	0.00K
Escambia Co.	AL	2/10/2006	4:14 a.m.	Earthquake	3.1 miles	5.3	0	0	0.00K	0.00K
Escambia Co.	AL	9/10/2006	2:56 p.m.	Earthquake	8.7 miles	5.9	0	0	0.00K	0.00K

No earthquake events were reported during 01/01/2003 thru 12/31/2013 by the NOAA NCDC Storm Events Database/U.S. Geological Survey/Alabama Geological Survey

260 Wildfire Events – 1/1/2010 thru 12/31/2013

(Source: Alabama Forestry Commission)

County	Total # of Fires 2010-2013	Average # of Fires Per Year	Total Acres Burned 2010-2013	Average Acres Burned Per Year	Average Fire Size in Acres Per Year
Escambia	260	87	5537.56	1,846	21

0 Dam/Levee Failure Events - 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database)

No events occurred or were reported during 01/01/2003 thru 12/31/2013.

**Table 5-3: City of Atmore
Hazard Probability Assessment**

Natural Hazards	Number of Historical Occurrences	Probability of Future Annual Occurrence	Extent	Area Affected
Thunderstorm	2	20%	5-10%	Citywide
Lightning	Unknown	Unknown	<5%	Citywide
Hail	4	40%	<5%	Citywide
Tornado	1	10%	5-10%	Citywide
Flood/Flash Flood	10	100%	5-10%	Citywide
Drought/Extreme Heat	Unknown	Unknown	<5%	Citywide
Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	4	40%	<5%	Citywide
Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind	4	40%	5-10%	Citywide
Sinkhole/Expansive Soil	Unknown	Unknown	<5%	Citywide
Landslide	Unknown	Unknown	<5%	Citywide
Earthquake	4	40%	<5%	Citywide
Wildfire	260	>100%	5-10%	Citywide
Dam/Levee Failure	Unknown	Unknown	<5%	Citywide

Source: NOAA NCDC; U. S. Inflation Calculator/Consumer Price Index; USGS; Local Input; USDA Census of Agriculture; Alabama Forestry Commission; and National Forestry Service; Participating Jurisdictions

Methodology: Number of historical occurrences is those reported by NOAA NCDC during the 10 year study period, with the exception of wildfire that is a 3 year study period. Probability is expressed by dividing the total number of occurrences by the study period in years. Extent is expressed as the percentage assigned by the jurisdictions' ranking in the vulnerability summary (Table 4-12). Zero or unknown denotes no data available to determine the probability, extent, or affected area.

TABLE 5-4: Atmore's Critical Facilities

(These structures are vulnerable to: Thunderstorms, lightning, hail, tornados, floods/flash floods, drought/extreme heat, winter weather, frost freeze, heavy snow, ice storms, winter weather, extreme cold, tropical storms, tropical depressions, high winds, strong winds, sinkholes, earthquakes, wildfires, and dam failures.)

FACILITY TYPE	REPLACEMENT VALUE
Community Center	
Library	
City Hall Complex	
Water Plant, Byrne Drive	
Water Plant, Dees Drive	
Atmore Police Dept. - Narcotics	\$38,415
Atmore VFD, 1147 Mack Pond Rd.	\$16,464
Nokomis VFD, 1400 Jones Rd.	\$16,464
Atmore FD, 201 E. Louisville Ave.	\$16,464
Atmore Christian School, 245 Tennant Drive	\$474,540
Rachael-Patterson School, 1102 West Craig St.	\$5,238,920
A. C. Moore Elementary School, 501 Beck St.	\$3,407,200
Total	\$9,208,467
<i>Sources: HAZUS-MH 2.1, Local</i>	

**Table 5-5: City of Atmore
Estimated Loss Projections from Specified Hazards**

Natural Hazards	Average Occurrences (per year)	Total Deaths	Total Injuries	Average Death and Injury Loss (per event)	Average Crop and Property Loss (per event)	Projected Loss (per event)
Thunderstorm	0.2	0	0	Unknown	\$5,000	\$5,450
Lightning	Unknown	0	0	Unknown	Unknown	Unknown
Hail	0.4	0	0	Unknown	\$1,000	\$1,090
Tornado	0.1	0	0	Unknown	\$5,000	\$5,450
Flood/Flash Flood	1.0	0	0	Unknown	\$150,500	\$164,045
Drought/Extreme Heat	Unknown	0	0	Unknown	Unknown	Unknown
Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	0.4	0	0	Unknown	Unknown	Unknown
Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind	0.4	0	0	Unknown	Unknown	Unknown
Sinkhole/Expansive Soil	Unknown	0	0	Unknown	Unknown	Unknown
Landslide	Unknown	0	0	Unknown	Unknown	Unknown
Earthquake	0.4	0	0	Unknown	Unknown	Unknown
Wildfire	87	0	0	Unknown	\$39,900	\$43,491
Dam/Levee Failure	Unknown	0	0	Unknown	Unknown	Unknown
<i>Sources: NOAA NCDC; U.S. Inflation Calculator/Consumer Price Index; Local Input; USDA Census of Agriculture; Alabama Forestry Commission and National Forestry Service; Alabama Geological Survey</i>						
Methodology: Average occurrences were expressed annually by dividing the total number of occurrences by the ten-year period. Deaths and injuries were taken from the hazard event data. Average losses were calculated by dividing the total amount of all damages by the total number of occurrences causing damage during the ten-year period with the exception of wildfire. Projected loss expresses an estimated damage amount per future occurrence by converting the average loss figure from a midpoint of 2008 dollars to 2014 dollars (\$1 in 2008 = \$1.09 in 2014...a cumulative rate of inflation of 9%). Zero or Unknown denotes there is no data available to determine the average occurrences, average loss or projected loss per event.						

City of Atmore Mitigation Action Plan

The City of Atmore recognizes the importance of Mitigation Planning and will incorporate mitigation planning in planning documents as they are revised or initiated. The following information was submitted by the City of Atmore during the annual plan reviews and incorporated into this plan update.

<p>Have there been any changes in the level of risk to citizens?</p> <p>YES</p> <p>If yes, please explain.</p>	<p>Flood hazard areas expanded due to updated Flood Insurance Rate Maps.</p>
<p>Have there been any changes in laws, policies, or regulations at your level?</p> <p>YES</p> <p>If yes, please list.</p>	<p>Adoption of International Property Maintenance Code for condemnation of unsafe structures.</p>

Mitigation Status

During the plan update, mitigation actions were reviewed in order to identify completed, deferred, or deleted actions from the previous plan and incorporate actions added during annual updates, if any. **Table 5-6** shows the City of Atmore’s updated mitigation actions. The status of the mitigation action can be found under benchmark in the chart.

This page left intentionally blank

MITIGATION STRATEGY – CITY OF ATMORE

Table 5-6: City of Atmore 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	2019
Estimated Cost	TBD
Funding Sources	Local, HMGP
Priority	High
Benchmark	Training is ongoing. Attended Alabama Floodplain Manager’s training on July 11-12, 2012 in Foley, Alabama. Courses included Floodplain Management Summary and Review, GIS Module, and H&H Module. The City of Atmore wishes to keep this mitigation action in the 2015 Plan Revision.
Mitigation Action - DELETED	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	2020
Estimated Cost	TBD
Funding Sources	HMGP (FEMA Map Modernization Program)
Priority	Low
Benchmark	Completed in 2012. FIRMS are available in digital format; detailed studies of developed areas with elevations are still being pursued.
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

Table 5-6: City of Atmore Mitigation Actions

Point of Contact Person for this Action	Flood Plain Manager
Estimated Time Frame for Completion	2020
Estimated Cost	TBD
Funding Sources	HMGP
Priority	High
Benchmark	The city participates in the NFIP and plans to continue. The City of Atmore wishes to keep this mitigation action in the 2015 Plan Revision.
Mitigation Action - DELETED	Acquisition of several homes.
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	Local Government, HMGP
Priority	High
Benchmark	DELETED - No action has been taken on this project due to lack of funding and the fact that during the past five years there have been no repetitive loss or severe repetitive loss properties. The City of Atmore wishes to keep this mitigation action in the 2015 Plan Revision.
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

Table 5-6: City of Atmore Mitigation Actions

Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2018
Estimated Cost	TBD
Funding Sources	Local Government
Priority	High
Benchmark	The city posted an article in both local newspapers in February 2012 to promote awareness of pending revisions to flood maps and subsequent insurance requirements. The City of Atmore wishes to keep this mitigation action in the 2015 Plan Revision.
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	Road Department
Estimated Time Frame for Completion	2019
Estimated Cost	
Funding Sources	HMGP, Local
Priority	High
Benchmark	Atmore continues drainage system maintenance. The planning committee reviewed this action and Atmore wishes to keep it in this plan update.
Mitigation Action	Purchase a portable 6" diesel pump with float system for the Atmore Utility Board.
Type	Property Protection
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	2020
Estimated Cost	TBD
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	No action has been taken on this project due to lack of funding. The City of Atmore wishes to keep this mitigation action in the 2015 Plan Revision.
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

Table 5-6: City of Atmore Mitigation Actions

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	2020
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. The City of Atmore wishes to keep this mitigation action in the 2015 Plan Revision.
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	2019
Estimated Cost	TBD
Funding Sources	HMGP; Local
Priority	Low
Benchmark	Atmore continues promoting good construction practices and proper code enforcements. The planning committee reviewed this action and Atmore wishes to keep it in this plan update.
Mitigation Action	Distribute FEMA Publication 320 – <u>Taking Shelter From the Storm: Building a Safe Room in Your House</u> – 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	2017
Estimated Cost	TBD
Funding Sources	HMGP; Local
Priority	Low
Benchmark	Atmore continues distributing FEMA Publication 320. The planning committee reviewed this action and

Table 5-6: City of Atmore Mitigation Actions

	Atmore wishes to keep it in this plan update.
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	2018
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	Low
Benchmark	Atmore continues publicizing the availability of FIRM information. The planning committee reviewed this action and Atmore wishes to keep it in this plan update.
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 Atmore promotes mitigation and severe weather awareness through an annual severe weather awareness event. The City of Atmore wishes to keep this mitigation action in the 2015 Plan Revision.
Mitigation Action - DELETE	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
Applies to new/existing asset(s)	Existing

Table 5-6: City of Atmore Mitigation Actions

Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2018
Estimated Cost	TBD
Funding Sources	HMGP, Local Government
Priority	Low
Benchmark	DELETE - The City of Atmore assists the Escambia County EMA in obtaining and depositing publications as necessary. The City of Atmore wishes to delete this mitigation action in the 2015 Plan Revision.
Mitigation Action - DELETE	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
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, Local Government
Priority	High
Benchmark	DELETE - The City of Atmore assists the Escambia County EMA in distributing brochures to area schools. The City of Atmore wishes to delete this mitigation action in the 2015 Plan Revision.
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 Atmore continues promoting the use of weather radios in households and businesses. The City of Atmore wishes to keep this mitigation action in the 2015 Plan Revision.
Mitigation Action	Seek technical assistance through the Alabama Cooperative Extension System and/or the Alabama Forestry Commission with Best Management Practices

Table 5-6: City of Atmore Mitigation Actions

	(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. The City of Atmore wishes to keep this mitigation action in the 2015 Plan Revision.
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/existing asset(s)	Existing
Point of Contact Person for this Action	Local Government
Estimated Time Frame for Completion	2020
Estimated Cost	TBD
Funding Sources	HMGP, DOT
Priority	High
Benchmark	No action has been taken due to lack of funds. The City of Atmore wishes to keep this mitigation action in the 2015 Plan Revision.
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. The City of Atmore wishes to keep this mitigation action in the

Table 5-6: City of Atmore Mitigation Actions

	2015 Plan Revision.
Mitigation Action	<p>Purchase/update emergency generators for post-disaster mitigation and conduct routine tests on backup generators for all critical facilities. This includes for the Little Escambia Church, 91 Pecan Leaf Lane that serves as a Red Cross Emergency Shelter; 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; 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; 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); an emergency generator for the Physician Office Complex #1 at the Brewton Medical Center (150 KW) including installation (\$250,000); and an emergency generator for the Physician Office Complex #2 at the Flomaton Medical Center (50 KW) including installation (\$50,000).</p> <p>Purchase 8 portable generators with extending pole lights.</p>
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	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. The City of Atmore wishes to keep this mitigation action in the 2015 Plan Revision.
Mitigation Action	Support the Alabama Skywarn Foundation’s efforts to

Table 5-6: City of Atmore Mitigation Actions

	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. The City of Atmore wishes to keep this mitigation action in the 2015 Plan Revision.
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. The City of Atmore wishes to keep this mitigation action in the 2015 Plan Revision.
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

Table 5-6: City of Atmore Mitigation Actions

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. The City of Atmore wishes to keep this mitigation action in the 2015 Plan Revision.
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	2019
Estimated Cost	2018
Funding Sources	HMGP, DOT
Priority	High
Benchmark	No action has been taken due to lack of funds. The City of Atmore wishes to keep this mitigation action in the 2015 Plan Revision.
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
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
Priority	High
Benchmark	No action has been taken due to lack of funds. The City of Atmore wishes to keep this mitigation action in the 2015 Plan Revision.
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

Table 5-6: City of Atmore Mitigation Actions

	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/existing asset(s)	Existing
Point of Contact Person for this Action	Local Government
Estimated Time Frame for Completion	2020
Estimated Cost	TBD
Funding Sources	HMGP
Priority	High
Benchmark	No action has been taken due to lack of funds. The City of Atmore wishes to keep this mitigation action in the 2015 Plan Revision.
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/existing asset(s)	Existing
Point of Contact Person for this Action	Local Government
Estimated Time Frame for Completion	2019
Estimated Cost	TBD
Funding Sources	HMGP
Priority	High
Benchmark	No action has been taken due to lack of funds. The City of Atmore wishes to keep this mitigation action in the 2015 Plan Revision.
Mitigation Action - DELETED	Install a PTO drive for the Byrne Drive Water Plant and Dees Drive Water Plant.
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	Local Government
Estimated Time Frame for Completion	2010-2015
Estimated Cost	TBD
Funding Sources	HMGP
Priority	High
Benchmark	COMPLETED - PTO drives for the Byrne Drive Water Plant and the Dees Drive Water Plant have been installed.

Table 5-6: City of Atmore Mitigation Actions

Mitigation Action - DELETED	Permanently mount five lift station by-pass pumps.
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	Local Government
Estimated Time Frame for Completion	2010-2015
Estimated Cost	TBD
Funding Sources	HMGP
Priority	High
Benchmark	COMPLETED - Lift station by-pass pumps have been mounted.
Mitigation Action - DELETED	Install an equalization basin 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	Local Government
Estimated Time Frame for Completion	2010-2015
Estimated Cost	TBD
Funding Sources	HMGP
Priority	High
Benchmark	COMPLETED - Equalization basin has been installed.
Mitigation Action - DELETED	Replace sanitary sewer on Liberty St. from lift station to Carver Ave.
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	Local Government
Estimated Time Frame for Completion	2010-2015
Estimated Cost	TBD
Funding Sources	HMGP
Priority	High
Benchmark	COMPLETED - Sanitary sewer on Liberty Street from lift station to Carver Ave. has been replaced.
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

Table 5-6: City of Atmore Mitigation Actions

	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	2020
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. The City of Atmore wishes to keep this mitigation action in the 2015 Plan Revision.

City of Brewton

This page left intentionally blank

**Table 5-7: City of Brewton
Risk and Vulnerability Overview**

Natural Hazards	Hazard Identification	Mitigation Actions Prioritization	Prioritized Occurrence Threat	Vulnerability
Thunderstorm	X	2	2	H
Lightning	X	3	7	L
Hail	X	2	3	M
Tornado	X	2	7	L
Flood/Flash Flood	X	1	4	M
Drought/Extreme Heat	X	3	7	L
Winter Storm/Frost Freeze/ Heavy Snow/Ice Storm/ Winter Weather/ Extreme Cold	X	3	5	L
Hurricane/Tropical Storm/Tropical Depression/High Wind/ Strong Wind	X	2	5	M
Sinkhole/Expansive Soil	X	3	7	L
Landslide	X	3	7	L
Earthquake	X	3	6	L
Wildfire	X	3	1	M
Dam/Levee Failure	X	3	7	L

KEY:

Hazard Identification – Identified by local jurisdictions

Mitigation Actions Prioritization - Hazards are prioritized by jurisdictions based on past hazard experiences, vulnerabilities, and available mitigation actions with the hazard having highest priority of mitigation assigned number one.

Prioritized Occurrence Threat - Hazards are prioritized with the highest threat of occurrence assigned number one based on hazardous events that have occurred within each jurisdiction over the past ten years, with the exception of wildfires that were based on events that have occurred over the past three years. Some natural hazards have equal threats to a jurisdiction; therefore, their threat number will be the same. These prioritized threats may or may not be the same as the mitigation actions prioritization.

Vulnerability – Identified by local jurisdictions. NA – Not Applicable; not a hazard to the jurisdiction; L – Low Risk; little damage potential (damage to less than 5% of the jurisdiction); M – Medium Risk; moderate damage potential (damage to 5-10% of jurisdiction, infrequent occurrence); and H – High Risk; significant risk/major damage potential (damage to over 10% of jurisdiction, regular occurrence)

(Source: NOAA NCDC Storm Events Database; Alabama Forestry Commission; National Forestry Service; Alabama Geological Survey; Participating Jurisdictions)

This page left intentionally blank

TABLE 5-8: CITY OF BREWTON HAZARD EVENTS

14 Thunderstorm Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database)

Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
BREWTON	ESCAMBIA CO.	AL	01/26/2004	05:40	CST	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	08/15/2006	19:20	CST	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	08/30/2006	16:55	CST	Thunderstorm Wind	50 kts. EG	0	0	12.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	02/12/2008	18:00	CST-6	Thunderstorm Wind	50 kts. MG	0	0	12.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	02/12/2008	18:10	CST-6	Thunderstorm Wind	56 kts. MG	0	0	0.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	02/17/2008	14:43	CST-6	Thunderstorm Wind	50 kts. EG	0	0	12.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	03/26/2009	03:50	CST-6	Thunderstorm Wind	52 kts. MG	0	0	12.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	03/27/2009	03:58	CST-6	Thunderstorm Wind	60 kts. EG	0	0	35.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	07/02/2009	17:10	CST-6	Thunderstorm Wind	52 kts. EG	0	1	100.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	03/09/2011	09:40	CST-6	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	06/07/2011	15:14	CST-6	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	06/07/2011	15:15	CST-6	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	06/07/2011	15:15	CST-6	Thunderstorm Wind	52 kts. EG	0	0	10.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	06/07/2011	16:15	CST-6	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
Totals:								0	2	517.00K	0.00K

0 Lightning Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database)

No lightning events occurred or were reported during 01/01/2003 thru 12/31/2013.

9 Hail Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database)

Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
BREWTON	ESCAMBIA CO.	AL	03/09/2003	08:50	CST	Hail	1.00 in.	0	0	0.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	03/09/2003	09:25	CST	Hail	1.00 in.	0	0	0.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	04/21/2005	17:40	CST	Hail	0.88 in.	0	0	0.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	05/08/2006	19:10	CST	Hail	1.00 in.	0	0	0.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	05/09/2006	19:35	CST	Hail	2.00 in.	0	0	40.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	04/02/2009	12:20	CST-6	Hail	0.88 in.	0	0	0.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	04/13/2009	04:25	CST-6	Hail	0.75 in.	0	0	0.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	07/17/2012	15:20	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	07/17/2012	15:42	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
Totals:								0	0	40.00K	0.00K

0 Tornado Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database)

No tornado events occurred or were reported during 01/01/2003 thru 12/31/2013.

7 Flood/Flash Flood Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database)

<u>Location</u>	<u>County/Zone</u>	<u>St.</u>	<u>Date</u>	<u>Time</u>	<u>T.Z.</u>	<u>Type</u>	<u>Mag</u>	<u>Dth</u>	<u>Inj</u>	<u>PrD</u>	<u>CrD</u>
COUNTYWIDE	ESCAMBIA CO.	AL	06/30/2003	21:00	CST	Flash Flood		0	0	0.00K	0.00K
COUNTYWIDE	ESCAMBIA CO.	AL	07/01/2003	00:00	CST	Flash Flood		0	0	0.00K	0.00K
COUNTYWIDE	ESCAMBIA CO.	AL	07/10/2005	17:00	CST	Flash Flood		0	0	0.00K	0.00K
COUNTYWIDE	ESCAMBIA CO.	AL	08/29/2005	12:00	CST	Flash Flood		0	0	0.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	04/01/2007	20:15	CST-6	Flash Flood		0	0	0.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	12/14/2009	18:40	CST-6	Flash Flood		0	0	0.00K	0.00K
BREWTON	ESCAMBIA CO.	AL	03/09/2011	10:30	CST-6	Flash Flood		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

0 Drought/Extreme Heat Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database)

No drought/extreme heat events occurred or were reported during 01/01/2003 thru 12/31/2013.

4 Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database)

<u>Location</u>	<u>County/Zone</u>	<u>St.</u>	<u>Date</u>	<u>Time</u>	<u>T.Z.</u>	<u>Type</u>	<u>Mag</u>	<u>Dth</u>	<u>Inj</u>	<u>PrD</u>	<u>CrD</u>
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	02/12/2010	00:00	CST-6	Winter Storm		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	02/12/2010	00:00	CST-6	Winter Storm		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	02/12/2010	00:00	CST-6	Winter Storm		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	02/12/2010	00:00	CST-6	Winter Storm		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

4 Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database)

<u>Location</u>	<u>County/Zone</u>	<u>St.</u>	<u>Date</u>	<u>Time</u>	<u>T.Z.</u>	<u>Type</u>	<u>Mag</u>	<u>Dth</u>	<u>Inj</u>	<u>PrD</u>	<u>CrD</u>
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	09/13/2004	21:00	CST	Hurricane (typhoon)		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	07/09/2005	03:00	CST	Hurricane (typhoon)		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	07/10/2005	14:45	CST	Hurricane (typhoon)		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	06/10/2005	03:00	CST	Tropical Storm		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

0 Sinkhole/Expansive Soil Events - 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database/U.S. Geological Survey)

No sinkhole/expansive soil events occurred or were reported during 01/01/2003 thru 12/31/2013 by the NOAA NCDC Storm Events Database/U.S. Geological Survey or Locally

0 Landslide Events - 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database/U.S. Geological Survey)

No landslide events were reported during 01/01/2003 thru 12/31/2013 by the NOAA NCDC Storm Events Database/U.S. Geological Survey/Local

3 Earthquake Events - 01/01/2003 thru 12/31/2013 (4018 days)

(Source: www.homefacts.com/earthquakes/Alabama.html)

Location	St.	Date	Time	Type	Depth	Mag	Dth	Inj	PrD	CrD	
Escambia Co.	114.5 miles from county's center	AL	11/7/2004	11:20 a.m.	Earthquake	3.1 miles	4.4	0	0	0.00K	0.00K
Escambia Co.	288.9 miles from county's center	AL	2/10/2006	4:14 a.m.	Earthquake	3.1 miles	5.3	0	0	0.00K	0.00K
Escambia Co.	337.7 miles from county's center	AL	9/10/2006	2:56 p.m.	Earthquake	8.7 miles	5.9	0	0	0.00K	0.00K

No earthquake events were reported during 01/01/2003 thru 12/31/2013 by the NOAA NCDC Storm Events Database/U.S. Geological Survey/Alabama Geological Survey

260 Wildfire Events – 1/1/2010 thru 12/31/2013

(Source: Alabama Forestry Commission)

County	Total # of Fires 2010-2013	Average # of Fires Per Year	Total Acres Burned 2010-2013	Average Acres Burned Per Year	Average Fire Size in Acres Per Year
Escambia	260	87	5537.56	1,846	21

0 Dam/Levee Failure Events - 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database)

No dam/levee failure events occurred or were reported during 01/01/2003 thru 12/31/2013.

**Table 5-9: City of Brewton
Hazard Probability Assessment**

Natural Hazards	Number of Historical Occurrences	Probability of Future Occurrence	Extent	Area Affected
Thunderstorm	14	>100%	>10%	Citywide
Lightning	Unknown	Unknown	<5%	Citywide
Hail	9	90%	5-10%	Citywide
Tornado	Unknown	Unknown	<5%	Citywide
Flood/Flash Flood	7	70%	5-10%	Citywide
Drought/Extreme Heat	Unknown	Unknown	<5%	Citywide
Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	4	40%	<5%	Citywide
Hurricane/High Wind/Strong Wind/Tropical Storm/Tropical Depression	4	40%	5-10%	Citywide
Sinkhole/Expansive Soil	Unknown	Unknown	<5%	Citywide
Landslide	Unknown	Unknown	<5%	Citywide
Earthquake	3	30%	<5%	Citywide
Wildfire (2010-2013 – 3 year study period)	260	>100%	5-10%	Citywide
Dam/Levee Failure	Unknown	Unknown	<5%	Citywide
<i>Source: NOAA NCDC; U. S. Inflation Calculator/Consumer Price Index; USGS ; Local Input; USDA Census of Agriculture; Alabama Forestry Commission; and National Forestry Service; Participating Jurisdictions</i>				
Methodology: Number of historical occurrences is those reported by NOAA NCDC during the 10 year study period, with the exception of wildfire that is a 3 year study period. Probability is expressed by dividing the total number of occurrences by the study period in years. Extent is expressed as the percentage assigned by the jurisdictions' ranking in the vulnerability summary (Table 4-12). Zero denotes no data available to determine the probability, extent, or affected area.				

TABLE 5-10: CITY OF BREWTON'S CRITICAL FACILITIES

(These structures are vulnerable to: Thunderstorms, lightning, hail, tornados, floods/flash floods, drought/extreme heat, winter weather, frost freeze, heavy snow, ice storms, winter weather, extreme cold, tropical storms, tropical depressions, high winds, strong winds, sinkholes, earthquakes, wildfires, and dam failures.)

FACILITY TYPE	REPLACEMENT VALUE
D. W. McMillan Memorial Hospital, 1403 McMillan Ave.	
EMA's Emergency Operations Center, Room 109, Escambia Co. Courthouse, Belleville	
Alabama State Extension Office, 1742 Kirkland Rd.	
Brewton Head Start, 1207 Belleville Ave.	
Brewton Municipal Airport, 205 Airport Drive	
Azalea Place (Medical Center Addition)	\$1,595,000
JDCC ATN Building	\$1,862,234
Brewton Public Library, Belleville	
Brewton Police Department, 1010a Douglas Ave.	\$38,415
Escambia County Sheriff, 316 Court St.	\$38,415
Appleton FD, 3538 Mason Mill Pon.	\$16,464
Brewton FD, 601 Saint Nicholas Ave.	\$16,464
McCall FD, Highway 31	\$16,464
Escambia-Brewton Area Voc. School, 2824 Pea Ridge Rd.	\$4,555,580
McCall Junior High School, 3975 Old Highway 31	\$1,831,720
T. R. Miller High School, 1835 Douglas Ave.	\$3,701,410
Brewton Elementary School, 901 Douglas Ave.	\$5,087,070
Brewton Middle School, 301 Liles Blvd.	\$4,251,880
Total	\$23,011,116
<i>Source: Steve Yuhasz, City of Brewton and HAZUS 2.1</i>	

**Table 5-11: City of Brewton
Estimated Loss Projections from Specified Hazards**

Natural Hazards	Average Occurrences (per year)	Total Deaths	Total Injuries	Average Death and Injury Loss (per event)	Average Crop and Property Loss (per event)	Projected Loss (per event)
Thunderstorm	1.4	0	1	\$1,655	\$16,143	\$19,400
Lightning	Unknown	0	0	Unknown	Unknown	Unknown
Hail	0.9	0	0	Unknown	\$4,444	\$4,844
Tornado	Unknown	0	0	Unknown	Unknown	Unknown
Flood/Flash Flood	0.7	0	0	Unknown	Unknown	Unknown
Drought/Extreme Heat	Unknown	0	0	Unknown	Unknown	Unknown
Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	0.4	0	0	Unknown	Unknown	Unknown
Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind	0.4	0	0	Unknown	Unknown	Unknown
Sinkhole/Expansive Soil	Unknown	0	0	Unknown	Unknown	Unknown
Landslide	Unknown	0	0	Unknown	Unknown	Unknown
Earthquake	0.3	0	0	Unknown	Unknown	Unknown
Wildfire (3 year study period)	87	0	0	Unknown	\$39,900	\$43,491
Dam/Levee Failure	Unknown	0	0	Unknown	Unknown	Unknown

Sources: NOAA NCDC; U. S. Inflation Calculator/Consumer Price Index; Local Input; USDA Census of Agriculture; Alabama Forestry Commission and National Forestry Service; Alabama Geological Survey

Methodology: Average occurrences were expressed annually by dividing the total number of occurrences by the ten-year period. Deaths and injuries were taken from the hazard event data. Average losses were calculated by dividing the total amount of all damages by the total number of occurrences causing damage during the ten-year period with the exception of wildfire. Projected loss expresses an estimated damage amount per future occurrence by converting the average loss figures from a midpoint of 2008 dollars to 2014 dollars (\$1 in 2008 = \$1.09 in 2014...a cumulative rate of inflation of 9%). Zero or Unknown denotes there is no data available to determine the average occurrences, average loss or projected loss per event.

City of Brewton Mitigation Action Plan

The City of Brewton recognizes the importance of Mitigation Planning and will incorporate mitigation planning in planning documents as they are revised or initiated.

Mitigation Status

The current statuses of the mitigation actions are shown under Benchmark.

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. The city wishes to keep this action in the plan.
Mitigation Action - DELETED	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	2019
Estimated Cost	TBD
Funding Sources	HMGP (FEMA Map Modernization Program)
Priority	Low
Benchmark	Completed in 2012.

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. The city wishes to keep this action in the plan.
Mitigation Action	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	This project is in the discussion stage and will be initiated if funding is available. The city wishes to keep this action in the plan.
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. The city wishes to keep this action in the plan.

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. The city wishes to keep this action in the plan.
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. The city wishes to keep this action in the plan.
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. The city wishes to keep this action in the plan.
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. The city wishes to keep this action in the plan.
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. The city wishes to keep this action in the plan.
Mitigation Action	Control rainwater run-off at the Physician Office Complex #1 at the Brewton 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. The city wishes to keep this action in the plan.
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. The city 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 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. The city wishes to keep this action in the plan.
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. The city wishes to keep this action in the plan.
Mitigation Action	Distribute FEMA Publication 320 – <u>Taking Shelter From the Storm: Building a safe room in your house</u> – 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. The city wishes to keep this action in the plan.
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. The city wishes to keep this action in the plan.
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. The City of Brewton wishes to keep this mitigation action in the 2015 Plan Revision.
Mitigation Action - DELETE	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
Applies to new/existing asset(s)	Existing

Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2018
Estimated Cost	TBD
Funding Sources	HMGP, Local Government
Priority	Low
Benchmark	DELETE - The City of Brewton assists the Escambia County EMA in obtaining and depositing publications as necessary. The City of Brewton wishes to delete this mitigation action in the 2015 Plan Revision.
Mitigation Action - DELETE	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
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, Local Government
Priority	High
Benchmark	DELETE - The City of Brewton assists the Escambia County EMA in distributing brochures to area schools. The City of Brewton wishes to delete this mitigation action in the 2015 Plan Revision.
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. The City of Brewton wishes to keep this mitigation action in the 2015 Plan Revision.
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. The City of Brewton wishes to keep this mitigation action in the 2015 Plan Revision.
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. The City of Brewton wishes to keep this mitigation action in the 2015 Plan Revision.
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 generators for sewer stations; a generator for the City Hall; one permanently mounted generator for the East Brewton Police/Fire Departments; two 60 kilowatt portable generators to power the wastewater life stations (Presley Street; Martin Luther King; Briar Lake; Liberty; and Medical Park) and 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 150 kilowatt generator mounted on a trailer for the Atmore Utility Board; a 100 kilowatt

	<p>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; 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; 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); an emergency generator for the Physician Office Complex #1 at the Brewton Medical Center (150 KW) including installation (\$250,000); and an emergency generator for the Physician Office Complex #2 at the Flomaton Medical Center (50 KW) including installation (\$50,000).</p> <p>Purchase 8 portable generators with extending pole lights.</p>
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. The City of Brewton wishes to keep this mitigation action in the 2015 Plan Revision.
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. The City of Brewton wishes to keep this mitigation action in the 2015 Plan Revision.
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. The City of Brewton wishes to keep this mitigation action in the 2015 Plan Revision.
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. The City of Brewton wishes to keep this mitigation action in the 2015 Plan Revision.
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. The City of Brewton wishes to keep this mitigation action in the 2015 Plan Revision.
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. The City of Brewton wishes to keep this mitigation action in the 2015 Plan Revision.
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. The City of Brewton wishes to keep this mitigation action in the 2015 Plan Revision.
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. The City of Brewton wishes to keep this mitigation action in the 2015 Plan Revision.
Mitigation Action	Install a storm drain across the T. R. Miller Mill Company property 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	No action has been taken due to lack of funds. The City of Brewton wishes to keep this mitigation action in the 2015 Plan Revision.
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. The City of Brewton wishes to keep this mitigation action in the 2015 Plan Revision.
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. The City of Brewton wishes to keep this mitigation action in the 2015 Plan Revision.
Mitigation Action – NEW	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	New Action

This page left intentionally blank

CITY OF EAST BREWTON

This page left intentionally blank

**Table 5-13: City of East Brewton
Risk and Vulnerability Overview**

Natural Hazards	Hazard Identification	Mitigation Actions Prioritization	Prioritized Occurrence Threat	Vulnerability
Thunderstorm	X	2	5	L
Lightning	X	4	5	L
Hail	X	2	4	L
Tornado	X	2	5	L
Flood/Flash Flood	X	1	2	M
Drought/Extreme Heat	X	4	5	L
Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	X	4	2	M
Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind	X	3	2	M
Sinkhole/Expansive Soil	X	4	5	L
Landslide	X	4	5	L
Earthquake	X	4	3	L
Wildfire	X	4	1	M
Dam/Levee Failure	X	4	5	L

KEY:

Hazard Identification – Identified by local jurisdictions

Mitigation Actions Prioritization - Hazards are prioritized by jurisdictions based on past hazard experiences, vulnerabilities, and available mitigation actions with the hazard having highest priority of mitigation assigned number one.

Prioritized Occurrence Threat - Hazards are prioritized with the highest threat of occurrence assigned number one based on hazardous events that have occurred within each jurisdiction over the past ten years, with the exception of wildfires that were based on events that have occurred over the past three years. Some natural hazards have equal threats to a jurisdiction; therefore, their threat number will be the same. These prioritized threats may or may not be the same as the mitigation actions prioritization.

Vulnerability – Identified by local jurisdictions. NA – Not Applicable; not a hazard to the jurisdiction; L – Low Risk; little damage potential (damage to less than 5% of the jurisdiction); M – Medium Risk; moderate damage potential (damage to 5-10% of jurisdiction, infrequent occurrence); and H – High Risk; significant risk/major damage potential (damage to over 10% of jurisdiction, regular occurrence)

(Source: NOAA NCDC Storm Events Database; Alabama Forestry Commission; National Forestry Service; Alabama Geological Survey; Participating Jurisdictions)

This page left intentionally blank

TABLE: 5-14: CITY OF EAST BREWTON HAZARD EVENTS

0 Thunderstorm Events – 01/01/2003 thru 12/31/2013 (4018 days)
 (Source: NOAA NCDC Storm Events Database)

No thunderstorm events occurred or were reported during 01/01/2003 thru 12/31/2013.

0 Lightning Events – 01/01/2003 thru 12/31/2013 (4018 days)
 (Source: NOAA NCDC Storm Events Database)

No lightning events occurred or were reported during 01/01/2003 thru 12/31/2013.

1 Hail Event – 01/01/2003 thru 12/31/2013 (4018 days)
 (Source: NOAA NCDC Storm Events Database)

Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
EAST BREWTON	ESCAMBIA CO.	AL	06/26/2008	12:00	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

0 Tornado Events – 01/01/2003 thru 12/31/2013 (4018 days)
 (Source: NOAA NCDC Storm Events Database)

No tornado events occurred or were reported during 01/01/2003 thru 12/31/2013.

4 Flood/Flash Flood Events – 01/01/2003 thru 12/31/2013 (4018 days)
 (Source: NOAA NCDC Storm Events Database)

Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
COUNTYWIDE	ESCAMBIA CO.	AL	06/30/2003	21:00	CST	Flash Flood		0	0	0.00K	0.00K
COUNTYWIDE	ESCAMBIA CO.	AL	07/01/2003	00:00	CST	Flash Flood		0	0	0.00K	0.00K
COUNTYWIDE	ESCAMBIA CO.	AL	07/10/2005	17:00	CST	Flash Flood		0	0	0.00K	0.00K
COUNTYWIDE	ESCAMBIA CO.	AL	08/29/2005	12:00	CST	Flash Flood		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

0 Drought/Extreme Heat Events – 01/01/2003 thru 12/31/2013 (4018 days)
 (Source: NOAA NCDC Storm Events Database)

No drought/extreme heat events occurred or were reported during 01/01/2003 thru 12/31/2013.

4 Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold Events –

01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database)

Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	02/12/2010	00:00	CST-6	Winter Storm		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	02/12/2010	00:00	CST-6	Winter Storm		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	02/12/2010	00:00	CST-6	Winter Storm		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	02/12/2010	00:00	CST-6	Winter Storm		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

4 Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind Events –

01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database)

Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	09/13/2004	21:00	CST	Hurricane (typhoon)		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	07/09/2005	03:00	CST	Hurricane (typhoon)		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	07/10/2005	14:45	CST	Hurricane (typhoon)		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	06/10/2005	03:00	CST	Tropical Storm		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

0 Sinkhole/Expansive Soil Events - 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database/U.S. Geological Survey)

No sinkhole/expansive soil events occurred or were reported during 01/01/2003 thru 12/31/2013.

0 Landslide Events - 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database/U.S. Geological Survey)

No landslide events occurred or were reported during 01/01/2003 thru 12/31/2013.

3 Earthquake Events - 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database/U.S. Geological Survey)

Location		St.	Date	Time	Type	Depth	Mag	Dth	Inj	PrD	CrD
Escambia Co.	114.5 miles from county's center	AL	11/7/2004	11:20 a.m.	Earthquake	3.1 miles	4.4	0	0	0.00K	0.00K
Escambia Co.	288.9 miles from county's center	AL	2/10/2006	4:14 a.m.	Earthquake	3.1 miles	5.3	0	0	0.00K	0.00K
Escambia Co.	337.7 miles from county's center	AL	9/10/2006	2:56 p.m.	Earthquake	8.7 miles	5.9	0	0	0.00K	0.00K

No earthquake events were reported during 01/01/2003 thru 12/31/2013 by the NOAA NCDC Storm Events Database/U.S. Geological Survey/Alabama Geological Survey

260 Wildfire Events – 1/1/2010 thru 12/31/2013

(Source: Alabama Forestry Commission)

County	Total # of Fires 2010-2013	Average # of Fires Per Year	Total Acres Burned 2010-2013	Average Acres Burned Per Year	Average Fire Size in Acres Per Year
Escambia	260	87	5537.56	1,846	21

0 Dam/Levee Failure Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database/Local Input)

No dam/levee failure events occurred or were reported during 01/01/2003 thru 12/31/2013.

**Table 5-15: City of East Brewton
Hazard Probability Assessment**

Natural Hazards	Number of Historical Occurrences	Probability of Future Annual Occurrence	Extent	Area Affected
Thunderstorm	Unknown	Unknown	<5%	Citywide
Lightning	Unknown	Unknown	<5%	Citywide
Hail	1	10%	<5%	Citywide
Tornado	Unknown	Unknown	<5%	Citywide
Flood/Flash Flood	4	40%	5-10%	Citywide
Drought/Extreme Heat	Unknown	Unknown	<5%	Citywide
Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	4	40%	5-10%	Citywide
Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind	4	40%	5-10%	Citywide
Sinkhole/Expansive Soil	Unknown	Unknown	<5%	Citywide
Landslide	Unknown	Unknown	<5%	Citywide
Earthquake	3	30%	<5%	Citywide
Wildfire (2010-2013 – 3 year study)	260	>100%	5-10%	Citywide
Dam/Levee Failure	Unknown	Unknown	<5%	Citywide

Source: NOAA NCDC; U. S. Inflation Calculator/Consumer Price Index; USGS; Local Input; USDA Census of Agriculture; Alabama Forestry Commission; and National Forestry Service; Participating Jurisdictions

Methodology: Number of historical occurrences is those reported by NOAA NCDC during the 10 year study period, with the exception of wildfire that is a 3 year study period. Probability is expressed by dividing the total number of occurrences by the study period in years. Extent is expressed as the percentage assigned by the jurisdictions' ranking in the vulnerability summary (Table 4-12). Zero or Unknown denotes there is no data available to determine the probability, extent, or affected area.

TABLE 5-16: CITY OF EAST BREWTON'S CRITICAL FACILITIES

(These structures are vulnerable to: Thunderstorms, lightning, hail, tornados, floods/flash floods, drought/extreme heat, winter weather, frost freeze, heavy snow, ice storms, winter weather, extreme cold, tropical storms, tropical depressions, high winds, strong winds, sinkholes, earthquakes, wildfires, and dam failures.)

FACILITY TYPE	REPLACEMENT VALUE
East Brewton Police Dept., 615 Forrest Ave.	\$1,500,000
East Brewton Fire Dept., 615 Forrest Ave.	\$200,000
W. S. Neal Elementary School, 701 Williamson St.	\$5,362,300
W. S. Middle School, 801 Andrew Jackson St.	\$3,777,340
W. S. Neal High School, 801 Andrew Jackson	\$3,625,490
Total	\$12,820,009

Source: HAZUS 2.1

**Table 5-17: City of East Brewton
Estimated Loss Projections from Specified Hazards**

Natural Hazards	Average Occurrences (per year)	Total Deaths	Total Injuries	Average Death and Injury Loss (per event)	Average Crop and Property Loss (per event)	Projected Loss (per event)
Thunderstorm	Unknown	0	0	Unknown	Unknown	Unknown
Lightning	Unknown	0	0	Unknown	Unknown	Unknown
Hail	0.1	0	0	Unknown	Unknown	Unknown
Tornado	Unknown	0	0	Unknown	Unknown	Unknown
Flood/Flash Flood	0.4	0	0	Unknown	Unknown	Unknown
Drought/Extreme Heat	Unknown	0	0	Unknown	Unknown	Unknown
Winter Weather/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	0.4	0	0	Unknown	Unknown	Unknown
Hurricane/Tropical Storm/Tropical Depression/ High Wind/ Strong Wind	0.4	0	0	Unknown	Unknown	Unknown
Sinkhole/Expansive Soil	Unknown	0	0	Unknown	Unknown	Unknown
Landslide	Unknown	0	0	Unknown	Unknown	Unknown
Earthquake	0.3	0	0	Unknown	Unknown	Unknown
Wildfire (3 year study period)	87	0	0	Unknown	\$39,900	\$43,491
Dam/Levee Failure	Unknown	0	0	Unknown	Unknown	Unknown

Sources: NOAA NCDC; U. S. Inflation Calculator/Consumer Price Index; Local Input; USDA Census of Agriculture; Alabama Forestry Commission and National Forestry Service; Alabama Geological Survey

Methodology: Average occurrences were expressed annually by dividing the total number of occurrences by the ten-year period. Deaths and injuries were taken from the hazard event data. Average losses were calculated by dividing the total amount of all damages by the total number of occurrences causing damage during the ten-year period with the exception of wildfire. Projected loss expresses an estimated damage amount per future occurrence by converting the average loss figures from a midpoint of 2008 dollars to 2014 dollars (\$1 in 2008 = \$1.09 in 2014...a cumulative rate of inflation of 9%). Zero and Unknown denote there is no data available to determine the average occurrences, average loss or projected loss per event.

City of East Brewton Mitigation Action Plan

The City of East Brewton recognizes the importance of mitigation planning and will incorporate mitigation planning in planning documents as they are revised or initiated.

Mitigation Status

The current statuses of the mitigation actions are shown under Benchmark. **Table 5-18** shows the City of East Brewton’s mitigation actions for the 2015 plan revision.

MITIGATION STRATEGY – CITY OF EAST BREWTON

Table 5-18: City of East 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	2019
Estimated Cost	TBD
Funding Sources	HMGP
Priority	High
Benchmark	East Brewton continues training local flood plain manager. The planning committee reviewed this action and East Brewton wishes to keep it in this plan update.
Mitigation Action - DELETED	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	2018
Estimated Cost	TBD
Funding Sources	HMGP (FEMA Map Modernization Program)
Priority	Low
Benchmark	Completed in 2012.

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	2020
Estimated Cost	TBD
Funding Sources	HMGP
Priority	High
Benchmark	East Brewton continues participating in the National Flood Insurance Program. The planning committee reviewed this action and East Brewton wishes to keep it in this plan update.
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	2018
Estimated Cost	TBD
Funding Sources	Local Government
Priority	High
Benchmark	East Brewton continues promoting flood insurance. The planning committee reviewed this action and East Brewton wishes to keep it in this plan update.
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	2019
Estimated Cost	TBD
Funding Sources	HMGP/ Local Government
Priority	Low
Benchmark	East Brewton continues drainage system maintenance. The planning committee reviewed this action and East Brewton wishes to keep it in this plan update.

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	2020
Estimated Cost	TBD
Funding Sources	HMGP/ Local Government
Priority	Medium
Benchmark	East Brewton continues supporting the local flood plain manager. The planning committee reviewed this action and Escambia County wishes to keep it in this plan update.
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	2020
Estimated Cost	TBD
Funding Sources	HMGP/ Local Government
Priority	Low
Benchmark	East Brewton continues promoting construction practices and proper code enforcements. The planning committee reviewed this action and Escambia County wishes to keep it in this plan update.

Mitigation Action	Distribute FEMA Publication 320 – <u>Taking Shelter From the Storm: Building a Safe Room in Your House</u> – 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	2016
Estimated Cost	TBD
Funding Sources	HMGP/Local Government
Priority	High
Benchmark	Escambia County continues distributing FEMA publications. The planning committee reviewed this action and Escambia County wishes to keep it in this plan update.
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	2017
Estimated Cost	TBD
Funding Sources	HMGP/Local Government
Priority	Low
Benchmark	East Brewton continues publicizing the availability of FIRM information. The planning committee reviewed this action and East Brewton wishes to keep it in this plan update.

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	2020
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. The planning committee reviewed this action and East Brewton wishes to keep it in this plan update.
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	2017
Estimated Cost	TBD
Funding Sources	HMGP/Local Government
Priority	Low
Benchmark	East Brewton continues obtaining and depositing materials with local libraries. The planning committee reviewed this action and East Brewton wishes to keep it in this plan update.

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	2017
Estimated Cost	TBD
Funding Sources	HMGP/Local Government
Priority	High
Benchmark	East Brewton continues distributing hazard mitigation brochures. The planning committee reviewed this action and East Brewton wishes to keep it in this plan update.
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	2019
Estimated Cost	\$30 each
Funding Sources	HMGP/Local Government
Priority	High
Benchmark	East Brewton continues promoting the use of weather radios. The planning committee reviewed this action and East Brewton wishes to keep it in this plan update.

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	2020
Estimated Cost	TBD
Funding Sources	HMGP/AL Cooperative Extension Service/AL Forestry Commission
Priority	Low
Benchmark	East Brewton continues seeking technical assistance. The planning committee reviewed this action and East Brewton wishes to keep it in this plan update.
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. The City of East Brewton wishes to keep this mitigation action in the 2015 Plan Revision.
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	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. Some 2010 actions listed were for surrounding jurisdictions and were removed for this plan update. The City of East Brewton wishes to keep this mitigation action in the 2015 Plan Revision.
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. The City of Brewton wishes to keep this mitigation action in the 2015 Plan Revision.
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	2020
Estimated Cost	TBD
Funding Sources	HMGP, PDM, HUD, Local
Priority	Medium
Benchmark	No action has been taken due to lack of funds. The City of Brewton wishes to keep this mitigation action in the 2015 Plan Revision.
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	2020
Estimated Cost	\$125,000 and up - TBD
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	W. S. Neal High School is now under construction and includes a large safe room. No additional action has been taken due to lack of funds. The City of East Brewton wishes to keep this mitigation action in the 2015 Plan Revision.
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	\$125,000 and up – TBD
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	No action has been taken due to lack of funds. The City of East Brewton wishes to keep this mitigation action in the 2015 Plan Revision.

This page left intentionally blank

Town of Flomaton

This page left intentionally blank

**Table 5-19: Town of Flomaton
Risk and Vulnerability Overview**

Natural Hazards	Hazard Identification	Mitigation Actions Prioritization	Prioritized Occurrence Threat	Vulnerability
Thunderstorm	X	2	3	M
Lightning	X	3	5	L
Hail	X	2	5	L
Tornado	X	2	5	L
Flood/Flash Flood	X	1	2	M
Drought/Extreme Heat	X	3	5	L
Winter Storm/Frost Freeze/ Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	X	3	3	M
Hurricane/Tropical Storm/ Tropical Depression/High Wind/ Strong Wind	X	2	3	M
Sinkhole/Expansive Soil	X	3	5	L
Landslide	X	3	5	L
Earthquake	X	3	4	L
Wildfire	X	3	1	M
Dam/Levee Failure	X	3	5	L

KEY:

Hazard Identification – Identified by local jurisdictions

Mitigation Actions Prioritization - Hazards are prioritized by jurisdictions based on past hazard experiences, vulnerabilities, and available mitigation actions with the hazard having highest priority of mitigation assigned number one.

Prioritized Occurrence Threat - Hazards are prioritized with the highest threat of occurrence assigned number one based on hazardous events that have occurred within each jurisdiction over the past ten years, with the exception of wildfires that were based on events that have occurred over the past three years. Some natural hazards have equal threats to a jurisdiction; therefore, their threat number will be the same. These prioritized threats may or may not be the same as the mitigation actions prioritization.

Vulnerability – Identified by local jurisdictions. NA – Not Applicable; not a hazard to the jurisdiction; L – Low Risk; little damage potential (damage to less than 5% of the jurisdiction); M – Medium Risk; moderate damage potential (damage to 5-10% of jurisdiction, infrequent occurrence); and H – High Risk; significant risk/major damage potential (damage to over 10% of jurisdiction, regular occurrence)

(Source: NOAA NCDC Storm Events Database; Alabama Forestry Commission; National Forestry Service; Alabama Geological Survey; Participating Jurisdictions)

This page left intentionally blank

TABLE 5-20: TOWN OF FLOMATON HAZARD EVENTS

4 Thunderstorm Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database)

<u>Location</u>	<u>County/Zone</u>	<u>St.</u>	<u>Date</u>	<u>Time</u>	<u>T.Z.</u>	<u>Type</u>	<u>Mag</u>	<u>Dth</u>	<u>Inj</u>	<u>PrD</u>	<u>CrD</u>
FLOMATON	ESCAMBIA CO.	AL	04/25/2003	04:10	CST	Thunderstorm Wind	50 kts. EG	0	0	15.00K	0.00K
FLOMATON	ESCAMBIA CO.	AL	11/15/2006	07:40	CST-6	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
FLOMATON	ESCAMBIA CO.	AL	05/11/2009	19:00	CST-6	Thunderstorm Wind	52 kts. EG	0	0	20.00K	0.00K
FLOMATON	ESCAMBIA CO.	AL	03/09/2011	09:30	CST-6	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
Totals:								0	0	50.00K	0.00K

0 Lightning Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database)

No lightning events occurred or were reported during 01/01/2003 thru 12/31/2013.

0 Hail Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database)

No hail events occurred or were reported during 01/01/2003 thru 12/31/2013.

0 Tornado Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database)

No tornado events occurred or were reported during 01/01/2003 thru 12/31/2013.

5 Flood/Flash Flood Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database)

<u>Location</u>	<u>County/Zone</u>	<u>St.</u>	<u>Date</u>	<u>Time</u>	<u>T.Z.</u>	<u>Type</u>	<u>Mag</u>	<u>Dth</u>	<u>Inj</u>	<u>PrD</u>	<u>CrD</u>
FLOMATON	ESCAMBIA CO.	AL	12/14/2009	22:00	CST-6	Flood		0	0	362.00K	0.00K
COUNTYWIDE	ESCAMBIA CO.	AL	06/30/2003	21:00	CST	Flash Flood		0	0	0.00K	0.00K
COUNTYWIDE	ESCAMBIA CO.	AL	07/01/2003	00:00	CST	Flash Flood		0	0	0.00K	0.00K
COUNTYWIDE	ESCAMBIA CO.	AL	07/10/2005	17:00	CST	Flash Flood		0	0	0.00K	0.00K
COUNTYWIDE	ESCAMBIA CO.	AL	08/29/2005	12:00	CST	Flash Flood		0	0	0.00K	0.00K
Totals:								0	0	362.00K	0.00K

0 Drought/Extreme Heat Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database)

No drought/extreme heat events were reported during 01/01/2003 thru 12/31/2013 by the NOAA NCDC Storm Events Database or Local

4 Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold Events – 01/01/2003 thru 12/31/2013 (4018 days)
 (Source: NOAA NCDC Storm Events Database)

Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	02/12/2010	00:00	CST-6	Winter Storm		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	02/12/2010	00:00	CST-6	Winter Storm		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	02/12/2010	00:00	CST-6	Winter Storm		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	02/12/2010	00:00	CST-6	Winter Storm		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

4 Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind Events – 01/01/2003 thru 12/31/2013 (4018 days)
 (Source: NOAA NCDC Storm Events Database)

Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	09/13/2004	21:00	CST	Hurricane (typhoon)		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	07/09/2005	03:00	CST	Hurricane (typhoon)		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	07/10/2005	14:45	CST	Hurricane (typhoon)		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	06/10/2005	03:00	CST	Tropical Storm		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

0 Sinkhole Event – 01/01/2003 thru 12/31/2013 (4018 days)

No sinkhole events were reported during 01/01/2003 thru 12/31/2013 by the NOAA NCDC Storm Events Database/U.S. Geological Survey or Local

0 Landslide Events – 01/01/2003 thru 12/31/2013 (4018 days)

No landslide events were reported during 01/01/2003 thru 12/31/2013 by the NOAA NCDC Storm Events Database/U.S. Geological Survey/Local

3 Earthquake Events – 01/01/2003 thru 12/31/2013 (4018 days)
 (Source: www.homefacts.com/earthquakes/Alabama.html)

Location	St.	Date	Time	Type	Depth	Mag	Dth	Inj	PrD	CrD
Escambia Co.	AL	11/7/2004	11:20 a.m.	Earthquake	3.1 miles	4.4	0	0	0.00K	0.00K
Escambia Co.	AL	2/10/2006	4:14 a.m.	Earthquake	3.1 miles	5.3	0	0	0.00K	0.00K
Escambia Co.	AL	9/10/2006	2:56 p.m.	Earthquake	8.7 miles	5.9	0	0	0.00K	0.00K

No earthquake events were reported during 01/01/2003 thru 12/31/2013 by the NOAA NCDC Storm Events Database/U.S. Geological Survey/Alabama Geological Survey

260 Wildfire Events – 1/1/2010 thru 12/31/2013

(Source: Alabama Forestry Commission)

County	Total # of Fires 2010-2013	Average # of Fires Per Year	Total Acres Burned 2010-2013	Average Acres Burned Per Year	Average Fire Size in Acres Per Year
Escambia	260	87	5537.56	1,846	21

0 Dam/Levee Failure Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database/Local Input)

No dam/levee failure events occurred or were reported during 01/01/2003 thru 12/31/2013.

**Table 5-21: Town of Flomaton
Hazard Probability Assessment**

Natural Hazards	Number of Historical Occurrences	Probability of Future Annual Occurrence	Extent	Area Affected
Thunderstorm	4	40%	5-10%	Town wide
Lightning	Unknown	Unknown	<5%	Town wide
Hail	Unknown	Unknown	<5%	Town wide
Tornado	Unknown	Unknown	<5%	Town wide
Flood/Flash Flood	5	50%	5-10%	Town wide
Drought/Extreme Heat	Unknown	Unknown		Town wide
Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	4	40%	5-10%	Town wide
Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind	4	40%	5-10%	Town wide
Sinkhole/Expansive Soil	Unknown	Unknown	<5%	Town wide
Landslide	Unknown	Unknown	<5%	Town wide
Earthquake	3	30%	<5%	Town wide
Wildfire (2010-2013 – 3 year study period)	260	>100%	5-10%	Town wide
Dam/Levee Failure	Unknown	Unknown	<5%	Town wide

Source: NOAA NCDC; U. S. Inflation Calculator/Consumer Price Index; USGS; Local Input; USDA Census of Agriculture; Alabama Forestry Commission; and National Forestry Service; Participating Jurisdictions

Methodology: Number of historical occurrences is those reported by NOAA NCDC during the 10 year study period, with the exception of wildfire that is a 3 year study period. Probability is expressed by dividing the total number of occurrences by the study period in years. Extent is expressed as the percentage assigned by the jurisdictions' ranking in the vulnerability summary (Table 4-12). Zero and Unknown denote there is no data available to determine the probability, extent, or affected area.

TABLE 5-22: TOWN OF FLOMATON'S CRITICAL FACILITIES

(These structures are vulnerable to: Thunderstorms, lightning, hail, tornados, floods/flash floods, drought/extreme heat, winter weather, frost freeze, heavy snow, ice storms, winter weather, extreme cold, tropical storms, tropical depressions, high winds, strong winds, sinkholes, earthquakes, wildfires, and dam failures.)

FACILITY TYPE	REPLACEMENT VALUE
Water Well #2, 4684 Highway 31	
Water Well #3, 22680 Old Atmore Road	
Little Escambia Church, 91 Pecan Leaf Lane (serves as a shelter)	
City Hall	
Water Tank #2	
Sewer Station	
Flomaton Police Dept., 22475 Highway 31	\$38,415
Flomaton FD, 22475 Highway 31	\$16,464
Flomaton Fire Chief's Office, 22576 Highway 31	\$16,464
Flomaton FD, 307 Ringold	\$16,464
Flomaton Elementary School, 1634 Poplar St.	\$5,115,540
Flomaton High School, 21200 Highway 31	\$2,505,570
Turtle Point Science Center, 20959 Highway 31	\$4,555,580
Escambia Co. Alternative School, 21280 Highway 31	\$4,555,580
Total	\$16,820,077
<i>Source: HAZUS 2.1</i>	

**Table 5-23: Town of Flomaton
Estimated Loss Projections from Specified Hazards**

Natural Hazards	Average Occurrences (per year)	Total Deaths	Total Injuries	Average Death and Injury Loss (per event)	Average Crop and Property Loss (per event)	Projected Loss (per event)
Thunderstorm	0.4	0	0	Unknown	\$12,500	\$13,625
Lightning	Unknown	0	0	Unknown	Unknown	Unknown
Hail	Unknown	0	0	Unknown	Unknown	Unknown
Tornado	Unknown	0	0	Unknown	Unknown	Unknown
Flood/Flash Flood	0.5	0	0	Unknown	\$72,400	\$78,916
Drought/Extreme Heat	Unknown	0	0	Unknown	Unknown	Unknown
Winter Storm/ Frost Freeze/ Heavy Snow/ Ice Storm/Winter Weather/Extreme Cold	0.4	0	0	Unknown	Unknown	Unknown
Hurricane/Tropical Storm/Tropical Depression/High Wind/ Strong Wind	0.4	0	0	Unknown	Unknown	Unknown
Sinkhole/Expansive Soil	Unknown	0	0	Unknown	Unknown	Unknown
Landslide	Unknown	0	0	Unknown	Unknown	Unknown
Earthquake	0.3	0	0	Unknown	Unknown	Unknown
Wildfire (3 year study period)	87	0	0	Unknown	\$39,900	\$43,491
Dam/Levee Failure	Unknown	0	0	Unknown	Unknown	Unknown

Sources: NOAA NCDC; U. S. Inflation Calculator/Consumer Price Index; Local Input; USDA Census of Agriculture; Alabama Forestry Commission and National Forestry Service; Alabama Geological Survey

Methodology: Average occurrences were expressed annually by dividing the total number of occurrences by the ten-year period. Deaths and injuries were taken from the hazard event data. Average losses were calculated by dividing the total amount of all damages by the total number of occurrences causing damage during the ten-year period with the exception of wildfire. Projected loss expresses an estimated damage amount per future occurrence by converting the average loss figures from a midpoint of 2008 dollars to 2014 dollars (\$1 in 2008 = \$1.09 in 2014...a cumulative rate of inflation of 9%). Zero and Unknown denote there is no data available to determine the average occurrences, average loss or projected loss per event.

Town of Flomaton Mitigation Action Plan

The Town of Flomaton recognizes the importance of Mitigation Planning and will incorporate Mitigation planning in planning documents as they are revised or initiated.

Mitigation Status

The current status of the mitigation actions is shown under Benchmark in **Table 5-24**.

MITIGATION STRATEGY – TOWN OF FLOMATON

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	2019
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	Continues training as needed. The town wishes to keep this action in the plan.
Mitigation Action - DELETED	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	2018
Estimated Cost	TBD
Funding Sources	HMGP (FEMA Map Modernization Program)
Priority	Low
Benchmark	Completed in 2012.
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	2020
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	Flomaton participates in the NFIP and will continue. The town wishes to keep this action in the plan.
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	2017
Estimated Cost	TBD
Funding Sources	Local Government
Priority	High
Benchmark	Promotes flood insurance where needed. The town wishes to keep this action in the plan.
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	2018
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	2018
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 – <u>Taking Shelter From the Storm: Building a Safe Room in Your House</u> – 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	2017
Estimated Cost	TBD
Funding Sources	HMGP; Local
Priority	Low
Benchmark	Flomaton continues distributing FEMA Publication 320. The planning committee reviewed this action and Flomaton wishes to keep it in this plan update.
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	2018
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	Low
Benchmark	Flomaton continues publicizing the availability of FIRM information. The planning committee reviewed this action and Flomaton wishes to keep it in this plan update.
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 Town of Flomaton promotes mitigation and severe weather awareness through an annual severe weather awareness event. The Town of Flomaton wishes to keep this mitigation action in the 2015 Plan Revision.
Mitigation Action - DELETE	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
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2018
Estimated Cost	TBD
Funding Sources	HMGP, Local Government
Priority	Low
Benchmark	DELETE - The Town of Flomaton assists the Escambia County EMA in obtaining and depositing publications as necessary. The Town of Flomaton wishes to delete this mitigation action in the 2015 Plan Revision.
Mitigation Action - DELETE	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
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, Local Government
Priority	High
Benchmark	DELETE - The Town of Flomaton assists the Escambia County EMA in distributing brochures to area schools. The Town of Flomaton wishes to delete this mitigation action in the 2015 Plan Revision.
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 town continues to work with the Escambia County Soil and Water Conservation District to maintain Best Management Practices for channel and drainage system maintenance. The Town of Flomaton wishes to keep this mitigation action in the 2015 Plan Revision.
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. The Town of Flomaton wishes to keep this mitigation action in the 2015 Plan Revision.
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	2020

Estimated Cost	\$1,500 - \$50,000 each
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	Items not specific to the Town of Flomaton as listed in the 2010 plan revision has been removed in this section. No action has been taken due to lack of funds. The Town of Flomaton wishes to keep this mitigation action in the 2015 Plan Revision.
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	2019
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	No action has been taken due to lack of funds. The Town of Flomaton wishes to keep this mitigation action in the 2015 Plan Revision.
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. The Town of Flomaton wishes to keep this mitigation action in the 2015 Plan Revision.
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	2020
Estimated Cost	\$125,000 each
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	No action has been taken due to lack of funds. The Town of Flomaton wishes to keep this mitigation action in the 2015 Plan Revision.
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	2020
Estimated Cost	TBD
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	No action has been taken due to lack of funds. The Town of Flomaton wishes to keep this mitigation action in the 2015 Plan Revision.
Mitigation Action - NEW	Construct a new drainage channel from 10 th 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/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	New Action
Mitigation Action - New	Construct/Install community safe rooms
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	New Action

This page left intentionally blank

Town of Pollard

This page left intentionally blank

**Table 5-25: Town of Pollard
Risk and Vulnerability Overview**

Natural Hazards	Hazard Identification	Mitigation Actions Prioritization	Prioritized Occurrence Threat	Vulnerability
Thunderstorm	X	2	4	M
Lightning	X	6	4	L
Hail	X	4	4	L
Tornado	X	2	4	M
Flood/Flash Flood	X	1	4	M
Drought/Extreme Heat	X	6	4	H
Winter Storm/Frost Freeze/ Heavy Snow/Ice Storm/Winter Weather/ Extreme Cold	X	5	2	M
Hurricane/Tropical Storm/Tropical Depression/ Strong Wind/High Wind	X	3	2	M
Sinkhole/Expansive Soil	X	6	4	L
Landslide	X	6	4	L
Earthquake	X	6	3	L
Wildfire	X	6	1	L
Dam/Levee Failure	X	6	4	L
KEY: NA – Not Applicable; not a hazard to the jurisdiction L – Low Risk; little damage potential (damage to less than 5% of the jurisdiction) M – Medium Risk; moderate damage potential (damage to 5-10% of jurisdiction, infrequent occurrence) H – High Risk; significant risk/major damage potential (damage to over 10% of jurisdiction, regular occurrence)				
<i>(Source: Participating Jurisdictions)</i>				

This page left intentionally blank

TABLE 5-26: TOWN OF POLLARD HAZARD EVENTS

0 Thunderstorm Events – 01/01/2003 thru 12/31/2013 (4018 days)
 (Source: NOAA NCDC Storm Events Database)

No thunderstorm events occurred or were reported during 01/01/2003 thru 12/31/2013.

0 Lightning Events – 01/01/2003 thru 12/31/2013 (4018 days)
 (Source: NOAA NCDC Storm Events Database)

No lightning events occurred or were reported during 01/01/2003 thru 12/31/2013.

0 Hail Events – 01/01/2003 thru 12/31/2013 (4018 days)
 (Source: NOAA NCDC Storm Events Database)

No hail events occurred or were reported during 01/01/2003 thru 12/31/2013.

0 Tornado Events – 01/01/2003 thru 12/31/2013 (4018 days)
 (Source: NOAA NCDC Storm Events Database)

No tornado events occurred or were reported during 01/01/2003 thru 12/31/2013.

0 Flood/Flash Flood Events – 01/01/2003 thru 12/31/2013 (4018 days)
 (Source: NOAA NCDC Storm Events Database)

No flood/flash flood events occurred or were reported during 01/01/2003 thru 12/31/2013.

0 Drought/Extreme Heat Events – 01/01/2003 thru 12/31/2013 (4018 days)
 (Source: NOAA NCDC Storm Events Database)

No drought/extreme heat events occurred or were reported during 01/01/2003 thru 12/31/2013.

4 Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold Events – 01/01/2003 thru 12/31/2013 (4018 days)
 (Source: NOAA NCDC Storm Events Database)

Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	02/12/2010	00:00	CST-6	Winter Storm		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	02/12/2010	00:00	CST-6	Winter Storm		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	02/12/2010	00:00	CST-6	Winter Storm		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	02/12/2010	00:00	CST-6	Winter Storm		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

**4 Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind Events –
01/01/2003 thru 12/31/2013 (4018 days)**

(Source: NOAA NCDC Storm Events Database)

Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	09/13/2004	21:00	CST	Hurricane (typhoon)		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	07/09/2005	03:00	CST	Hurricane (typhoon)		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	07/10/2005	14:45	CST	Hurricane (typhoon)		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	06/10/2005	03:00	CST	Tropical Storm		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

0 Sinkhole/Expansive Soil Events - 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database/U.S. Geological Survey)

No events occurred or were reported during 01/01/2003 thru 12/31/2013.

0 Landslide Events - 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database/U.S. Geological Survey)

No events occurred or were reported during 01/01/2003 thru 12/31/2013.

3 Earthquake Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: www.homefacts.com/earthquakes/Alabama.html)

Location	St.	Date	Time	Type	Depth	Mag	Dth	Inj	PrD	CrD
Escambia Co. 114.5 miles from county's center	AL	11/7/2004	11:20 a.m.	Earthquake	3.1 miles	4.4	0	0	0.00K	0.00K
Escambia Co. 288.9 miles from county's center	AL	2/10/2006	4:14 a.m.	Earthquake	3.1 miles	5.3	0	0	0.00K	0.00K
Escambia Co. 337.7 miles from county's center	AL	9/10/2006	2:56 p.m.	Earthquake	8.7 miles	5.9	0	0	0.00K	0.00K

No earthquake events were reported during 01/01/2003 thru 12/31/2013 by the NOAA NCDC Storm Events Database/U.S. Geological Survey/Alabama Geological Survey

260 Wildfire Events – 1/1/2010 thru 12/31/2013

(Source: Alabama Forestry Commission)

County	Total # of Fires 2010-2013	Average # of Fires Per Year	Total Acres Burned 2010-2013	Average Acres Burned Per Year	Average Fire Size in Acres Per Year
Escambia	260	87	5537.56	1,846	21

0 Dam/Levee Failure Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database/Local Input)

No dam/levee failure events occurred or were reported during 01/01/2003 thru 12/31/2013.

**Table 5-27: Town of Pollard
Hazard Probability Assessment**

Natural Hazards	Number of Historical Occurrences	Probability of Future Annual Occurrence	Extent	Area Affected
Thunderstorm	Unknown	Unknown	5-10%	Town wide
Lightning	Unknown	Unknown	<5%	Town wide
Hail	Unknown	Unknown	<5%	Town wide
Tornado	Unknown	Unknown	5-10%	Town wide
Flood/Flash Flood	Unknown	Unknown	5-10%	Town wide
Drought/Extreme Heat	Unknown	Unknown	>10%	Town wide
Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	4	40%	5-10%	Town wide
Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind	4	40%	5-10%	Town wide
Sinkhole/Expansive Soil	Unknown	Unknown	<5%	Town wide
Landslide	Unknown	Unknown	<5%	Town wide
Earthquake	3	30%	<5%	Town wide
Wildfire (2010-2013 – 3 year study period)	260	>100%	<5%	Town wide
Dam/Levee Failure	0	Unknown	<5%	Town wide

Source: NOAA NCDC; U. S. Inflation Calculator/Consumer Price Index; USGS; Local Input; USDA Census of Agriculture; Alabama Forestry Commission; and National Forestry Service; Participating Jurisdictions

Methodology: Number of historical occurrences is those reported by NOAA NCDC during the 10 year study period, with the exception of wildfire that is a 3 year study period. Probability is expressed by dividing the total number of occurrences by the study period in years. Extent is expressed as the percentage assigned by the jurisdictions' ranking in the vulnerability summary (Table 4-12). Zero and Unknown denote there is no data available to determine the probability, extent, or affected area.

TABLE 5-28: TOWN OF POLLARD’S CRITICAL FACILITIES

(These structures are vulnerable to: Thunderstorms, lightning, hail, tornados, floods/flash floods, drought/extreme heat, winter weather, frost freeze, heavy snow, ice storms, winter weather, extreme cold, tropical storms, tropical depressions, high winds, strong winds, sinkholes, earthquakes, wildfires, and dam failures.)

FACILITY TYPE	REPLACEMENT VALUE
Town Hall	
Total	\$TBD

**Table 5-29: Town of Pollard
Estimated Loss Projections from Specified Hazards**

Natural Hazards	Average Occurrences (per year)	Total Deaths	Total Injuries	Average Death and Injury Loss (per event)	Average Crop and Property Loss (per event)	Projected Loss (per event)
Thunderstorm	Unknown	0	0	Unknown	Unknown	\$5,450
Lightning	Unknown	0	0	Unknown	Unknown	Unknown
Hail	Unknown	0	0	Unknown	Unknown	Unknown
Tornado	Unknown	0	0	Unknown	Unknown	Unknown
Flood/Flash Flood	Unknown	0	0	Unknown	Unknown	\$1,635
Drought/Extreme Heat	Unknown	0	0	Unknown	Unknown	Unknown
Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	0.4	0	0	Unknown	Unknown	Unknown
Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind	0.4	0	0	Unknown	Unknown	\$113,723
Sinkhole/Expansive Soil	Unknown	0	0	Unknown	Unknown	Unknown
Landslide	Unknown	0	0	Unknown	Unknown	Unknown
Earthquake	0.3	0	0	Unknown	Unknown	Unknown
Wildfire (3 year study period)	87	0	0	Unknown	\$39,900	\$43,491
Dam/Levee Failure	Unknown	0	0	Unknown	Unknown	Unknown

Sources: NOAA NCDC; U. S. Inflation Calculator/Consumer Price Index; Local Input; USDA Census of Agriculture; Alabama Forestry Commission and National Forestry Service; Alabama Geological Survey

Methodology: Average occurrences were expressed annually by dividing the total number of occurrences by the ten-year period. Deaths and injuries were taken from the hazard event data. Average losses were calculated by dividing the total amount of all damages by the total number of occurrences causing damage during the ten-year period with the exception of wildfire. Projected loss expresses an estimated damage amount per future occurrence by converting the average loss figures from a midpoint of 2008 dollars to 2014 dollars (\$1 in 2008 = \$1.09 in 2014...a cumulative rate of inflation of 9%). Zero and Unknown denote there is no data available to determine the average occurrences, average loss or projected loss per event.

Town of Pollard Mitigation Action Plan

The Town of Pollard recognizes the importance of Mitigation Planning and will incorporate mitigation planning in planning documents as they are revised or initiated.

Mitigation Status

The current status of the proposed action is shown under Benchmark in Table 5-30.

MITIGATION STRATEGY – TOWN OF POLLARD

Table 5-30: Town of Pollard Mitigation Actions	
Mitigation Action - DELETE	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	2018
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	The county trains the flood plain manager; therefore, the committee reviewed this mitigation action and wishes to delete it from the plan.
Mitigation Action - DELETE	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	2019
Estimated Cost	TBD
Funding Sources	HMGP (FEMA Map Modernization Program)
Priority	Low
Benchmark	Completed in 2012. The county updates all FIRMS; therefore, the committee reviewed this mitigation action and wishes to delete it from the plan.

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	2020
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	The town is a NFIP participant and will continue participating; therefore, the town wishes to keep the mitigation action in the plan.
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	2017
Estimated Cost	TBD
Funding Sources	Local Government
Priority	High
Benchmark	The town promotes flood insurance where needed. The town wishes to keep the mitigation action in the plan.
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	2019
Estimated Cost	TBD
Funding Sources	HMGP, Local Government
Priority	Low
Benchmark	Pollard continues drainage system maintenance. The planning committee reviewed this action and Pollard wishes to keep it in this plan update.

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	2017
Estimated Cost	TBD
Funding Sources	HMGP, Local Government
Priority	Medium
Benchmark	Pollard continues distributing FEMA publications. The planning committee reviewed this action and Pollard wishes to keep it in this plan update.
Mitigation Action	Distribute FEMA Publication 320 – <u>Taking Shelter From the Storm: Building a Safe Room in Your House</u> – 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	2018
Estimated Cost	TBD
Funding Sources	HMGP, Local Government
Priority	High
Benchmark	Pollard continues distributing FEMA publications. The planning committee reviewed this action and Pollard wishes to keep it in this plan update.

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	2017
Estimated Cost	TBD
Funding Sources	HMGP, Local Government
Priority	Low
Benchmark	Pollard continues publicizing the availability of FIRM information. The planning committee reviewed this action and Pollard wishes to keep it in this plan update.
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	2020
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. The planning committee reviewed this action and Pollard wishes to keep it in this plan update.

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	2019
Estimated Cost	TBD
Funding Sources	HMGP, Local Government
Priority	Low
Benchmark	Pollard continues obtaining and depositing materials with local libraries. The planning committee reviewed this action and Pollard wishes to keep it in this plan update.
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	2019
Estimated Cost	TBD
Funding Sources	HMGP, Local Government
Priority	High
Benchmark	Pollard continues distributing hazard mitigation brochures. The planning committee reviewed this action and Pollard wishes to keep it in this plan update.

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	2020
Estimated Cost	\$30 each
Funding Sources	HMGP, Local Government
Priority	High
Benchmark	Pollard continues distributing hazard mitigation brochures. The planning committee reviewed this action and Pollard wishes to keep it in this plan update.
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	2018
Estimated Cost	TBD
Funding Sources	HMGP, AL Cooperative Extension Service, AL Forestry Commission
Priority	Low
Benchmark	Pollard continues seeking technical assistance. The planning committee reviewed this action and Pollard wishes to keep it in this plan update.

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	2019
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. The planning committee reviewed this action and Pollard wishes to keep it in this plan update.
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	2020
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. The planning committee reviewed this action and Pollard wishes to keep it in this plan update.

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	2020
Estimated Cost	\$30 each
Funding Sources	HMGP
Priority	High
Benchmark	Pollard continues supporting efforts to distribute weather radios. The planning committee reviewed this action and Pollard wishes to keep it in this plan update.
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	2020
Estimated Cost	
Funding Sources	HMGP, Local
Priority	High
Benchmark	Pollard continues encouraging safe room construction. The planning committee reviewed this action and Pollard wishes to keep it in this plan update.

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	2020
Estimated Cost	
Funding Sources	HMGP, Local
Priority	High
Benchmark	Pollard continues encouraging safe room construction. The planning committee reviewed this action and Pollard wishes to keep it in this plan update.
Mitigation Action – NEW	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	2020
Estimated Cost	\$125,000 each
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	New Action
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	2020
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	Items not specific to the Town of Pollard were removed from this section. The planning committee reviewed this

	action and Pollard wishes to keep it in this plan update.
--	---

This page left intentionally blank

Town of Riverview

This page left intentionally blank

**Table 5-31: Town of Riverview
Risk and Vulnerability Overview**

Natural Hazards	Hazard Identification	Mitigation Actions Prioritization	Prioritized Occurrence Threat	Vulnerability
Thunderstorm	X	2	4	M
Lightning	X	4	4	L
Hail	X	3	4	L
Tornado	X	2	4	M
Flood/Flash Flood	X	1	2	L
Drought/Extreme Heat	X	4	4	H
Winter Storm/Frost Freeze/ Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	X	4	2	M
Hurricane/Tropical Storm/Tropical Depression/ Strong Wind/High Wind	X	2	2	M
Sinkhole/Expansive Soil	X	4	4	L
Landslide	X	4	4	L
Earthquake	X	4	3	L
Wildfire	X	4	1	M
Dam/Levee Failure	X	4	4	L
KEY: NA – Not Applicable; not a hazard to the jurisdiction L – Low Risk; little damage potential (damage to less than 5% of the jurisdiction) M – Medium Risk; moderate damage potential (damage to 5-10% of jurisdiction, infrequent occurrence) H – High Risk; significant risk/major damage potential (damage to over 10% of jurisdiction, regular occurrence)				
<i>(Source: Participating Jurisdictions)</i>				

This page left intentionally blank

TABLE 5-32: TOWN OF RIVERVIEW HAZARD EVENTS

0 Thunderstorm Events – 01/01/2003 thru 12/31/2013 (4018 days)
(Source: NOAA NCDC Storm Events Database)

No thunderstorm events occurred or were reported during 01/01/2003 thru 12/31/2013.

0 Lightning Events – 01/01/2003 thru 12/31/2013 (4018 days)
(Source: NOAA NCDC Storm Events Database)

No lightning events occurred or were reported during 01/01/2003 thru 12/31/2013.

0 Hail Events – 01/01/2003 thru 12/31/2013 (4018 days)
(Source: NOAA NCDC Storm Events Database)

No hail events occurred or were reported during 01/01/2003 thru 12/31/2013.

0 Tornado Events – 01/01/2003 thru 12/31/2013 (4018 days)
(Source: NOAA NCDC Storm Events Database)

No tornado events occurred or were reported during 01/01/2003 thru 12/31/2013.

4 Flood/Flash Flood Events – 01/01/2003 thru 12/31/2013 (4018 days)
(Source: NOAA NCDC Storm Events Database)

Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
COUNTYWIDE	ESCAMBIA CO.	AL	06/30/2003	21:00	CST	Flash Flood		0	0	0.00K	0.00K
COUNTYWIDE	ESCAMBIA CO.	AL	07/01/2003	00:00	CST	Flash Flood		0	0	0.00K	0.00K
COUNTYWIDE	ESCAMBIA CO.	AL	07/10/2005	17:00	CST	Flash Flood		0	0	0.00K	0.00K
COUNTYWIDE	ESCAMBIA CO.	AL	08/29/2005	12:00	CST	Flash Flood		0	0	0.00K	0.00K
Totals:								0	0	0	0.00K

0 Drought/Extreme Heat Events – 01/01/2003 thru 12/31/2013 (4018 days)
(Source: NOAA NCDC Storm Events Database)

No drought/extreme heat events occurred or were reported during 01/01/2003 thru 12/31/2013.

4 Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold Events – 01/01/2003 thru 12/31/2013 (4018 days)
(Source: NOAA NCDC Storm Events Database)

Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	02/12/2010	00:00	CST-6	Winter Storm		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	02/12/2010	00:00	CST-6	Winter Storm		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	02/12/2010	00:00	CST-6	Winter Storm		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	02/12/2010	00:00	CST-6	Winter Storm		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

**4 Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind Events –
01/01/2003 thru 12/31/2013 (4018 days)**
(Source: NOAA NCDC Storm Events Database)

Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	09/13/2004	21:00	CST	Hurricane (typhoon)		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	07/09/2005	03:00	CST	Hurricane (typhoon)		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	07/10/2005	14:45	CST	Hurricane (typhoon)		0	0	0.00K	0.00K
ESCAMBIA (ZONE)	ESCAMBIA (ZONE)	AL	06/10/2005	03:00	CST	Tropical Storm		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

0 Sinkhole/Expansive Soil Events - 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database/U.S. Geological Survey)

No events occurred or were reported during 01/01/2003 thru 12/31/2013.

0 Landslide Events - 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database/U.S. Geological Survey)

No events occurred or were reported during 01/01/2003 thru 12/31/2013.

3 Earthquake Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: www.homefacts.com/earthquakes/Alabama.html)

Location	St.	Date	Time	Type	Depth	Mag	Dth	Inj	PrD	CrD
Escambia Co. 114.5 miles from county's center	AL	11/7/2004	11:20 a.m.	Earthquake	3.1 miles	4.4	0	0	0.00K	0.00K
Escambia Co. 288.9 miles from county's center	AL	2/10/2006	4:14 a.m.	Earthquake	3.1 miles	5.3	0	0	0.00K	0.00K
Escambia Co. 337.7 miles from county's center	AL	9/10/2006	2:56 p.m.	Earthquake	8.7 miles	5.9	0	0	0.00K	0.00K

No earthquake events were reported during 01/01/2003 thru 12/31/2013 by the NOAA NCDC Storm Events Database/U.S. Geological Survey/Alabama Geological Survey

260 Wildfire Events – 1/1/2010 thru 12/31/2013

(Source: Alabama Forestry Commission)

County	Total # of Fires 2010-2013	Average # of Fires Per Year	Total Acres Burned 2010-2013	Average Acres Burned Per Year	Average Fire Size in Acres Per Year
Escambia	260	87	5537.56	1,846	21

0 Dam/Levee Failure Events – 01/01/2003 thru 12/31/2013 (4018 days)

(Source: NOAA NCDC Storm Events Database/Local Input)

No dam/levee failure events occurred or were reported during 01/01/2003 thru 12/31/2013.

**Table 5-33: Town of Riverview
Hazard Probability Assessment**

Natural Hazards	Number of Historical Occurrences	Probability of Future Annual Occurrence	Extent	Area Affected
Thunderstorm	Unknown	Unknown	5-10%	Town wide
Lightning	Unknown	Unknown	<5%	Town wide
Hail	Unknown	Unknown	<5%	Town wide
Tornado	Unknown	Unknown	5-10%	Town wide
Flood/Flash Flood	4	40%	<5%	Town wide
Drought/Extreme Heat	Unknown	Unknown	>10%	Town wide
Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	4	40%	5-10%	Town wide
Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind	4	40%	5-10%	Town wide
Sinkhole/Expansive Soil	Unknown	Unknown	<5%	Town wide
Landslide	Unknown	Unknown	<5%	Town wide
Earthquake	3	30%	<5%	Town wide
Wildfire (2010-2013 – 3 year study period)	260	>100%	5-10%	Town wide
Dam/Levee Failure	0	Unknown	<5%	Town wide

Source: NOAA NCDC; U. S. Inflation Calculator/Consumer Price Index; USGS; Local Input; USDA Census of Agriculture; Alabama Forestry Commission; and National Forestry Service; Participating Jurisdictions

Methodology: Number of historical occurrences is those reported by NOAA NCDC during the 10 year study period, with the exception of wildfire that is a 3 year study period. Probability is expressed by dividing the total number of occurrences by the study period in years. Extent is expressed as the percentage assigned by the jurisdictions' ranking in the vulnerability summary (Table 4-12). Zero and Unknown denote there is no data available to determine the probability, extent, or affected area.

TABLE 5-34: TOWN OF RIVERVIEW'S CRITICAL FACILITIES	
<i>(These structures are vulnerable to: Thunderstorms, lightning, hail, tornados, floods/flash floods, drought/extreme heat, winter weather, frost freeze, heavy snow, ice storms, winter weather, extreme cold, tropical storms, tropical depressions, high winds, strong winds, sinkholes, earthquakes, wildfires, and dam failures.)</i>	
FACILITY TYPE	REPLACEMENT VALUE
Town Hall	
Total	\$TBD

**Table 5-35: Town of Riverview
Estimated Loss Projections from Specified Hazards**

Natural Hazards	Average Occurrences (per year)	Total Deaths	Total Injuries	Average Death and Injury Loss (per event)	Average Crop and Property Loss (per event)	Projected Loss (per event)
Thunderstorm	Unknown	0	0	Unknown	Unknown	Unknown
Lightning	Unknown	0	0	Unknown	Unknown	Unknown
Hail	Unknown	0	0	Unknown	Unknown	Unknown
Tornado	Unknown	0	0	Unknown	Unknown	Unknown
Flood/Flash Flood	0.4	0	0	Unknown	Unknown	Unknown
Drought/Extreme Heat	Unknown	0	0	Unknown	Unknown	Unknown
Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	0.4	0	0	Unknown	Unknown	Unknown
Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind	0.4	0	0	Unknown	Unknown	Unknown
Sinkhole/Expansive Soil	Unknown	0	0	Unknown	Unknown	Unknown
Landslide	Unknown	0	0	Unknown	Unknown	Unknown
Earthquake	0.3	0	0	Unknown	Unknown	Unknown
Wildfire (3 year study period)	87	0	0	Unknown	\$39,900	\$43,491
Dam/Levee Failure	Unknown	0	0	Unknown	Unknown	Unknown

Sources: NOAA NCDC; U. S. Inflation Calculator/Consumer Price Index; Local Input; USDA Census of Agriculture; Alabama Forestry Commission and National Forestry Service; Alabama Geological Survey

Methodology: Average occurrences were expressed annually by dividing the total number of occurrences by the ten-year period. Deaths and injuries were taken from the hazard event data. Average losses were calculated by dividing the total amount of all damages by the total number of occurrences causing damage during the ten-year period with the exception of wildfire. Projected loss expresses an estimated damage amount per future occurrence by converting the average loss figures from a midpoint of 2008 dollars to 2014 dollars (\$1 in 2008 = \$1.09 in 2014...a cumulative rate of inflation of 9%). Zero and Unknown denote there is no data available to determine the average occurrences, average loss or projected loss per event.

This page left intentionally blank

Town of Riverview Mitigation Action Plan

The Town of Riverview recognizes the importance of Mitigation Planning and will incorporate mitigation planning in planning documents as they are revised or initiated.

Mitigation Status

The current status of the proposed action is shown under Benchmark in **Table 5-36**.

MITIGATION STRATEGY – TOWN OF RIVERVIEW

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	2019
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	Escambia County continues training local flood plain manager. The planning committee reviewed this action and Riverview wishes to keep it in this plan update.
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	2019
Estimated Cost	TBD
Funding Sources	HMGP (FEMA Map Modernization Program)
Priority	Low
Benchmark	Escambia County continues seeking update of all FIRMS. The planning committee reviewed this action and Riverview wishes to keep it in this plan update.

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	2020
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	Riverview continues participating in the National Flood Insurance Program. The planning committee reviewed this action and Riverview wishes to keep it in this plan update.
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	2018
Estimated Cost	TBD
Funding Sources	Local Government
Priority	High
Benchmark	Riverview continues promoting flood insurance. The planning committee reviewed this action and Riverview wishes to keep it in this plan update.
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	2019
Estimated Cost	TBD
Funding Sources	HMGP, Local Government
Priority	Low
Benchmark	Riverview continues drainage system maintenance. The planning committee reviewed this action and Riverview wishes to keep it in this plan update.

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	2018
Estimated Cost	TBD
Funding Sources	HMGP, Local Government
Priority	Medium
Benchmark	Riverview continues supporting the local flood plain manager. The planning committee reviewed this action and Riverview wishes to keep it in this plan update.
Mitigation Action	Distribute FEMA Publication 320 – <u>Taking Shelter From the Storm: Building a Safe Room in Your House</u> – 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	2018
Estimated Cost	TBD
Funding Sources	HMGP, Local Government
Priority	High
Benchmark	Riverview continues distributing FEMA publications. The planning committee reviewed this action and Riverview wishes to keep it in this plan update.

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	2018
Estimated Cost	TBD
Funding Sources	HMGP, Local Government
Priority	Low
Benchmark	Riverview continues publicizing the availability of FIRM information. The planning committee reviewed this action and Riverview wishes to keep it in this plan update.
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	2020
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. The planning committee reviewed this action and Riverview wishes to keep it in this plan update.

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	2019
Estimated Cost	TBD
Funding Sources	HMGP, Local Government
Priority	Low
Benchmark	Riverview continues obtaining and depositing materials with local libraries. The planning committee reviewed this action and Riverview wishes to keep it in this plan update.
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	2018
Estimated Cost	TBD
Funding Sources	HMGP, Local Government
Priority	High
Benchmark	Riverview continues distributing hazard mitigation brochures. The planning committee reviewed this action and Riverview wishes to keep it in this plan update.

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	2020
Estimated Cost	\$30 each
Funding Sources	HMGP, Local Government
Priority	High
Benchmark	Riverview continues promoting the use of weather radios. The planning committee reviewed this action and Riverview wishes to keep it in this plan update.
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	2019
Estimated Cost	TBD
Funding Sources	HMGP, AL Cooperative Extension Service, AL Forestry Commission
Priority	Low
Benchmark	Riverview continues seeking technical assistance. The planning committee reviewed this action and Riverview wishes to keep it in this plan update.

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	2019
Estimated Cost	\$35,000 each
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	Riverview will purchase, install and test warning sirens as funds become available. The planning committee reviewed this action and Riverview wishes to keep it in this plan update.
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	2020
Estimated Cost	\$1,500 - \$35,000
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	Actions not specific to Riverview were removed from this section. Riverview will purchase and update emergency generators as funds become available. The planning committee reviewed this action and Riverview wishes to keep it in this plan update.

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	2019
Estimated Cost	\$30 each
Funding Sources	HMGP
Priority	High
Benchmark	Riverview continues supporting efforts to distribute weather radios. The planning committee reviewed this action and Riverview wishes to keep it in this plan update.
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	2020
Estimated Cost	\$125,000 each and up - TBD
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	Riverview continues encouraging the construction of safe rooms. The planning committee reviewed this action and Riverview wishes to keep it in this plan update.

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	2020
Estimated Cost	\$125,000 each and up - TBD
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	Riverview continues encouraging the construction of safe rooms. The planning committee reviewed this action and Riverview wishes to keep it in this plan update.
Mitigation Action – NEW	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	2020
Estimated Cost	\$125,000 each
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	New Action
Mitigation Action – NEW	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	2020
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	New Action

This page left intentionally blank

Poarch Band of Creek Indians

This page left intentionally blank

TABLE 5-37: POARCH BAND OF CREEK INDIAN’S CRITICAL FACILITIES <i>(These structures are vulnerable to: Thunderstorms, lightning, hail, tornados, floods/flash floods, drought/extreme heat, winter weather, frost freeze, heavy snow, ice storms, winter weather, extreme cold, tropical storms, tropical depressions, high winds, strong winds, sinkholes, earthquakes, wildfires, and dam failures.)</i>	
FACILITY TYPE	REPLACEMENT VALUE
Poarch FD, 621 Jack Springs Rd.	\$16,464
Total	\$16,464

Source: HAZUS 2.1, Accessed 2015

Poarch Band of Creek Indians Action Plan

The Poarch Band of Creek Indians recognizes the importance of Mitigation Planning and will incorporate mitigation planning in planning documents as they are revised or initiated.

Mitigation Status

In order to track the progress of identified actions, the status of mitigation actions are listed under Benchmark in **Table 5-38**.

This page left intentionally blank

Table 5-38: Poarch Band of Creek Indians' Mitigation Actions

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	Flood Plain Manager/EMA
Estimated Time Frame for Completion	2019
Estimated Cost	TBD
Funding Sources	Local, HMGP
Priority	Low
Benchmark	The Poarch Creek Indians continue promoting the purchase of flood insurance. The Poarch Creek Indians reviewed this action item and wish to keep it in this plan update.
Mitigation Action	Prepare and implement standard operating procedures for drainage system maintenance.
Type	Property Protection
Goal	Reduce the Poarch Creek Indians' risk from natural hazards.
Hazard(s) Addressed	Floods, Flash Floods, Tornados, Severe Thunderstorms, High Winds, Strong Winds
Applies to new/existing asset(s)	Existing
Point of Contact Person for this Action	Public Works
Estimated Time Frame for Completion	2020
Estimated Cost	TBD
Funding Sources	Local, HMGP
Priority	Medium
Benchmark	The Poarch Creek Indians continue drainage system maintenance. The Poarch Creek Indians reviewed this action item and wish to keep it in this plan update.

Mitigation Action	Distribute FEMA Publication 320 – <u>Taking Shelter From the Storm: Building a Safe Room in Your House</u> – to local homebuilders.
Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	Tornadoes, Thunderstorms, 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	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	The Poarch Creek Indians continue distribution of FEMA publications. The Poarch Creek Indians reviewed this action item and wish to keep it in this plan update.
Mitigation Action - DELETE	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	2018
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	Low
Benchmark	The Poarch Creek Indians reviewed this action item and wish to remove it from this plan update.

Mitigation Action	Promote mitigation and severe weather awareness, through a Tribal Newsletter.
Type	Public Education & Awareness
Goal	Foster public support and acceptance of hazard mitigation
Hazard(s) Addressed	All
Applies to new/existing asset(s)	New
Point of Contact Person for this Action	EMA
Estimated Time Frame for Completion	2020
Estimated Cost	TBD
Funding Sources	HMGP, Local
Priority	High
Benchmark	Tribal Newsletters have been published during the past five years to promote mitigation and severe weather awareness. The Poarch Creek Indians reviewed this action item and wishes to keep it in this plan update.
Mitigation Action	Obtain free publications from FEMA, NWS, USGS, and other federal and state agencies and deposit these in public areas.
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
Priority	High
Benchmark	The Poarch Creek Indians continue distribution of free publications. The Poarch Creek Indians reviewed this action item and wish to keep it in this plan update.

Mitigation Action - DELETED	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
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, Local
Priority	Low
Benchmark	Deleted - The Escambia County EMA continues distribution of free publications. The Poarch Creek Indians reviewed this action item and wish to delete it in this plan update.
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 Poarch Creek Indians continue promoting weather radios. The Poarch Creek Indians reviewed this action item and wish to keep it in this plan update.
Mitigation Action	Test emergency warning sirens, as needed. Upgrade

	existing equipment, as needed.
Type	Emergency Services
Goal	Reduce the Poarch Creek Indians' 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	TBD
Funding Sources	Local, HMGP
Priority	High
Benchmark	The Poarch Creek Indians continue testing and upgrading warning sirens as needed; however, does not wish to purchase and install new ones. The Poarch Creek Indians reviewed this action item and wish to keep it in this plan update.
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 Person for this Action	Local Flood Plain Manager
Estimated Time Frame for Completion	2020
Estimated Cost	TBD
Funding Sources	HMGP; Local
Priority	Low
Benchmark	The Poarch Creek Indians continues supporting the local flood plain manager. The Poarch Creek Indians reviewed this action item and wish to keep it in this plan update.
Mitigation Action - REVISED	Improve/Install storm drains has been revised to conduct an updated storm drainage study which is the first step to prioritizing the storm drains to be improved and installed.
Type	Structural Projects
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	Local Flood Plain Manager, Poarch Band of Creek Indians
Estimated Time Frame for Completion	2020
Estimated Cost	TBD

Funding Sources	HMGP; Local
Priority	Medium
Benchmark	The Poarch Creek Indians reviewed and revised this action item and wish to keep it in this plan update.
Mitigation Action - REVISED	Encourage the construction of safe rooms within new buildings.
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	2020
Estimated Cost	\$125,000 each
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	The Poarch Creek Indians wish to construct/install community safe rooms as funds become available. The Poarch Creek Indians reviewed and revised (removed the word "public" and its specific examples) this action item and wish to keep it in this plan update.
Mitigation Action - REVISED	Encourage the construction of safe rooms in existing construction.
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	2020
Estimated Cost	\$4,500 - \$125,000 each
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	The Poarch Creek Indians wish to construct/install community safe rooms as funds become available. The Poarch Creek Indians reviewed and revised (removed Atmore specific example) this action item and wish to keep it in this plan update.
Mitigation Action - NEW	Purchase and install emergency generators at critical facilities.
Type	Emergency Services Protection
Goal	Reduce Poarch Creek Indians' 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	New Action
Mitigation Action	Construct/Install community safe rooms
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	2020
Estimated Cost	\$125,000 each
Funding Sources	HMGP, ADECA
Priority	High
Benchmark	The Poarch Creek Indians wish to construct/install community safe rooms as funds become available. The Poarch Creek Indians reviewed this action item and wish to keep it in this plan update.
Mitigation Action	Make application 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	2018
Estimated Cost	TBD
Funding Sources	HMGP
Priority	High
Benchmark	The Poarch Band of Creek Indians plans to make application to participate in the NFIP. The Poarch Creek Indians reviewed this action item and wish to keep it in this plan update.

This page left intentionally blank

Section Six: Mitigation Plan Maintenance

The plan may be reviewed at any time at the request of any local government, by the Chairman of the Hazard Mitigation Planning Committee, or at the discretion of the Escambia County EMA Director. Local governments may submit a formal letter to the Escambia County EMA Director or the Chairman of the Escambia County Hazard Mitigation Planning Committee requesting a review of the plan. The public may also request review of the plan by submitting a formal letter to the Escambia County EMA Director or the Chairman of the Escambia County Hazard Mitigation Planning Committee requesting a review of the plan. In the future, the County EMA will strive to get jurisdictions with websites to post the Hazard Mitigation Plan and provide a way for the public to comment online. Citizen Input on Hazard Mitigation Planning forms will be placed in public places, to include on the courthouse bulletin board, in the local government buildings, and in the library to provide the public a chance to provide feedback during the plan's implementation, monitoring, and evaluation process.

The Hazard Mitigation Planning Committee may re-evaluate the plan after a disaster has occurred to make sure that mitigation of the hazard was addressed properly. At a minimum, the Hazard Mitigation Planning Committee will monitor, evaluate, and amend this plan annually. During publicized meetings of various kinds (mutual aid, LEPC, etc.), public participation, as well as participation from neighboring counties, is encouraged to allow the public an opportunity to participate in the process. In addition, the Hazard Mitigation Planning Committee will continually review a variety of resources and examine conditions, which may affect mitigation activities for natural and technological hazards. The committee will review existing plans, policies, maps, and other documentation such as, but not limited to:

- NFIP flood panels
- Post-disaster redevelopment models
- Critical facilities lists and maps
- Existing land-use maps
- Future land-use maps
- Current zoning maps
- Land development codes
- Governing body codes and resolutions

- Comprehensive plans, including drainage studies
- Emergency Operations Plan
- Standard Operating Guidelines
- Various other plans and/or studies related to hazard mitigation

The EMA Director will serve as the point of contact for all amendments to the plan and will coordinate all additions or deletions of actions to the plan, as needed. The EMA Director will be responsible for informing the local governing bodies of any amendments made to the plan. Any local government seeking to add an action to the plan will be responsible for providing support for the action in the form of a resolution if, and only if, the funding source(s) requires so. The entire plan will be updated on a five-year planning cycle. The EMA Director will begin the update process months prior to the plan's expiration date in order to allow adequate time for the planning update process to be completed.

Regular plan monitoring will be achieved through the County EMA's efforts to track mitigation activities and the Hazard Mitigation Planning Committee's continual review of resources and conditions. The EMA Director is the responsible person for the review of the plan to include monitoring, evaluating, and updating of the plan, reconvening the committee only if additional information is available or the EMA Director requires assistance. The annual review of the plan will take place in June of each year. Although the entire plan's progress will be monitored, evaluated, and updated on a continuous basis throughout the five-year timeframe, the annual review will begin by the EMA Director emailing a survey form to the HMPC members asking them for their input and giving them a two-week deadline on returning the information to the EMA Director. Following the two-week deadline, the EMA Director will consolidate the survey forms and act upon the findings as needed and in the methods described below. Documentation will be kept from each review, to include sign-in sheets, agendas, public notices, emails, survey forms, etc. if applicable.

The County EMA will conduct an annual evaluation of the plan, reconvening the committee only if additional information is available or the EMA Director requires assistance. The EMA Director will document the annual evaluation and note the findings. The evaluation will consider several basic factors including:

1. Changes in the level of risk to the county and its citizens

2. Changes in laws, policies, or regulations at the local or state level
3. Changes in state or local agencies or their procedures that will affect how mitigation programs or funds are administered
4. Significant changes in funding sources or capabilities
5. Changes in the composition of the Hazard Mitigation Committee
6. Progress on mitigation actions (including project closeouts) and new mitigation actions that the county is considering
7. Major changes to the multi-jurisdictional hazard mitigation plan

Additionally, the County EMA will contact local agencies (and other individuals and organizations as appropriate) to determine if updates have been made to certain elements of the local plans as part of the annual review process. The purpose of this effort is to ensure that local information about risk, goals, projects, and mitigation strategies included in the plan remains current.

In the event modifications to the plan are warranted as a result of the annual review or other conditions, the HMPC will oversee and approve all revisions to the plan. Conditions which might warrant revisions to this plan would include, but not be limited to, special opportunities for funding, a response to a natural disaster, and changes in jurisdictions' capabilities to implement the plan. The public and neighboring counties will be encouraged and provided the chance to participate in the review of the updated plan, as well as in the plan update itself. Before any revisions are submitted to the jurisdictions for adoption, a notice may be placed in the local newspaper or posted in public facilities, allowing an opportunity for the public to review the proposed amendments at the EMA, submit written comments, and/or present comments at a public meeting. The HMPC will then submit all revisions for adoption by jurisdictions affected by the changes. A copy of the plan revisions will be submitted to all holders of the original plan in a timely manner.

Incorporation into Existing Planning Mechanisms

The Escambia County Hazard Mitigation Plan is incorporated into the current Escambia County Emergency Operations Plan that is administered by the Escambia County Emergency Management Agency. The Escambia County Hazard Mitigation Plan update has also been

incorporated into planning initiatives of the South Alabama Regional Planning Commission that covers Mobile, Baldwin and Escambia Counties.

Incorporation of the hazard mitigation plan will vary for each jurisdiction based on existing planning methods and processes. Jurisdictions with planning commissions and respective zoning ordinances and building codes will incorporate mitigation plan elements as appropriate into their review of new developments.

Some jurisdictions have no zoning or existing plans of any type other than this mitigation plan (see Table 1-1) and do not have the resources or funding to prepare them. In these cases, where applicable, the mitigation plan elements will be incorporated into local development decisions by the appropriate local coordinating body in order to determine funding, prioritization, and review of new development activities. At such time as the jurisdiction does adopt zoning and building codes they will reflect the goals and objectives set forth in this plan. Further, any jurisdiction preparing or updating a comprehensive plan will reflect their hazard mitigation goals and objectives in their plan. These updates will occur as budget and time allow.

Continued Public Participation

The plan will be available for the public to view at the Escambia County Emergency Operations Center, all City and Town Halls and the Escambia County Commission Office. Written comments regarding the plan can be made to the Escambia County EMA Director.

During the past five years, the Escambia County EMA completed yearly plan reviews during June of each year and incorporated the feedback into this plan update. A copy or copies of the annual review survey forms that were returned to the EMA as a result of the annual review is below:

County: ESCAMBIA CITY OF ATMORE	HMPC Member: CHRIS BLACK BUILDING INSPECTOR	Date: 7/20/2012
<p>Have there been any changes in the level of risk to citizens?</p> <p>YES</p> <p>If yes, please explain.</p>	<p>Flood hazard areas expanded due to updated Flood Insurance Rate Maps.</p>	
<p>Have there been any changes in laws, policies, or regulations at your level?</p> <p>YES</p> <p>If yes, please list.</p>	<p>Adoption of International Property Maintenance Code for condemnation of unsafe structures.</p>	
<p>Have there been any changes in your agency/jurisdiction or in procedures that will affect how mitigation programs or funds are administered?</p> <p>NO</p> <p>If yes, please explain.</p>		
<p>Have there been significant changes in funding sources or capabilities?</p> <p>NO</p> <p>If yes, please explain.</p>		
<p>Have there been any changes in your agency/jurisdiction in regards to representation on this committee?</p> <p>NO</p>		

If yes, list new representative(s).			
Mitigation Measure #: 1.1.1	Has project been accomplished? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Should project continue or be removed from plan? Continue <input checked="" type="checkbox"/> Remove <input type="checkbox"/> If project is to be removed, please explain the reason(s) for removal.	Updated status on the project? List tasks that have and have not been completed on this project. For those tasks not completed, explain why. Training is ongoing. Attended Alabama Floodplain Manager's training on July 11-12, 2012 in Foley, AL. Courses included Floodplain Management Summary and Review, GIS Module, and H&H Module. ✓
Mitigation Measure #: 1.1.2	Has project been accomplished? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Should project continue or be removed from plan? Continue <input checked="" type="checkbox"/> Remove <input type="checkbox"/> If project is to be removed, please explain the reason(s) for removal.	Updated status on the project? List tasks that have and have not been completed on this project. For those tasks not completed, explain why. FIRMS available in digital format; detailed studies of developed areas with elevations still being pursued. ✓
Mitigation Measure #: 2.1.1	Has project been accomplished? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Should project continue or be removed from plan? Continue <input checked="" type="checkbox"/> Remove <input type="checkbox"/> If project is to be removed, please explain the reason(s) for removal.	Updated status on the project? List tasks that have and have not been completed on this project. For those tasks not completed, explain why. Ongoing project. Posted article in both local newspapers in February 2012 to promote awareness of pending revisions to flood maps and subsequent insurance requirements. ✓

<p>Mitigation Measure #:</p> <p>2.2.1</p>	<p>Has project been accomplished?</p> <p>Yes <input type="checkbox"/></p> <p>No <input checked="" type="checkbox"/></p>	<p>Should project continue or be removed from plan?</p> <p>Continue <input checked="" type="checkbox"/></p> <p>Remove <input type="checkbox"/></p> <p>If project is to be removed, please explain the reason(s) for removal.</p>	<p>Updated status on the project? List tasks that have and have not been completed on this project. For those tasks not completed, explain why.</p> <p>Ongoing project. ✓</p>
<p>Mitigation Measure #:</p> <p>3.1.1</p>	<p>Has project been accomplished?</p> <p>Yes <input checked="" type="checkbox"/></p> <p>No <input type="checkbox"/></p>	<p>Should project continue or be removed from plan?</p> <p>Continue <input checked="" type="checkbox"/></p> <p>Remove <input type="checkbox"/></p> <p>If project is to be removed, please explain the reason(s) for removal.</p>	<p>Updated status on the project? List tasks that have and have not been completed on this project. For those tasks not completed, explain why.</p> <p>Ongoing project. Organized a three ring binder containing multiple areas of guidance relating to Floodplain Management. Binder is located in a readily accessible location and contains handouts for public use. ✓</p>
<p>Mitigation Measure #:</p> <p>3.3.2</p>	<p>Has project been accomplished?</p> <p>Yes <input checked="" type="checkbox"/></p> <p>No <input type="checkbox"/></p>	<p>Should project continue or be removed from plan?</p> <p>Continue <input checked="" type="checkbox"/></p> <p>Remove <input type="checkbox"/></p> <p>If project is to be removed, please explain the reason(s) for removal.</p>	<p>Updated status on the project? List tasks that have and have not been completed on this project. For those tasks not completed, explain why.</p> <p>Ongoing project. ✓</p>
<p>Mitigation Measure #:</p> <p>3.5.1</p>	<p>Has project been accomplished?</p> <p>Yes <input type="checkbox"/></p> <p>No <input checked="" type="checkbox"/></p>	<p>Should project continue or be removed from plan?</p> <p>Continue <input checked="" type="checkbox"/></p> <p>Remove <input type="checkbox"/></p>	<p>Updated status on the project? List tasks that have and have not been completed on this project. For those tasks not completed, explain why.</p> <p>Ongoing project. ✓</p>

		If project is to be removed, please explain the reason(s) for removal.	
Mitigation Measure #: 3.5.2	Has project been accomplished? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Should project continue or be removed from plan? Continue <input checked="" type="checkbox"/> Remove <input type="checkbox"/> If project is to be removed, please explain the reason(s) for removal.	Updated status on the project? List tasks that have and have not been completed on this project. For those tasks not completed, explain why. Ongoing project. Posted article in both local newspapers in February 2012 to promote awareness of pending revisions to flood maps and subsequent insurance requirements. ✓
Mitigation Measure #: 3.5.3	Has project been accomplished? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Should project continue or be removed from plan? Continue <input checked="" type="checkbox"/> Remove <input type="checkbox"/> If project is to be removed, please explain the reason(s) for removal.	Updated status on the project? List tasks that have and have not been completed on this project. For those tasks not completed, explain why. Ongoing project. ✓
Mitigation Measure #: 3.5.4	Has project been accomplished? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Should project continue or be removed from plan? Continue <input checked="" type="checkbox"/> Remove <input type="checkbox"/> If project is to be removed, please explain the reason(s) for removal.	Updated status on the project? List tasks that have and have not been completed on this project. For those tasks not completed, explain why. Ongoing project. ✓

<p>Mitigation Measure #:</p> <p>3.5.5</p>	<p>Has project been accomplished?</p> <p>Yes <input type="checkbox"/></p> <p>No <input checked="" type="checkbox"/></p>	<p>Should project continue or be removed from plan?</p> <p>Continue <input checked="" type="checkbox"/></p> <p>Remove <input type="checkbox"/></p> <p>If project is to be removed, please explain the reason(s) for removal.</p>	<p>Updated status on the project? List tasks that have and have not been completed on this project. For those tasks not completed, explain why.</p> <p>Ongoing project. ✓</p>
<p>Mitigation Measure #:</p> <p>3.5.6</p>	<p>Has project been accomplished?</p> <p>Yes <input type="checkbox"/></p> <p>No <input checked="" type="checkbox"/></p>	<p>Should project continue or be removed from plan?</p> <p>Continue <input checked="" type="checkbox"/></p> <p>Remove <input type="checkbox"/></p> <p>If project is to be removed, please explain the reason(s) for removal.</p>	<p>Updated status on the project? List tasks that have and have not been completed on this project. For those tasks not completed, explain why.</p> <p>Ongoing project.</p> <p>✓</p>
<p>Mitigation Measure #:</p> <p>4.2.1</p>	<p>Has project been accomplished?</p> <p>Yes <input checked="" type="checkbox"/></p> <p>No <input type="checkbox"/></p>	<p>Should project continue or be removed from plan?</p> <p>Continue <input checked="" type="checkbox"/></p> <p>Remove <input type="checkbox"/></p> <p>If project is to be removed, please explain the reason(s) for removal.</p>	<p>Updated status on the project? List tasks that have and have not been completed on this project. For those tasks not completed, explain why.</p> <p>Continue to work with the Escambia County Soil and Water Conservation District to maintain Best Management Practices for channel and drainage system maintenance. ✓</p>
<p>Mitigation Measure #:</p> <p>5.1.2</p>	<p>Has project been accomplished?</p> <p>Yes <input type="checkbox"/></p> <p>No <input checked="" type="checkbox"/></p>	<p>Should project continue or be removed from plan?</p> <p>Continue <input checked="" type="checkbox"/></p> <p>Remove <input type="checkbox"/></p> <p>If project is to be removed, please</p>	<p>Updated status on the project? List tasks that have and have not been completed on this project. For those tasks not completed, explain why.</p> <p>Ongoing project. ✓</p>

		explain the reason(s) for removal.	
Mitigation Measure #: 5.5.1	Has project been accomplished? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Should project continue or be removed from plan? Continue <input checked="" type="checkbox"/> Remove <input type="checkbox"/> If project is to be removed, please explain the reason(s) for removal.	Updated status on the project? List tasks that have and have not been completed on this project. For those tasks not completed, explain why. Ongoing project. ✓
Mitigation Measure #: 6.3.1	Has project been accomplished? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Should project continue or be removed from plan? Continue <input checked="" type="checkbox"/> Remove <input type="checkbox"/> If project is to be removed, please explain the reason(s) for removal.	Updated status on the project? List tasks that have and have not been completed on this project. For those tasks not completed, explain why. Ongoing project. ✓
Mitigation Measure #: 6.4.1	Has project been accomplished? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Should project continue or be removed from plan? Continue <input checked="" type="checkbox"/> Remove <input type="checkbox"/> If project is to be removed, please explain the reason(s) for removal.	Updated status on the project? List tasks that have and have not been completed on this project. For those tasks not completed, explain why. Ongoing project. ✓
Mitigation Measure #: 1.1.3	Has project been accomplished? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Should project continue or be removed from plan? Continue <input checked="" type="checkbox"/> Remove <input type="checkbox"/>	Updated status on the project? List tasks that have and have not been completed on this project. For those tasks not completed, explain why. Currently participating in the NFIP; project is ongoing. ✓

		If project is to be removed, please explain the reason(s) for removal.	
Mitigation Measure #: 1.2.1	Has project been accomplished? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Should project continue or be removed from plan? Continue <input checked="" type="checkbox"/> Remove <input type="checkbox"/> If project is to be removed, please explain the reason(s) for removal.	Updated status on the project? List tasks that have and have not been completed on this project. For those tasks not completed, explain why. Ongoing project. ✓
Mitigation Measure #: 2.4.1	Has project been accomplished? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Should project continue or be removed from plan? Continue <input type="checkbox"/> Remove <input checked="" type="checkbox"/> If project is to be removed, please explain the reason(s) for removal.	Updated status on the project? List tasks that have and have not been completed on this project. For those tasks not completed, explain why. Portable 6" diesel pump has been purchased. ✓
Mitigation Measure #: 5.1.1	Has project been accomplished? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Should project continue or be removed from plan? Continue <input checked="" type="checkbox"/> Remove <input type="checkbox"/> If project is to be removed, please explain the reason(s) for removal.	Updated status on the project? List tasks that have and have not been completed on this project. For those tasks not completed, explain why. Ongoing project. ✓

<p>Mitigation Measure #:</p> <p>5.4.1</p>	<p>Has project been accomplished?</p> <p>Yes <input type="checkbox"/></p> <p>No <input checked="" type="checkbox"/></p>	<p>Should project continue or be removed from plan?</p> <p>Continue <input checked="" type="checkbox"/></p> <p>Remove <input type="checkbox"/></p> <p>If project is to be removed, please explain the reason(s) for removal.</p>	<p>Updated status on the project? List tasks that have and have not been completed on this project. For those tasks not completed, explain why.</p> <p>Ongoing project. ✓</p>
<p>Mitigation Measure #:</p> <p>6.4.2</p>	<p>Has project been accomplished?</p> <p>Yes <input type="checkbox"/></p> <p>No <input checked="" type="checkbox"/></p>	<p>Should project continue or be removed from plan?</p> <p>Continue <input checked="" type="checkbox"/></p> <p>Remove <input type="checkbox"/></p> <p>If project is to be removed, please explain the reason(s) for removal.</p>	<p>Updated status on the project? List tasks that have and have not been completed on this project. For those tasks not completed, explain why.</p> <p>Ongoing project; construction of new drainage channel from 10th Street Channel to Pine Barren Watershed Chanel should be listed under the City of Flomaton. ✓</p>
<p>Mitigation Measure #:</p> <p>6.4.3</p>	<p>Has project been accomplished?</p> <p>Yes <input type="checkbox"/></p> <p>No <input checked="" type="checkbox"/></p>	<p>Should project continue or be removed from plan?</p> <p>Continue <input checked="" type="checkbox"/></p> <p>Remove <input type="checkbox"/></p> <p>If project is to be removed, please explain the reason(s) for removal.</p>	<p>Updated status on the project? List tasks that have and have not been completed on this project. For those tasks not completed, explain why.</p> <p>Ongoing project. ✓</p>
<p>Mitigation Measure #:</p> <p>6.4.4</p>	<p>Has project been accomplished?</p> <p>Yes <input type="checkbox"/></p> <p>No <input checked="" type="checkbox"/></p>	<p>Should project continue or be removed from plan?</p> <p>Continue <input checked="" type="checkbox"/></p> <p>Remove <input type="checkbox"/></p> <p>If project is to be removed, please</p>	<p>Updated status on the project? List tasks that have and have not been completed on this project. For those tasks not completed, explain why.</p> <p>Ongoing project.</p>

		explain the reason(s) for removal.	✓
Mitigation Measure #: 6.4.5	Has project been accomplished? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Should project continue or be removed from plan? Continue <input checked="" type="checkbox"/> Remove <input type="checkbox"/> If project is to be removed, please explain the reason(s) for removal.	Updated status on the project? List tasks that have and have not been completed on this project. For those tasks not completed, explain why. Ongoing project. ✓
Mitigation Measure #: 6.4.6	Has project been accomplished? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Should project continue or be removed from plan? Continue <input type="checkbox"/> Remove <input checked="" type="checkbox"/> If project is to be removed, please explain the reason(s) for removal.	Updated status on the project? List tasks that have and have not been completed on this project. For those tasks not completed, explain why. PTO drives for the Byrne Drive Water Plant and the Dees Drive Water Plant have been installed. ✓
Mitigation Measure #: 6.4.7	Has project been accomplished? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Should project continue or be removed from plan? Continue <input type="checkbox"/> Remove <input checked="" type="checkbox"/> If project is to be removed, please explain the reason(s) for removal.	Updated status on the project? List tasks that have and have not been completed on this project. For those tasks not completed, explain why. Lift station by-pass pumps have been mounted. ✓
Mitigation Measure #: 6.4.8	Has project been accomplished? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Should project continue or be removed from plan? Continue <input type="checkbox"/> Remove <input checked="" type="checkbox"/>	Updated status on the project? List tasks that have and have not been completed on this project. For those tasks not completed, explain why.

		If project is to be removed, please explain the reason(s) for removal.	Equalization basin has been installed. ✓
Mitigation Measure #: 6.4.9	Has project been accomplished? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Should project continue or be removed from plan? Continue <input type="checkbox"/> Remove <input checked="" type="checkbox"/> If project is to be removed, please explain the reason(s) for removal.	Updated status on the project? List tasks that have and have not been completed on this project. For those tasks not completed, explain why. Sanitary sewer on Liberty St. from lift station to Carver Ave. has been replaced. ✓

CITY OF ATMORE

REQUESTED UPDATES TO ESCAMBIA COUNTY, ALABAMA NATURAL HAZARDS MITIGATION PLAN

Type	Goal	Mitigation Measure
Emergency Services Protection	Reduce Escambia County's vulnerability to natural hazards	Purchase (8) portable generators with extending pole lights. Added.
Emergency Services Protection	Reduce Escambia County's vulnerability to natural hazards	Purchase extension arm bush hog with minimum 72" cutting width to more adequately maintain drainage systems. Item not eligible under the HMGP.
Emergency Services Protection	Reduce Escambia County's vulnerability to natural hazards	Purchase backhoe with extension boom and two dump trucks to improve ability to maintain evacuation routes and assist in debris removal. Item not eligible under the HMGP.

Amendment to Section 6-8, Table 6.4-2

Current effective date for Flood Insurance Rate Maps is identified as 9/28/2007. These maps were updated and the new effective date is 6/5/2012. ✓

Amendment to Mitigation Measure 6.4.1

Change "community shelter for Atmore Utility Board" to employee shelter for Atmore Utility Board. ✓

This page left intentionally blank

APPENDIX I

Adopting Resolutions

This page left intentionally blank

APPROVAL & IMPLEMENTATION

The purpose of hazard mitigation is to implement action that eliminate the risk from hazards, or reduce the severity of the effects of hazards on people and property. Mitigation actions are both short-term and long-term activities that reduce the cause or occurrence of hazards; reduce exposure to hazards; or reduce effects of hazards through various means to include preparedness, response and recovery measures.

This plan update applies to all local agencies, boards, commissions, and departments assigned mitigation responsibilities, and to others as designated by the Escambia County Commission or Director of the Escambia County Emergency Management Agency.

The Escambia County Hazard Mitigation Plan Update was prepared in compliance with Public Law 106-390, *Disaster Mitigation Act of 2000*, as amended. This plan update implements hazard mitigation measures intended to eliminate or reduce the effects of future disasters throughout Escambia County, and was developed in a joint and cooperative venture by members of the Escambia County Hazard Mitigation Planning.

Escambia County will comply with all applicable state and federal statutes and regulations in effect with respect to the periods for which it receives grant funding, in compliance with 44 Code of Federal Regulations (CFR) 13.11c. Escambia County will amend its plan whenever necessary to reflect changes in local/state and/or federal laws and statutes as required in 44 CFR, 13.11d. At a minimum, the Escambia County EMA will review and if necessary, update the plan every five years from the date of approval in accordance with 44 CFR, 201.6 (5) (d) (3) in order to continue program eligibility.

As the Director of the Escambia County Emergency Management Agency, I hereby adopt this plan update in accordance to the powers delegated to me and accept this plan update for implementation in order to protect the lives and property of the citizens of Escambia County, Alabama.

Date

David Adams, Director
Escambia County Emergency Management Agency

This page left intentionally blank

County of Escambia

2015 Escambia County Hazard Mitigation Plan Update

Resolution of Adoption

WHEREAS, the Escambia County Hazard Mitigation Plan has been updated in accordance with FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, the County of Escambia participated in the updating of a multi-jurisdictional plan, Escambia County Hazard Mitigation Plan; and

WHEREAS, the County of Escambia is a local unit of government that has afforded the citizens an opportunity to comment and provide input in the plan and the actions in the plan; and

WHEREAS, the County of Escambia has reviewed the plan and affirms that the plan will be updated no less than every five years.

NOW THEREFORE, BE IT RESOLVED by the County Commission that the County of Escambia adopts the 2015 Escambia County Hazard Mitigation Plan Update, and resolves to execute the actions in the plan.

ADOPTED, this _____ day of _____, 2015 at the meeting of the County Commission.

Chairman, Escambia County Commission

This page left intentionally blank

City of Atmore

2015 Escambia County Hazard Mitigation Plan Update

Resolution of Adoption

WHEREAS, the Escambia County Hazard Mitigation Plan has been updated in accordance with FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, the City of Atmore participated in the updating of a multi-jurisdictional plan, Escambia County Hazard Mitigation Plan; and

WHEREAS, the City of Atmore is a local unit of government that has afforded the citizens an opportunity to comment and provide input in the plan and the actions in the plan; and

WHEREAS, the City of Atmore has reviewed the plan and affirms that the plan will be updated no less than every five years.

NOW THEREFORE, BE IT RESOLVED by the City Council that the City of Atmore adopts the 2015 Escambia County Hazard Mitigation Plan Update, and resolves to execute the actions in the plan.

ADOPTED, this _____ day of _____, 2015 at the meeting of the City Council.

President, Atmore City Council

This page left intentionally blank

City of Brewton

2015 Escambia County Hazard Mitigation Plan Update

Resolution of Adoption

WHEREAS, the Escambia County Hazard Mitigation Plan has been updated in accordance with FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, the City of Brewton participated in the updating of a multi-jurisdictional plan, Escambia County Hazard Mitigation Plan; and

WHEREAS, the City of Brewton is a local unit of government that has afforded the citizens an opportunity to comment and provide input in the plan and the actions in the plan; and

WHEREAS, the City of Brewton has reviewed the plan and affirms that the plan will be updated no less than every five years.

NOW THEREFORE, BE IT RESOLVED by the City Council that the City of Brewton adopts the 2015 Escambia County Hazard Mitigation Plan Update, and resolves to execute the actions in the plan.

ADOPTED, this _____ day of _____, 2015 at the meeting of the City Council.

President, Brewton City Council

This page left intentionally blank

City of East Brewton

2015 Escambia County Hazard Mitigation Plan Update

Resolution of Adoption

WHEREAS, the Escambia County Hazard Mitigation Plan has been updated in accordance with FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, the City of East Brewton participated in the updating of a multi-jurisdictional plan, Escambia County Hazard Mitigation Plan; and

WHEREAS, the City of East Brewton is a local unit of government that has afforded the citizens an opportunity to comment and provide input in the plan and the actions in the plan; and

WHEREAS, the City of East Brewton has reviewed the plan and affirms that the plan will be updated no less than every five years.

NOW THEREFORE, BE IT RESOLVED by the City Council that the City of East Brewton adopts the 2015 Escambia County Hazard Mitigation Plan Update, and resolves to execute the actions in the plan.

ADOPTED, this _____ day of _____, 2015 at the meeting of the City Council.

President, East Brewton City Council

This page left intentionally blank

Town of Flomaton

2015 Escambia County Hazard Mitigation Plan Update

Resolution of Adoption

WHEREAS, the Escambia County Hazard Mitigation Plan has been updated in accordance with FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, the Town of Flomaton participated in the updating of a multi-jurisdictional plan, Escambia County Hazard Mitigation Plan; and

WHEREAS, the Town of Flomaton is a local unit of government that has afforded the citizens an opportunity to comment and provide input in the plan and the actions in the plan; and

WHEREAS, the Town of Flomaton has reviewed the plan and affirms that the plan will be updated no less than every five years.

NOW THEREFORE, BE IT RESOLVED by the Town Council that the Town of Flomaton adopts the 2015 Escambia County Hazard Mitigation Plan Update, and resolves to execute the actions in the plan.

ADOPTED, this _____ day of _____, 2015 at the meeting of the Town Council.

President, Flomaton Town Council

This page left intentionally blank

Town of Pollard

2015 Escambia County Hazard Mitigation Plan Update

Resolution of Adoption

WHEREAS, the Escambia County Hazard Mitigation Plan has been updated in accordance with FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, the Town of Pollard participated in the updating of a multi-jurisdictional plan, Escambia County Hazard Mitigation Plan; and

WHEREAS, the Town of Pollard is a local unit of government that has afforded the citizens an opportunity to comment and provide input in the plan and the actions in the plan; and

WHEREAS, the Town of Pollard has reviewed the plan and affirms that the plan will be updated no less than every five years.

NOW THEREFORE, BE IT RESOLVED by the Town Council that the Town of Pollard adopts the 2015 Escambia County Hazard Mitigation Plan Update, and resolves to execute the actions in the plan.

ADOPTED, this _____ day of _____, 2015 at the meeting of the Town Council.

President, Pollard Town Council

This page left intentionally blank

Town of Riverview

2015 Escambia County Hazard Mitigation Plan Update

Resolution of Adoption

WHEREAS, the Escambia County Hazard Mitigation Plan has been updated in accordance with FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, the Town of Riverview participated in the updating of a multi-jurisdictional plan, Escambia County Hazard Mitigation Plan; and

WHEREAS, the Town of Riverview is a local unit of government that has afforded the citizens an opportunity to comment and provide input in the plan and the actions in the plan; and

WHEREAS, the Town of Riverview has reviewed the plan and affirms that the plan will be updated no less than every five years.

NOW THEREFORE, BE IT RESOLVED by the Town Council that the Town of Riverview adopts the 2015 Escambia County Hazard Mitigation Plan Update, and resolves to execute the actions in the plan.

ADOPTED, this _____ day of _____, 2015 at the meeting of the Town Council.

President, Riverview Town Council

This page left intentionally blank

Poarch Creek Indians
2015 Escambia County Hazard Mitigation Plan Update

Resolution of Adoption

WHEREAS, the Escambia County Hazard Mitigation Plan has been updated in accordance with FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, the Poarch Creek Indians participated in the updating of a multi-jurisdictional plan, Escambia County Hazard Mitigation Plan; and

WHEREAS, the Poarch Creek Indians is a federally recognized Indian Tribe that has afforded the citizens an opportunity to comment and provide input in the plan and the actions in the plan; and

WHEREAS, the Poarch Creek Indians have reviewed the plan and affirms that the plan will be updated no less than every five years.

NOW THEREFORE, BE IT RESOLVED by the Poarch Creek Indians that the Tribal Council adopts the 2015 Escambia County Hazard Mitigation Plan Update, and resolves to execute the actions in the plan.

ADOPTED, this _____ day of _____, 2015 at the meeting of the Tribal Council.

Chairman, Poarch Creek Indians Tribal Council