

Pickens County Hazard Mitigation Plan



2015 Plan Update



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



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Pickens County Hazard Mitigation Plan

Table of Contents

Introduction		12
Section One	Planning Process	16
	Plan Update Process	16
	Continued Public Participation	16
	Hazard Mitigation Planning Committee	17
	Participation Guidelines	19
	Committee and Public Meeting Schedule and Participation	20
	Interagency and Intergovernmental Coordination	48
	Integration with Existing Plans	49
	Plan Adoption	50
Section Two	General Characteristics	52
	Growth Trends	53
	General Geology	56
Section Three	Pickens County Risk Assessment	60
	Hazard Profiles	78
	I. Thunderstorms	78
	II. Lightning	80
	III. Hail	84
	VI. Droughts/Extreme Heat	102
	VII. Winter Storms/Frost Freezes/Heavy Snow/Ice Storms/ Winter Weather/Extreme Cold	108
	VIII. Hurricanes/Tropical Storms/Tropical Depressions/High Winds/ Strong Winds	112
	IX. Sinkholes/Expansive Soils	118
	X. Landslides	122
	XI. Earthquake	124
	XII. Wildfire	132

	XIII. Dam Failure	140
Section Four	Vulnerability Assessment	146
	Socially Vulnerable Populations	161
	Vulnerable Structures	168
	Critical Facility Inventory	170
	Development Trends	175
	Methods of Warning	176
	Vulnerability Summary	180
	Estimated Loss Projections	180
	Mitigating Potential Losses	184
Section Five	Jurisdiction Assessments	190
	City of Aliceville	192
	Town of Carrollton	210
	Town of Ethelsville	230
	Town of Gordo	250
	Town of McMullen	270
	Town of Memphis	288
	Town of Pickensville	306
	Town of Reform	324
	Pickens County Fire Association	344
	Pickens County Board of Education	350
	Pickens County Medical Center	356
Section Six	Mitigation Plan Maintenance	362
	Incorporation into Existing Planning Mechanisms	364

Appendices

Appendix I	Adopting Resolutions	368
	Pickens County EMA	370
	Pickens County	372
	City of Aliceville	374
	Town of Carrollton	376
	Town of Ethelsville	378
	Town of Gordo	380
	Town of McMullen	382
	Town of Memphis	384
	Town of Pickensville	386
	Town of Reform	388
	Pickens County Board of Education	390
	Pickens County Fire Association	392
	Pickens County Medical Center	394
	FEMA Approval Letter	396

LIST OF MAPS, FIGURES, & TABLES

Maps		Page
2-1	Pickens County General Location & Population Density	54
4-1	Pickens County Census Tracts	164
4-2	Pickens County Outdoor Warning Sirens	178

Figures

2-1	Geology of Alabama	58
3-1	Generalized Tornado Paths	90
3-2	Wind Zones in the United States	91
3-3	Sinkholes and Sinkhole Density Across Alabama	119
3-4	General Soils of Alabama	120
3-5	Landslide Incidence & Susceptibility in Pickens County	123
3-6	National Seismic Hazard Mapping Project	129
3-7	Seismic Zones of the Southeastern United States	130
3-8	Total Acres Burned by Wildfire (1997-2012)	136
3-9	Number of Fires Per Year Per Square Mile (1997-2012)	138
4-1	Pickens County Community Safe Rooms	150
4-2	Pickens County Outdoor Warning Sirens	179

Tables

1-1	Pickens County Existing Plans by Jurisdiction	51
2-1	Growth Trends in 1190-2013 Population	53
3-1	Pickens County Hazard Probability of Future Occurrence	64
3-2	Pickens County Hazard Identification by Jurisdiction	65
3-3	Pickens County Prioritized Occurrence Threat by Jurisdiction Based on Past Events	66
3-4	Pickens County Mitigation Actions Prioritization	67
3-5	Pickens County Hazard Events	68
3-6	Estimating Hail Size	85
3-7	Fujita Tornado Scales	92
3-8	Flood Probability Terms	96

3-9	Pickens County NFIP Status by Jurisdiction	99
3-10	Heat Index/Heat Disorders	106
3-11	Saffir-Simpson Hurricane Wind Scale	113
3-12	Earthquake PGA, Magnitude, and Intensity Comparison	126
3-13	Wildfires in Pickens County 1997-2012	133
3-14	Pickens County Dams Risk Categories	143
3-15	Pickens County Dam Inventory	144
4-1	Community Safe Rooms in Pickens County	150
4-2	Pickens County Population Characteristics	162
4-3	Pickens County Income Data	167
4-4	Pickens County Housing Characteristics	168
4-5	Pickens County Building Stock by General Occupancy	169
4-6	Pickens County Building Exposure	169
4-7	Pickens County Building Contents Exposure	170
4-8	Pickens County Critical Facilities	174
4-9	Pickens County Population Projections	175
4-10	Pickens County Outdoor Warning Sirens	178
4-11	2014 Values Used for Monetary Conversion of Tornado Injuries and Deaths	181
4-12	Pickens County Vulnerability Summary	182
4-13	Pickens County Estimated Losses from Specified Hazards	183
4-14	Pickens County Mitigation Actions	188
5-1	City of Aliceville Risk & Vulnerability Overview	194
5-2	City of Aliceville Hazard Events	196
5-3	City of Aliceville Hazard Probability Assessment	203
5-4	City of Aliceville Critical Facilities Inventory	204
5-5	City of Aliceville Estimated Loss Projections from Specified Hazards	205
5-6	City of Aliceville Mitigation Actions	208
5-7	Town of Carrollton Risk & Vulnerability Overview	212
5-8	Town of Carrollton Hazard Events	214
5-9	Town of Carrollton Hazard Probability Assessment	224

5-10	Town of Carrollton Critical Facilities	223
5-11	Town of Carrollton Estimated Loss Projections from Specified Hazards	224
5-12	Town of Carrollton Mitigation Actions	229
5-13	Town of Ethelsville Risk & Vulnerability Overview	232
5-14	Town of Ethelsville Hazard Events	234
5-15	Town of Ethelsville Hazard Probability Assessment	241
5-16	Town of Ethelsville Critical Facilities	242
5-17	Town of Ethelsville Estimated Loss Projections from Specified Hazards	243
5-18	Town of Ethelsville Mitigation Actions	248
5-19	Town of Gordo Risk & Vulnerability Overview	252
5-20	Town of Gordo Hazard Events	254
5-21	Town of Gordo Hazard Probability Assessment	260
5-22	Town of Gordo Critical Facilities	261
5-23	Town of Gordo Estimated Loss Projections from Specified Hazards	262
5-24	Town of Gordo Mitigation Actions	268
5-25	Town of McMullen Risk & Vulnerability Overview	272
5-26	Town of McMullen Hazard Events	274
5-27	Town of McMullen Hazard Probability Assessment	280
5-28	Town of McMullen Critical Facilities	281
5-29	Town of McMullen Estimated Loss Projections from Specified Hazards	282
5-30	Town of McMullen Mitigation Actions	286
5-31	Town of Memphis Risk & Vulnerability Overview	290
5-32	Town of Memphis Hazard Events	292
5-33	Town of Memphis Hazard Probability Assessment	298
5-34	Town of Memphis Critical Facilities	299
5-35	Town of Memphis Estimated Loss Projections from Specified Hazards	300
5-36	Town of Memphis Mitigation Actions	304
5-37	Town of Pickensville Risk & Vulnerability Overview	308
5-38	Town of Pickensville Hazard Events	310
5-39	Town of Pickensville Hazard Probability Assessment	316
5-40	Town of Pickensville Critical Facilities	317
5-41	Town of Pickensville Estimated Loss Projections from Specified Hazards	318
5-42	Town of Pickensville Mitigation Actions	323

5-43	Town of Reform Risk & Vulnerability Overview	326
5-44	Town of Reform Hazard Events	328
5-45	Town of Reform Hazard Probability Assessment	336
5-46	Town of Reform Critical Facilities	337
5-47	Town of Reform Estimated Loss Projections from Specified Hazards	338
5-48	Town of Reform Mitigation Actions	342
5-49	Pickens County Fire Association Mitigation Actions	348
5-50	Pickens County Board of Education Mitigation Actions	354
5-51	Pickens County Medical Center Mitigation Actions	360

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Introduction

Pickens County Hazard Mitigation Plan

The Pickens 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, Aliceville, Carrollton, Ethelsville, Gordo, Memphis, McCullen, Pickensville, and Reform. Other local governments that elected to participate in and adopt the plan are: the Pickens County Board of Education, Pickens County Fire Association, and the Pickens County Medical Center.

On October 30, 2000, the United States Congress passed the Disaster Mitigation Act of 2000, also known as DMA2K. Among its other features, DMA2K established a requirement that in order to remain eligible for federal disaster assistance and grant funds, localities must develop and adopt hazard mitigation plans as a condition of receiving mitigation project grants under the Pre-Disaster Mitigation (PDM) Program and the Post-Disaster Hazard Mitigation Program (HMGP). On February 26, 2002 (updated October 1, 2002 and October 28, 2003), the Federal Emergency Management Agency (FEMA) published an Interim Final Rule (IFR) updated to the Final Rule (FR) on October 1, 2013 that provides the guidance and regulations under which such plans must be developed. The Final Rule (FR) provides detailed descriptions of both the planning process that localities are required to observe, as well as the contents of the plan that emerges.

Pickens County will continue to comply with all applicable federal and state statutes and regulations related to hazard mitigation planning. In addition, Pickens County will amend its plan whenever necessary to reflect changes in countywide hazard mitigation.

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 grant's Period of Performance is May 19, 2013 through May 19, 2016. Pickens County entered into an agreement with Lee Helms Associates L.L.C. (LHA) to update the 2009 plan that was revised by the West Alabama Regional Commission (WARC) and expires on December 16, 2014.

Scope

The Pickens County Hazard Mitigation Plan includes all incorporated and unincorporated areas in Pickens County. The plan addresses all natural hazards identified by the Federal Emergency Management Agency. All hazards that may affect Pickens 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 Pickens County Hazard Mitigation Plan is an effort

to identify mitigation strategies that address the hazards to which Pickens County is the most vulnerable. This plan is only one of many means Pickens County will take to achieve a safer, more hazard-resistant environment for its residents.

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Section One: Planning Process

Plan Update Process

The hazard mitigation planning update process began in February of 2014 after the Pickens County Emergency Management Agency (PCEMA) was awarded a planning grant from the Alabama Emergency Management Agency (AEMA). The PCEMA received 75 percent funding from the Federal Emergency Management Agency (FEMA). The remaining 25 percent was provided locally through in-kind services. The 2015 plan update reflects the same basic structure as the 2009 plan.

The Pickens County mitigation plan is the representation of the county's commitment to reduce risks from natural hazards. In doing this, the number, location, extent and probability of natural disasters occurring within the area were assessed. Previous 2009 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. Jurisdictions, planning committee members, the public, and neighboring communities actively participated by attending meetings and/or providing input by phone, fax, email, postal mail and one-on-one contacts made by the EMA Director/Hazard Mitigation Planning Commission Chairman.

Continued Public Participation

The plan will be available for the public to view at the Pickens County Emergency Operations Center, all City and Town Halls, Pickens County Courthouse, and the West Alabama Regional Commission.

After the initial plan was completed in 2004, it was made available for ongoing public view and comment at the Pickens County Emergency Operations Center, all City and Town

Halls, and the Pickens County Courthouse. 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 annual meetings held by the Pickens County EMA. No meeting notes or sign-in sheets were created and saved for these past meetings; however, they will be a future 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 and/or Facebook pages to place the 2015 plan on their site and offer the public a place to comment on the plan. Jurisdictions having Facebook pages are: Carrollton, Alabama and Gordo, Alabama. Jurisdictions having websites are: Pickens County: www.pickensalabama.com; City of Reform: www.cityofreform.com; Pickens County BOE: www.pickens.k12.ga.us; and Pickens County Firefighters Association: www.pickensfire.net.

Hazard Mitigation Planning Committee

Before beginning the plan update process, LHA staff coordinated with Mr. Ken Gibson, Pickens County EMA Director, to review the hazard mitigation planning committee. All but four existing members were confirmed to continue service. Replacements were made and new members were added to represent local governments participating in the plan for the first time. Mr. Gibson, the Pickens County EMA Director assumed the responsibility as Chairman of the Hazard Mitigation Planning Committee and also invited the Local Emergency Planning Committee (LEPC) to participate in the planning process. The Hazard Mitigation Planning Committee (HMPC) consisted of the following members:

Pickens County

Kenny Gibson, EMA Director (LEPC)
Ted Ezelle, County Commissioner
Michael Cooper, County Commissioner (LEPC)
Frederick Kennedy, County Commissioner

Cheryl Bowles, County Administrator

Sky Hallmon, County Engineer (LEPC)

Patty Fuller, County Extension Agent

Jack Somerville, Pickens County Water Authority/Pickens County Revenue Commissioner

Keith Cox, Pickens County Water Authority (LEPC Chair and Pickens Co. Firefighters Assoc.)

Sam Wiggins, Industrial Development Authority, Board Member

Herbert House, Water Superintendent (LEPC)

Turner Oliver, Board of Education Superintendent (LEPC)

Jimmy Latham, Pickens County Medical Center (LEPC)

Elton Gibson, Citizen (LEPC)

Chuck McDaniel, Alabama Forestry (LEPC Member and Pickens Co. Firefighters Assoc.)

Represented the Pickens County Firefighters Association – attended meetings, answered phone calls and emails

Doug Sanders, Pickens Herald, Editor (LEPC)

Jimmy Latham, PCMC/Asst. Adm. Op. DCH (LEPC)

City of Aliceville

Marva Gipson, City Councilperson

Tonnie Jones, Police Chief (LEPC)

Brian Pearson, Water Superintendent

Town of Carrollton

Joe Lancaster, Mayor (1st Meeting)

Scotty Perrgin, Water Superintendent

John Stepp, Street Superintendent

Anthony Durrah-Police Chief (LEPC)

Town of Ethelsville

Linwood Hughes, Mayor

Jimmie Nell Jollie, Clerk

Town of Gordo

Craig Patterson, Mayor

Todd Hall, Police Chief (LEPC)

Chris Gray, Utility Superintendent (LEPC)

Toby Kelly, Street and Sanitation Superintendent (LEPC)

Sam Powell, Fire Chief

Town of Memphis

Mayor

Town of McMullen

Bessie Wilkins, Mayor Pro-Tem

Carolyn Cleveland, Town Clerk

Town of Pickensville

Mary Fuseyamore, Mayor

Town of Reform

Bennie Horton, Mayor

Winston Richardson, Water Superintendent (LEPC)

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.
2. Each local government should submit requested information to Pickens County EMA or LHA in a timely manner. Local governments should meet time frames and deadlines established by the committee. In the event of extenuating circumstances, the Hazard Mitigation Planning Committee Chairman may approve late submissions.
3. Committee members should fully cooperate with LHA and the Pickens County EMA during the update and finalization of the Pickens County Hazard Mitigation Plan by providing the

best available information necessary to complete the plan.

4. Each participating jurisdiction must review mitigation strategies from the 2009 plan for which they were responsible and provide new actions they wish to pursue in the future. 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 jurisdiction, public and private nonprofits, general public, and neighboring communities of Tuscaloosa (David Hartin, EMA Director, 205-248-4960), Lamar (Johnny Bigham, EMA Director, 205-695-7105), Fayette (James Sanders, EMA Director, 205-932-6113), Greene (Iris Sermon, EMA Director, 205-372-1911), Sumter (Margaret Gulley, EMA Director, 205-652-6347) in Alabama and Noxubee (Brad Moore, EMA Director, 662-726-5111) and Lowndes (Cindy Lawrence, EMA Director, 662-329-5110) in Mississippi were invited and encouraged to participate in each of the committee meetings. In the event they were unable to attend the meetings they were provided meeting materials from the Pickens 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 Pickens County EMA and/or LHA to be counted as an active participant in the planning process. Neighboring communities were invited by phone or email and encouraged to attend all committee meetings and provide input. None of these communities attended any of the meetings; however during contacts made, all expressed their willingness to help in the event of a disaster. Public meeting notices were published in the Pickens County Herald at least seven days prior to the meeting date and included contact information for assistance. 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 have their concerned citizens to complete. Three forms were completed during the planning process and are included in this section.

of the Library funds can once again be used to provide much needed library services to our patrons and the community. Every donation is much appreciated, regardless the amount.

Thank you so much for your continued support of Aliceville Public Library and all the libraries in Pickens County.

Sincerely,

for public office at this time.

Steve Flowers

HAZARD MITIGATION PLANNING COMMITTEE WILL MEET

The Pickens County Hazard Mitigation Planning Committee meeting will be held at 10 a.m. on Tuesday, Feb. 18, at the Service Center Auditorium in Carrollton.

AMERICAN LEGION POST 40 MEETING

The American Legion Post 40 and Auxiliary meets every third Thursday of the month at 6:30 p.m. at the Peco Conference Center in Gordo. The next regular meeting will be on Feb. 20.


Host:
Matt Glover

Topic:
Fighting the Insurance Co.

Guest:
Champ Crocker

Thursday at 6:30

Email your legal questions anytime!
lawcall@wvnet.com



history reflections and recognition of community leaders. Proceeds will benefit community service projects and scholarships.

HAZARD MITIGATION PLANNING COMMITTEE WILL MEET

The Pickens County Hazard Mitigation Planning Committee meeting will be held at 10 a.m. on Tuesday, Feb. 18, at the Service Center Auditorium in Carrollton.

AMERICAN LEGION POST 40 MEETING

Lung Cancer
or Colon Cancer

Asbestos exposure was common in many industrial professions prior to 1980. Many cancers have been linked to such exposure including:

Lung Cancer • Mesothelioma • Colon Cancer

If you or your loved ones have been diagnosed with any of these cancers call:

Environmental Litigation Group, PC
1-800-749-9200

month in the best Auxiliary member MONTH COUNTY The Pickens Board of Supervisors Tuesday of each month at 10 a.m. in Street, Service Center COUNTY MONTH LIBRARY The Pickens County Library is open every day of each month.

FEBRUARY 5, 2014

Renee Helms

From: Ken Gibson [pcema@centurytel.net]
Sent: Wednesday, February 12, 2014 9:11 AM
To: admin54@earthlink.net; pickenscnty@centurytel.net; dtf916@yahoo.com; Jamie Chapman; kperkins001@centurytel.net; Keith Cox; robin.pickens911@yahoo.com; pickensso@yahoo.com; ttown012@centurytel.net; townofgordomayor@centurytel.net; OliverT@pcboe.org; anthonyv@pcboe.org; pickensengineer@yahoo.com; Patti Presley-Fuller; kgibson574@gmail.com; joelancaster25@yahoo.com; jlatham@pcmc.dchsystem.com; dmccaa@nctv.com; elgibson@centurytel.net; 'City of Reform'
Cc: donh@ema.alabama.gov; Renee Helms
Subject: Pickens County Hazard Mitigation Planning Committee

Just another reminder about the Pickens County Hazard Mitigation Planning Committee meeting to be held at the Service Center auditorium in Carrollton on Tuesday at 10am, February 18, 2014. Please make sure to attend this important meeting. All county and municipality officials need to attend this important meeting which will determine future hazard mitigation grants.

Ken Gibson
Pickens County EMA
P O Box 459
155 Reform ST, RM 100
Carrollton, AL 35447
205-367-2009

This email may contain classified, confidential and/or privileged material. Any review, receipt, dissemination or other use of this message by non-addressee is prohibited by law. If you are not the intended recipient, please contact sender and delete the message.

INITIAL MEETING AGENDA

2015 PICKENS COUNTY HAZARD MITIGATION PLAN UPDATE

Tuesday, February 18, 2014 @ 10 a.m.

Service Center Auditorium in Carrollton

1. Introductions

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

2. Project Background

- 2009 plan update was prepared by the West Alabama Planning Commission under the direction of the Hazard Mitigation Planning Committee, the Local Emergency Planning Committee, and the Pickens County Emergency Management Agency and adopted by:
 - Pickens County – Unincorporated
 - Aliceville City – Town
 - Carrollton – Town
 - Ethelsville – Town
 - Gordo – Town
 - McMullen – Town
 - Memphis – Town
 - Pickensville – Town
 - Reform – City
 - Pickens County School Board – School District
 - Pickens County Fire Association – Special District
- 2014-2015 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 Pickens 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

- 2009 plan update expires December 16, 2014
- Period of Performance for the grant is May 19, 2013 - May 19, 2016
- Goal date for draft plan to be submitted in order to be approved before current plan expires: Monday, August 4, 2014
 - 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
- Local EMA Director is to complete Questionnaire #1 and return by Feb. 25, 2014
- Local EMA Director is to provide LHA with a copy of the media release for this meeting
- Update 2009 plan information – see handouts to update critical facilities inventories and hazard mitigation goals and actions
- Discuss in-kind contributions for local match to this planning grant
- Set date and location for next meeting

Tuesday, February 18, 2014 at 10 a.m.

USDA Service Center Auditorium in Carrollton

Pickens County Hazard Mitigation Planning Meeting 1

The Chairman of the Hazard Mitigation Planning Committee, Mr. Ken Gibson, opened the meeting. Lee Helms Associates, L. L. C. reviewed the original 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 17 committee members or designees attended the meeting, along with 2 LHA representatives. No members of the general public were in attendance.

- Bennie Horton, Mayor of Reform
- Brian Pearson, Aliceville Water Superintendent
- Cheryl Bowles, Pickens County Administrator
- Craig Patterson, Mayor of Gordo
- Frederick Kennedy, Pickens County Commissioner
- Herbert House, Pickens County Water (LEPC)
- Joe Lancaster, Mayor of Carrollton
- John Stepp, Carrollton Street Superintendent
- Ken Gibson, EMA Director (LEPC)
- Lee Helms, LHA
- Marva Gipson, Aliceville Councilperson
- Mary Fuseyamore, Mayor of Pickensville
- Michael Cooper, Pickens County Commissioner (LEPC)
- Patti Fuller, Pickens County Extension Agent
- Renee Helms, LHA
- Scottie Perrgin, Carrollton Water Superintendent
- Sky Hallmon, Pickens County Engineer (LEPC)
- Toby Kelley, Gordo Street and Sanitation Superintendent (LEPC)
- Turner Oliver, Pickens County BOE Superintendent (LEPC)

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PICKENS COUNTY

Tuesday, February 18, 2014 at 10 a.m. – Service Center Auditorium in Carrollton
INITIAL HAZARD-MITIGATION PLANNING MEETING SIGN-IN SHEET

(PLEASE PRINT CLEARLY)

NAME	AGENCY OR DEPARTMENT/ JOB TITLE	PHONE/ FAX	E-MAIL
Toby Kelley	Agency: <i>Town of Golbo</i> Job Title: <i>STREET & SANIT. SUPER</i>	Phone: <i>205-364-7111</i> Fax: <i>364-8295</i>	<i>golbo@tkelley97@yahoo.com</i>
Patti Fuller	Agency: <i>County Coordinate</i> Job Title: <i>Extension System</i>	Phone: <i>205-307-8108</i> Fax:	<i>ppfuller@ares.edu</i>
Daniel Sky Hamon	Agency: <i>Pickens County Engineer</i> Job Title: <i>COUNTY ENGINEER</i>	Phone: <i>205-367-2050</i> Fax:	<i>pickensengineer@yahoo.com</i>
Michael Cooper	Agency: <i>Pickens Co. Comm</i> Job Title:	Phone: <i>205-399-0746</i> Fax:	<i>None</i>
Brink Pearson	Agency: <i>City of Pickensville</i> Job Title: <i>Superintendent Water Dept</i>	Phone: Fax:	
Lee + Renee Helms	Agency: <i>Lee Helms Assoc. LLC.</i> Job Title: <i>Owner / Manager</i>	Phone: <i>205-280-3027</i> Fax: <i>205-280-0543</i>	<i>lee@leehelmsllc.com</i> <i>renee@leehelmsllc.com</i>



PICKENS COUNTY

Tuesday, February 18, 2014 at 10 a.m. – Service Center Auditorium in Carrollton
INITIAL HAZARD-MITIGATION PLANNING MEETING SIGN-IN SHEET

(PLEASE PRINT CLEARLY)

NAME	AGENCY OR DEPARTMENT/ JOB TITLE	PHONE/ FAX	E-MAIL
KEN GIBSON	Agency: Pickens Co EMA Job Title: DIRECTOR	Phone: 205-367-2009 Fax: 205-367-2025	ken.gibson@pickens.net
John STAPP	Agency: Town of Carrollton Job Title: SUPERVISOR	Phone: 205-367-8711 Fax: 205-367-8958	no email (send to mayor)
Herbert Howe	Agency: Pickens County Water Job Title: Superintendent	Phone: 205-367-8923 Fax: 367-8901	pickens0000@countynet.net
Mary Susy Moore	Agency: Town of Pickensville Job Title: Mayor	Phone: 205-373-2068 Fax: Town of Pickensville	TTown012@countynet.net
Dave Gibson	Agency: City of Phenixville Job Title: Council person	Phone: 205-373-6611 Fax: 205-373-6513	burggibson@phenix.com
John Oliver	Agency: Pickens Co BOE Job Title: Superintendent	Phone: 205-367-8244 Fax: 367-8616	oliverj@pickens.k12.al.us

Transportation
Supervisor



PICKENS COUNTY

Tuesday, February 18, 2014 at 10 a.m. - Service Center Auditorium in Carrollton
INITIAL HAZARD-MITIGATION PLANNING MEETING SIGN-IN SHEET

(PLEASE PRINT CLEARLY)

NAME	AGENCY OR DEPARTMENT/ JOB TITLE	PHONE/ FAX	E-MAIL
Craig Patterson	Agency: Town of Gordo Job Title: Mayor	Phone: 205-364-7111 Fax: 205-364-8295	gordomayor@aol.com
Joe Lancaster	Agency: Carrollton Job Title: Mayor	Phone: 205-367-8711 Fax: 205-367-8952	jdelancaster25@yahoo.com
Bennie Horton	Agency: Town of Reform Job Title: Mayor	Phone: 206 375 6363 Fax:	cityofreform.netv.com
Scottie Perrigin	Agency: Town of Carrollton Job Title: Water speaker	Phone: (201) 567-0711 Fax:	Scottie.perrigin@carrollton.com
Cheryl Bowles	Agency: Commission Job Title: Administrator	Phone: 205 367-2023 Fax: 205 367-2025	adminstrator@carrollton.com
Frederick Kennedy	Agency: Commission Job Title: Commissioner	Phone: 205-339-5209 Fax:	Kennedy.Fred@carrollton.com

Shirley L. Meehan

Tanya McMullen
Mayor



205-799-0888

mayormeehan@carrollton.com

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**HAZARD MITIGATION PLANNING
COMMITTEE WILL MEET**

The Pickens County Hazard Mitigation Planning Committee meeting will be held at 1:30 p.m. on Tuesday, March 12, at the Service Center Auditorium in Carrollton. The public is welcome to attend.

HAZARD MITIGATION PLANNING COMMITTEE WILL MEET

The Pickens County Hazard Mitigation Planning Committee meeting will be held at 1:30 p.m. on Tuesday, March 12, at the Service Center Auditorium in Carrollton. The public is welcome to attend.

S

SECOND MEETING AGENDA

2014 PICKENS COUNTY HAZARD MITIGATION PLAN UPDATE

Wednesday, March 12, 2014 @ 1:30 p.m.

Service Center Auditorium in Carrollton

1. Introductions

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

2. Project Schedule Reminder

- 2009 plan update expires December 16, 2014
- Period of Performance for the grant is May 19, 2013 - May 19, 2016
- **Goal date for draft plan to be submitted** in order to be approved before current plan expires: **Monday, August 4, 2014**
- 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
- Update 2009 plan information – see handouts Discuss in-kind contributions for local match to this planning grant
- Set date and location for next meeting (**preferably in June 2014**)

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Wednesday, March 12, 2014 at 1:30 p.m.

USDA Service Center Auditorium in Carrollton

Pickens County Hazard Mitigation Planning Meeting 2

The Chairman of the Hazard Mitigation Planning Committee, Mr. Ken Gibson, opened the meeting. 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 26 committee members or designees attended the meeting, along with one LHA representative and two members of the general public who completed a “Citizen Input on Hazard Mitigation Planning” form (see below).

- Anissa Ball, Pickens County Board of Education – Administrator of Student Services
- Anthony Durrah, Carrollton Police Department Chief (LEPC)
- Bennie Horton, Mayor of Reform
- Buddy Abernathy, Citizen
- Cheryl Bowles, Pickens County Administrator
- Chuck McDaniel, Alabama Forestry Commission (LEPC)
- Craig Patterson, Mayor of Gordo
- Don Hartley, Alabama Emergency Management Agency – Region 3 Coordinator
- Doug Sanders, Jr., Pickens County Herald – Editor/Publisher (LEPC)
- Eli Hughes, Mayor of Ethelsville
- Elton Gibson, Citizen (LEPC)
- Frederick Kennedy, Pickens County Commissioner
- Herbert House, Pickens County Water (LEPC)
- Jimmy Garner
- Jimmy Latham, Pickens County Medical Center – Assistant Administrator of Support Services (LEPC)
- Joe Lancaster, Mayor of Carrollton

- Ken Gibson, EMA Director (LEPC)
- Lee Helms, LHA
- Mary Fuseyamore, Mayor of Pickensville
- Michael Cooper, Pickens County Commissioner/Building Supt. (LEPC)
- Patti Fuller, Pickens County Extension Agent
- Scottie Perrgin, Carrollton Water Superintendent
- Sky Hallmon, Pickens County Engineer (LEPC)
- Tim Browning, Pickens County Commissioner/Forestry
- Toby Kelley, Gordo Street and Sanitation Superintendent
- Tommy Dockery, Alabama Dept. of Public Health - Emergency Preparedness Coordinator
- Tonnie Jones, Aliceville Police Department (LEPC)
- Turner Oliver, Pickens County Board of Education Superintendent (LEPC)

PICKENS COUNTY

Wednesday, March 12, 2014 at 1:30 p.m. - Service Center Auditorium in Carrollton
SECOND HAZARD-MITIGATION PLANNING MEETING SIGN-IN SHEET

PLEASE PRINT CLEARLY)

NAME	AGENCY OR DEPARTMENT/ JOB TITLE	PHONE/ FAX	E-MAIL
Jimmy Lettman	Agency: Pickens Co. Health Dept Job Title: Asst. Adm. of Health Dept	Phone: 205-367-2411 Fax: 205-367-2471	jlettman@pickens.k12.sc
Timmy GARNER	Agency: Memphis Job Title: Mayor	Phone: 205-373-0348 Fax: 205-514-0418 Cell: 205-514-0418	NO email
Toby KELLEY	Agency: TOWN OF GOLDO Job Title:	Phone: 205-364-7111 Fax:	goldot@kelley970
Robert House	Agency: Pickens County Water Job Title: Supt.	Phone: 205-367-8923 Fax:	
Frederick Kennedy	Agency: Pickens County Commission Job Title: Commissioner	Phone: 205-239-5204 Fax:	Kennedy.Frederick.360@pc
Unisa Ball	Agency: Pickens Co. Bd. of Ed. Job Title: Administrator of Student Services	Phone: 205-367-8195 Fax: 205-367-8404	ballu@pickens.k12.sc



Janie P. Jones	Alicia's Police	205-373-2517	alicej@pickens.k12.sc
Kimberly L. Mcraa	Town of Mcraa Mayor	205-799-0888	MayorMcraa@out10

PICKENS COUNTY

Wednesday, March 12, 2014 at 1:30 p.m. – Service Center Auditorium in Carrollton
SECOND HAZARD-MITIGATION PLANNING MEETING SIGN-IN SHEET

(PLEASE PRINT CLEARLY)

NAME	AGENCY OR DEPARTMENT/ JOB TITLE	PHONE/ FAX	E-MAIL
Ken Gibson	Agency: Pickens Co EMA Job Title: DIRECTOR	Phone: 205-367-2009 Fax:	pkema@centurytel.net
Tim Brown	Agency: Forestry & Co. Commission Job Title: Commissioner	Phone: Fax:	
Anthony Durrah	Agency: Carrollton P.D. Job Title: Chief	Phone: 205-367-8711 Fax: 205-367-8950	Anthony.durrah@carrollton.ga.gov
Chuck McDaniel	Agency: Al Forestry Commission Job Title:	Phone: 205-367-8232 Fax:	PickensCounty@forestry.alabama.gov
Tommy Dockery	Agency: ADPA Emergency Preparedness Job Title: Coordinator	Phone: (205) 554-4539 Fax: (205) 556-2701	tommy.dockery@daphnystate.edu
Mary Jusey	Agency: Town of Pickensville Job Title: Mayor	Phone: 205-373-2068 Fax: SAME.	TTown012@CenturyTel.net

Lee Helms

LHA
Owner



205-280-3027
205-280-0543

lee@leehelmsllc.com

PICKENS COUNTY

Wednesday, March 12, 2014 at 1:30 p.m. – Service Center Auditorium in Carrollton
SECOND HAZARD-MITIGATION PLANNING MEETING SIGN-IN SHEET

(PLEASE PRINT CLEARLY)

NAME	AGENCY OR DEPARTMENT/ JOB TITLE	PHONE/ FAX	E-MAIL
Patti Fuller (Fuller)	Agency: ACES - Pickens Job Title: County Coordinator	Phone: 205-307-9148 Fax:	ppfuller@aces.edu
Joel Lancaster	Agency: Carrollton Job Title: Mayor	Phone: 367-8711 Fax: 367-8952	joelancaster25@yahoo.com
Elton Ilson	Agency: Citizen Job Title:	Phone: 373-2749 Fax:	eltonilson@earthlink.net
Michael Cox	Agency: Pickens Co. Comm. Job Title:	Phone: 205-399-0176 Fax:	None
W. L. Hughes	Agency: Town of Ethelsville Job Title: Mayor	Phone: 205-628-2419 Fax:	hughes@ethelsville.com
DON HARTLEY	Agency: AEMH Job Title: Res. 3 Coordinator	Phone: 888-222-8415 Fax:	don.hartley@emh.akron.org

Buddy Abernathy

Citizen



863-797-6685

buddyabernathy@tampabay.rr.com

(Handwritten mark)

PICKENS COUNTY

Wednesday, March 12, 2014 at 1:30 p.m. - Service Center Auditorium in Carrollton
SECOND HAZARD-MITIGATION PLANNING MEETING SIGN-IN SHEET

(PLEASE PRINT CLEARLY)

NAME	AGENCY OR DEPARTMENT/ JOB TITLE	PHONE/ FAX	E-MAIL
Bennie E. Horton	Agency: <i>Reform</i>	Phone: <i>205-375-6363</i>	<i>Cityofreform@actv.com</i>
	Job Title: <i>Mayor</i>	Fax: <i>205-375-6371</i>	
Craig Patterson	Agency: <i>Town of Gordo</i>	Phone: <i>205 364 7111</i>	<i>gordomayor@co.s.cen</i>
	Job Title: <i>Mayor</i>	Fax: <i>205 364 8295</i>	
Doug Sanders, Jr.	Agency: <i>Pickens Co. Herald</i>	Phone: <i>205-767-2217</i>	<i>pickenscity.a.centurytel.net</i>
	Job Title: <i>Editorial Publisher</i>	Fax: <i>"</i>	
Turner Oliver	Agency: <i>Pickens Board of Ed</i>	Phone: <i>205-367-8244</i>	<i>oliverT@BCboe.org</i>
	Job Title:	Fax: <i>367-8244</i>	
Cheryl Bowles	Agency: <i>PCC</i>	Phone: <i>367-2023</i>	<i>adminstr@earthlink.net</i>
	Job Title:	Fax: <i>367-2025</i>	
Scottie Lemigis	Agency:	Phone:	
	Job Title: <i>water operator</i>	Fax: <i>367-8711</i>	



Sky Hallmon

*PCC
COUNTY ENGINEER*

205-367-2030

pickensengineer@yahoo

CITIZEN INPUT ON HAZARD MITIGATION PLANNING

Where in the county do you live (Which city or township?)	Aliceville
What is your zip code at home?	35442
Do you work with Law Enforcement, Fire Service, Emergency Medical Services, Public Health, or Emergency Management? (Yes or No)	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?	X	X
B	Building fire?		X
C	Severe thunderstorm?	X	
D	Tornado?	X	
E	Winter Weather?	X	
F	Terrorism?		X
G	Drought?	X	
H	Hazardous material spill or release from pipelines, trucks, trains, or aircraft?		X
I	Hazardous material spill or release from a facility?		X
J	Power failure for more than two or three hours?	X	
K	Earthquake		X

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

Did you lose time from work or school because of any of these events?
If so, which ones? List by letter designation: No

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

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

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: C D

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? C D

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

Do you own a NOAA weather radio? YES ___ NO X

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

Are you familiar with the Emergency Alert System YES X NO ___

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

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

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

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

Are there emergency plans at your place of employment? YES X 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	ELTON L. GIBSON
Mailing Address	1917 Pine St. Aliceville, AL 35442
Contact Number	1-205-399-1013
E-Mail	ehgibson@centurytel.net

Questions?

CITIZEN INPUT ON HAZARD MITIGATION PLANNING

Where in the county do you live (Which city or township?) <u>Carrollton, AL</u>	
What is your zip code at home? <u>35447</u>	
Do you work with Law Enforcement, Fire Service, Emergency Medical Services, Public Health, or Emergency Management? (Yes or No) <u>Yes</u>	

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?	X	
B	Building fire?	X	
C	Severe thunderstorm?	X	
D	Tornado?	Y	
E	Winter Weather?	X	
F	Terrorism?		X
G	Drought?		
H	Hazardous material spill or release from pipelines, trucks, trains, or aircraft?	X	
I	Hazardous material spill or release from a facility?		X
J	Power failure for more than two or three hours?	X	
K	Earthquake		X

Did you have to leave your home because of any of these events?
If so, which ones? List by letter designation: NO

Did you lose time from work or school because of any of these events?
If so, which ones? List by letter designation: NO

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

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

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: TRUCKS

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: AirCAERT

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

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

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

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

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

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

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

Are there emergency plans at your place of employment? YES X 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	<u>Chuc R. McDaniel</u>
Mailing Address	<u>12481 Hwy 86 West</u>
Contact Number	<u>305-367-8232</u>
E-Mail	<u>Pickens.County@forestry.alabama.gov</u>

Questions?

CITIZEN INPUT ON HAZARD MITIGATION PLANNING

Where in the county do you live (Which city or township?)	Zion
What is your zip code at home?	35466
Do you work with Law Enforcement, Fire Service, Emergency Medical Services, Public Health, or Emergency Management? (Yes or No)	yes

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: no

Did you lose time from work or school because of any of these events?

If so, which ones? List by letter designation: D, E

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: D, E

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? E

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

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	Buddy Abernathy
Mailing Address	P.O. BOX 411, Carrollton, AL 35447
Contact Number	☎ (863) 797-6685
E-Mail	Buddy.Abernathy@tampabay.rr.com

Questions?

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 2015 plan update. All information provided was beneficial in completing 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

- Pickens County Emergency Management Agency provided assistance in gathering data

Academia

- University of Alabama - Department of Geology

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 West Alabama Regional Commission's (WARC) economic development planning efforts have been integrated into this plan revision. Of possible interest to those viewing this plan, the WARC also provides Pickens County with: 1) A Business Preparedness Toolkit and presentation that will help area businesses prepare for the effects of a disaster. The toolkit is tailored to Pickens County and provides a sample preparedness and continuity of operations plan, support materials, and a listing of local emergency resources. 2) Data Books containing information from the 2010 Census and the 2006-2010 American Community Survey for the county, tracts, and municipalities. Maps of the counties and tracts are also included.

Local planning mechanisms by jurisdictions are listed in **Table 1-1**. Hazard mitigation information and actions in this plan may be incorporated into these local planning mechanisms. The mitigation action tables for each jurisdiction identifies who is responsible for the actions, funding mechanisms and other resources available that will be pursued, prioritization of the actions, and completion dates for each action. During the past five years, the jurisdictions incorporated the previous hazard mitigation information into other planning mechanisms. Goals and objectives were considered in Aliceville's comprehensive plan and implemented through the zoning ordinances and building codes in Aliceville, Carrollton, Gordo, and Reform. Risks assessments, including hazard information and mapping, helped form the basis for emergency

management program activities and plans; the county's debris plan; land use plans in Carrollton, Gordo, and McMullen; strategic plans in Aliceville, Gordo, and the county; Capital Improvement Plan in Gordo; zoning ordinances and building codes in Aliceville, Carrollton, Gordo, and Reform; Floodplain Management Plan in Aliceville, Carrollton, Gordo, and Reform; and the Drainage Ordinance in Aliceville. Future growth and development will be planned away from high-risk locations.

In order to expand on and improve these existing policies and plans, each participating jurisdiction is committed to increasing hazard mitigation planning and action capability by being involved and incorporating, where appropriate, mitigation planning and actions into local planning initiatives and into public works and emergency management functions. While no specific actions are planned for the immediate future for any participating jurisdiction, the next comprehensive plan update may detail these actions further.

Plan Adoption

All jurisdictions in Pickens County, along with the Pickens County Board of Education and the Pickens County Firefighters Association, actively participated in the planning process. Representatives from each local government attended each of the meetings and provided information vital to the update of this plan. Upon completion of the plan each of the eight municipalities (Aliceville, Carrollton, Ethelsville, Gordo, McMullen, Memphis, Pickensville and Reform) along with the Pickens County Commission, Pickens County School Board, and the Pickens County Firefighters Association passed a formal resolution adopting the plan. By adopting this multi-jurisdictional hazard mitigation plan the listed participants will be eligible applicants for mitigation grant funds through the Pre-Disaster Mitigation Program, Hazard Mitigation Grant Program, and Flood Mitigation Assistance Program. Adopting Resolutions can be found in **Appendix I**.

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

PLAN/ POLICY	Aliceville	Carrollton	Ethelsville	Gordo	McMullen	Memphis	Reform	Pickensville	Unincorporated County
Comprehensive Plan	Y	N	N	N	N	N	N	N	N
Strategic Plan	Y	N	N	Y	N	N	N	N	Y
Growth Management Plan	N	N	N	N	N	N	N	N	N
Capital Improvement Plan	N	N	N	Y	N	N	N	N	N
Zoning Ordinance	Y	Y	N	Y	N	N	Y	N	N
Building Code	Y	Y	N	Y	N	N	Y	N	N
Floodplain Management Plan	Y	Y	N	Y	N	N	Y	N	N
Elevation Certificates	N	N	N	INC	N	N	N	N	INC
Drainage Ordinance	Y	N	N	N	N	N	N	N	N
Emergency Management Plan	Y	Y	Y	Y	N	N	Y	N	Y
Critical Facilities Map	N	Y	N	Y	N	N	N	N	Y
Existing Land Use Map	N	Y	N	Y	Y	N	N	N	N
State Plan	N	N	N	N	N	N	N	N	Y
Hazard Mitigation	Y	Y	Y	Y	Y	Y	Y	Y	Y
Strategic National Stockpile Plan	N	N	N	N	N	N	N	N	Y
Other	N	N	N	N	N	N	N	N	Debris Plan

Source: Participating Jurisdictions, 2014

Section Two: General Characteristics

Pickens County is located in west central Alabama along the state's western border. In Alabama, Fayette, Greene, Lamar, Tuscaloosa and Sumter counties border Pickens County. Lowndes and Noxubee Counties in east Mississippi also border the county. According to the 2010 Census, Pickens County has 881.42 square miles of land area and approximately 8.63 square miles of water area. The county contains eight municipalities: Aliceville, Carrollton, Ethelsville, Gordo, McMullen, Memphis, Pickensville and Reform. See **Map 2-1: Pickens County General Location and Population Density Map**. Pickens County is governed by County Commissioners who are elected by citizens in their commission districts. The chairmanship rotates on a regular basis so that each commissioner will serve a term as chairman. An elected mayor and council serve each municipality. The Town of Carrollton serves as the Pickens County seat while the City of Aliceville is the predominant center for local business and trade.

Pickens County has two airports, one located near Reform and the other just outside of Aliceville. The airports do not provide commercial service. The major highways in Pickens County are U. S. Highway 82, State Route 14, State Route 17, State Route 32, and State Route 86. The county is served by two rail lines, the Alabama and Gulf Coast Railway and the Alabama Southern Railroad, one running east-west through Gordo, Reform and Ethelsville, and the other running north- south along the lower western border of the county. Utilities in Pickens County include electricity, gas, water, sewer, and solid waste. Electrical service is provided by Alabama Power and gas is supplied by Alabama Gas Corporation. AT&T provides telecommunication services. Water and sewer service is provided by municipal or rural systems. The City of Aliceville and Towns of Carrollton, Gordo, and Reform operate sewer systems. Most unincorporated areas are serviced only by septic tanks. Pickens County operates a solid waste collection program and inert landfill.

Adjacent to Pickens County, Alabama is Lamar County to the north; Fayette County to the northeast; Tuscaloosa County to the east; Greene County to the southeast; Sumter County to the south; Noxubee County, Mississippi to the southwest; and Lowndes County, Mississippi to the west.

Growth Trends

Pickens County's population declined during the years 1990-2013. All municipalities experienced losses in population, with the exception of the Town of Gordo. **Map 2-1:** Pickens County General Location and Population Density Map depict the newest 2010 Census Tracts and population concentrations in Pickens County. **Table 2-1** below shows the growth trends for the county and its municipalities compared to the State of Alabama.

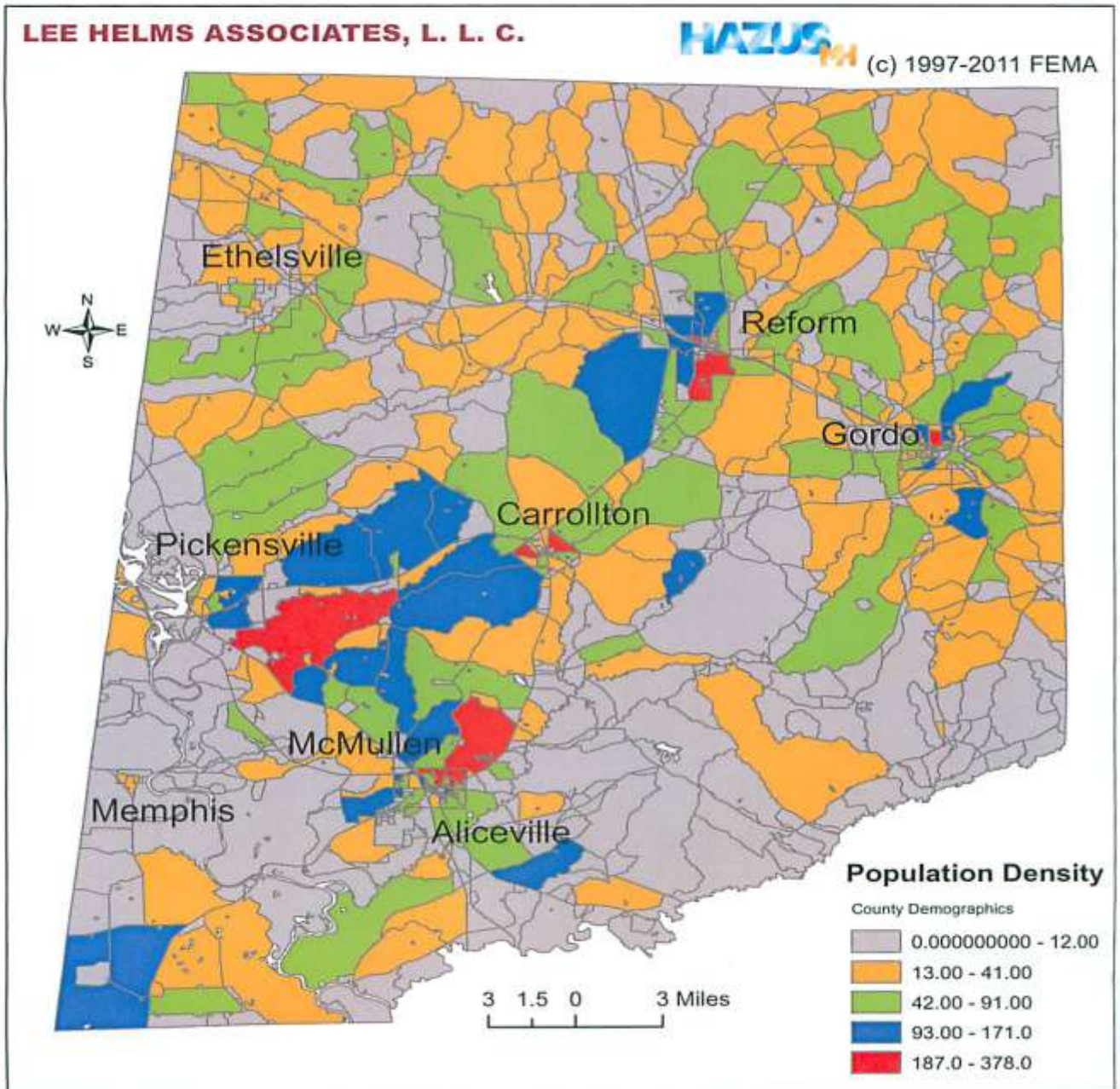
Table 2-1: Growth Trends 1990-2013

**Change
1990-2013**

	4/1/1990	4/1/2000	4/1/2010	1/1/2013	Number	Percent
Aliceville	3,025	2,781	2,486	2,448	-577	-19.1%
Carrollton	1,176	1,037	1,019	1,007	-169	-14.4%
Ethelsville	95	52	81	75	-20	-21.1%
Gordo	1,681	1,564	1,750	1,712	31	2%
McMullen	112	66	10	10	-102	-91.1%
Memphis	95	54	33	29	-66	-70%
Pickensville	648	704	608	590	-58	-9%
Reform	2,173	1,919	1,702	1,669	-504	-23.2%
Pickens County	20,704	20,949	19,746	19,358	-1,346	-7%
Alabama	4,041,281	4,447,032	4,779,736	4,841,486	800,205	20%

Source: 2010 U.S. Bureau of Census; Calculations by LHA, 2014

Map 2-1: Pickens County General Location and Population Density Map



Map Update 2014

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General Geology

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

Geologic units in Pickens County, Alabama include the following:

Selma Group; Mooreville Chalk (Cretaceous) – at surface, covers 3% of the area – is yellowish –gray to olive-gray compact fossiliferous clayey chalk and chalky marl. The unconformable contact at the base is characterized by a bed of glauconitic, chalky sand containing phosphate pellets and molds of fossils. The Arcola Limestone Member at the top consists of two to four beds of light-gray brittle, dense, fossiliferous limestone separated by beds of light-gray to pale-olive calcareous clay. Lithology: carbonate; mixed clastic/carbonate; sand; limestone; clay or mud.

Alluvial, coastal and low terrace deposits (Holocene) - at surface, covers 29 % of the area – is 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.

Tuscaloosa Group; Coker Formation (Cretaceous) - at surface, covers 2 % of the area – is light-colored micaceous very fine to medium sand, cross-bedded sand, varicolored micaceous clay, and a few thin gravel beds containing quartz and chert pebbles. Beds of thinly laminated finely glauconitic very fine to fine sand, silt and dark-gray carbonaceous clay (Eoline Member) occur locally in the lower part in western AL. Locally quartz and chert gravels at the base of the formation range in size from very fine pebbles to large cobbles. In southeastern Elmore County the formation includes marine sediments consisting of glauconitic, fossiliferous, quartzose fine to medium sand and medium-gray carbonaceous silty clay. Not mapped east of the Tallapoosa River. Lithology: sand; clay or mud; silt; gravel; chert.

Tuscaloosa Group; Gordo Formation (Cretaceous) - at surface, covers 24 % of the area – is massive beds of cross-bedded sand, gravelly sand, and lenticular beds of locally carbonaceous

partly mottled moderate-red and pale-red-purple clay; lower part is predominantly a gravelly sand consisting chiefly of chert and quartz pebbles. Not mapped east of the Tallapooza River.

Lithology: sand; clay or mud; gravel; chert.

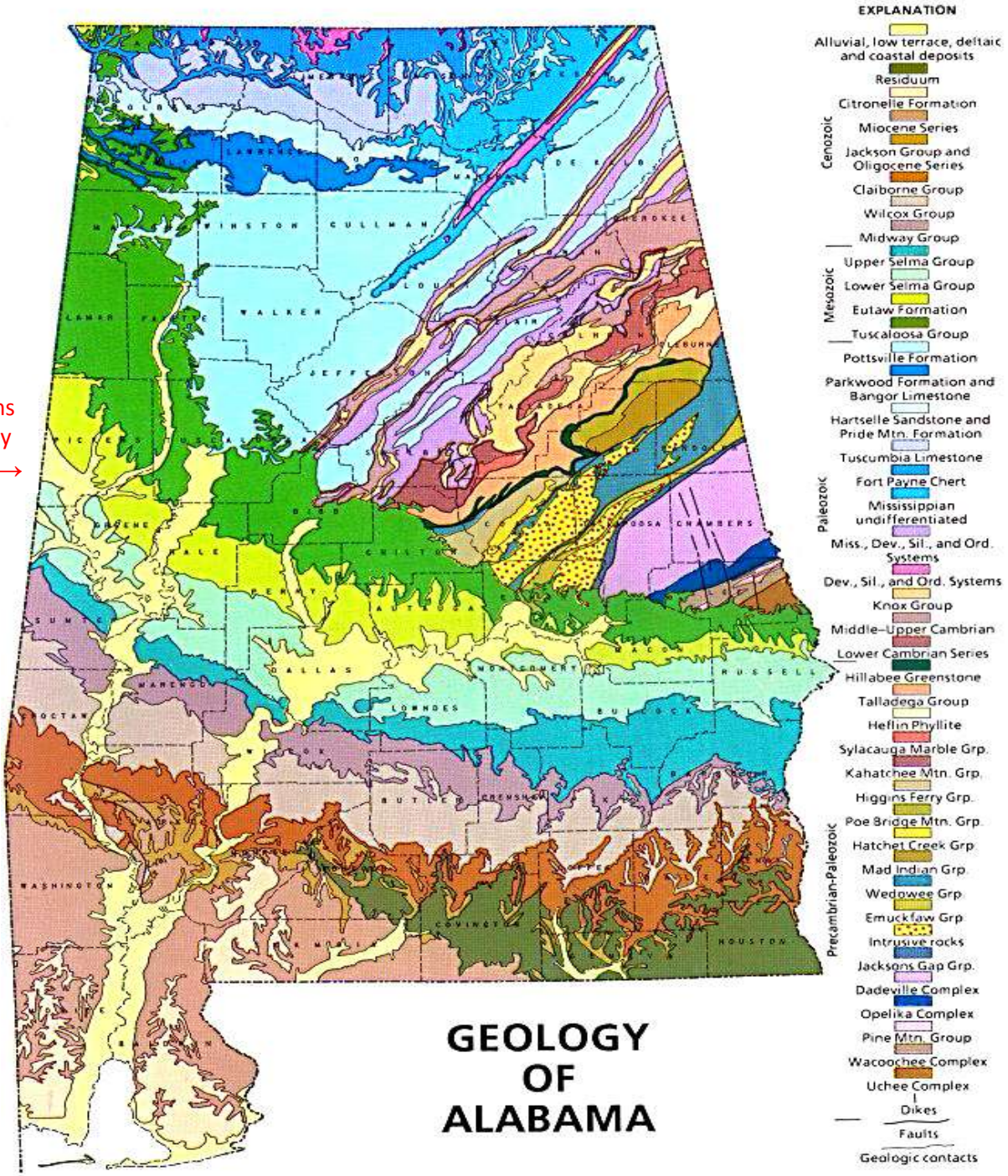
High terrace deposits (Pleistocene) - at surface, covers 10 % of the area – is varicolored lenticular beds of poorly sorted sand, ferruginous sand, silt, clay, and gravelly sand. Sand consists primarily of very fine to very coarse poorly sorted quartz grains; gravel composed of quartz, quartzite, and chert pebbles. Lithology: terrace.

Eutaw Formation (Cretaceous) *at surface, covers 29 % of this area* – is light-greenish-gray to yellowish-gray cross-bedded, well-sorted, micaceous, fine to medium quartz sand that is fossiliferous and glauconitic in part and contains beds of greenish-gray micaceous, silty clay and medium-dark-gray carbonaceous clay. Light-gray glauconitic fossiliferous sand, thin beds of sandstone and massive accumulations of fossil oyster shells occur locally in the upper part of the formation in western AL (Tombigbee Sand Member). In eastern AL thin to thick-bedded accumulations of the fossil oyster *Ostrea cretacea* Morton occur throughout much of the formation. Lithology: sand; clay or mud; sandstone.

Selma Group; Demopolis Chalk (Cretaceous) - at surface, covers 1 % of the area – is light-gray to medium-light-gray compact, brittle chalk overlain by abundantly fossiliferous chalky marl, very clayey chalk, and calcareous clay (Bluffport Marl Member). In south-central Montgomery County the Demopolis is split into two eastward extending tongues by a westward-extending tongue of the Cusseta Sand Member of the Ripley Formation. The lower tongue is pale-olive to yellowish-gray silty to finely sand, micaceous, fossiliferous chalk that eastward becomes more sandy and merges with the Cusseta in central Bullock County. The upper tongue is yellowish-gray clayey, very finely sandy, micaceous chalk that merges with the Ripley in southeastern Montgomery County. Lithology: carbonate; clay or mud; sand.

Figure 2-1: Geology of Alabama
 (Source: University of AL – Geology Department)

Pickens County
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GEOLOGY OF ALABAMA

2014

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Section Three: Risk Assessment

The risk assessment process is necessary to identify those natural hazards that pose a threat to Pickens County and its municipal jurisdictions. This process used information provided by members of the Pickens 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.

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 2009 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.

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. 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 severity 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; $\$172,000/21=\$8,190$

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

Natural Hazards	Number of Occurrences Between 2003-2013	Probability of Future Occurrence	Area Affected
Thunderstorm	49	>100%	Countywide
Lightning	0	Unknown	Countywide
Hail	32	>100%	Countywide
Tornado	15	>100%	Countywide
Flood/Flash Flood	17	>100%	Countywide
Droughts/Extreme Heat	16	>100%	Countywide
Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	7	70%	Countywide
Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind	8	80%	Countywide
Sinkhole/Expansive Soil	0	Unknown	N/A
Landslide	0	Unknown	N/A
Earthquake	0	Unknown	N/A
Dam/Levee Failure	0	Unknown	N/A
Natural Hazard	Number of Occurrences Between 1997-2012	Probability of Future Occurrence	Area Affected
Wildfire (15-year study period – 5,475 days)	419	>100%	Countywide
<i>Sources: NOAA NCDC Storm Events Database; Alabama Forestry Commission; Alabama Geological Survey, 2014</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 15-year study period. Zero denotes no data available to determine the probability of future occurrence or areas affected.			

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

Natural Hazards	Aliceville	Carrollton	Ethelsville	Gordo	McMullen	Memphis	Pickensville	Reform	Un-incorporated County
Thunderstorm	X	X	X	X	X	X	X	X	X
Lightning	X	X	X	X	X	X	X	X	X
Hail	X	X	X	X	X	X	X	X	X
Tornado	X	X	X	X	X	X	X	X	X
Flood/Flash Flood	X	X	X	X	X	X	X	X	X
Drought/Extreme Heat	X	X	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	X	X
Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind	X	X	X	X	X	X	X	X	X
Sinkhole/Expansive Soil	X	N/A	N/A	X	N/A	N/A	N/A	X	N/A
Landslide	N/A	N/A	N/A	N/A	X	N/A	N/A	X	N/A
Earthquake	X	X	X	X	X	X	X	X	X
Wildfire	X	X	X	X	X	X	X	X	X
Dam/Levee Failure	X	N/A	N/A	N/A	N/A	X	N/A	N/A	N/A

Source: Participating Jurisdictions 2015

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

Natural Hazards	Aliceville	Carrollton	Ethelsville	Gordo	McMullen	Memphis	Pickensville	Reform	Un-incorporated County
Thunderstorm	3	3	3	6	5	5	6	4	4
Lightning	8	8	7	9	6	7	8	7	8
Hail	4	6	5	7	6	6	8	6	7
Tornado	7	7	6	8	6	7	7	7	7
Flood/Flash Flood	5	3	3	3	3	4	3	3	3
Drought/Extreme Heat	2	2	2	2	2	2	2	2	2
Winter Weather/ Frost Freeze/Heavy Snow/Ice Storm/ Winter Weather/ Extreme Cold	6	5	4	5	4	4	5	5	6
Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind	5	4	3	4	3	3	4	4	5
Sinkhole/Expansive Soil	10	9	8	9	6	7	8	7	8
Landslide	10	9	8	9	6	7	8	7	8
Earthquake	10	9	8	9	6	7	8	7	8
Wildfire (15-year study period – 5,475 days)	1	1	1	1	1	1	1	1	1
Dam/Levee Failure	9	9	8	9	6	7	8	7	8

NOAA NCDC Storm Events Database; Alabama Forestry Commission; National Forestry Service; Alabama Geological Survey, 2014

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 fifteen 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.

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

Natural Hazards	Aliceville	Carrollton	Ethelsville	Gordo	McMullen	Memphis	Pickensville	Reform	Un-incorporated County
Thunderstorm	1	1	1	3	2	1	1	2	1
Lightning	3	3	3	4	4	3	5	6	3
Hail	4	4	4	5	5	4	7	3	4
Tornado	2	2	2	1	1	2	2	1	2
Flood/Flash Flood	8	6	8	2	3	6	6	5	7
Drought/Extreme Heat	5	5	5	10	7	7	4	8	6
Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	10	8	6	6	8	9	3	4	8
Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind	6	4	9	7	6	8	8	9	5
Sinkhole/Expansive Soil	11	N/A	N/A	8	N/A	N/A	N/A	N/A	N/A
Landslide	N/A	N/A	N/A	N/A	9	N/A	N/A	N/A	N/A
Earthquake	12	10	10	11	11	10	10	10	10
Wildfire	9	9	7	9	8	5	9	7	9
Dam/Levee Failure	7	N/A	N/A	N/A	N/A	11	N/A	N/A	N/A

Source: Participating Jurisdictions, 2014

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.

TABLE 3-5: PICKENS COUNTY HAZARD EVENTS

49 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>Inf</u>	<u>PrD</u>	<u>CrD</u>
CARROLLTON	PICKENS CO.	AL	02/22/2003	00:25	CST	Thunderstorm Wind	55 kts. EG	0	0	3.00K	0.00K
CARROLLTON	PICKENS CO.	AL	04/06/2003	15:17	CST	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	05/06/2003	17:10	CST	Thunderstorm Wind	50 kts. EG	0	0	6.00K	0.00K
COCHRANE	PICKENS CO.	AL	02/05/2004	17:19	CST	Thunderstorm Wind	60 kts. ES	0	0	20.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	07/04/2004	16:58	CST	Thunderstorm Wind	50 kts. EG	0	0	7.00K	0.00K
ETHELVSILLE	PICKENS CO.	AL	12/07/2004	04:10	CST	Thunderstorm Wind	52 kts. EG	0	0	4.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	12/09/2004	06:05	CST	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	01/13/2005	08:00	CST	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	03/13/2005	18:25	CST	Thunderstorm Wind	51 kts. EG	0	0	10.00K	0.00K
ETHELVSILLE	PICKENS CO.	AL	03/13/2006	17:02	CST	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
REFORM	PICKENS CO.	AL	05/10/2006	10:40	CST	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
CARROLLTON	PICKENS CO.	AL	07/19/2006	16:30	CST	Thunderstorm Wind	55 kts. EG	0	0	5.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	07/29/2006	14:56	CST	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
REFORM	PICKENS CO.	AL	11/15/2006	10:45	CST-6	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
CARROLLTON	PICKENS CO.	AL	02/24/2007	23:20	CST-6	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
CARROLLTON	PICKENS CO.	AL	01/10/2008	15:25	CST-6	Thunderstorm Wind	43 kts. EG	0	0	2.00K	0.00K
PALMETTO	PICKENS CO.	AL	02/06/2008	02:42	CST-6	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
PICKENSVILLE	PICKENS CO.	AL	07/04/2008	15:15	CST-6	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
REFORM	PICKENS CO.	AL	08/02/2008	18:30	CST-6	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K

ALICEVILLE	PICKENS CO.	AL	08/02/2008	18:59	CST-6	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	04/19/2009	14:06	CST-6	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
ETHELVILLE	PICKENS CO.	AL	06/12/2009	16:36	CST-6	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
CARROLLTON	PICKENS CO.	AL	10/09/2009	15:14	CST-6	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	10/09/2009	15:15	CST-6	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	04/24/2010	07:05	CST-6	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
CARROLLTON	PICKENS CO.	AL	05/20/2010	14:09	CST-6	Thunderstorm Wind	40 kts. EG	0	0	5.00K	0.00K
GORDO	PICKENS CO.	AL	05/20/2010	14:32	CST-6	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
BENEVOLA	PICKENS CO.	AL	06/15/2010	16:00	CST-6	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
REFORM	PICKENS CO.	AL	06/15/2010	16:50	CST-6	Thunderstorm Wind	55 kts. EG	0	0	3.00K	0.00K
PICKENSVILLE	PICKENS CO.	AL	08/04/2010	18:45	CST-6	Thunderstorm Wind	55 kts. EG	0	0	1.50K	0.00K
ETHELVILLE	PICKENS CO.	AL	08/15/2010	19:15	CST-6	Thunderstorm Wind	60 kts. EG	0	0	5.00K	0.00K
GORDO	PICKENS CO.	AL	10/26/2010	14:52	CST-6	Thunderstorm Wind	55 kts. EG	0	0	10.00K	0.00K
BENEVOLA	PICKENS CO.	AL	04/04/2011	17:51	CST-6	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	04/11/2011	16:56	CST-6	Thunderstorm Wind	60 kts. EG	0	0	20.00K	0.00K
PICKENSVILLE	PICKENS CO.	AL	04/20/2011	21:00	CST-6	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
CARROLLTON	PICKENS CO.	AL	04/27/2011	03:28	CST-6	Thunderstorm Wind	60 kts. EG	0	0	2.00K	0.00K
CARROLLTON	PICKENS CO.	AL	06/28/2011	11:46	CST-6	Thunderstorm Wind	40 kts. EG	0	0	0.50K	0.00K
GORDO	PICKENS CO.	AL	06/28/2011	11:55	CST-6	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
STAFFORD	PICKENS CO.	AL	07/03/2011	19:55	CST-6	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
COCHRANE	PICKENS CO.	AL	08/10/2011	13:00	CST-6	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
CARROLLTON	PICKENS CO.	AL	08/10/2011	16:25	CST-6	Thunderstorm Wind	50 kts. EG	0	0	7.00K	0.00K

ETHELSTVILLE	PICKENS CO.	AL	03/02/2012	15:13	CST-6	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
CARROLLTON	PICKENS CO.	AL	06/04/2012	06:18	CST-6	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
ETHELSTVILLE	PICKENS CO.	AL	07/06/2012	16:20	CST-6	Thunderstorm Wind	78 kts. EG	0	0	0.00K	0.00K
CARROLLTON	PICKENS CO.	AL	08/18/2012	04:12	CST-6	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
REFORM	PICKENS CO.	AL	09/03/2012	20:00	CST-6	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
PALMETTO	PICKENS CO.	AL	09/03/2012	20:12	CST-6	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
REFORM	PICKENS CO.	AL	09/03/2012	20:50	CST-6	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
GARDEN	PICKENS CO.	AL	12/20/2012	07:20	CST-6	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
Totals:								0	0	169.00K	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.

32 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>
CARROLLTON	PICKENS CO.	AL	05/02/2003	14:14	CST	Hail	0.88 in.	0	0	0.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	05/02/2003	15:10	CST	Hail	0.75 in.	0	0	0.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	04/07/2004	16:11	CST	Hail	1.25 in.	0	0	0.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	04/07/2004	17:00	CST	Hail	1.25 in.	0	0	0.00K	0.00K
ETHELSTVILLE	PICKENS CO.	AL	10/21/2004	00:06	CST	Hail	0.88 in.	0	0	0.00K	0.00K
ETHELSTVILLE	PICKENS CO.	AL	03/13/2005	15:40	CST	Hail	0.75 in.	0	0	0.00K	0.00K
ETHELSTVILLE	PICKENS CO.	AL	03/13/2005	15:48	CST	Hail	0.88 in.	0	0	0.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	03/13/2005	18:15	CST	Hail	0.75 in.	0	0	0.00K	0.00K
CARROLLTON	PICKENS CO.	AL	03/22/2005	19:29	CST	Hail	0.75 in.	0	0	0.00K	0.00K

REFORM	PICKENS CO.	AL	03/22/2005	19:46	CST	Hail	0.75 in.	0	0	0.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	03/22/2005	19:59	CST	Hail	0.75 in.	0	0	0.00K	0.00K
GORDO	PICKENS CO.	AL	04/06/2005	21:38	CST	Hail	0.75 in.	0	0	1.00K	0.00K
GORDO	PICKENS CO.	AL	04/30/2005	02:53	CST	Hail	0.75 in.	0	0	1.00K	0.00K
REFORM	PICKENS CO.	AL	12/04/2005	14:41	CST	Hail	0.75 in.	0	0	0.00K	0.00K
CARROLLTON	PICKENS CO.	AL	02/03/2006	17:55	CST	Hail	0.75 in.	0	0	0.00K	0.00K
REFORM	PICKENS CO.	AL	04/03/2006	01:14	CST	Hail	0.75 in.	0	0	0.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	04/03/2006	03:41	CST	Hail	1.00 in.	0	0	0.00K	0.00K
REFORM	PICKENS CO.	AL	04/07/2006	23:36	CST	Hail	0.75 in.	0	0	0.00K	0.00K
COCHRANE	PICKENS CO.	AL	03/01/2007	14:30	CST-6	Hail	0.88 in.	0	0	0.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	03/01/2007	15:20	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	03/01/2007	16:05	CST-6	Hail	0.75 in.	0	0	0.00K	0.00K
CARROLLTON	PICKENS CO.	AL	03/15/2008	00:45	CST-6	Hail	0.75 in.	0	0	0.00K	0.00K
GORDO	PICKENS CO.	AL	06/01/2008	13:39	CST-6	Hail	0.75 in.	0	0	0.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	02/27/2009	15:00	CST-6	Hail	0.75 in.	0	0	0.00K	0.00K
PALMETTO	PICKENS CO.	AL	02/27/2009	20:50	CST-6	Hail	0.75 in.	0	0	0.00K	0.00K
REFORM	PICKENS CO.	AL	06/12/2009	15:25	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
PALMETTO	PICKENS CO.	AL	04/24/2010	06:55	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
ETHELSTVILLE	PICKENS CO.	AL	04/24/2010	15:45	CST-6	Hail	1.75 in.	0	0	10.00K	0.00K
MELROSE	PICKENS CO.	AL	04/24/2010	16:00	CST-6	Hail	0.88 in.	0	0	0.00K	0.00K
REFORM	PICKENS CO.	AL	09/03/2012	20:50	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
MELROSE	PICKENS CO.	AL	04/27/2013	16:59	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K

MEMPHIS	PICKENS CO.	AL	08/06/2013	15:05	CST-6	Hail	0.75 in.	0	0	0.00K	0.00K
Totals:								0	0	12.00K	0.00K

15 Tornado 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
DANCY	PICKENS CO.	AL	04/25/2003	10:57	CST	Tornado	F1	0	0	100.00K	0.00K
ETHELSTVILLE	PICKENS CO.	AL	03/13/2005	21:54	CST	Tornado	F0	0	0	175.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	04/06/2005	16:51	CST	Tornado	F0	0	0	50.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	09/25/2005	13:04	CST	Tornado	F0	0	0	4.00K	0.00K
BENEVOLOA	PICKENS CO.	AL	09/25/2005	14:39	CST	Tornado	F0	0	0	2.00K	0.00K
PICKENSVILLE	PICKENS CO.	AL	01/10/2008	15:10	CST-6	Tornado	EF0	0	0	10.00K	0.00K
GORDO	PICKENS CO.	AL	01/10/2008	15:43	CST-6	Tornado	EF1	0	0	50.00K	0.00K
PICKENSVILLE	PICKENS CO.	AL	05/06/2009	07:20	CST-6	Tornado	EF1	0	0	50.00K	0.00K
CARROLLTON	PICKENS CO.	AL	05/06/2009	07:31	CST-6	Tornado	EF1	0	0	50.00K	0.00K
DANCY	PICKENS CO.	AL	04/27/2011	03:16	CST-6	Tornado	EF1	0	0	2.900M	0.00K
CARROLLTON	PICKENS CO.	AL	04/27/2011	03:27	CST-6	Tornado	EF2	0	0	1.800M	0.00K
GORDO	PICKENS CO.	AL	04/27/2011	03:41	CST-6	Tornado	EF1	0	0	11.00K	0.00K
UNION CHAPEL	PICKENS CO.	AL	04/27/2011	14:40	CST-6	Tornado	EF1	0	4	3.800M	0.00K
VIENNA	PICKENS CO.	AL	04/27/2011	15:05	CST-6	Tornado	EF3	0	0	1.600M	0.00K
PICKENSVILLE	PICKENS CO.	AL	04/11/2013	11:48	CST-6	Tornado	EF1	0	0	0.00K	0.00K
Totals:								0	4	10.602M	0.00K

17 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>
PICKENS (ZONE)	PICKENS (ZONE)	AL	05/18/2003	06:00	CST	Flood		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	05/20/2003	08:00	CST	Flood		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/01/2005	00:00	CST	Flood		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	06/12/2005	06:45	CST	Flood		0	0	0.00K	0.00K
GARDEN	PICKENS CO.	AL	09/05/2011	15:00	CST-6	Flood		0	0	0.00K	0.00K
CARROLLTON	PICKENS CO.	AL	09/05/2011	15:00	CST-6	Flood		0	0	0.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	02/05/2004	19:05	CST	Flash Flood		0	0	10.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	02/05/2004	20:30	CST	Flash Flood		0	0	5.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	02/05/2004	23:30	CST	Flash Flood		0	0	5.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	12/09/2004	06:30	CST	Flash Flood		0	0	6.00K	0.00K
PICKENSVILLE	PICKENS CO.	AL	01/06/2009	14:00	CST-6	Flash Flood		2	1	50.00K	0.00K
STANSEL	PICKENS CO.	AL	02/27/2009	17:30	CST-6	Flash Flood		0	0	0.00K	0.00K
PICKENSVILLE	PICKENS CO.	AL	09/20/2009	18:35	CST-6	Flash Flood		0	0	10.00K	0.00K
GARDEN	PICKENS CO.	AL	09/05/2011	09:00	CST-6	Flash Flood		0	0	0.00K	0.00K
REFORM	PICKENS CO.	AL	09/05/2011	09:00	CST-6	Flash Flood		0	0	0.00K	0.00K
CARROLLTON	PICKENS CO.	AL	09/05/2011	09:00	CST-6	Flash Flood		0	0	0.00K	0.00K

GORDO	PICKENS CO.	AL	09/03/2012	21:00	CST-6	Flash Flood		0	0	0.00K	0.00K
Totals:								2	1	86.00K	0.00K

16 Drought/Extreme Heat 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
PICKENS (ZONE)	PICKENS (ZONE)	AL	07/18/2006	07:00	CST	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/01/2006	00:00	CST	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/01/2006	00:00	CST	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	05/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	06/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	07/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	10/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	11/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	12/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	01/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	02/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	03/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

**7 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	In	PrD	CrD
PICKENS (ZONE)	PICKENS (ZONE)	AL	12/15/2010	05:00	CST-6	Winter Weather		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	01/24/2003	00:00	CST	Extreme Cold/Wind Chill		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/07/2007	00:00	CST-6	Frost Freeze		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/08/2007	00:00	CST-6	Frost Freeze		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	01/09/2011	12:45	CST-6	Ice Storm		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	03/01/2009	00:30	CST-6	Heavy Snow		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	02/09/2011	16:15	CST-6	Heavy Snow		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

**8 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	In	PrD	CrD
PICKENS (ZONE)	PICKENS (ZONE)	AL	07/10/2005	16:00	CST	Tropical Storm		0	0	65.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/29/2005	18:00	CST	Tropical Storm		0	1	500.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/23/2008	12:00	CST-6	Tropical Depression		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/16/2004	07:30	CST	High Wind	56 kts. EG	0	0	600.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	06/11/2005	18:00	CST	Strong Wind	40 kts. EG	0	0	8.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/12/2009	20:30	CST-6	Strong Wind	43 kts. EG	0	0	75.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/05/2011	12:00	CST-6	Strong Wind	39 kts. EG	0	0	5.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/05/2011	18:00	CST-6	Strong Wind	43 kts. EG	0	0	5.00K	0.00K
Totals:								0	1	1.258M	0.00K

LOCAL INPUT ON TROPICAL STORMS/STRONG WIND DAMAGES

Location	Date	Type	Dth	Inj	PrD	CrD	Total Cost	Associated Hurricane
Aliceville	8/29/2005	Tropical Storm	0	0	\$64,049	\$0	\$64,049	Katrina
Carrollton	9/16/2004	Tropical Storm	0	0	\$2,658	\$0	\$2,658	Ivan
Gordo	8/29/2005	Tropical Storm	0	0	\$20,000	\$0	\$20,000	Katrina
Pickens County	6/11/2005	Tropical Depression	0	0	\$104,000	\$0	\$104,000	Arlene
Pickens County	7/10/2005	Tropical Storm	0	0	\$65,000	\$0	\$65,000	Dennis
Pickens County	8/29/2005	Tropical Storm	0	0	\$500,000	\$0	\$500,000	Katrina
Pickens County Individual Assistance	8/29/2005	Tropical Storm	0	0	\$837,037	\$0	\$837,037	Katrina
Pickensville	8/29/2005	Tropical Storm	0	0	\$250	\$0	\$250	Katrina
Reform	8/29/2005	Tropical Storm	0	0	\$19,332	\$0	\$19,332	Katrina
TOTALS			0	0	\$1,612,326	\$0	\$1,612,326	

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

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

No sinkhole 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.

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

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

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

419 Wildfire Events – 1997 thru 2012
(Source: Alabama Forestry Commission)

County	Total # of Fires	Average # of Fires	Total Acres Burned	Average Acres Burned	Average Fire Size
Pickens	419	28	3,227	215	7.7

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.

Hazard Profiles

I. Thunderstorms

A thunderstorm is a convective cloud that often produces heavy rain, wind gusts, thunder, lightning, and hail. Pickens 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.

Primary effects from thunderstorms in Pickens County would include:

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

Hazardous results from significant thunderstorms in Pickens 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.

Table 3-5 shows the historical occurrences of thunderstorms during the study period.

Each jurisdiction is at risk for thunderstorm events. Of the thunderstorms reported, two affected the entire county, ten occurred in an unincorporated county area, and the remaining 37 affected only specific municipalities.

On July 6, 2012, thunderstorms moved across Pickens County producing isolated wind damage. The wind magnitude for this particular storm was 78 knots or 90 miles per hour winds. A self standing cell tower was knocked down along with approximately 100 trees in the McShan

and Coal Fire Communities. No injuries, deaths, property or crop damages occurred.

On February 5, 2004, thunderstorms resulted in a few trees being blown down from near Cochrane to just south of Aliceville, through Gordo, and to the county line just northeast of Gordo. A large tractor trailer truck was blown off the road near the intersection of SR 159 and US 82. The wind magnitude for this particular storm was 60 knots or 69 miles per hour winds. No injuries, deaths, or crop damages occurred. Property damages of \$20,000 resulted from this event.

On April 11, 2011, a squall line ahead of a cold front associated with a strong upper level storm system moved across Pickens County producing widespread wind damage, knocking down numerous trees and power lines and damaging homes and buildings. Trees were blown down in Aliceville, some of which fell on homes. Multiple businesses sustained roof damage. No injuries, deaths, or crop damages occurred. Property damages of \$20,000 resulted from this event.

Pickens County experienced 49 thunderstorm events in a 10 year period resulting in a greater than 100% (4.90) probability that a thunderstorm event will occur on an annual basis. The total amount of damages for the 49 thunderstorm events was \$169,000 with 41 thunderstorm events causing damage resulting in an estimated \$4,122 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 Pickens County due to a thunderstorm event; the ranking is minor to major.

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. 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*). Each jurisdiction is equally at risk for lightning events. Lightning strikes can cause power outages, fires, electrocution, and disruptions to communication systems. The NOAA NCDC reported no lightning events during the ten-year study period of 2003-2013. Since no lightning events were reported, no property damages, crop damages, injuries, or deaths were reported as results of lightning events. **Table 3-5** shows the historical occurrences of lightning during the study period. Although the NOAA NCDC reported no lightning events during the ten-year study period of 2003-2013, the entire planning area of the county is equally at risk for a lightning event. While the State of Alabama experienced 11-20 deaths as a result of lightning strikes during 2003 – 2013, none of the deaths occurred in Pickens County. Due to no county experiences, it is not possible to determine a more factual probability of lightning occurrences for the Pickens County planning area.

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.

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: NOAA, December 18, 2014*).

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.

Pickens County experienced 0 lightning events in a 10 year period resulting in a 0% (0.00) or unknown probability that a lightning event will occur on an annual basis. The total amount of damages for the 0 lightning events was \$0.00 with 0 lightning events causing damage resulting in an estimated \$0 or unknown amount of expected annual damages from future events. The extent/range of magnitude or severity that could be experienced by Pickens County due to a lightning event is minimum to minor.

Primary effects from lightning in Pickens County would include:

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

Hazardous results from significant lightning in Pickens 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. Electrocution 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.

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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	¼ inch
Marble/mothball	½ inch
Dime/Penny	¾ inch
Nickel	7/8 inch
Quarter	1 inch
Ping-Pong Ball	1 ½ inch
Golf Ball	1 ¾ inch
Tennis Ball	2 ½ inch
Baseball	2 ¾ inch
Tea Cup	3 inches
Grapefruit	4 inches
Softball	4 ½ inches
<i>Source: NWS, January 10, 2003</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 32 hail events during the ten-year study period of 2003-2013. An estimated \$12,000 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, zero affected the entire county, five occurred in an unincorporated county area, and the remaining 27 affected only specific municipalities.

On April 24, 2010, a storm system associated with a cold front brought widespread severe thunderstorms, including at least 8 tornadoes to Central Alabama. Pickens County experienced hail magnitude of 1.75 inches (golf ball size), resulting in \$10,000 property damage across the area. No injuries, deaths, or crop damages occurred.

Pickens County experienced 32 hail events in a 10 year period resulting in a greater than 100% (3.20) probability that a hail event will occur on an annual basis. The total amount of damages for the 32 hail events was \$12,000 with 3 hail events causing damage resulting in an estimated \$4,000 of expected annual damages from future events. The referenced hail 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 Pickens County due to a hail event; the ranking is minor to major.

Primary Effects from Hail in Pickens County would include:

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

Hazardous results from significant Hail in Pickens 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.

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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. Pickens County is located in Zone IV which warrants profiling. Zone IV has witnessed a higher frequency of tornadoes than any other zone. Zone IV has also witnessed some of the deadliest tornadoes in history.

A total of fifteen tornadoes occurred in Pickens County according to NOAA NCDC during 2003 - 2013. An estimated \$10,602 million in property damage, no crop damage, and four injuries occurred as a result of the reported tornadoes. A funnel cloud was also spotted just northwest of the Palmetto Community on September 25, 2005.

The most significant event during the study period occurred in the area of Pickensville on April 27, 2011 with an EF1 tornado, 24.38 miles in length and 1,056 yards wide. A powerful storm system crossed the Southeast United States on Wednesday, April 27, 2011, resulting in a large and deadly tornado outbreak. This epic event broke the record for number of tornadoes in a day for the State of Alabama, becoming the most significant tornado outbreak in the state's history. Central Alabama had two rounds of severe weather that day. During the early morning hours, a Quasi-Linear Convective System quickly moved across the northern half of the National Weather Service, Birmingham county warning area. Straight line winds of 90 mph (78 kts) or greater and 11 tornadoes lead to widespread damage and power outages. During the afternoon, long-lived supercell thunderstorms produced long-track, strong and violent tornadoes. Destruction and loss of life across many towns and communities was devastating. The first segment of this long track tornado initially touched down 5 miles northeast of Pickensville near Basinger Rd, north of AL Hwy 86. While the average path width of this tornado in Pickens County was around 0.4 mile (704 yards), the maximum path width was 0.6 mile (1056 yards). The tornado crossed AL Hwy 17 and US Hwy 82, across the southern and western extents of the

City of Reform. The storm strengthened to an EF1 rating with winds of 110 mph to the northeast of Reform. Along CR 49, several chicken houses were destroyed and grain feed bins were tossed up to 100 yards. As the tornado crossed AL Hwy 159, north of CR 49, several homes sustained roof damage and several outbuildings were destroyed. Numerous trees were snapped or uprooted along the path. The tornado moved northeast entering Tuscaloosa County south of Mid Walters Rd. Most of the violent tornadoes from this day were captured on video by a number of people, including storm spotters and chasers, as well as numerous television news crews and remotely controlled web-enabled video cameras. This allowed unprecedented coverage and viewing of this historic event in real time from people worldwide. (*Source: NCDC NOAA*)

Each jurisdiction has been affected by tornado activity in the past. The location of Pickens County in Wind Zone IV, past occurrences of tornados, and the potential for future occurrences to cause damage, death, and injuries leaves Pickens County vulnerable to and at risk for tornados.

Pickens County experienced 15 tornado events in a 10 year period resulting in a greater than 100% (1.50) probability that a tornado event will occur on an annual basis. The total amount of damages for the 15 tornado events was \$10,602,000 with 14 tornado events causing damage resulting in an estimated \$757,286 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 Pickens County due to a tornado event; the ranking is major.

Primary effects from Tornados in Pickens 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 Tornados in Pickens 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

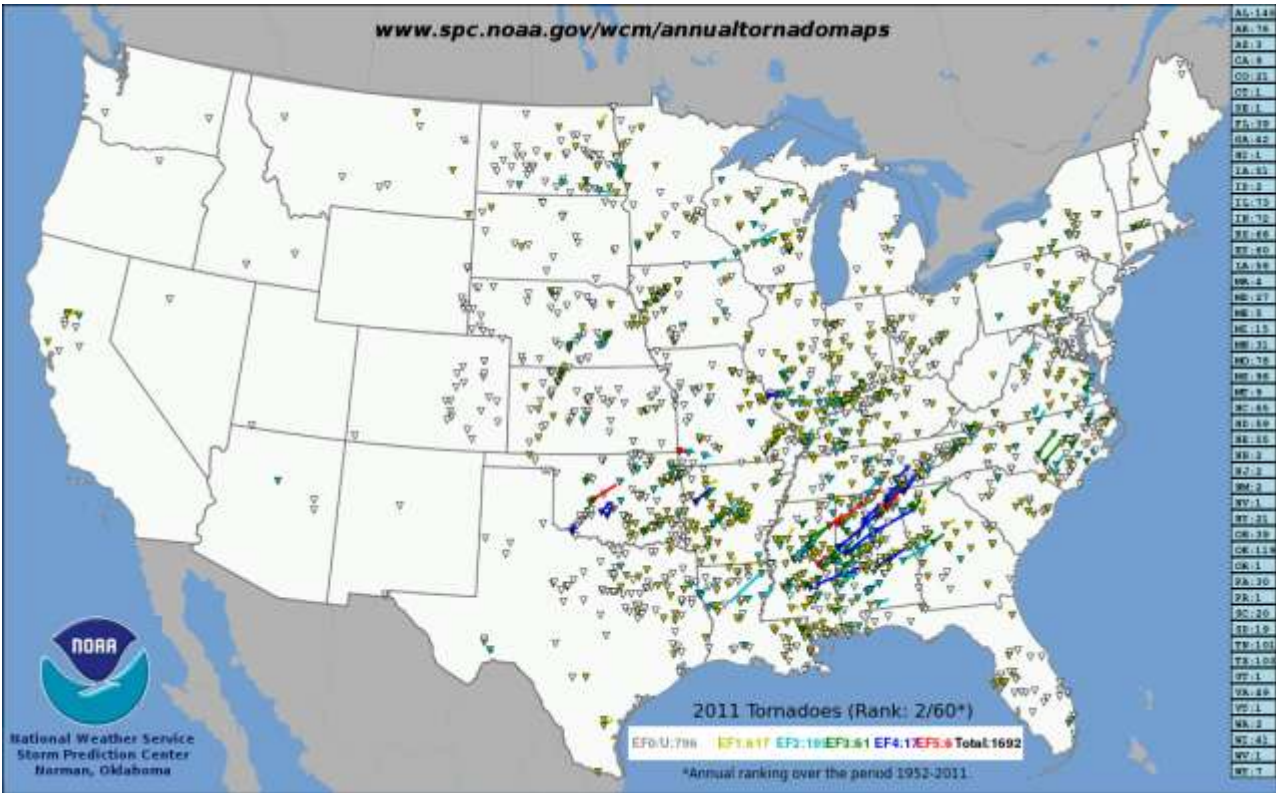


Figure 3-2: Wind Zones in the United States

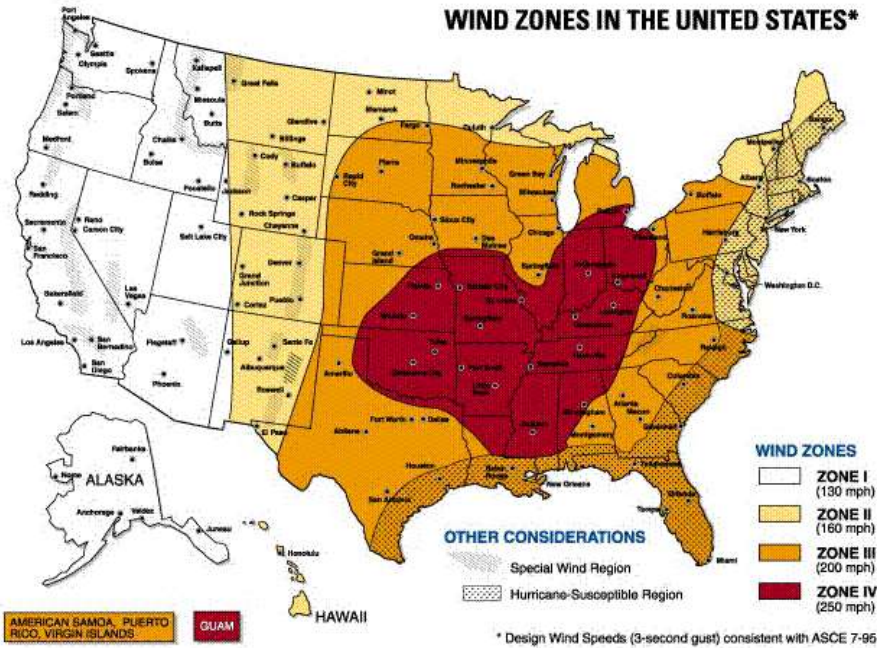


Figure 1.2 Wind zones in the United States
 Source: www.fema.gov, 2014

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, this goes from 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.

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V. Floods/Flash Floods

There are three types of flooding that affect Pickens 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 Pickens County recorded by NOAA NCDC. Between 2003 and 2013 there were 11 occurrences of flash flooding and 6 floods in the county. Damages from these events were only as a result of flash flooding and totaled \$86,000 in property damage, no crop damage, two deaths, and one injury.

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*, Pickens County has 31 High Density Polyethylene (HDPE - Earth) Dams, including one high hazard dam (John McShan #1) located along a tributary of Fire Creek near Melrose. No historical records are available of dam/levee failures in Pickens 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.

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, 2014)</i>	

On September 5, 2011, remnants of Tropical Storm Lee dumped heavy rainfall in Pickens County. Several roads in Carrollton and Garden (Aliceville) were flooded, with some being totally washed out, resulting in roads remaining closed through September 6, 2011. No injuries, deaths, crop or property damages occurred or were reported from this event.

On January 6, 2009, heavy rainfall produced flooding at several locations across Pickens County. At least five roads were closed due to high water and two bridges were washed out. Flash flooding caused a bridge to wash out on Antioch Church Road, over Buncomb Creek. A mother and child subsequently drove off the washed out roadway and drowned in the flood waters. A second vehicle following behind also drove into the creek at the same place, but occupants of this vehicle were successfully rescued. One injury, two deaths, no crop, and \$50,000 property damages occurred from this event.

On December 9, 2004, Doppler radar estimated 2 to 4 inches of rain fell in a short period of time across Pickens County. The rain fell on already saturated ground causing some flash flooding. Several roadways were temporarily closed due to high water. Local schools were delayed opening until the storms passed. A few area creeks and streams briefly rose above their banks. No injuries, deaths, or crop damages occurred or were reported from this event. Property damages of \$6,000 were reported.

Pickens County experienced 17 flood/flash flood events in a 10 year period resulting in a greater than 100% (1.70) probability that a flood/flash flood event will occur on an annual basis. The total amount of damages for the 17 flood/flash flood events was \$86,000 with 6 flood/flash flood events causing damage resulting in an estimated \$14,333 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 Pickens County due to a flood/flash flood event; the ranking is minor to major.

Primary Effects from Floods in Pickens County would include:

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

Hazardous results from significant flood in Pickens 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

Pickens 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. An update of the flood maps of Pickens County was completed in 2010. Currently McMullen, Memphis, and Ethelsville are not participating in the NFIP; while the county and remaining jurisdictions are considered participants in the NFIP. The Town of Ethelsville has had no flood areas identified. The Towns of McMullen and Memphis were sanctioned in 2011. 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, Pickens 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: Pickens County National Flood Insurance Program Status by Jurisdiction						
CID	Community Name	Initial FHBM Identified	Initial FIRM Identified	Current Eff. Map Date	Sanction Date	Tribal
010283#	Pickens County	01/17/75	06/04/90	09/17/10	06/04/90	No
010180#	City of Aliceville	04/11/75	07/17/78	09/17/10	07/17/78	No
010181#	Town of Carrollton	08/23/74	08/15/78	09/17/10	08/15/78	No
N/A – Zone C	Town of Ethelsville	N/A	N/A	N/A	N/A	No
010220#	Town of Gordo	02/14/75	08/15/78	09/17/10	08/15/78	No
010521#	Town of McMullen	Not Participating	09/17/10	09/17/10	09/17/11	No
010520#	Town of Memphis	Not Participating	09/17/10	09/17/10	09/17/11	No
010423#	Town of Pickensville	(Use the Pickens County 010283# FIRM)	06/04/90	09/17/10	06/06/96	No
010221#	Town of Reform	12/27/74	07/03/78	09/17/10	07/03/78	No
<i>Source: FEMA Community Status Book Report as of February 6, 2014</i>						

Severe Repetitive Loss Properties and Repetitive Loss Properties

FEMA defines repetitive loss properties as those having two or more claims of \$1,000 or more in the past 10-year period. FEMA defines severe repetitive loss properties as those

properties claiming at least four claims over \$5,000, which amount to more than \$20,000 total; or properties with two claim payments cumulatively greater than the market value of the building – both of which must take place within a 10-year period and not less than 10 days apart.

There are no Severe Repetitive Loss or Repetitive Loss properties in Pickens County at this time. The flood prone areas in Pickens County are along the Alabama-Tombigbee and Sipsy River, Aliceville Lake in Pickensville, and along major creeks and streams such as Bear, Big, Buncomb, Coal Fire, and Lubdub.

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VI. Drought/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 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, Pickens County experienced D2 Severe to D3 Extreme Drought in 2006, D2 Severe to D4 Exceptional Drought in 2007, and D1 Moderate to D4 Exceptional Drought in 2008. No deaths, injuries, property or crop damages were reported. 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.

Pickens County experienced 16 drought/extreme heat events in a 10 year period resulting in a greater than 100% (1.60) probability that a drought/extreme heat event will occur on an annual basis. The total amount of damages for the 16 drought/extreme heat events was \$0 with no drought/extreme heat events causing damage resulting in an estimated \$0 of expected annual damages from future events. The referenced drought 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 Pickens County due to a drought event; the ranking is minimum to minor.

Primary effects from Drought and Excessive Heat in Pickens 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 Pickens 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, 2014)

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 reported 16 instances of drought for Pickens County from 2003-2013. No crop or property damages were reported. There were no reports of extreme heat events during this ten year period.

VII. Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold

Pickens 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 Pickens County from 2003 - 2013.

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 January 24-25, 2003, Pickens County experienced the coldest temperatures in seven years. Early morning temperatures ranged from 2-10 degrees Fahrenheit. Many area residents reported frozen and broken water pipes as a result of the extended cold. Several lawn sprinkler systems also froze and broke making many areas very icy. No injuries, deaths, crop, or property damages were reported.

Pickens County experienced a frost freeze on April 7-8, 2007. Sub-freezing temperatures were recorded. No injuries, deaths, crop, or property damages occurred.

On March 1, 2009, heavy snow accumulated up to 3 inches in Pickens County. No injuries, deaths, crop, or property damages occurred.

On January 17, 2013, heavy snow ranging from near one inch up to 2.5 inches fell across Pickens County. Numerous wrecks were reported on minor and major roadways, including area interstates, and travel was disrupted. No injuries, deaths, crop, or property damages occurred.

On January 9-10, 2011, a mixture of freezing rain and sleet fell across the county, with

average ice accumulations of one half inch and one inch of sleet accumulation in Carrollton. Numerous roads were closed. No injuries, deaths, crop, or property damages occurred.

On December 15, 2010 a period of freezing rain led to a light glaze of ice on many surfaces, particularly at the Bevill Lock and Dam. Although precipitation was light, ice quickly accumulated on area roadways, causing hazardous driving conditions, numerous vehicle accidents, and road closures. No injuries, deaths, crop, or property damages occurred.

Pickens County experienced 7 winter storm/extreme cold/frost freeze/heavy snow/ice storm/winter weather events in a 10 year period resulting in a less than 100% (.70) 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 7 winter storm/extreme cold/frost freeze/heavy snow/ice storm/winter weather events was \$0 with no winter storm/extreme cold/frost freeze/heavy snow/ice storm/winter weather events causing damage resulting in an estimated \$0 of expected annual damages from future events. The referenced winter storm/extreme cold/frost freeze/heavy snow/ice storm/winter weather events 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 Pickens County due to a winter storm/extreme cold/frost freeze/heavy snow/ice storm/winter weather event; the ranking is minor to major.

Primary effects from winter storms in Pickens 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 Pickens 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.

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VIII. Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind

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, 2014)

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. Pickens County is not directly affected by storm surges; therefore, no additional analysis will be completed on the topic.

On July 10-11, 2005, numerous trees and power lines were knocked down as Tropical Storm Dennis moved across Pickens County. No injuries, deaths, or crop damages occurred. Property damages of \$65,000 resulted from this event.

On August 29-30, 2005, extensive tree and power line damage occurred as Tropical Storm Katrina affected the area. Many roadways were impassable due to fallen trees. Power outages were widespread. Several structures were damaged. One grocery store had its roof torn off. One person was slightly injured when a tree fell on their home. One injury and no deaths or crop damages occurred. Property damages of \$500,000 resulted from this event.

On August 23-25, 2008, Tropical Depression Fay brought high winds, heavy rain, and numerous tornadoes to the Pickens County area. No injuries, deaths, crop, or property damages occurred.

On September 16, 2004, high winds in association with Ivan resulted in hundreds of trees and power lines being knocked down. Power outages lasted as long as five days in some locations. Hundreds of homes suffered varying degrees of wind damage. Maximum wind gusts were estimated around 56 knots or 65 miles an hour. No injuries, deaths, or crop damages occurred. Property damages of \$600,000 resulted from this event.

On April 12, 2009, strong wind gusts estimated around 43 knots or 50 miles per hour downed numerous trees around the county. The roof and press box at Gordo High School were damaged. Several businesses in Gordo sustained roof damage. A few trees fell on and damaged homes. No injuries, deaths, or crop damages occurred. Property damages of \$75,000 resulted from this event.

Pickens County experienced 8 hurricane/tropical storm/tropical depression/high wind/strong wind events in a 10 year period resulting in an 80% (.80) 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 8 hurricane/tropical storm/tropical depression/high wind/strong wind events was \$1,258,000 with 7 hurricane/tropical storm/tropical depression/high wind/strong wind events causing damage resulting in an estimated \$179,714 of expected annual damages from future events. The referenced hurricane/tropical storm/tropical depression/high wind/strong

wind events 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 Pickens County due to a hurricane/tropical storm/tropical depression/high wind/strong wind event; the ranking is minor to major.

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

Pickens 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 Pickens County does not feel the effects of storm surges, other effects including heavy rain, flooding, winds, and tornados often have significant impacts on Pickens County.

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IX. Sinkhole/Expansive Soil

Sinkholes

Naturally occurring Sinkholes occur where soluble limestone, carbonate rock, salt beds, or rocks can be dissolved by groundwater 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.

The 2009 plan update stated sinkholes did not pose a threat to Pickens County as there were no reports of sinkholes from any source. According to the Geological Survey of Alabama's sinkhole data as of 2010, Pickens County has experienced sinkholes; however, the sinkhole density in Pickens County is low. **Figure 3-3** shows sinkholes and sinkhole density in Pickens County.

Pickens County experienced 0 sinkholes 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 well as the expected annual damages from future events. The ranking is minimum to minor.

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. Pickens County has Coastal Plains, Major Flood Plains and Alluvial soils. There were no expansive soils reported 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.

Figure 3-3

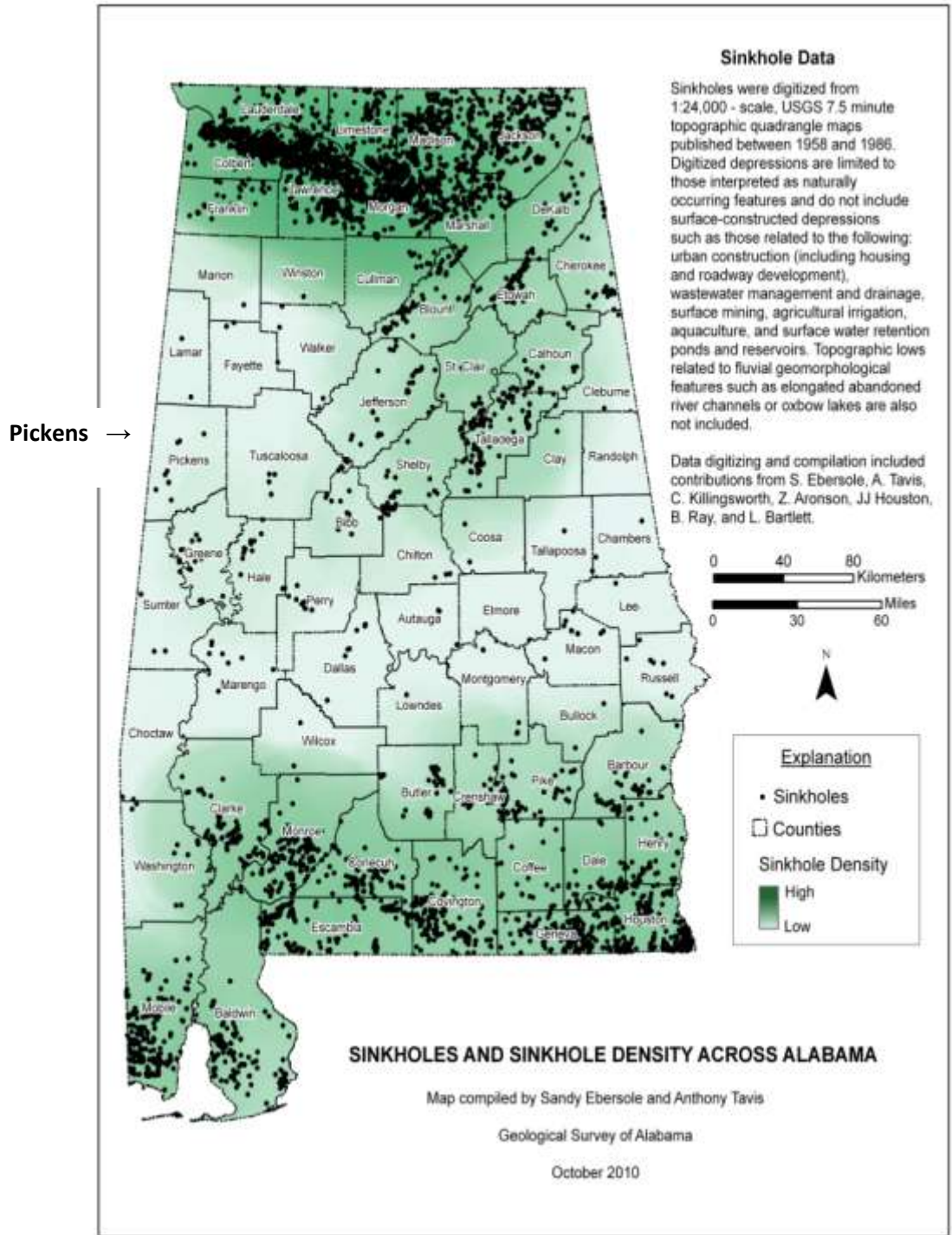


Figure 3-4: General Soils of Alabama



Source: Cartographic Research Lab, University of Alabama, 2014

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X. Landslide

A landslide is defined by the United States Geological 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. A 1982 study performed by Karen F. Rheams of the United States Geological Survey indicated 23 landslides had occurred in the county but all of these were man-induced events attributed to roadway construction. **Figure 3-5** shows the landslide incidence and susceptibility and indicates that Pickens County is at a low to no risk of incidence. There were no Pickens County landslides reported from GSA or local sources during the time frame covered by this plan; therefore, plan information remains the same as in the 2009 update.

Primary effects from landslide in Pickens County would include:

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

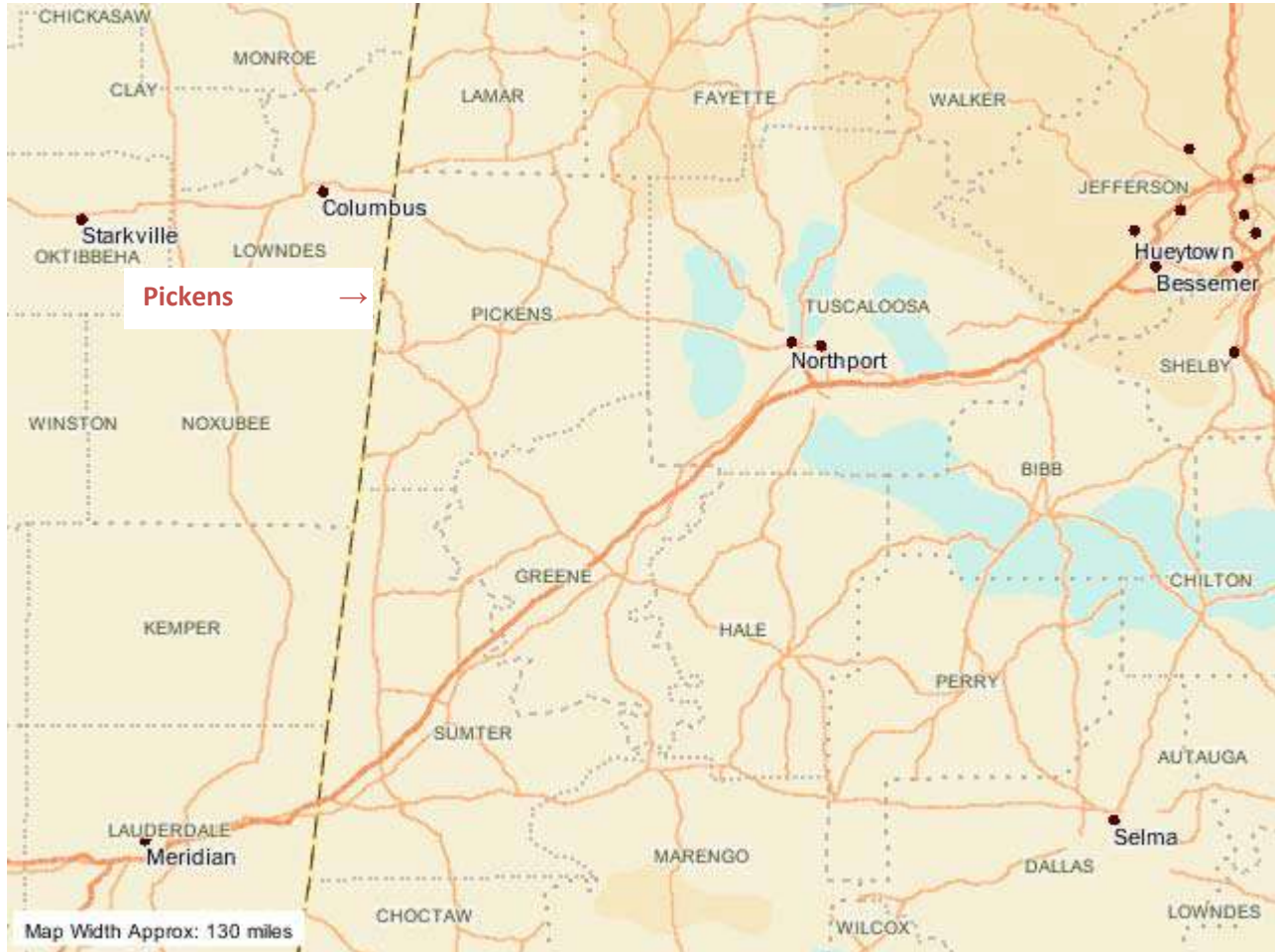
Hazardous results from landslide in Pickens County would include:

1. Landslides move with tremendous force capable of destroying most structures in its 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.

Pickens County experienced 0 landslides 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 well as the expected annual damages from future events. The ranking is minimum to minor.

Figure 3-5: Landslide Incidence and Susceptibility in Pickens County



Source: Geological Survey of Alabama, 2014

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>, 2014)

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

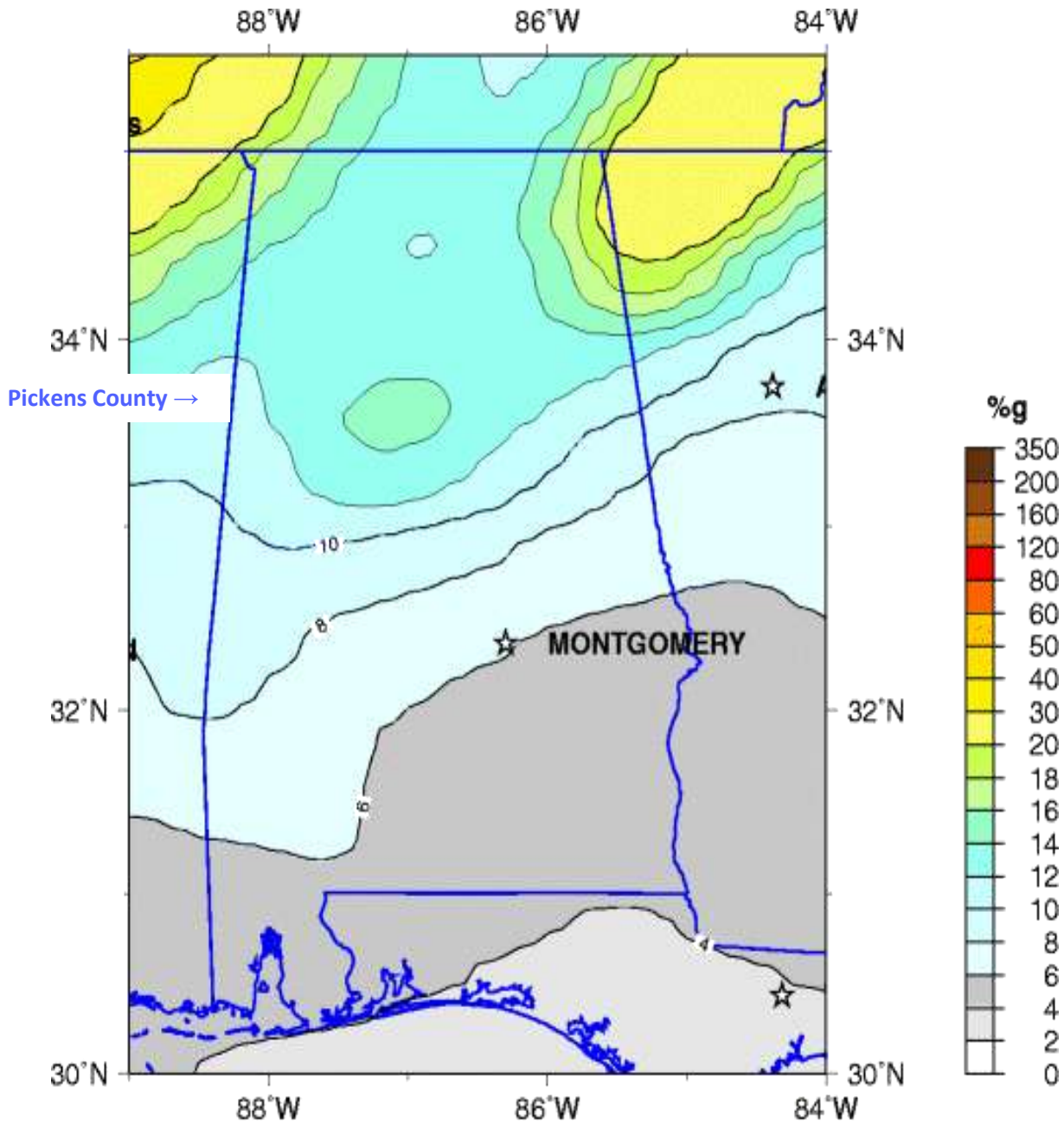
Roanoke in southwestern Virginia southwestward to central Alabama. Considered a zone of moderate risk, the SASZ includes the Appalachian Mountains. Most of the earthquakes felt in Alabama are centered in the SASZ. The hypocenters of earthquakes in this zone are on deeply buried faults. The SCSZ is centered near Charleston South Carolina and encompasses nearly the whole State. Pickens County is at risk for earthquakes.

Earthquakes occurring in Pickens 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. There is insufficient data to predict the future probability of an earthquake occurring in Pickens County. The risk of a significant, damage-causing earthquake in Pickens County is low to moderate. The northeastern portion of the county is at a slightly greater risk than other portions of the county.

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. Pickens County did not experience any major earthquake events during the past ten years (January 1, 2003 – December 31, 2013) as noted in **Table 3-5**.

Two zones of frequent earthquake activity that could potentially impact Pickens County are the New Madrid Seismic Zone and the Southern Appalachian Seismic Zone. Damage could be significant in Pickens 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

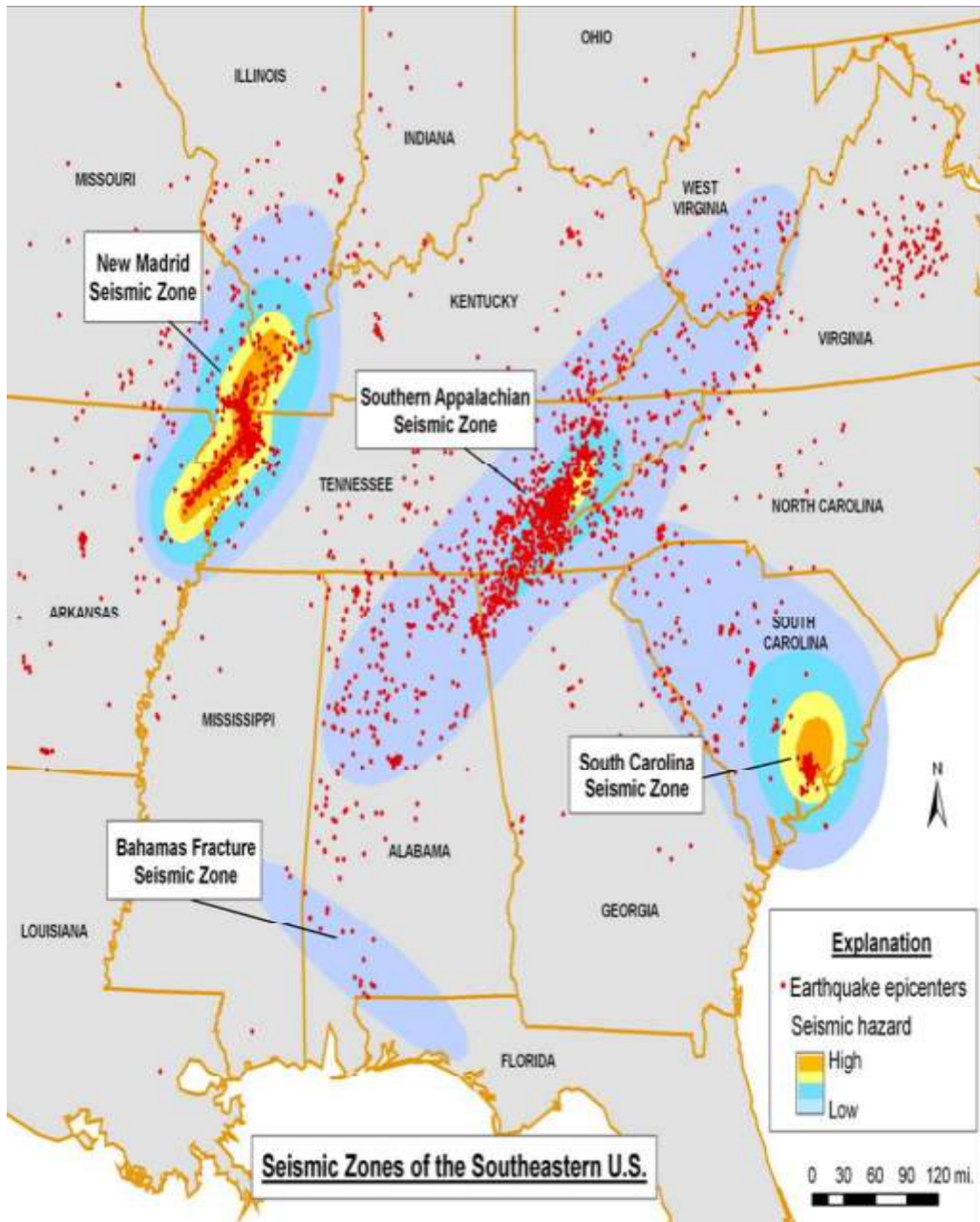
earthquake along the New Madrid Fault line could cause chimneys to fall, glass to break, and walls to crack in Pickens County.



**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

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



Source: Geological Survey of Alabama, 2014

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.

Pickens County experienced zero earthquake events in a 10 year period resulting in an unknown probability that an earthquake event will occur on an annual basis. The total amount of damages for an earthquake event is also unknown, as well as the expected annual damages from future events. The ranking is minimum to minor.

Primary effects from earthquake in Pickens County would include:

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

Hazardous results from earthquake in Pickens 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 Pickens 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. Wildfire

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. Pickens County is susceptible to wild/forest fires especially during times of drought. Pickens County has a total of 470,275 acres of forestland. The total acres are made up of 204,795 softwoods, 59,990 oak-pine, and 205,490 hardwoods. (*Source: Alabama Forestry Commission – Forest Resource Report 2012*)

The frequency and severity of wildfires is dependent on weather and on human activity. Nearly all wildfires in Pickens County are human caused (only a small percent are caused by lightning), with arson and careless debris burning being the major causes of wildfires. 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 3-13** shows the number of fires and acres burned during the period 1997 to 2012, as recorded by the Alabama Forestry Commission. Pickens County had a total of 419 fires during this 15 year period, affecting a total of 3,227 acres. Pickens County is located in an area where the current fire danger conditions are low to moderate, according to the U. S. Forestry Service.

The National Forest Service (NFS) maintains data nationwide and produces various maps and forecasts daily under the Wildland Fire Assessment System (WFAS). A review of this data showed Pickens County has an 11-15 percent probability of a fire occurring because of a lightning strike. The probability of ignition by lightning depends mainly on fuel moisture. Fuel Model Maps help to determine susceptibility of vegetative cover to wildfires. Pickens County is covered by Fuel Models A and C. Areas covered by these models consist of light fuel vegetation such as herbaceous plants and round woods that are less than one-quarter of an inch.

Figure 3-8 and **Figure 3-9** from the Alabama Forestry Commission show Alabama Counties' total acres burned by wildfires from 1997-2012 and the average number of wildfires per year per square mile. The total acres burned by wildfires during this time in Pickens County were 3,001 – 5,500 acres. The number of fires per year per square mile in Pickens County were 0.031 – 0.05 wildfires.

Table 3-13: Wildfires in Pickens County 1997-2012					
County	Total # of Fires	Average # of Fires	Total Acres Burned	Average Acres Burned	Average Fire Size
Pickens	419	28	3,227	215	7.7

Source: Alabama Forestry Commission, 2014

Pickens County experienced 419 wildfire events in a 15 year period resulting in a greater than 100% (27.93) probability that a wildfire event will occur on an annual basis. The total amount of acres burned for the 419 wildfire events was 3,227 resulting in an estimated 8 acres burned per wildfire event. The total amount of acres burned was 3,227 multiplied by \$1,900 (the average market value for an acre of land in Pickens County) equals \$6,131,300 damages for the 419 wildfire events with 419 wildfire events causing damage resulting in an estimated \$14,633 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 \$15,950 of expected annual damages from future events. No deaths or injuries were reported. The ranking, extent/range of magnitude or severity that could be experienced by Pickens County due to a wildfire event is minimum to minor.

Primary effects from wildfire in Pickens County would include:

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

Hazardous results from significant wildfire in Pickens 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.

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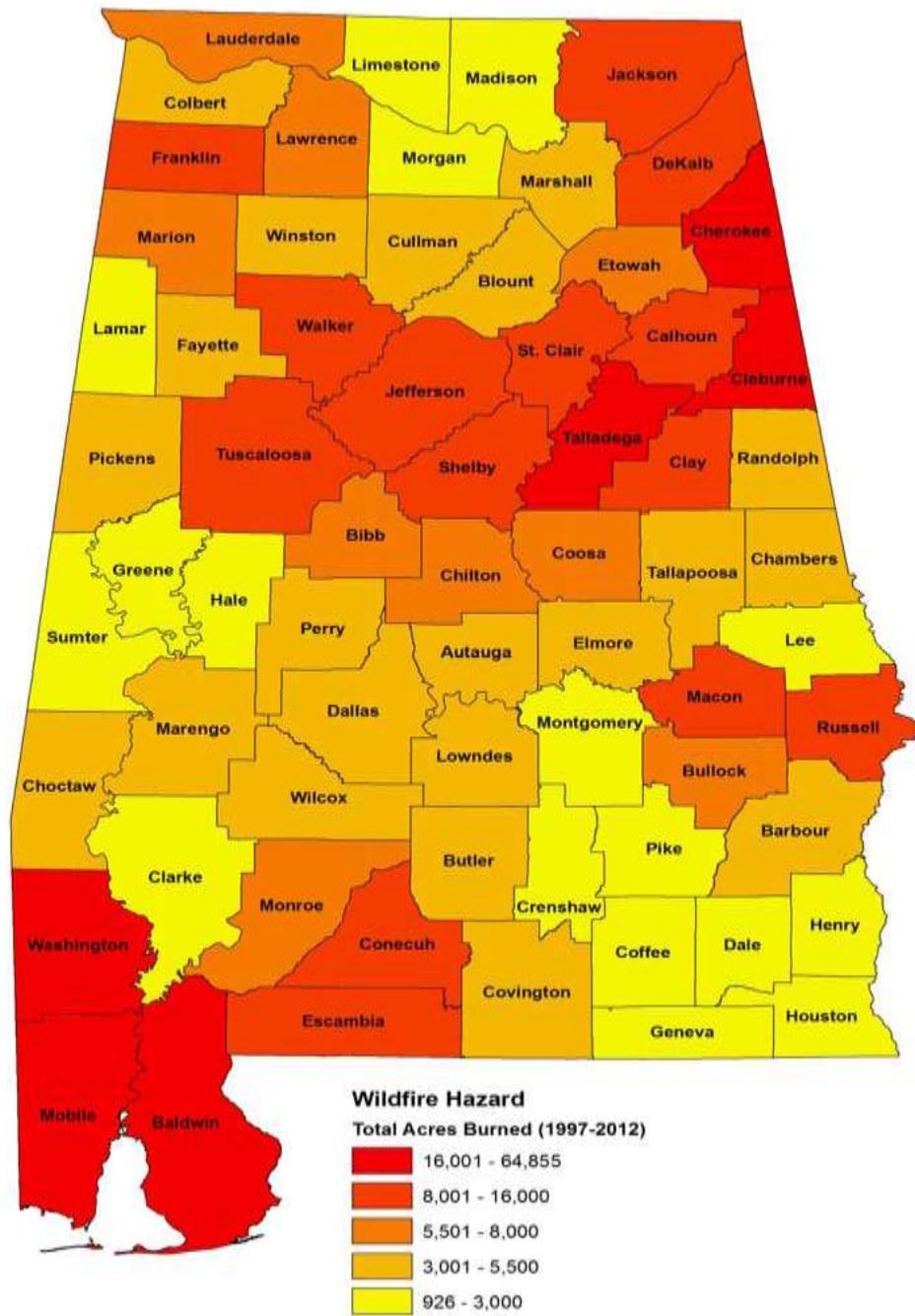


FIGURE 3-8
Total Acres Burned by Wildfire 1997-2012
(Source: Alabama Forestry Commission and the Alabama Emergency Management Agency, 2014)

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FIGURE 3-9
Number of Fires per Year per Square Mile 1997-2012
(Source: Alabama Forestry Commission and the Alabama Emergency Management Agency, 2014)

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XIII. Dam 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 Pickens 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 Pickens County during 2003 - 2013.

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 Pickens 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*, Pickens County has 31 High Density Polyethylene (HDPE - Earth) Dams including one high hazard dam (failure or poor operation would likely result in the loss of human life), six significant hazard dams (failure or poor operation would not likely result in the loss of human life, but would result in economic loss, environmental damage, and disruption of lifeline facilities), and 24 low hazard dams (failure or poor operations would not likely result in the loss of human life, but would result in low economic and environmental damage). None of the dams is located within a municipality. All dams are located in sparsely populated areas scattered throughout the unincorporated jurisdiction. **Table 3-14** shows risk categories of dams. **Table 3-15** provides an inventory listing of all the dams in Pickens County and includes additional data on each.

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 Pickens 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 Pickens 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.

Table 3-14: Pickens 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	24
Total	31
<i>(Source: HAZUS MH 2.1, 2014)</i>	

Table 3-15: Pickens County Dam Inventory

Dam Name	NID ID	RIVER	NID Height	NID Storage	Year Completed	Drainage Area	Hazard	County	Longitude	Latitude
JOHN MCSHAN 3	AL00166	TR-FIRE CREEK	13.00	130.00	1973		L	PICKENS	-88.1250	33.4083
C S STIRLING JR	AL00178	TR-COW CREEK	20.00	143.00	1965		L	PICKENS	-88.0833	33.1217
SPEED	AL00177	TR-LITTLE MAGBY CREEK	25.00	59.00	1965		L	PICKENS	-88.2467	33.5100
PARSON	AL00175	LUBBUB CREEK-OFFSTREAM	10.00	64.00	1965		L	PICKENS	-88.0833	33.2550
LONGVIEW	AL00173	SIPSEY RIVER-OFFSTREAM	16.00	53.00	1950		L	PICKENS	-87.9533	33.1267
BALDWIN	AL00169	TOMBIGBEE-OFFSTREAM	18.00	66.00	1967		L	PICKENS	-88.2567	33.0483
JOHN MCSHAN 2	AL00165	TR-FIRE CREEK	17.00	544.00	1972		L	PICKENS	-88.1217	33.4100
JOHN MCSHAN 1	AL00164	TR FIRE CREEK	20.00	1342.00	1952		H	PICKENS	-88.1167	33.4017
KIMBRELL 1	AL00170	TR-FENACHE CREEK	16.00	50.00	1967		L	PICKENS	-88.2717	33.0400
SHELTON DAM	AL01497	TR-MAGBY CREEK	17.00	54.00	1960		L	PICKENS	-88.1783	33.4517
EWART DOUGHTY DAM	AL01495	LANGDON BRANCH-OFFSTREAM	20.00	94.00	1965		S	PICKENS	-88.0267	33.4083
JOHNSTON DAM 1	AL01494	TR-SENECA CREEK	30.00	1080.00	1975		L	PICKENS	-88.0417	33.1533
JOHNSTON DAM 2	AL01493	TR-SENECA CREEK	15.00	130.00	1977		L	PICKENS	-88.0300	33.1450
DLES LAKE DAM	AL01491	LUBBUB CREEK-OFFSTREAM	20.00	64.00	1965		L	PICKENS	-88.0750	33.1783
SANDERS DAM	AL01489	PINE KNOT BRANCH	15.00	53.00	1965		S	PICKENS	-88.2267	33.2050
BOGGESS DAM	AL01488	TR-LITTLE MAGBY CREEK	27.00	77.00	1979		L	PICKENS	-88.2300	33.5083
WILLIAM LATHAM DAM	AL01487	TR-LUBBUB CREEK	17.00	78.00	1979		S	PICKENS	-88.0417	33.4000
LOWE'S DAM	AL00172	HOG BRANCH OFFSTREAM	20.00	173.00	1970	0.67190	L	PICKENS	-87.9367	33.3583
CK HOUSE DAM	AL02242	TR-LUBBUB CREEK	20.00	35.00	1979	0.03130	S	PICKENS	-88.0333	33.3833
WILLIAM LATHAM #1	AL02245	TR-LUBBUB CREEK	19.00	118.00	1980	0.54690	S	PICKENS	-88.0333	33.4000
RR'S LAKE DAM	AL01492	TR-LUBBUB CREEK	25.00	117.00	1979	0.20940	L	PICKENS	-87.9583	33.1667
SHEPHERD	AL00176	COAL FIRE CREEK-OFFSTREAM	20.00	88.00	144968	0.96880	L	PICKENS	-88.1667	33.3500

Dam Name	NID ID	RIVER	NID Height	NID Storage	Year Completed	Drainage Area	Hazard	County	Longitude	Latitude
AM LANG DAM	AL02244	TR-BIG CREEK	13.00	40.00	1975	0.15630	S	PICKENS	-88.2000	33.2333
NSTON'S DAM	AL00168	FENACHE CREEK-OFFSTREAM	20.00	92.00	1973	0.23440	L	PICKENS	-88.2667	33.0167
PM JOHNSTON #1	AL02243	R-SENECA CREEK	30.00	947.00	1975	2.65630	L	PICKENS	-88.0333	33.1497
HARLEY MARTIN'S DAM #3	AL02316	TR-TOMBIGBEE RIVER	22.90	112.00	1985	0.23130	L	PICKENS	-88.2833	33.0667
ES LAKE DAM	AL00167	TR-LUBUB CREEK	27.00	692.00	1945	1.69530	L	PICKENS	-88.1000	33.1833
GERALD BRYANT DAM	AL02383	TR-TOMBIGBEE RIVER	17.00	60.00	1988	0.09380	L	PICKENS	-88.2667	33.0833
CEBRON BROWN DAM	AL02384	R-SIPSEY RIVER	23.00	84.00	1988	0.16250	L	PICKENS	-87.8833	33.3500
J. M. ALSTON - POND NO. 1	AL02457	LUBBUB CK.	6.40	110.40	1993	0.00000	L	PICKENS	-88.1233	33.1078
HARLEY MARTON #1	AL02463	TR-TOMBIGBEE RIVER	28.30	268.00	1981	0.09380	L	PICKENS	-88.2861	33.0592

Source: <http://crunch.tec.army.mil/nidpublic/webpages/nid.cfm>, 2014

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.

Thunderstorms (Source: NCDC NOAA)

Damage from thunderstorms can have a wide range of severity. All jurisdictions are vulnerable to thunderstorm events. A thunderstorm event in Pickens County during 2003-2013 occurred in Ethelsville. The wind magnitude was 90 miles per hour (78 kts.). On Friday, July 6, 2012, clusters of thunderstorms developed in Tennessee and moved southwestward across West Central Alabama, producing isolated wind damage. A self standing cell tower was knocked down along with approximately 100 trees in the McShan and Coal Fire Communities.

Two thunderstorm events resulting in the largest amount of damages occurred in Pickens County during 2003-2013. One event occurred in Cochrane on February 5, 2004 and resulted in property damages of \$20,000. A few trees were blown down from near Cochrane, to just south of Aliceville, through Gordo, and to the county line just northeast of Gordo. A large tractor trailer truck was blown off the road near the intersection of SR 159 and US 82. Another event occurred in Aliceville on April 11, 2011 and also resulted in property damages of \$20,000. Ahead of a cold front associated with a strong upper level storm system, a squall line moved across Central Alabama on Monday, April 11. Numerous trees were blown down in Aliceville, some of which fell on homes. In addition, multiple businesses sustained roof damage.

Lightning (Source: NCDC NOAA)

Lightning can cause substantial property damage and loss of human lives. All jurisdictions are vulnerable to lightning events.

Hail (Source: NCDC NOAA)

Severe thunderstorms have been known to produce hailstones 1.75 inch in diameter (golf ball size) or larger in Pickens County. A deepening storm system and associated cold front brought widespread severe thunderstorms, including at least 8 tornadoes, to Central Alabama on April 24, 2010. As a result, Ethelsville experienced 1.75 inch hailstones and \$10,000 property damages. All jurisdictions are vulnerable to hail events.

Tornado (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. **Table 4-1** provides community safe room information. **Figure 4-1** provides a view of Pickens County and maps the locations of community safe rooms.

Areas with higher population densities pose the greatest potential for property damage, injury, and death. The City of Aliceville and the Town of Reform are the most densely populated areas in the county. 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. Pickens County has a total of 2,077 mobile homes countywide, 21% of the total housing stock. The greatest concentration of mobile homes in a municipality is in the Town of McMullen where 37% of the units are mobile homes. (Sources: U.S. Census Bureau, 2010-2012 American Community Survey and Easidemographics.com)

A powerful storm system crossed the Southeast United States on Wednesday, April 27, 2011, resulting in a large and deadly tornado outbreak. This epic event broke the record for number of tornadoes in a day for the state of Alabama, becoming the most significant tornado outbreak in the state's history. This one event resulted in 4 injuries and \$3.8 million in property damages.

Central Alabama had two rounds of severe weather that day. During the early morning hours, a Quasi-Linear Convective System quickly moved across the northern half of the National Weather Service, Birmingham county warning area. Straight line winds of 90 mph (78kts) or greater and 11 tornadoes lead to widespread damage and power outages. During the afternoon, long-lived supercell thunderstorms produced long-track, strong and violent tornadoes. Destruction and loss of life across many towns and communities was devastating.

The first segment of this long track tornado initially touched down 5 miles northeast of Pickensville near Basinger Rd, north of AL Hwy 86. This tornado continued through portions of Tuscaloosa, Fayette, Walker, Cullman (See Storm Data for Huntsville), and Blount Counties, before it dissipated in Marshall (See Storm Data for Huntsville) County. While the average path width of this tornado in Pickens County was around 0.4 mile (704 yds), the maximum path width was 0.6 mile (1056 yds). The tornado crossed AL Hwy 17 and US Hwy 82, across the southern and western extents of the city of Reform. The storm strengthened to an EF1 rating with winds of 110 mph to the northeast of Reform. Along CR 49, several chicken houses were destroyed and grain feed bins were tossed up to 100 yards. As the tornado crossed AL Hwy 159, north of CR 49, several homes sustained roof damage and several outbuildings were destroyed. Numerous trees were snapped or uprooted along the path. The tornado moved northeast entering Tuscaloosa County south of Mid Walters Rd.

Most of the violent tornadoes from this day were captured on video by a number of people, including storm spotters and chasers, as well as numerous television news crews and remotely controlled web-enabled video cameras. This allowed unprecedented coverage and viewing of this historic event in real time from people worldwide.

TABLE 4-1: COMMUNITY SAFE ROOMS IN PICKENS COUNTY

Location		Status	HMGP #
1	4216 M L King Road, Aliceville, AL 35442	Complete	1971-220
2	112 Bains Road, Ethelsville, AL 35461	Complete (Siren at 1159 Co. Rd. 30)	1971-222
3	897 Roland Bate Road, Carrollton, AL 35441	Complete	1971-217
4	240 Shade Road, Aliceville, AL 35442	Complete	1971-221
5	51 School Circle, Reform, AL 35481	Complete	1971-213
6	1184 M L King Road, Aliceville, AL 35442	Complete	1971-214
7	7420 Co Rd 13, Aliceville, AL 35442	Complete Siren in operation	1971-218
8	41 Elliott St, Carrollton, AL 35447	Complete	1836-010
9	3368 Zion Ridge, Gordo, AL 35466	Waiting on FEMA's approval PN 4082	1971
10	71 Co Rd 71, Ethelsville, AL 35461	Waiting on FEMA's approval PN 4082	1971
11	332 3 rd Ave. N.E., Aliceville, AL 35442	Complete	1971
12	751 5 th St. N.W., Aliceville, AL 35442	Complete	1971
13	11 Jackson Ferry Road, Pickensville, AL 35447	Complete	1836
14	401 1 st Ave. N.W., Gordo, AL 35446	Complete	1971

(Source: Pickens County EMA, 2014)



FIGURE 4-1: PICKENS COUNTY COMMUNITY SAFE ROOMS

(Source: Google Earth and Pickens County EMA, 2014)

Flood/Flash Flood *(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 City of Aliceville and the Towns of Carrollton and Reform 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. All

jurisdictions are vulnerable to flood events.

On May 19, 2003 the Tombigbee River at the Bevill Lock and Dam was in flood stage, reaching a maximum crest of 123.31 feet. On May 21, 2003 the Tombigbee River at the Bevill Lock and Dam was in flood stage, reaching a maximum crest of 124.36 feet. The flood stage is 122 feet. (*Source: NOAA NCDC*)

In April 2005, the county experienced 2 to 5 inches of rainfall in 3 days resulting in minor flooding. In June 2005, Tropical Storm Arlene dumped heavy rain across the county. A few area creeks were backed up and subsequently flooded, causing some roads to become temporarily impassable. Due to heavy rainfall from the remnants of Tropical Storm Lee in September 2011, several roads and parking lots were flooded. (*Source: NOAA NCDC*)

In January 2009, heavy rainfall from a slow moving frontal system produced flooding at several locations across Pickens County resulting in \$50,000 property damages, two deaths, and one injury. At least 5 roads were closed due to high water, and two bridges were washed out. Flash flooding caused a bridge to wash out on Antioch Church Road, over Buncomb Creek. A mother and child subsequently drove off the washed out roadway in Pickensville, and drowned in the flood waters. A second vehicle following behind also drove into the creek at the same place, but the occupants were successfully rescued. (*Source: HAZUS MH 2.1*)

In September 2011, heavy rainfall from the remnants of Tropical Storm Lee flooded roads and parking lots. (*Source: NOAA NCDC*)

Drought/Extreme Heat (*Source: NOAA NCDC*)

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.

Pickens County experienced severe (D2) to extreme (D3) drought conditions in three continuous months in 2006 having hydrologic and agricultural impacts, severe (D2) to exceptional (D4) drought conditions nine continuous months in 2007 and four continuous months

in 2008 having hydrologic, agricultural, and sociological impacts. Crops became highly stressed due to the lack of rainfall, with losses ranging from 50 to nearly 100 percent in some Central Alabama counties. Around 80 percent of the corn and soybean crop, 70 percent of the cotton crop, and 40 percent of the peanut crop, was considered to be in poor or very poor condition by month's end along with livestock and hay production. In addition, about 60 percent of the livestock, and 75 percent of pasture lands, were also considered to be poor or very poor, and hay yields for the summer were less than half of normal. Stream flows on area rivers and waterways remained near record low levels, and most reservoir levels were well below normal. Navigation on major rivers became significantly impacted, and many boat landings on major lakes became unusable due to extremely low lake levels. The number of mandatory water restrictions continued to increase, with fines and surcharges being enforced for excessive water usage. Many residential lawns, shrubbery, and gardens became severely stressed by the very dry conditions. 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 all 67 Alabama counties were declared Natural Disaster areas by the Federal Government. 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. The State Agriculture Commissioner (at the time) Ron Sparks referred to this event as the worst drought in 30-40 years. (Source: NOAA NCDC)

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.

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.

Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold

Pickens County commonly has extreme cold and winter storm events in any given year. These events impact the county in a variety of ways. Ice and small amounts of snow can cripple the county. 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 failure and property damage. 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 deaths. Since these storms have no defined track, all residents of Pickens County are vulnerable to severe winter storms.

One extreme cold/wind chill event was reported during this time; however, no damage resulted from this event. Beginning on January 24, 2003 and ending on January 25, 2003, the coldest temperatures in seven years occurred across much of North and Central Alabama and lasted for about two days. Early morning temperatures ranged from 2 to 10 degrees. The coldest temperatures were measured in outlying areas. Although no new records were established, these temperatures were very cold for the Deep South. Many area residents reported frozen and broken water pipes as a result of the extended cold.

Two frost freeze events were reported for Pickens County between 2003 and 2013: April 7-8, 2007 as an unusually cold spring time air mass settled across Central Alabama, bringing record cold temperatures to the entire region.

Two heavy snow events were reported for Pickens County between 2003 and 2013: March 1, 2009 as a late winter storm system that had caused some severe thunderstorms the previous day, ended with a heavy snow event for portions of Central Alabama. The snow began during the early morning hours on March 1, and lasted until the afternoon on the same day. The snow began just after midnight, and accumulated up to 3 inches until it ended around 11 a.m. Another event occurred on February 9, 2011 as a low pressure system formed off the Texas coast in the Gulf of Mexico during the overnight hours of Tuesday, February 8th. This surface low tracked eastward along the coast during the morning of Wednesday, February 9, dragging moisture northward from the Gulf of Mexico and pulling cold air in from the north. The combination of the moisture and cold air brought snowfall to much of Central Alabama. An average of 2.5 inches of snow fell across the county, with the higher amounts occurring in the northwest portion of the county.

One ice storm event was reported for Pickens County between 2003 and 2013: January 9-10, 2011 as a low pressure system moved across the northern Gulf of Mexico on Sunday January 9, moisture pushed northward into Central Alabama, interacting with cold air already in place across the area. The combination of moisture and cold air brought a wintry mix of precipitation to most of Central Alabama, Sunday afternoon through Monday morning. A mixture of freezing rain and sleet fell across the county, with average ice accumulations of one half inch and one inch of sleet accumulation in Carrollton. This led to numerous road closures.

One winter weather event was reported for Pickens County between 2003 and 2013: December 15, 2010 as moisture increased ahead of a weak storm system across Central Alabama. Temperatures near or below freezing at the surface resulted in widespread freezing rain and sleet beginning around sunrise and lasting through most of the day. Although precipitation was light, ice quickly accumulated on area roadways, causing hazardous driving conditions, numerous vehicle accidents, and road closures. Hazardous driving conditions due to ice on the roadway persisted well after precipitation moved out of the area, with many counties maintaining road

closures for extended periods of time. A period of freezing rain led to a light glaze of ice on many surfaces, particularly at the Bevill Lock and Dam.

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

Tropical Storms and Tropical Depressions such as Arlene, Dennis, Ivan, and Katrina have affected Pickens 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% 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.

Hurricane Ivan impacted Southern Alabama from September 13-16, 2004, making landfall near Gulf Shores at approximately 10:00 a.m. on September 16 as a Category 3 Hurricane. Storm surge values of 10-14 feet along the Alabama and Florida coastlines were the highest observed in over 100 years. As the storm moved inland, high winds and heavy rains wreaked havoc across the state. Heavy rainfall ranges between five and eight inches caused minor flooding across various areas of the state. Hurricane force winds were experienced for two to four hours across all inland Alabama counties, causing major damage to trees. These fallen trees were determined to be the primary cause of all inland structural damage attributed to the storm and electricity to residents to be interrupted for a week or more. Alabama totaled an estimated \$500,000,000 in damage to timber. Most of the soybean and pecan crops were destroyed, while the cotton crop suffered significantly though was not completely ruined. The Town of Carrollton reported \$2,658 in damages as a result of high winds from Hurricane Ivan. In Pickens County, hundreds of trees and power lines were knocked down in association with Ivan's high winds. Power outages lasted as long as 5 days in some locations. Hundreds of homes suffered varying degrees of wind damage. Maximum wind gusts were estimated around 65 miles an hour resulting in \$600,000 in property damage. (*Source: NOAA NCDC*)

Tropical Storm Arlene formed late on Wednesday, June 8, 2005. The system developed off the coast of Honduras in the Western Caribbean and moved generally north northwest. The storm grazed the tip of Western Cuba on Friday, June 10, 2005 and then entered the Gulf of Mexico, with winds sustained around 70 miles an hour. Arlene weakened just before it reached the United States mainland and did not reach hurricane force. Arlene made landfall as a Tropical Storm on Saturday afternoon, June 11, 2005 just west of Pensacola, Florida. Arlene was downgraded to a Tropical Depression Saturday evening as it entered Central Alabama. Arlene continued northward across Central Alabama through early Sunday morning. Arlene eventually lost its tropical characteristics over eastern Michigan Monday afternoon, June 13, 2005. Arlene's local effects were rather minor. Storm total rain amounts were generally 1 to 3 inches east of Interstate 65 and 2 to 5 inches west of Interstate 65. Locally higher amounts up to 6 to 8 inches were possible. Many counties received sustained winds of 20 to 30 miles an hour briefly, mainly associated with stronger outer bands. Estimated maximum wind gusts ranged between 35 and 45 miles an hour with a few higher amounts possible. The heaviest rain and strongest winds were generally experienced west of Interstate 65. Several trees and power lines were blown down across Central Alabama as the storm moved through the area. Many thousands of residents were without power for several hours. A few homes suffered minor roof damage. A few cities reported minor urban flooding that lasted only a few hours. The heaviest rain and highest wind gusts were sporadic in nature and occurred from late Saturday afternoon into early Sunday morning area wide. The variability was due to stronger feeder bands and location of the remnant tropical system. The measured wind gusts (miles per hour) in Pickens County were 46 MPH resulting in \$8,000 in property damages. (*Source: NOAA NCDC*)

As a Category 3 Hurricane, Dennis came ashore at Navarre Beach in the Florida Panhandle around 2 p.m. on July 10, 2005. Dennis brought with him sustained wind speed at 135 MPH and estimated storm surges of 10-15 feet. The National Weather Service issued an inland hurricane warning which indicated areas would experience substantial winds in excess of 74 MPH with gusts up to 90 MPH. The hurricane downgraded to a Tropical Storm produced 5-10 inches of rain throughout Alabama. President Bush approved a disaster declaration to provide infrastructure assistance to governments in counties across Alabama, making them eligible to

receive federal and state assistance to recover costs of debris removal operations and emergency protective measures. Pickens County experienced up to 65 MPH winds from Tropical Storm Dennis. Property damages totaled \$65,000 in Pickens County. (*Source: NOAA NCDC*).

Tropical Storm damage reports from local input includes: \$64,049 in property damages for Aliceville; \$2,658 in property damages for Carrollton; \$20,000 in property damages for Gordo; \$565,000 in property damages for Pickens County; \$837,037 in Individual Assistance for Pickens County; \$250 in Pickensville property damages, and \$19,332 in Reform property damages.

Wind damage reports from local input included \$104,000 in property damages for the county.

Hurricane Katrina made landfall on August 29, 2005 near Buras, Louisiana as a Category 3 storm and became known not only as the costliest but also as one of the most devastating hurricanes in the history of the United States. It is the deadliest hurricane to strike U.S. coastlines since 1928 and produced damages in excess of \$75 billion. Katrina had maximum sustained winds estimated to be 120 MPH at landfall. As Katrina moved across land, the storm weakened, though it maintained hurricane status past Laurel, Mississippi. Southwestern Alabama experienced hurricane conditions as Katrina moved through neighboring Mississippi. The effects of Katrina were widespread across Alabama, particularly areas in the western portions of the state. These effects included significant rainfall values totaling between 5 and 6 inches near the Mississippi state line and high winds with gusts recorded to be 68 MPH out of Vance, Alabama. The rain and winds resulted in thousands of fallen trees and downed power lines. Power outages lasted from a few days to a week or more, and Alabama Power reported Katrina to be the worst storm in their history for statewide damage and power outages. Additionally, minor damages occurred to some structures throughout the area. In Alabama, six tornados also stemmed from Katrina, four of which were F-0 and two that were F-1. Local sources in Pickens County reported a total of \$1,440,668 in damages as a result of Hurricane/Tropical Storm Katrina. Extensive tree and power line damage occurred as Katrina affected the area. Many roadways were impassable due to fallen trees. Power outages were widespread. Several structures were damaged. One grocery store had its roof torn off. One person was slightly injured when a tree fell on their home. According to NOAA NCDC, Pickens County suffered \$500,000 in property damages. (*Source: NOAA NCDC*)

On August 23, 2008, Tropical Storm Fay weakened to a Tropical Depression after it made its final landfall on the Florida Panhandle and entered Southern Alabama. No fatalities or injuries were reported in Pickens County. Trees and power lines were blown down by the winds, resulting in power outages, but no property or crop damages were reported. (*Source: NOAA NCDC*)

An intense atmospheric gravity wave brought a period of high winds to Central Alabama late in the evening on April 12, 2009 lasting into the early morning hours on April 13, 2009. The gravity wave, which formed on the back edge of a large precipitation area, moved into West Central Alabama from Mississippi around 9 pm CDT, moved across the middle of the state, and exited the east central counties by 8 am CDT the next morning. As the wave moved through, it produced a 1 to 2 hour long period of strong winds, with frequent gusts above 30 MPH, and peak gusts averaging 40 to 50 MPH. A larger number of trees were blown down than one may usually expect from these wind speeds, since many trees were weakened by a recent drought, and because the gusty winds lasted for up to two hours. The downed trees caused numerous power outages, and as many as 165,000 customers lost power during the storm. Wind gusts estimated around 50 MPH blew down numerous trees around the county. The roof and press box at Gordo High School were damaged. Several businesses in Gordo sustained roof damage. A few trees fell on homes, resulting in damages. Pickens County suffered \$75,000 in property damages. (*Source: NOAA NCDC*)

A tropical depression developed in the Gulf of Mexico on Thursday, September 1, 2011 and strengthened as it remained nearly stationary becoming Tropical Storm Lee Friday afternoon, September 2, 2011. Tropical Storm Lee slowly moved northward toward the central Louisiana coast, eventually making landfall Sunday, September 4, 2011 near Vermillion Bay, LA, with maximum sustained wind speeds of 45 MPH. Rain bands spread northward into Central Alabama Saturday afternoon, September 3, 2011, skirting the southwest corner of the area for approximately 6 hours before pushing further north across West Central Alabama. Moderate to heavy rainfall finally moved into other portions of the area overnight and continued through Sunday, September 4, 2011. Lee was downgraded to an extra tropical cyclone early Monday morning, September 5, 2011. As the remnants of Lee interacted with an approaching cold front,

heavy rainfall and gusty winds continued to affect Central Alabama through late Monday evening, September 7, 2011. The remnants of Tropical Storm Lee brought beneficial rainfall to Central Alabama over several days. However, an extended period of heavy rainfall led to significant flash flooding across portions of North Central Alabama, including the Birmingham metro area.

Gradient winds associated with the remnants of Tropical Storm Lee knocked down numerous trees across Pickens County, including trees blocking roadways in Aliceville and Reform. Widespread tree damage occurred across Pickens County as a result of strong winds ranging from 45-50 MPH. Falling trees blocked roadways and knocked down power lines. Pickens County suffered \$10,000 of property damages. (*Source: NOAA NCDC*)

Sinkholes/Expansive Soils

During the risk assessment, it was determined that Pickens County has a very limited area of outcrops of carbonate rocks, and no active areas of sinkholes in the county. The Towns of Gordo and Reform have reported minor occurrences in the past due to water erosion. Impacts would include damage to roadways, infrastructure or other property. The City of Aliceville also identified this hazard in the risk assessment but has had no occurrences. Though the soils present in the county do have some shrink-swell potential, the risk assessment determined that a profile was not necessary. No expansive soil issues were reported from NOAA NCDC or other sources.

Landslides (Source: Local Input)

Landslide occurrences in Pickens County have been restricted to soil erosion along roadways during past construction of major road projects such as State Highway 82. No current events have been reported. McMullen and Reform identified this hazard however the absence of occurrences indicate a low vulnerability to landslides at this time.

Earthquakes (Sources: Alabama Geological Survey; USGS Database; NOAA NCDC; www.homefacts.com/earthquakes/Alabama.html)

Pickens County has not experienced an earthquake event since the early 1970's. The occurrence was minor and did not cause any damages. A major earthquake in Pickens County could result in great loss of life and property damage in the billions of dollars. Adding to the danger is the fact that structures in the area were not built to withstand earthquake shaking. 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.

Wildfires (Source: Alabama Forestry Commission)

Pickens County has a significant amount of acreage that is comprised of forestland and is therefore vulnerable to wildfires, especially during times of drought. 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. Pickens County experienced 419 wildfires from 1997 – 2012 resulting in 3,227 acres burned.

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

There are 31 dams in Pickens County, one of which is classified as having High Hazard potential. The high hazard dam is located in the rural area between Reform and Ethelsville. Aliceville and Memphis identified this hazard in their risk assessment. Potential impacts would include unregulated water flow, possible crop and property damage, and an increase of waterborne disease. 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 Pickens 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 2010 Census using breakouts for entire municipalities and census tracts.

According to the 2010 Census, Pickens County has 881.41 acres of land area and 22.4 persons per square mile.

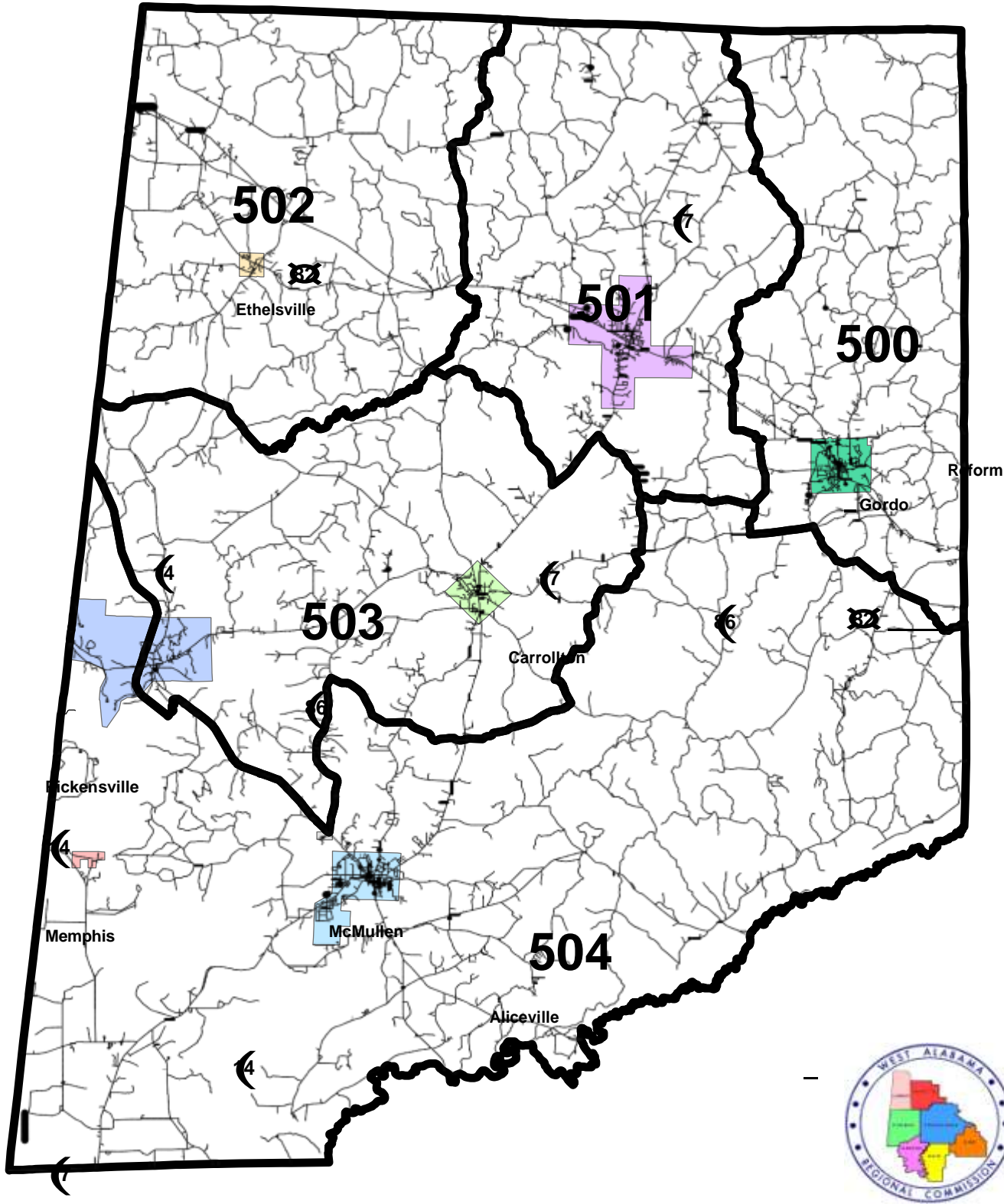
Table 4-2 shows the county's population characteristics by jurisdiction and by census tract. The City of Aliceville is the most populated jurisdiction, followed by the Towns of Gordo, Carrollton, and Reform. The county has five census tracts (See **Map 4-1**). In terms of vulnerability, the larger the population of an area the more people and structures that could possibly be damaged or destroyed. Tract 504 is the most populated tract. Tract 504 contains the City of Aliceville and the Towns of Memphis and McMullen (and portions of Pickensville). Tract 500 is the second most populated tract and includes the Town of Gordo. Tract 502 is the least populated tract and contains the Town of Ethelsville.

Table 4-2: Pickens County Population Characteristics

Geographic Area	<i>Population</i>	<i>Race-White</i>	<i>Race-Black</i>	<i>Race-Other*</i>	<i>Under 18 years</i>	<i>Age 18-64 years</i>	<i>Age 65 and Over</i>
Pickens County	19,746	11,110	8,211	425	4,601	11,809	3,336
Aliceville	5,384	1,971	3,303	110	1,280	3,168	936
Carrollton	3,840	1,461	2,231	148	923	2,406	511
Ethelsville	2,029	1,395	615	19	386	1,237	406
Gordo	4,837	3,858	868	111	1,214	2,821	802
McMullen	10	1	6	3	0	5	5
Memphis	29	0	29	0	0	25	4
Pickensville	608	220	386	2	148	353	107
Reform	3,656	2,425	1,194	37	798	2,177	681
Census Tracts							
500	4,837	3,858	868	111	1,214	2,821	802
501	3,656	2,425	1,194	37	798	2,177	681
502	2,029	1,395	615	19	386	1,237	406
503	3,840	1,461	2,231	148	923	2,406	511
504	5,423	1,972	3,338	113	1,280	3,198	945
<i>(Source: 2010 Census)</i>							

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MAP 4-1: Pickens County Census Tract Map



May 2008



Sources: U.S. Census Bureau TIGER Line Files

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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 4-3** shows the median household income, per capita income, and poverty level data for the jurisdictions and census tracts in Pickens 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 504 is the only tract that exceeds the state and national averages. Only one of the municipalities (Memphis) has a median household income that exceeds the state average, but is less than the national average. All other municipalities do not have a median household income that equals or exceeds either the state or national average. (*Source: 2010 Census*)

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. Tract 504 is the only tract that exceeds the state and national averages. Only one of the municipalities (Memphis) has a per capita income that exceeds the state and national averages. All other municipalities do not have a per capita income that equals or exceeds either the state or national average. (*Source: 2010 Census*)

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%. Much of the county is above one or both of these rates. Tract 502 is the only tract that is below the state and national rates. Only the Towns of Memphis and Ethelsville have rates that are below the state and national rates. The City of Aliceville has the highest poverty rate in the county at 54.1%. (*Source: 2010 Census*)

Table 4-3: Pickens County Income Data

Geographic Area	Median Household Income	Per Capita Income	Persons Below Poverty Level	Percent Below Poverty Level
Pickens County	\$28,762	\$17,024	5,410	27.4%
Aliceville	\$18,847	\$10,799	2,913	54.1%
Carrollton	\$30,729	\$16,204	1,429	37.2%
Ethelsville	\$41,607	\$14,600	136	6.7%
Gordo	\$21,854	\$18,432	1,224	25.3%
McMullen	\$17,188	\$12,645	3	31.4%
Memphis	\$48,603	\$43,206	3	9.8%
Pickensville	\$28,438	\$15,497	218	35.8%
Reform	\$18,313	\$15,434	1,108	30.3%
Census Tracts				
500	\$21,854	\$18,432	1,224	25.3%
501	\$18,313	\$15,434	1,108	30.3%
502	\$41,607	\$14,600	136	6.7%
503	\$30,729	\$16,204	1,429	37.2%
504	\$84,638	\$66,650	2,919	95.3%
<i>(Sources: 2010 Census; www.usa.com, 2014)</i>				

Vulnerable Structures

Housing is an important consideration of mitigation planning. The concentration and the type of housing are two primary factors. In Pickens County there are a total of 9,485 housing units. **Table 4-4** shows the housing characteristics of the county by jurisdiction.

The City of Aliceville has the greatest concentration of housing units, followed by the Towns of Reform and Gordo. The Town of Aliceville has the highest number of mobile home units within a municipality; while, McMullen 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 4-4: Pickens County Housing Characteristics			
Geographic Area	Total Housing Units	Mobile Home Units	Mobile Home %
Pickens County	9,485	2,077	21.0%
Aliceville	1,498	249	16.0%
Carrollton	509	51	10.0%
Ethelsville	25	5	20.0%
Gordo	786	12	0.01%
McMullen	29	11	37.0%
Memphis	38	0	0%
Pickensville	389	142	36.0%
Reform	932	84	9.0%
<i>(Source: 2010 Census)</i>			

Table 4-5 shows the building stock in Pickens County by general occupancy. The data provides the number of buildings by use and is shown by census tract. According to this data, provided by *HAZUS-MH 2.1* software, tract 504 has the highest number of structures in the county. Complementing this information is **Table 4-6** that provides the value totals for these building types and **Table 4-7** that provides the content value for these building types, each table is shown by Census Tract. Tract 504 also has the highest total value for structures in the county.

Table 4-5: Pickens County Building Stock by General Occupancy

Tract	Residential	Commercial	Industrial	Agriculture	Religious	Government	Education	Building Count
500	2,374	78	19	13	11	3	3	2,501
501	2,262	72	13	7	9	4	3	2,370
502	1,130	19	6	5	6	2	0	1,168
503	1,965	52	9	9	14	15	4	2,068
504	3,052	06	34	12	19	5	6	3,134
Total	10,783	227	81	46	59	29	16	11,241

(Source: HAZUS-MH 2.1, 2014)

Table 4-6: Pickens County Building Exposure

(Numbers shown in thousands of dollars)

Tract	Residential	Commercial	Industrial	Agriculture	Religious	Government	Education	Total Exposure
500	\$174,843	\$16,251	\$6,005	\$1,511	\$5,436	\$2,886	\$2,284	\$209,216
501	\$145,262	\$20,515	\$5,613	\$645	\$4,524	\$1,359	\$2,360	\$180,278
502	\$66,289	\$2,883	\$1,828	\$334	\$1,904	\$916	\$0	\$74,154
503	\$117,061	\$24,276	\$1,221	\$1,275	\$6,199	\$8,313	\$2,837	\$161,182
504	\$204,109	\$30,726	\$9,624	\$1,821	\$7,951	\$1,114	\$4,869	\$260,214
Total	\$707,564	\$94,651	\$24,291	\$5,586	\$26,014	\$14,588	\$12,350	\$885,044

(Source: HAZUS-MH 2.1, 2014)

Table 4-7: Pickens County Building Contents Exposure
(Numbers shown in thousands of dollars)

Tract	Residential	Commercial	Industrial	Agriculture	Religious	Government	Education	Total Exposure
500	\$87,677	\$17,233	\$8,580	\$1,511	\$5,436	\$4,059	\$2,284	\$126,780
501	\$72,834	\$21,169	\$5,366	\$645	\$4,524	\$1,359	\$2,360	\$108,257
502	\$33,204	\$2,980	\$2,454	\$389	\$1,904	\$1,291	\$0	\$42,222
503	\$58,657	\$29,832	\$1,688	\$1,224	\$6,199	\$8,313	\$2,837	\$108,750
504	\$102,310	\$31,377	\$11,776	\$1,821	\$7,951	\$1,466	\$4,869	\$161,570
Total	\$354,682	\$102,591	\$29,864	\$5,590	\$26,014	\$16,488	\$12,350	\$547,579

(Source: HAZUS-MH 2.1, 2014)

Critical Facility Inventory

Critical facilities are crucial to the daily operation of Pickens 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 4-8** 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 facilities based on the location of the facility without regard to ownership or function. The Pickens County Courthouse, for example, is shown on the Town of Carrollton’s list based on its location in the county seat. 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. Critical facilities in Pickens County identified as being in a special flood hazard area and particularly vulnerable to floods include:

Carrollton – Carrollton Sewer Lagoon at Latham Street \$2,000,000

Sewage lift Pump at Rear Tuscaloosa Street \$50,000

Sewage lift pump at Reform Street \$50,000

Bevill State Community College on Tuscaloosa Avenue \$3,000,000

New Construction of Critical Facilities

A medium-security federal prison is being constructed two miles north of the City of Aliceville on Highway 14. The new complex will house 1,400 female inmates, employ 350 people, and be valued at over \$200 million. The 650,000 square foot facility will incorporate 1,152 medium-security beds with an adjacent 256-bed minimum-security work camp and is expected to be complete in 2011.

2015 Plan Update: The Federal Correctional Institution in Aliceville (FCI Aliceville) a medium-security United States federal prison for female inmates in Alabama, opened in 2013 and is operated by the Federal Bureau of Prisons, a division of the United States Department of Justice. The FCI Aliceville also includes a satellite prison camp for minimum-security female inmates.

The Pickens County Water Authority is constructing a new water treatment plant north of the Town of Reform. The plant will cost approximately \$3 million. A new well we also be added to the system. Currently a test well is being constructed near the Town of Pickensville. The performance of the test well will ultimately determine the final location of the new well.

2015 Plan Update: Construction of additional new critical facilities and infrastructure will follow future development.

According to the West Alabama Regional Commission's (WARC) West Alabama Economic Development District *Comprehensive Economic Development Strategy 2012-2016* that can be found at www.warc.info:

- There is a new Westervelt Renewable Energy pellet plant in Pickens County.

- Other completed projects included projects to rehab infrastructure, upgrade vehicles/equipment for emergency first responders and law enforcement, acquire industrial sites, construct speculative buildings, improve healthcare facilities, construct storm shelters and add sidewalks near area schools, and GIS water system mapping by WARC

Also according to the West Alabama Regional Commission's (WARC) West Alabama Economic Development District *Comprehensive Economic Development Strategy 2012-2016* that can be found at www.warc.info, trends that continue to persist for Pickens County include:

- A large percentage of the District's residents are in the low-income category. One of the factors used in the Appalachian Regional Commission (ARC) "Distressed County" program is income. During FY 2012, only Hale County was classified as distressed by ARC. For FY 2013 Hale and Pickens were classified as distressed. Greene, Hale and Pickens, are included under the Delta Regional Authority program and all three are classified as distressed by DRA.
- A large number of the low skilled jobs have disappeared throughout the county and have not been replaced.
- Several municipalities need improvements/expansions to their water and sewer systems and several of the smaller municipalities still need sewer service. This lack of capacity continues to be a hindrance to both community and economic development.
- A large percentage of the homes, particularly in the rural areas, of the WARC District continue to be unsound. A shortage of sound housing continues in the district, especially for low-income residents.

Pickens County has experienced some success in reversing these trends; however, there is still much work to be done to reach the equivalence of the state and nation. These trends are important as they limit the District's competitiveness and hinder economic development opportunities. For additional information, view the West Alabama Regional Commission's (WARC) West Alabama Economic Development District *Comprehensive Economic Development Strategy 2012-2016* at www.warc.info.

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TABLE 4-8: Pickens County Critical Facilities (Source: Local and HAZUS-MH 2.1, 2014)

Facility	Location	Area	Use	Value
Governmental Services				
Bethlehem VFD	161 Bill Taylor Rd	Millport/Reform	Fire Service	\$79,540
Forest VFD Station 1	1159 CR 30	Ethelsville	Fire Service	\$54,100
Forest VFD Station 2	112 Bains Rd	Ethelsville	Fire Service	\$41,400
Kirk VFD	11995 Benevola Rd	Gordo	Fire Service	\$1,000,000
Liberty VFD	6315 Liberty Rd	Ethelsville	Fire and Rescue	\$1,000,000
Macedonia VFD	51 Brown Rd	Ethelsville	Fire Service	\$1,000,000
Marvin Chapel VFD	1263 Marvin Chapel Rd	Carrollton	Fire Service	\$1,000,000
McShan VFD	66 Oak Circle	Ethelsville	Fire Service	\$1,000,000
Memphis/Cochrane/Dancy VFD	1384 Hwy 17	Dancy	Fire Service	\$1,000,000
Palmetto VFD	School Circle Rd	Reform	Fire Service	\$1,000,000
Sapps VFD	5454 Sapps Rd	Aliceville	Fire Service	\$1,000,000
Summerville VFD	7240 CR 13	Aliceville	Fire Service	\$1,000,000
Zion VFD	8444 Hwy 59	Gordo	Fire Service	\$1,000,000
Public Works				
Water Pumping Station	Highway 75	Macedonia	Water Pumping	\$200,000
Water Tank #1- Hannah Tank	Hwy 159/Hannah Church Cir	Hannah Church	Potable Water	\$175,000
Water Tank #2- Pine Grove Tank	CR 26 & CR 75	Pine Grove	Potable Water	\$160,000
Water Tank #3- Marvin Chapel Tank	McDaniel Pate Rd	Marvin Chapel	Potable Water	\$250,000
Water Tank #4- Liberty Tank	CR 74 & CR 75	Andrews Chapel	Potable Water	\$150,000
Water Tank #5- Warehouse Tank	Hwy 86 W	Fire Tower Hill	Potable Water	\$200,000
Water Tank #6- McShan Tank	CR 30 @ Int. CR 35	McShan	Potable Water	\$150,000
Water Tank #7- Old 82 Tank	CR 30	b/t Reform & Gordo	Potable Water	\$150,000
Water Tank #8- Cochran Tank	Hwy 32 & Hwy 17	McDaniels Store	Potable Water	\$250,000
Water Tank #9- Ashcraft Corner	Hwy 159 & CR 59	Ashcraft Corner	Potable Water	\$100,000
Water Tank #10- Benevola Tank	Co. Hwy 63	Benevola	Potable Water	\$300,000
Water Tank #11- Palmetto Tank	CR 59 & Pobst Circle	Palmetto	Potable Water	\$175,000
Water Pumping Station	Hwy 30/ Old Hwy 82	W of Gordo	Water Pumping	\$21,000
Water Pumping Station	CR 30 & CR 27	W Reform	Water Pumping	\$26,000
Water Pumping Station	CR 30 & Hwy 45	Antioch	Water Pumping	\$26,000
Water Pumping Station	Hwy 17 N	N Reform	Water Pumping	\$26,000
Education				
Water Pumping Station	CR 30 & Hwy 57	Hargrove	Water Pumping	\$26,000
Water Pumping Station	Hwy 75	Macedonia	Water Pumping	\$9,000
Water Pumping Station	Co Rd 59 & CR 51	Palmetto	Water Pumping	\$9,000
Water Pumping Station	CR 5; 1 mi from Hwy 17	Lubbub	Water Pumping	\$15,000
Water Pumping Station	Hwy 14 & CR 19	McMullen	Water Pumping	\$22,000
Water Pumping Station	Hwy 82 & Floyds Mill Rd	S Carrollton	Water Pumping	\$26,000
Water Pumping Station	CR 29	N of Aliceville	Water Pumping	60,000
Water Pumping Station	Highland Dr & Hwy 17	S Aliceville	Water Pumping	\$70,000
Water Storage Warehouse	Co. Hwy 86	Outside Carrollton	Potable Water	\$36,000
Equipment Shed	Co. Hwy 86	Outside Carrollton	Potable Water	\$3,000
Well #1 Pickensville	Int. Hwy 86 & Hwy 14	Pickensville	Potable Water	\$236,000
Well #2 Cochran	Int. Hwy 17 & Hwy 32	Cochrane	Potable Water	\$164,000
Well #3 McShan	Co Rd 30 & Hwy 82	McShan	Potable Water	\$60,000
Well #4 Palmetto	Probst Cir & Co Rd 59	Palmetto	Potable Water	\$60,000
Well #5 Benevola	CR 63/ 8 miles S of Hwy 82	Benevola	Potable Water	\$60,000
Well #6 Hannah	Hwy 159/Hannah Church Cir	Hannah Church	Potable Water	\$60,000

Development Trends

The 2010 Census for Pickens County, Alabama shows a countywide population of 19,746. Current population projection numbers show that the population in Pickens County will continue decreasing within the next 20 years. There is a population change of -2,243 from 2010 to 2035, which is an 11.4% population decrease. **Table 4-9** provides the population projections for Pickens County.

YEAR	POPULATION PROJECTION
2015	19,292
2020	18,871
2025	18,431
2030	17,974
2035	17,503

(Sources: Center for Business and Economic Research, University of Alabama; Alabama Hazard Mitigation Plan, 2014)

The development trends in the county do not indicate any marked increase in vulnerability to identified hazards. The new federal prison near Aliceville created jobs and brought additional residents into the city and the surrounding county. A population increase was the result of both the inmate population and the employees at the facility. Changes to land use patterns may continue as the City of Aliceville responds and adjusts to the activities and needs associated with the correctional facility.

Methods of Warning

Pickens 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 Birmingham 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.

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

Pickens County EMA has 14 in-place outdoor warning sirens (two added within past five years). Although these sirens cover most of the populated areas, there are many places without an outdoor siren. An additional four sites have been selected for proposed sirens throughout the county. These four sites have been used in applications for community safe rooms, to include outdoor warning sirens that are awaiting FEMA's approval at the present time. **Table 4-10** lists the existing sirens. With the four exceptions mentioned above, outdoor warning sirens are becoming too expensive for the county to maintain; therefore as a new mitigation action for the 2015 plan update, distributing NOAA Weather Radios and/or Alert FM Receivers to residents has been added.

The existing sirens have an effective radiated coverage area of one mile around the siren. The sirens are activated only for Tornado Warnings but will be used to notify the public of Hazardous Materials Incidents in the near future. There is no ALL CLEAR siren sounding due to the possibility of public confusion. Weather Warnings sound like a long wail while Hazardous Material Alerts will have a distinct sound when the program goes on line. The siren blasts run three to five minutes.

The sirens are activated from the Pickens County E-911 Office. Activations may be completed in three separate south to north groupings or via the entire system simultaneously.

TABLE 4-10: Pickens County Outdoor Warning Sirens

Number	Jurisdiction	Address	Latitude	Longitude
1	County	4216 MLK Rd	33.1872	-88.1855
2	County	51 Brown Rd	33.3913	-88.2324
3	Memphis	708 William Price Rd	33.1381	-88.3065
4	County	School Circle Rd	33.4846	-87.9751
5	County	107 Poplar Springs Rd	33.3417	-88.0398
6	County	8444 Hwy 59	33.4226	-87.8760
7	County	6315 Liberty Rd	33.4778	-88.1705
8	Aliceville	215 1st St. NW	33.1289	-88.1528
9	Carrollton	100 Court Square	33.2616	-88.0953
10	Gordo	313 Main St S	33.3172	-87.9029
11	Pickensville	Water Ave & Hwy 86	33.2263	-88.2673
12	Reform	711 Park Drive	33.3720	-88.0195
13	County	1139 County 30	33.49530	-88.28423
14	County	7240 CR 13	33.0859	-88.1078

*All sirens have a one mile audible radius

(Source: Participating Jurisdictions, 2014)



FIGURE 4-2: PICKENS COUNTY OUTDOOR WARNING SIRENS

(Source: Google Earth and Pickens County EMA, 2014)

The entire countywide Outdoor Siren Warning System is periodically tested. Notification of testing is usually posted in the newspapers to avoid confusion. The general public is advised to not 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. As a backup to the Outdoor Siren Warning System, police and fire units throughout the county can be instructed to sound their sirens.

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 Pickens County residents are dedicated to informing their audiences of impending emergencies. These broadcasters have partnered with the Pickens 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 Pickens County market (ABC 33/40, NBC 13, and Fox 6) feature live Doppler radar and certificated meteorologists. Many of the radio stations provide continuous severe weather coverage. Local newspapers, outdoor warning sirens, NOAA radios, and ALERT FM also assist in informing the public of risks, threats, watches, warnings, evacuations, shelters, etc. The Pickens County EMA has printed and distributed materials with information concerning safe rooms, natural and man-made hazards, and what to do during tornados.

Vulnerability Summary

Table 4-12 provides a summary of Pickens 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 4-11 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 4-13 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 4-11: 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, 2014)</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 4-12: Pickens County Vulnerability Summary

Natural Hazards	Aliceville	Carrollton	Ethelsville	Gordo	McMullen	Memphis	Pickensville	Reform	Un-incorporated County
Thunderstorm	H	H	H	M	H	H	H	H	H
Lightning	H	H	H	M	H	H	H	H	H
Hail	H	H	M	L	M	H	H	H	M
Tornado	H	H	M	M	H	M	H	H	H
Flood/Flash Flood	M	H	L	M	L	M	L	L	L
Drought/ Extreme Heat	H	M	M	L	H	M	M	M	M
Winter Storm/ Frost Freeze/ Heavy Snow/ Ice Storm/Winter Weather/ Extreme Cold	M	M	M	M	H	L	H	L	L
Hurricane/Tropical Storm/Tropical Depression/ High Wind/ Strong Wind	M	M	L	L	H	L	H	L	L
Sinkhole/ Expansive Soil	L	N/A	N/A	L	N/A	N/A	N/A	N/A	N/A
Landslide	N/A	N/A	N/A	N/A	L	N/A	N/A	N/A	N/A
Earthquake	L	L	L	L	L	L	L	L	L
Wildfire	L	M	L	M	L	M	M	M	M
Dam/Levee Failure	M	N/A	N/A	N/A	N/A	L	N/A	N/A	N/A

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, 2014)

**Table 4-13: Pickens 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	4.9	0	0	\$0	\$3,449	\$3,759
Lightning	0	0	0	\$0	\$0	Unknown
Hail	3.2	0	0	\$0	\$375	\$409
Tornado	1.5	0	4	\$6,180	\$706,800	\$777,148
Flood/Flash Flood	1.7	2	1	\$431,952	\$5,059	\$476,342
Drought/Extreme Heat	1.6	0	0	\$0	\$0	Unknown
Winter Storm/Frost Freeze/ Heavy Snow/Ice Storm/Winter Weather/ Extreme Cold	0.7	0	0	\$0	\$0	Unknown
Hurricane/Tropical Storm/ Tropical Depression/High Wind/ Strong Wind	0.8	0	1	\$2,318	\$201,541	\$222,206
Sinkhole/Expansive Soil	0	0	0	\$0	\$0	Unknown
Landslide	0	0	0	\$0	\$0	Unknown
Earthquake	0	0	0	\$0	\$0	Unknown
Wildfire (15 year study period)	27.9	0	0	\$0	\$409,640	\$446,508
Dam/Levee Failure	0	0	0	\$0	\$0	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, 2014

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 during the ten-year period with the exception of wildfire which is a 15-year period (# fires x # acres per fire x \$1,900/acre average). 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 denotes no data available to determine the average occurrences, average loss or projected loss per event.

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 2009 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. **Table 4-14** shows Pickens County's updated mitigation actions for the 2015 plan revision. During the plan update process new actions were identified and added to the plan. In the 2009 plan revision, priorities were expressed by numbering 1 as the highest priority – the higher the number, the lower the priority. For this plan revision, the committee decided to assign a new prioritization labeling as one project may be equally as important as another project. As a result, projects will be labeled high, medium, and low in priority. 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.

Mitigation Strategy – Pickens County

Goal 1: Protect life

Objective 1.1 Improve Warning and Emergency Communication Systems

Action 1.1.1 Upgrade communication system

Action 1.1.2 Distribute NOAA Weather Radios and/or Alert FM Receivers to residents

Objective 1.2 Reduce impact of hazards on vulnerable populations

Action 1.2.1 Install/construct community safe rooms to include outdoor warning sirens, if needed

Action 1.2.2 Install/construct individual storm shelters

Objective 1.3 Improve disaster response and recovery through training and exercising

Goal 2: Protect property

Objective 2.1 Reduce losses to critical facilities/assets

Action 2.1.1 Install emergency generators at critical facilities

Objective 2.2 Continue Participation in NFIP program; encourage non-participating communities to join NFIP

Action 2.2.1 Enforce floodplain management requirements; regulate construction and improvements in Special Flood Hazard Areas (SFHAs).

Objective 2.3 Provide and maintain essential public services

Objective 2.4 Reduce losses due to drainage problems

Action 2.4.1 Upgrade drainage system

Goal 3: Reduce economic impacts of disasters

Objective 3.1 Maintain operations of critical businesses and major employers

Goal 4: Protect environment and natural resources

Objective 4.1 Identify, protect, and properly manage floodplains

Objective 4.2 Encourage non-participating communities to participate in NFIP program and enforce NFIP local codes and regulations

Goal 5: Increase public preparedness for disasters

Objective 5.1 Continue to train severe weather spotters

BENCHMARKING:

During 2010, Pickens County used Department of Homeland Security funds to begin upgrades to their communications. In 2012, the county added two outdoor warning sirens. There was no additional funding to complete the remaining mitigation actions. All mitigation actions from the 2009 plan update will remain in the 2015 plan update.

Table 4-14: Pickens County Mitigation Actions, 2014

Mitigation Action 1.1.1	Upgrade communication systems
Hazard(s) Addressed	All
Applies to new/existing asset	Existing
Local Planning Mechanism	Pickens County EMA, Pickens County Commission
Time frame for Completion	1 year from funding availability
Estimated Cost	
Funding Sources	HMPG, Local
Priority	High
Mitigation Action 1.1.2	Distribute NOAA Weather Radios and/or Alert FM Receivers to residents
Hazard(s) Addressed	All
Applies to new/existing asset	New and Existing
Local Planning Mechanism	Pickens County EMA
Time frame for Completion	1 year from funding availability
Estimated Cost	\$50,000
Funding Sources	HMGP, Local
Priority	High
Mitigation Actions 1.2.1 and 1.2.2	Install community safe rooms to include outdoor warning sirens if needed and install individual storm shelters throughout county
Hazard(s) Addressed	All
Applies to new/existing asset	New and Existing
Local Planning Mechanism	Pickens County EMA
Time frame for Completion	3 years from funding availability
Estimated Cost	\$3,500 to \$100,000
Funding Sources	HMGP, ADECA, Governor's Emergency Relief Fund, Local
Priority	High
Mitigation Action 2.1.1	Install emergency generators at critical facilities
Hazard(s) Addressed	All
Applies to new/existing asset	New and Existing
Local Planning Mechanism	Pickens County EMA & Pickens County Water Authority
Time frame for Completion	1 year from funding availability
Estimated Cost	\$35,000 ea
Funding Sources	HMGP, ADECA, Local
Priority	High

Mitigation Action 2.2.1	Enforce floodplain management requirements; regulate construction and improvements in Special Flood Hazard Areas (SFHA's)
Hazard(s) Addressed	Flood
Applies to new/existing asset	New and Existing
Local Planning Mechanism	Pickens County
Time frame for Completion	Continuous
Estimated Cost	
Funding Sources	NFIP, CDBG, HMGP, Local
Priority	Low
Mitigation Action 2.4.1	Upgrade drainage systems
Hazard(s) Addressed	Flood
Applies to new/existing asset	Existing
Local Planning Mechanism	Pickens County EMA & Pickens County
Time frame for Completion	1 year from funding availability
Estimated Cost	
Funding Sources	NFIP, CDBG, HMGP, Local
Priority	Medium

Section Five: Jurisdiction Assessments

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CITY OF ALICEVILLE

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

Natural Hazards	Hazard Identification	Mitigation Actions Prioritization	Prioritized Occurrence Threat	Vulnerability
Thunderstorm	X	2	3	H
Lightning	X	3	8	H
Hail	X	3	4	H
Tornado	X	2	7	H
Flood/Flash Flood	X	1	5	M
Drought/Extreme Heat	X	4	2	H
Winter Storm/Frost Freeze/ Heavy Snow/ Ice Storm/Winter Weather/Extreme Cold	X	4	6	M
Hurricane/Tropical Storm/ Tropical Depression/High Wind/ Strong Wind	X	2	5	M
Sinkhole/Expansive Soil	X	5	10	L
Landslide	N/A	5	1	N/A
Earthquake	X	5	1	L
Wildfire	X	5	1	L
Dam/Levee Failure	X	5	9	M

Sources: NOAA NCDC Storm Events Database; Alabama Forestry Commission; National Forestry Service; Alabama Geological Survey; Participating Jurisdictions, 2014

KEY

Hazard Identification: X Affects the Jurisdiction, N/A Not a threat to the jurisdiction

Priority: 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 fifteen 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: 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)

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TABLE 5-2: CITY OF ALICEVILLE HAZARD EVENTS

11 Thunderstorms 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>
ALICEVILLE	PICKENS CO.	AL	05/06/2003	17:10	CST	Thunderstorm Wind	50 kts. EG	0	0	6.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	07/04/2004	16:58	CST	Thunderstorm Wind	50 kts. EG	0	0	7.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	12/09/2004	06:05	CST	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	01/13/2005	08:00	CST	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	03/13/2005	18:25	CST	Thunderstorm Wind	51 kts. EG	0	0	10.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	07/29/2006	14:56	CST	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	08/02/2008	18:59	CST-6	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	04/19/2009	14:06	CST-6	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	10/09/2009	15:15	CST-6	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	04/24/2010	07:05	CST-6	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	04/11/2011	16:56	CST-6	Thunderstorm Wind	60 kts. EG	0	0	20.00K	0.00K
Totals:								0	0	62.00K	0.00K

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

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
ALICEVILLE	PICKENS CO.	AL	05/02/2003	15:10	CST	Hail	0.75 in.	0	0	0.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	04/07/2004	16:11	CST	Hail	1.25 in.	0	0	0.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	04/07/2004	17:00	CST	Hail	1.25 in.	0	0	0.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	03/13/2005	18:15	CST	Hail	0.75 in.	0	0	0.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	03/22/2005	19:59	CST	Hail	0.75 in.	0	0	0.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	04/03/2006	03:41	CST	Hail	1.00 in.	0	0	0.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	03/01/2007	15:20	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	03/01/2007	16:05	CST-6	Hail	0.75 in.	0	0	0.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	02/27/2009	15:00	CST-6	Hail	0.75 in.	0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

2 Tornado 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
ALICEVILLE	PICKENS CO.	AL	04/06/2005	16:51	CST	Tornado	F0	0	0	50.00K	0.00K
ALICEVILLE	PICKENS CO.	AL	09/25/2005	13:04	CST	Tornado	F0	0	0	4.00K	0.00K
Totals:								0	0	54.00K	0.00K

8 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	PICKENS CO.	AL	02/05/2004	19:05	CST	Flash Flood		0	0	10.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	02/05/2004	20:30	CST	Flash Flood		0	0	5.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	02/05/2004	23:30	CST	Flash Flood		0	0	5.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	12/09/2004	06:30	CST	Flash Flood		0	0	6.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	05/18/2003	06:00	CST	Flood		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	05/20/2003	08:00	CST	Flood		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/01/2005	00:00	CST	Flood		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	06/12/2005	06:45	CST	Flood		0	0	0.00K	0.00K
Totals:								0	0	26.00K	0.00K

16 Drought/Extreme Heat 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>
PICKENS (ZONE)	PICKENS (ZONE)	AL	07/18/2006	07:00	CST	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/01/2006	00:00	CST	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/01/2006	00:00	CST	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	05/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	06/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	07/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	10/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	11/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	12/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	01/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	02/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	03/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

5 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
PICKENS (ZONE)	PICKENS (ZONE)	AL	01/24/2003	00:00	CST	Extreme Cold/Wind Chill		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/07/2007	00:00	CST-6	Frost Freeze		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/08/2007	00:00	CST-6	Frost Freeze		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	01/09/2011	12:45	CST-6	Ice Storm		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	12/15/2010	05:00	CST-6	Winter Weather		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

**8 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>
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/16/2004	07:30	CST	High Wind (Ivan)	56 kts. EG	0	0	600.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	06/11/2005	18:00	CST	Strong Wind (Arlene)	40 kts. EG	0	0	8.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/12/2009	20:30	CST-6	Strong Wind	43 kts. EG	0	0	75.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/05/2011	12:00	CST-6	Strong Wind (Lee)	39 kts. EG	0	0	5.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/05/2011	18:00	CST-6	Strong Wind (Lee)	43 kts. EG	0	0	5.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/23/2008	12:00	CST-6	Tropical Depression (Fay)		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	07/10/2005	16:00	CST	Tropical Storm (Dennis)		0	0	65.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/29/2005	18:00	CST	Tropical Storm (Katrina)		0	1	500.00K	0.00K
Totals:								0	1	1,258.00M	0.00K

LOCAL INPUT ON TROPICAL STORM/TROPICAL DEPRESSION EVENTS

Location	Date	Type	Dth	Inj	PrD	CrD	Total Cost	Associated Hurricane
Aliceville	8/29/2005	Tropical Storm	0	0	\$64,049	\$0	\$64,049	Katrina
Pickens County	6/11/2005	Tropical Depression	0	0	\$104,000	\$0	\$104,000	Arlene
Pickens County	7/10/2005	Tropical Storm	0	0	\$65,000	\$0	\$65,000	Dennis
Pickens County	8/29/2005	Tropical Storm	0	0	\$500,000	\$0	\$500,000	Katrina
Pickens County Individual Assistance	8/29/2005	Tropical Storm	0	0	\$837,037	\$0	\$837,037	Katrina
TOTALS			0	0	\$1,570,086	\$0	\$1,570,086	

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.

0 Earthquake 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.

419 Wildfire Events – 1997 thru 2012

(Source: Alabama Forestry Commission)

County	Total # of Fires	Average # of Fires	Total Acres Burned	Average Acres Burned	Average Fire Size
Pickens	419	28	3,227	215	7.7

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 Aliceville
Hazard Probability Assessment**

Natural Hazards	Number of Historical Occurrences	Probability of Future Occurrence	Extent	Area Affected
Thunderstorm	11	>100%	>10%	Citywide
Lightning	0	Unknown	>10%	Citywide
Hail	9	90%	>10%	Citywide
Tornado	2	20%	>10%	Citywide
Flood/Flash Flood	8	80%	5-10%	Citywide
Drought/Extreme Heat	16	>100%	>10%	Citywide
Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	5	50%	5-10%	Citywide
Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind	8	80%	5-10%	Citywide
Sinkhole/Expansive Soil	0	Unknown	<5%	Citywide
Landslide	0	Unknown	<5%	N/A
Earthquake	0	Unknown	<5%	Citywide
Wildfire (1997-2012 – 15 year study period – 5,475 days)	419	>100%	<5%	Citywide
Dam/Levee Failure	0	Unknown	5-10%	Citywide

Sources: 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, 2014

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 15 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 5-4: City of Aliceville Critical Facilities

Governmental Services			
Aliceville City Hall	1419 Memorial Pkwy	Local Government	\$25,280
Aliceville Fire Department	215 1st St. NE	Fire & Rescue	\$545,000
Aliceville Police Department	215 1st St. NE	Police Dispatch	\$1,260,000
Public Works			
Water Well #1	719 3rd St SE	Water Supply	\$163,500
POW #1/350k generator	1201 Memorial Field Rd	Water Supply	\$250,000
POW #2	1202 Foundry Rd	Water Supply	\$120,000
City Well	Hwy 14E	Water Supply	\$52,000
Water Pump Station/100k generator	4th Ave NE	Water Pumping	\$135,000
Water Dept. Office	311 3rd Ave	Water Supply	\$50,000
Sewer Pumping Station	Eutaw Rd	Sewage Pumping	\$45,000
175K Taylor Generator	Water Dept. Warehouse	Water/Power Backup	\$35,500
Water Tank #1 (250K gal; EST)	Hood Hill	Water Supply	\$1,000,000
Water Tank #2 (750K gal; GST)	Brood St	Water Supply	\$780,000
Water Dept. Warehouse	1202 Foundry Rd	Water Equipment	\$175,000
East Sewer Lagoon	East of Aliceville	Sewage	\$59,940,000
West Sewer Lagoon	West of Aliceville	Sewage	\$59,940,000
O'Brien Sewer Clean- Out Machine	Mobile- Warehouse	Sewage	\$29,750
Water Tank #3 – 1 mil gals		Water Supply	\$1,500,000
Water Tank #4 – 750,000 gals		Water Supply	\$1,500,000
Education			
Aliceville Elementary School	800 Columbus Rd. NW	Education	\$3,659,290
Aliceville High School	417 3rd Street SE	Education	\$6,785,960
Aliceville Middle School	Columbus Rd. NW	Education	\$2,829,670
Industrial			
Miscellaneous			
Alabama National Guard	43 Jasper Road	Military	\$2,000,000
Alabama Power Substation	Highway 2	Electrical	\$1,500,000
Alabama Power Substation	Highway 17 South	Electrical	\$1,000,000
Wheat Nursing Home	703 17th Street NW	Health Care	\$1,453,860
Army National Guard	539 Memorial Pkwy NW	Military	\$2,000,000
Outdoor Weather Siren (#8)	215 1st St. NW	Weather Warning	\$25,000
Southern Natural Gas Co.	Aliceville	Natural Gas	\$981,000
<i>(Source: Local Jurisdiction; HAZUS-MH 2.1, 2014)</i>			TOTAL
			\$150,697,030

**Table 5-5: City of Aliceville
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	1.1	0	0	\$0	\$5,636	\$6,143
Lightning	0	0	0	\$0	\$0	Unknown
Hail	.9	0	0	\$0	\$0	Unknown
Tornado	.2	0	0	\$0	\$27,000	\$29,430
Flood/Flash Flood	.8	0	0	\$0	\$3,250	\$3,543
Drought/Extreme Heat	1.6	0	0	\$0	\$0	Unknown
Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	.5	0	0	\$0	\$0	Unknown
Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind	.8	0	1	\$2,897	\$157,250	\$174,560
Sinkhole/Expansive Soils	0	0	0	\$0	\$0	Unknown
Landslide	0	0	0	\$0	\$0	Unknown
Earthquake	0	0	0	\$0	\$0	Unknown
Wildfire (15 year study period)	27.9	0	0	\$0	\$14,633	\$15,950
Dam/Levee Failure	0	0	0	\$0	\$0	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, 2014

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 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 denotes no data available to determine the average occurrences, average loss or projected loss per event.

City of Aliceville Mitigation Action Plan

The City of Aliceville recognizes the importance of mitigation planning and will incorporate mitigation planning in planning documents as they are revised or initiated. The City of Aliceville has annexed up Highway 14 to include the new correctional facility. There are no other known or anticipated annexations by the City of Aliceville for the next five years.

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. **Table 5-6** shows the City of Aliceville's updated mitigation actions. During the plan update process new actions were identified and added to the plan. In the 2009 plan revision, priorities were expressed by numbering 1 as the highest priority – the higher the number, the lower the priority. For this plan revision, the committee decided to assign a new prioritization labeling as one project may be equally as important as another project. As a result, projects will be labeled high, medium, and low in priority.

Mitigation Strategy – City of Aliceville

Goal 1: Protect life

Objective 1.1 Improve Warning and Emergency Communication Systems

Action 1.1.1 Upgrade/expand communication system

Action 1.1.2 Install additional outdoor warning sirens

Objective 1.2 Reduce impact of hazards on vulnerable populations

Action 1.2.1 Construct long-term community safe rooms with generators

Objective 1.3 Improve disaster response and recovery

Goal 2: Protect property

Objective 2.1 Reduce losses to critical facilities/assets

Action 2.1.1 Provide adequate kilowatt generators to critical facilities

Objective 2.2 Continue Participation in NFIP program
Action 2.2.1 Enforce floodplain management requirements; regulate construction or improvements in Special Flood Hazard Areas (SFHAs).

Objective 2.3 Provide and maintain essential public services
Action 2.3.1 Construct public safety building

Objective 2.4 Reduce losses due to drainage problems
Action 2.4.1 Upgrade drainage system

Goal 3: Reduce economic impacts of disasters

Objective 3.1 Maintain operations of critical businesses and major employers

Goal 4: Protect environment and natural resources

Objective 4.1 Identify, protect, and properly manage floodplains

Objective 4.2 Enforce local codes and regulations related to NFIP

Goal 5: Increase public preparedness for disasters

Objective 5.1 Continue to train severe weather spotters

BENCHMARKING:

In 2012, two outdoor warning sirens have been added to the county using Department of Homeland Security funds. There was no additional funding to complete the remaining mitigation actions. All mitigation actions from the 2009 plan update will remain in the 2015 plan update.

Table 5-6: Aliceville Mitigation Actions 2015

Mitigation Action 1.1.1	Upgrade communications systems
Hazard(s) Addressed	All
Applies to new/existing asset	Existing
Local Planning Mechanism	Pickens County EMA, City of Aliceville
Time frame for Completion	One year from funding availability
Estimated Cost	\$25,000
Funding Sources	HMGP, Local
Priority	High
Mitigation Action 1.1.2	Install additional outdoor warning sirens in city
Hazard(s) Addressed	All
Applies to new/existing asset	New/ Existing
Local Planning Mechanism	Pickens County EMA, City of Aliceville
Time frame for Completion	One year from funding availability
Estimated Cost	\$15,000 each
Funding Sources	HMGP, ADECA, Local
Priority	Medium
Mitigation Action 1.2.1	Plan, fund, and build long-term community safe rooms to include generators
Hazard(s) Addressed	All
Applies to new/existing asset	New
Local Planning Mechanism	Pickens County EMA, City of Aliceville
Time frame for Completion	Two years from funding availability
Estimated Cost	\$250,000 ea
Funding Sources	HMGP, ADECA, Governor's Emergency Relief Fund, Local
Priority	Medium
Mitigation Action 2.1.1	Install generators at critical facilities
Hazard(s) Addressed	All
Applies to new/existing asset	New
Local Planning Mechanism	Pickens County EMA, City of Aliceville
Time frame for Completion	One year from funding availability
Estimated Cost	\$38,000 - \$45,000 ea
Funding Sources	HMGP, ADECA, Local
Priority	High
Mitigation Action 2.2.1	Enforce floodplain management requirements; regulate construction or improvement in Special Flood Hazard Areas (SFHA's)
Hazard(s) Addressed	Flood
Applies to new/existing asset	New and Existing
Local Planning Mechanism	City of Aliceville
Time frame for Completion	Continuous
Estimated Cost	
Funding Sources	NFIP, CDBG, Local
Priority	Low

Mitigation Action 2.3.1	Construct public safety building
Hazard(s) Addressed	All
Applies to new/existing asset	New and Existing
Local Planning Mechanism	City of Aliceville
Time frame for Completion	Two years from funding availability
Estimated Cost	\$1,620,000
Funding Sources	Local
Priority	Low
Mitigation Action 2.4.1	Upgrade drainage systems throughout city
Hazard(s) Addressed	Flood
Applies to new/existing asset	New and Existing
Local Planning Mechanism	City of Aliceville
Time frame for Completion	One year from funding availability
Estimated Cost	\$400,000
Funding Sources	HMGP, CDBG, Local
Priority	Low

Town of Carrollton

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**Table 5-7: Town of Carrollton
Risk and Vulnerability Overview**

Natural Hazards	Hazard Identification	Mitigation Actions Prioritization	Prioritized Occurrence Threat	Vulnerability
Thunderstorm	X	1	3	H
Lightning	X	3	8	H
Hail	X	4	6	H
Tornado	X	2	7	H
Flood	X	6	3	H
Drought/Extreme Heat	X	5	2	M
Winter Storm/Frost Freeze/ Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	X	8	5	M
Hurricane/Tropical Storm/ Tropical Depression/ High Wind/ Strong Wind	X	4	4	M
Sinkhole/Expansive Soil	N/A	N/A	9	N/A
Landslide	N/A	N/A	9	N/A
Earthquake	X	10	9	L
Wildfire	X	9	1	M
Dam/Levee Failure	N/A	N/A	9	N/A

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 fifteen 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, 2014)

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TABLE 5-8: TOWN OF CARROLLTON HAZARD EVENTS

10 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
CARROLLTON	PICKENS CO.	AL	02/22/2003	00:25	CST	Thunderstorm Wind	55 kts. EG	0	0	3.00K	0.00K
CARROLLTON	PICKENS CO.	AL	04/06/2003	15:17	CST	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	12/09/2004	06:05	CST	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	01/13/2005	08:00	CST	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
CARROLLTON	PICKENS CO.	AL	07/19/2006	16:30	CST	Thunderstorm Wind	55 kts. EG	0	0	5.00K	0.00K
CARROLLTON	PICKENS CO.	AL	02/24/2007	23:20	CST-6	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
CARROLLTON	PICKENS CO.	AL	01/10/2008	15:25	CST-6	Thunderstorm Wind	43 kts. EG	0	0	2.00K	0.00K
CARROLLTON	PICKENS CO.	AL	05/20/2010	14:09	CST-6	Thunderstorm Wind	40 kts. EG	0	0	5.00K	0.00K
CARROLLTON	PICKENS CO.	AL	06/28/2011	11:46	CST-6	Thunderstorm Wind	40 kts. EG	0	0	0.50K	0.00K
CARROLLTON	PICKENS CO.	AL	06/04/2012	06:18	CST-6	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
Totals:								0	0	27.50K	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>
CARROLLTON	PICKENS CO.	AL	05/02/2003	14:14	CST	Hail	0.88 in.	0	0	0.00K	0.00K
CARROLLTON	PICKENS CO.	AL	03/22/2005	19:29	CST	Hail	0.75 in.	0	0	0.00K	0.00K
CARROLLTON	PICKENS CO.	AL	02/03/2006	17:55	CST	Hail	0.75 in.	0	0	0.00K	0.00K
CARROLLTON	PICKENS CO.	AL	03/15/2008	00:45	CST-6	Hail	0.75 in.	0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

2 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>
CARROLLTON	PICKENS CO.	AL	05/06/2009	07:31	CST-6	Tornado	EF1	0	0	50.00K	0.00K
CARROLLTON	PICKENS CO.	AL	04/27/2011	03:27	CST-6	Tornado	EF2	0	0	1.800M	0.00K
Totals:								0	0	1.850M	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>
PICKENS (ZONE)	PICKENS (ZONE)	AL	05/18/2003	06:00	CST	Flood		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	05/20/2003	08:00	CST	Flood		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/01/2005	00:00	CST	Flood		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	06/12/2005	06:45	CST	Flood		0	0	0.00K	0.00K
CARROLLTON	PICKENS CO.	AL	09/05/2011	15:00	CST-6	Flood		0	0	0.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	02/05/2004	19:05	CST	Flash Flood		0	0	10.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	02/05/2004	20:30	CST	Flash Flood		0	0	5.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	02/05/2004	23:30	CST	Flash Flood		0	0	5.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	12/09/2004	06:30	CST	Flash Flood		0	0	6.00K	0.00K
CARROLLTON	PICKENS CO.	AL	09/05/2011	09:00	CST-6	Flash Flood		0	0	0.00K	0.00K
Totals:								0	0	26.00K	0.00K

16 Drought/Extreme Heat 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
PICKENS (ZONE)	PICKENS (ZONE)	AL	07/18/2006	07:00	CST	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/01/2006	00:00	CST	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/01/2006	00:00	CST	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	05/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	06/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	07/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	10/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	11/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	12/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	01/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	02/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	03/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

7 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
PICKENS (ZONE)	PICKENS (ZONE)	AL	01/24/2003	00:00	CST	Extreme Cold/Wind Chill		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/07/2007	00:00	CST-6	Frost Freeze		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/08/2007	00:00	CST-6	Frost Freeze		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	03/01/2009	00:30	CST-6	Heavy Snow		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	02/09/2011	16:15	CST-6	Heavy Snow		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	01/09/2011	12:45	CST-6	Ice Storm		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	12/15/2010	05:00	CST-6	Winter Weather		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

**8 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>
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/16/2004	07:30	CST	High Wind (Ivan)	56 kts. EG	0	0	600.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	06/11/2005	18:00	CST	Strong Wind (Arlene)	40 kts. EG	0	0	8.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/12/2009	20:30	CST-6	Strong Wind	43 kts. EG	0	0	75.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/05/2011	12:00	CST-6	Strong Wind (Lee)	39 kts. EG	0	0	5.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/05/2011	18:00	CST-6	Strong Wind (Lee)	43 kts. EG	0	0	5.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/23/2008	12:00	CST-6	Tropical Depression (Fay)		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	07/10/2005	16:00	CST	Tropical Storm (Dennis)		0	0	65.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/29/2005	18:00	CST	Tropical Storm (Katrina)		0	1	500.00K	0.00K
Totals:								0	1	1,258.00M	0.00K

Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind Events
(Source: Local Input)

Location	Date	Type	Mag	Dth	Inj	Pr	Cr	Total Cost	Comments
Carrollton	9/16/2004	Tropical Storm	N/A	0	0	\$2,658		\$2,658	Ivan
TOTALS						\$2,658		\$2,658	

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.

0 Earthquake 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.

419 Wildfire Events – 1997 thru 2012

(Source: Alabama Forestry Commission)

County	Total # of Fires	Average # of Fires	Total Acres Burned	Average Acres Burned	Average Fire Size
Pickens	419	28	3,227	215	7.7

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.

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**Table 5-9: Town of Carrollton
Hazard Probability Assessment**

Natural Hazards	Number of Historical Occurrences	Probability of Future Occurrence	Extent	Area Affected
Thunderstorm	10	100%	>10%	Town wide
Lightning	0	Unknown	>10%	Town wide
Hail	4	40%	>10%	Town wide
Tornado	2	2%	>10%	Town wide
Flood/Flash Flood	10	100%	>10%	Town wide
Drought/Extreme Heat	16	>100%	5-10%	Town wide
Winter Storm/Frost Freeze/Heavy Snow/ Ice Storm/Winter Weather/ Extreme Cold	7	70%	5-10%	Town wide
Hurricane/High Wind/ Strong Wind/ Tropical Storm/ Tropical Depression	8	80%	5-10%	Town wide
Sinkhole/Expansive Soil	0	Unknown	Unknown	N/A
Landslide	0	Unknown	Unknown	N/A
Earthquake	0	Unknown	<5%	Town wide
Wildfire (1997-2012 – 15 year study period – 5,475 days)	419	>100%	5-10%	Town wide
Dam/Levee Failure	0	Unknown	N/A	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, 2014

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 15 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: Town of Carrollton Critical Facilities, 2015

Facility	Location	Use	Value
Governmental Services			
Carrollton City Hall/ Police Station	100 Court Sq.	Local Government/Police	\$1,260,000
Carrollton Fire Department	55 Fire House Dr.	Police/ Fire Dispatch	\$1,000,000
Pickens County Judicial Center	20 Phoenix Ave	Local Government	\$5,000,000
Pickens County EMA Office	82 Commerce Ave	Local Government	\$350,000
Pickens County Jail/ Sheriff	183 Cemetery St	Local Government	\$3,500,000
Pickens County Probate/ DA	50 Courthouse Square	Local Government	\$2,000,000
Pickens County Service Center	155 Reform St	Local Government	\$3,000,000
Pickens County Engineers	41 Elliott St	Local Government	\$500,000
Community Safe Room	41 Elliott St	Safe Room	\$86,000
Public Works			
Carrollton Sewage Lagoon	474 Latham St.	Sewage	\$59,940,000
City Equipment Storage	CR 35& Phoenix Ave.	Storage	\$500,000
Water Tank (350K gal)	West end of Sanders St	Water Supply	\$500,000
Pickens County Equipment Shop	210 Phoenix Ave	Storage	\$500,000
Carrollton Water/ Street Shop	69 Spring St		\$1,000,000
Carrollton Sewer Lift Pump/Generator	554 Reform St	Sewage	\$125,000
Carrollton Sewer Lift Pump	234 W.E. Hill Dr.	Sewage	\$100,000
Carrollton Sewer Lift Pump	333 Ray Bass Rd	Sewage	\$100,000
Carrollton Sewer Lift Pump	155 Rear Tuscaloosa St	Sewage	\$100,000
Pickens County Water Authority	90 Phoenix Ave	Water Supply	\$500,000
Industrial			
Education			
Pickens County High	101 Commerce St.	Education	\$4,480,300
Pickens Academy	225 Ray Bass Hwy	Education	\$4,925,710
Bevill State Community College	401 Tuscaloosa Ave	Education	\$3,000,000
Lakeview Head Start	63 Lakeside St	Education	\$808,300
Pickens County Bus Shop	640 Reform St	Education	\$790,700
Robinson Geer Center	890 Reform St	Education	\$500,000
LaDow Technical Center	377 LaDow Center Circle	Education	\$6,733,560
Lakeside Center	101 Commerce Avenue	Education	\$4,349,300
Carrollton High School	101 Commerce Avenue	Education	\$4,349,300
Miscellaneous			
Alabama Power Substation	East & Sanders St.	Electricity	\$2,000,000
Pickens County Ambulance	54 Firehouse Dr	Health Services	\$1,000,000
Carrollton Baptist Church	30 Cemetery St	Shelter	\$2,000,000
Carrollton Methodist Church	87 Tuscaloosa Ave	Shelter	\$2,000,000
First National Bank of Carrollton	160 Reform St	Financial	\$1,000,000
West Alabama Bank	86 Court Square	Financial	\$1,000,000
Outdoor Warning Siren (#9)	100 Court Square	Weather Warning	\$20,000
WRAG 590		Broadcast Facility	\$90,000
WALN CH 207		Broadcast Facility	\$90,000
WZBQ CH 231		Broadcast Facility	\$90,000
<i>-MH 2.1 and Local Jurisdiction</i>		TOTAL	\$119,288,170

**Table 5-11: Town of Carrollton
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	0	0	\$0	\$2,750	\$2,998
Lightning	0	0	0	\$0	\$0	Unknown
Hail	0.4	0	0	\$0	\$0	Unknown
Tornado	0.2	0	4	\$0	\$925,000	\$1,008,250
Flood/Flash Flood	1	2	1	\$0	\$2,600	\$2,834
Drought/Extreme Heat	1.6	0	0	\$0	\$0	Unknown
Winter Storm/Frost Freeze/ Heavy Snow/Ice Storm/Winter Weather/ Extreme Cold	0.7	0	0	\$0	\$0	Unknown
Hurricane/Tropical Storm/ Tropical Depression/High Wind/ Strong Wind	0.8	0	1	\$2,897	\$201,541	\$222,837
Sinkhole/Expansive Soil	0	0	0	\$0	\$0	Unknown
Landslide	0	0	0	\$0	\$0	Unknown
Earthquake	0	0	0	\$0	\$0	Unknown
Wildfire (15 year study period)	27.9	0	0	\$0	\$14,633	\$15,950
Dam/Levee Failure	0	0	0	\$0	\$0	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, 2014

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 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 denotes no data available to determine the average occurrences, average loss or projected loss per event.

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Town of Carrollton Mitigation Action Plan

The Town of Carrollton recognizes the importance of mitigation planning and will incorporate mitigation planning in planning documents as they are revised or initiated. During the past five years, the town has not had the funds to complete the mitigation actions listed in the 2009 plan revision. During the next five years, the town is pursuing emergency backup generators be installed (listed in order of priority) at the sewer lift pumps located at 242 W. E. Hill Drive; 333 Ray Bass Road; 155 Rear Tuscaloosa St.; at the city hall located at 100 Court Square; at the fire department located at 55 Fire House Drive; and at the lagoon located on Latham Street. As new mitigation actions, the town is pursuing constructing/installing community safe rooms and individual storm shelters. The Town of Carrollton is a participating member of the National Flood Insurance Program (NFIP) with a current effective map date of 2010. The town intends to upgrade its drainage systems by ditching nine miles of streets and all waterways emptying into Lubbub Creek.

Mitigation Status

In order to track the progress of identified actions, the Town of Carrollton's 2009 Mitigation Action Plan is shown below. The current statuses of the proposed actions are shown in italics.

BENCHMARKING:

Town of Carrollton Mitigation Action Plan (2009)

1. Add generators at critical facilities –*Action was revised and is ongoing*
2. Upgrade communication systems – *Action is ongoing*
3. Upgrade drainage systems – *Action is ongoing*
4. Enforce floodplain management requirements; regulate construction or improvements in Special Flood Hazard Areas (SFHAs) – *Action is ongoing*

Table 5-12 shows the Town of Carrollton's mitigation actions for the 2015 plan update. During the plan update process, two actions were revised and two new actions were identified

and added to the plan. All previous mitigation actions are ongoing.

Mitigation Strategy – Town of Carrollton

Goal 1: Protect life

Objective 1.1 Improve Warning and Emergency Communication Systems

Action 1.1.1 Upgrade communication systems

Objective 1.2 Reduce impact of hazards on vulnerable populations

Action 1.2.1 Construct/install community safe rooms with backup generators

Action 1.2.2 Construct/install individual storm shelters

Objective 1.3 Improve disaster response and recovery

Goal 2: Protect property

Objective 2.1 Reduce losses to critical facilities/assets

Action 2.1.1 Provide emergency backup generators to all critical facilities

Objective 2.2 Continue Participation in NFIP program

Action 2.2.1 Enforce floodplain management requirements; regulate construction or improvements in Special Flood Hazard Areas (SFHAs)

Objective 2.3 Provide and maintain essential public services

Objective 2.4 Reduce losses due to drainage problems

Action 2.4.1 Upgrade drainage systems

Goal 3: Reduce economic impacts of disasters

Objective 3.1 Maintain operations of critical businesses and major employers

Goal 4: Protect environment and natural resources

Objective 4.1 Identify, protect, and properly manage floodplains

Objective 4.2 Enforce local codes and regulations related to NFIP

Goal 5: Increase public preparedness for disasters

Objective 5.1 Continue to train severe weather spotters

Table 5-12: Carrollton Mitigation Actions 2015

Mitigation Action 1.1.1	Upgrade communication system
Hazard(s) Addressed	All
Applies to new/existing asset	New and Existing
Local Planning Mechanism	Town of Carrollton
Time frame for Completion	One year from funding availability
Estimated Cost	\$25,000 each
Funding Sources	HMGP, Local
Priority	Medium
Mitigation Action 1.2.1	Construct/install community safe rooms with backup generators
Hazard(s) Addressed	All
Applies to new/existing asset	New and Existing
Local Planning Mechanism	Town of Carrollton
Time frame for Completion	Three years from funding availability
Estimated Cost	\$100,000 each
Funding Sources	HMGP, ADECA, Governor's Emergency Relief Fund, Local
Priority	High
Mitigation Action 1.2.2	Construct/install individual storm shelters
Hazard(s) Addressed	All
Applies to new/existing asset	New and Existing
Local Planning Mechanism	Town of Carrollton
Time frame for Completion	Three years from funding availability
Estimated Cost	\$5,000 each
Funding Sources	HMGP, ADECA, Governor's Emergency Relief Fund, Local
Priority	High
Mitigation Action 2.1.1	Provide emergency backup generators to all critical facilities
Hazard(s) Addressed	All
Applies to new/existing asset	New and Existing
Local Planning Mechanism	Pickens County EMA, Town of Carrollton
Time frame for Completion	One year from funding availability
Estimated Cost	\$25,000 ea
Funding Sources	HMGP, ADECA, Local
Priority	High
Mitigation Action 2.4.1	Upgrade drainage systems
Hazard(s) Addressed	Flooding
Applies to new/existing asset	Existing
Local Planning Mechanism	Town of Carrollton, Public Works
Time frame for Completion	One year from funding availability
Estimated Cost	\$200,000
Funding Sources	NFIP, CDBG, Local
Priority	Medium
Mitigation Action 4.2.1	Enforce floodplain management requirements; regulate construction or improvement in Special Flood Hazard Areas (SFHA's)
Hazard(s) Addressed	Flood
Applies to new/existing asset	New and Existing
Local Planning Mechanism	Town of Carrollton
Time frame for Completion	Continuous
Estimated Cost	
Funding Sources	NFIP, CDBG, Local
Priority	Low

Town of Ethelsville

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**Table 5-13: Town of Ethelsville
Risk and Vulnerability Overview**

Natural Hazards	Hazard Identification	Mitigation Actions Prioritization	Prioritized Occurrence Threat	Vulnerability
Thunderstorm	X	1	3	H
Lightning	X	3	7	H
Hail	X	4	5	M
Tornado	X	2	6	M
Flood	X	8	3	L
Drought/Extreme Heat	X	5	2	M
Winter Storm/Frost Freeze/ Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	X	6	4	M
Hurricane/Tropical Storm/ Tropical Depression/ High Wind/ Strong Wind	X	9	3	L
Sinkhole/Expansive Soil	N/A	N/A	8	N/A
Landslide	N/A	N/A	8	N/A
Earthquake	X	10	8	L
Wildfire	X	7	1	L
Dam/Levee Failure	N/A	N/A	8	N/A

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 fifteen 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)

(Sources: NOAA NCDC Storm Events Database; Alabama Forestry Commission; National Forestry Service; Alabama Geological Survey; Participating Jurisdictions, 2014)

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TABLE 5-14: TOWN OF ETHELSVILLE HAZARD EVENTS

8 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>
ETHELVSILLE	PICKENS CO.	AL	12/07/2004	04:10	CST	Thunderstorm Wind	52 kts. EG	0	0	4.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	12/09/2004	06:05	CST	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	01/13/2005	08:00	CST	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
ETHELVSILLE	PICKENS CO.	AL	03/13/2006	17:02	CST	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
ETHELVSILLE	PICKENS CO.	AL	06/12/2009	16:36	CST-6	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
ETHELVSILLE	PICKENS CO.	AL	08/15/2010	19:15	CST-6	Thunderstorm Wind	60 kts. EG	0	0	5.00K	0.00K
ETHELVSILLE	PICKENS CO.	AL	03/02/2012	15:13	CST-6	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
ETHELVSILLE	PICKENS CO.	AL	07/06/2012	16:20	CST-6	Thunderstorm Wind	78 kts. EG	0	0	0.00K	0.00K
Totals:								0	0	23.00K	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)

Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
ETHELVSILLE	PICKENS CO.	AL	10/21/2004	00:06	CST	Hail	0.88 in.	0	0	0.00K	0.00K
ETHELVSILLE	PICKENS CO.	AL	03/13/2005	15:40	CST	Hail	0.75 in.	0	0	0.00K	0.00K
ETHELVSILLE	PICKENS CO.	AL	03/13/2005	15:48	CST	Hail	0.88 in.	0	0	0.00K	0.00K
ETHELVSILLE	PICKENS CO.	AL	04/24/2010	15:45	CST-6	Hail	1.75 in.	0	0	10.00K	0.00K
Totals:								0	0	10.00K	0.00K

1 Tornado 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
ETHELVSILLE	PICKENS CO.	AL	03/13/2005	21:54	CST	Tornado	F0	0	0	175.00K	0.00K
Totals:								0	0	175.00K	0.00K

8 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>
PICKENS (ZONE)	PICKENS (ZONE)	AL	05/18/2003	06:00	CST	Flood		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	05/20/2003	08:00	CST	Flood		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/01/2005	00:00	CST	Flood		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	06/12/2005	06:45	CST	Flood		0	0	0.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	02/05/2004	19:05	CST	Flash Flood		0	0	10.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	02/05/2004	20:30	CST	Flash Flood		0	0	5.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	02/05/2004	23:30	CST	Flash Flood		0	0	5.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	12/09/2004	06:30	CST	Flash Flood		0	0	6.00K	0.00K
Totals:								0	0	26.00K	0.00K

16 Drought/Extreme Heat 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>
PICKENS (ZONE)	PICKENS (ZONE)	AL	07/18/2006	07:00	CST	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/01/2006	00:00	CST	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/01/2006	00:00	CST	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	05/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	06/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	07/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	10/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	11/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	12/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	01/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	02/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	03/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

**7 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
PICKENS (ZONE)	PICKENS (ZONE)	AL	01/24/2003	00:00	CST	Extreme Cold/Wind Chill		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/07/2007	00:00	CST-6	Frost Freeze		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/08/2007	00:00	CST-6	Frost Freeze		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	03/01/2009	00:30	CST-6	Heavy Snow		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	02/09/2011	16:15	CST-6	Heavy Snow		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	01/09/2011	12:45	CST-6	Ice Storm		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	12/15/2010	05:00	CST-6	Winter Weather		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

**8 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
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/16/2004	07:30	CST	High Wind (Ivan)	56 kts. EG	0	0	600.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	06/11/2005	18:00	CST	Strong Wind (Arlene)	40 kts. EG	0	0	8.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/12/2009	20:30	CST-6	Strong Wind	43 kts. EG	0	0	75.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/05/2011	12:00	CST-6	Strong Wind (Lee)	39 kts. EG	0	0	5.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/05/2011	18:00	CST-6	Strong Wind (Lee)	43 kts. EG	0	0	5.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/23/2008	12:00	CST-6	Tropical Depression (Fay)		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	07/10/2005	16:00	CST	Tropical Storm (Dennis)		0	0	65.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/29/2005	18:00	CST	Tropical Storm (Katrina)		0	1	500.00K	0.00K
Totals:								0	1	1,258.00M	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.

0 Earthquake 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.

419 Wildfire Events – 1997 thru 2012
(Source: Alabama Forestry Commission)

County	Total # of Fires	Average # of Fires	Total Acres Burned	Average Acres Burned	Average Fire Size
Pickens	419	28	3,227	215	7.7

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 5-15: Town of Ethelsville
Hazard Probability Assessment**

Natural Hazards	Number of Historical Occurrences	Probability of Future Occurrence	Extent	Area Affected
Thunderstorm	8	80%	>10%	Town-wide
Lightning	0	Unknown	>10%	Town-wide
Hail	4	40%	5-10%	Town-wide
Tornado	1	10%	5-10%	Town-wide
Flood/Flash Flood	8	80%	<5%	Town-wide
Drought/Extreme Heat	16	>100%	5-10%	Town-wide
Winter Storm/Frost Freeze/ Heavy Snow/Ice Storm/ Winter Weather/ Extreme Cold	7	70%	5-10%	Town-wide
Hurricane/Tropical Storm/ Tropical Depression/High Wind/Strong Wind	8	80%	<5%	Town-wide
Sinkhole/Expansive Soil	0	Unknown	Unknown	N/A
Landslide	0	Unknown	Unknown	N/A
Earthquake	0	Unknown	<5%	N/A
Wildfire (1997-2012 – 15 year study period – 5,475 days)	419	>100%	<5%	Town-wide
Dam/Levee Failure	0	Unknown	Unknown	N/A

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, 2014

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 15 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 5-16: Town of Ethelsville Critical Facilities

Facility	Location	Use	Value
<i>Governmental Services</i>			
Ethelsville Town Hall	510 Main St.	Local Government	\$100,000
<i>Public Works</i>			
Water Pumping Station Master Meter	Highway 75	Water Pumping	\$200,000
<i>Education</i>			
<i>Miscellaneous</i>			
Alabama Power Substation	Highway 75	Electrical	\$500,000
Century-Tel Phone Exchange	488 Main St.	Communications	\$600,000
<i>(Source: Local Jurisdiction, 2014)</i>			TOTAL \$1,400,000

**Table 5-17: Town of Ethelsville
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	.8	0	0	\$0	\$2,300	\$2,507
Lightning	0	0	0	\$0	\$0	Unknown
Hail	.4	0	0	\$0	\$1,000	\$1,090
Tornado	.1	0	0	\$0	\$17,500	\$19,075
Flood/Flood	.8	0	0	\$0	\$2,600	\$2,834
Drought/Extreme Heat	1.6	0	0	\$0	\$0	Unknown
Winter Weather/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	.7	0	0	\$0	\$0	Unknown
Hurricane/Tropical Storm/Tropical Depression/High Wind/ Strong Wind	.8	0	1	\$2,318	\$125,800	\$139,649
Sinkhole/Expansive Soil	0	0	0	\$0	0	Unknown
Landslide	0	0	0	\$0	0	Unknown
Earthquake	0	0	0	\$0	0	Unknown
Wildfire (15 year study period)	27.9	0	0	\$0	\$14,633	\$15,950
Dam/Levee Failure	0	0	0	\$0	0	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, 2014

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 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 denotes no data available to determine the average occurrences, average loss or projected loss per event.

Town of Ethelsville Mitigation Action Plan

The Town of Ethelsville recognizes the importance of mitigation planning and will incorporate mitigation planning in planning documents as they are revised or initiated. The town was unable to complete any of their mitigation actions during the past 5 years due to lack of local match funding requirement; therefore, they are still pursuing the same goals as was in the 2009 plan revision.

Mitigation Status

In order to track the progress of identified actions, the 2009 Mitigation Plan's mitigation action list for the Town of Ethelsville is shown below. The current statuses of the proposed actions are shown in italics.

BENCHMARKING:

Town of Ethelsville Mitigation Action Plan (2005)

1. Install additional outdoor warning sirens – *Action is ongoing*
2. Construct long-term community safe rooms – *Action was revised and is ongoing*
3. Encourage individual storm shelters – *Action is ongoing*
4. Join NFIP upon identification of Special Flood Hazard Areas – *Action was revised and is ongoing*

Table 5-18 shows the Town of Ethelsville's mitigation actions for the 2015 plan revision. During the plan update process two actions were revised and no new actions were identified. All actions from previous plan revision are ongoing.

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Mitigation Strategy – Town of Ethelsville

Goal 1: Protect life

Objective 1.1 Improve Warning and Emergency Communication Systems

Action 1.1.1 Install additional outdoor warning sirens

Objective 1.2 Reduce impact of hazards on vulnerable populations

Action 1.2.1 Construct/install community safe rooms with backup generators

Action 1.2.2 Encourage individual storm shelters

Objective 1.3 Improve disaster response and recovery

Goal 2: Protect property

Objective 2.1 Reduce losses to critical facilities/assets

Objective 2.2 Participate in NFIP program

Action 2.2.1 Join NFIP upon identification of Special Flood Hazard Areas

Objective 2.3 Provide and maintain essential public services

Objective 2.4 Reduce losses due to drainage problems

Goal 3: Reduce economic impacts of disasters

Objective 3.1 Maintain operations of critical businesses and major employers

Goal 4: Protect environment and natural resources

Objective 4.1 Identify, protect, and properly manage floodplains

Goal 5: Increase public preparedness for disasters

Objective 5.1 Continue to train severe weather spotters

Table 5-18: Ethelsville Mitigation Actions 2015

Mitigation Action 1.1.1	Install additional outdoor warning sirens in town
Hazard(s) Addressed	All
Applies to new/existing asset	New
Local Planning Mechanism	Pickens County EMA, Town of Ethelsville
Time frame for Completion	One year from funding availability
Estimated Cost	\$25,000 each
Funding Sources	ADECA, Local
Priority	High
Mitigation Action 1.2.1	Construct/install community safe rooms with backup generators
Hazard(s) Addressed	All
Applies to new/existing asset	New and Existing
Local Planning Mechanism	Pickens County EMA, Individuals
Time frame for Completion	Two years from funding availability
Estimated Cost	\$100,000 - \$250,000 each
Funding Sources	ADECA, Governor's Emergency Relief Fund, Local
Priority	High
Mitigation Action 1.2.2	Encourage individual storm shelters
Hazard(s) Addressed	All
Applies to new/existing asset	New
Local Planning Mechanism	Pickens County EMA, Individuals
Time frame for Completion	Three to five years from funding availability
Estimated Cost	\$5,000 each
Funding Sources	ADECA, Governor's Emergency Relief Fund, Local
Priority	Medium
Mitigation Action 2.2.1	Participate in the NFIP
Hazard(s) Addressed	Flood
Applies to new/existing asset	New
Local Planning Mechanism	Town of Ethelsville
Time frame for Completion	Upon identification of Special Flood Hazard Areas
Estimated Cost	
Funding Sources	NFIP, Local
Priority	Low

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Town of Gordo

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

Natural Hazards	Hazard Identification	Mitigation Actions Prioritization	Prioritized Occurrence Threat	Vulnerability
Thunderstorm	X	3	6	M
Lightning	X	4	9	M
Hail	X	5	7	L
Tornado	X	1	8	M
Flood	X	2	3	L
Drought/Extreme Heat	X	10	2	M
Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	X	6	5	L
Hurricane/Tropical Storm/Tropical Depression/ High Wind/Strong Wind	X	7	4	L
Sinkhole/Expansive Soil	X	8	9	L
Landslide	N/A	N/A	9	N/A
Earthquake	X	11	9	L
Wildfire	X	9	1	M
Dam/Levee Failure	N/A	N/A	9	N/A

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 fifteen 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, 2014)

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TABLE 5-20: TOWN OF GORDO HAZARD EVENTS

5 Thunderstorms 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	PICKENS CO.	AL	12/09/2004	06:05	CST	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	01/13/2005	08:00	CST	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
GORDO	PICKENS CO.	AL	05/20/2010	14:32	CST-6	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
GORDO	PICKENS CO.	AL	10/26/2010	14:52	CST-6	Thunderstorm Wind	55 kts. EG	0	0	10.00K	0.00K
GORDO	PICKENS CO.	AL	06/28/2011	11:55	CST-6	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
Totals:								0	0	20.00K	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.

3 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
GORDO	PICKENS CO.	AL	04/06/2005	21:38	CST	Hail	0.75 in.	0	0	1.00K	0.00K
GORDO	PICKENS CO.	AL	04/30/2005	02:53	CST	Hail	0.75 in.	0	0	1.00K	0.00K
GORDO	PICKENS CO.	AL	06/01/2008	13:39	CST-6	Hail	0.75 in.	0	0	0.00K	0.00K
Totals:								0	0	2.00K	0.00K

2 Tornado 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
GORDO	PICKENS CO.	AL	01/10/2008	15:43	CST-6	Tornado	EF1	0	0	50.00K	0.00K
GORDO	PICKENS CO.	AL	04/27/2011	03:41	CST-6	Tornado	EF1	0	0	11.00K	0.00K
Totals:								0	0	61.00K	0.00K

9 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
PICKENS (ZONE)	PICKENS (ZONE)	AL	05/18/2003	06:00	CST	Flood		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	05/20/2003	08:00	CST	Flood		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/01/2005	00:00	CST	Flood		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	06/12/2005	06:45	CST	Flood		0	0	0.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	02/05/2004	19:05	CST	Flash Flood		0	0	10.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	02/05/2004	20:30	CST	Flash Flood		0	0	5.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	02/05/2004	23:30	CST	Flash Flood		0	0	5.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	12/09/2004	06:30	CST	Flash Flood		0	0	6.00K	0.00K
GORDO	PICKENS CO.	AL	09/03/2012	21:00	CST-6	Flash Flood		0	0	0.00K	0.00K
Totals:								0	0	26.00K	0.00K

16 Drought/Extreme Heat 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>
PICKENS (ZONE)	PICKENS (ZONE)	AL	07/18/2006	07:00	CST	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/01/2006	00:00	CST	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/01/2006	00:00	CST	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	05/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	06/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	07/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	10/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	11/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	12/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	01/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	02/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	03/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

7 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
PICKENS (ZONE)	PICKENS (ZONE)	AL	12/15/2010	05:00	CST-6	Winter Weather		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	01/24/2003	00:00	CST	Extreme Cold/Wind Chill		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/07/2007	00:00	CST-6	Frost Freeze		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/08/2007	00:00	CST-6	Frost Freeze		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	01/09/2011	12:45	CST-6	Ice Storm		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	03/01/2009	00:30	CST-6	Heavy Snow		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	02/09/2011	16:15	CST-6	Heavy Snow		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

**8 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>
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/16/2004	07:30	CST	High Wind (Ivan)	56 kts. EG	0	0	600.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	06/11/2005	18:00	CST	Strong Wind (Arlene)	40 kts. EG	0	0	8.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/12/2009	20:30	CST-6	Strong Wind	43 kts. EG	0	0	75.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/05/2011	12:00	CST-6	Strong Wind (Lee)	39 kts. EG	0	0	5.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/05/2011	18:00	CST-6	Strong Wind (Lee)	43 kts. EG	0	0	5.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/23/2008	12:00	CST-6	Tropical Depression (Fay)		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	07/10/2005	16:00	CST	Tropical Storm (Dennis)		0	0	65.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/29/2005	18:00	CST	Tropical Storm (Katrina)		0	1	500.00K	0.00K
Totals:								0	1	1,258.00M	0.00K

Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind Events
(Source: Local Input)

Location	Date	Type	Mag	Dth	Inj	PrD	CrD	Total Cost	Comments
Gordo	8/29/2005	Tropical Storm	N/A					\$16,543	Katrina
TOTALS		n/a						\$16,543	

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.

0 Earthquake 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.

419 Wildfire Events – 1997 thru 2012

(Source: Alabama Forestry Commission)

County	Total # of Fires	Average # of Fires	Total Acres Burned	Average Acres Burned	Average Fire Size
Pickens	419	28	3,227	215	7.7

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 5-21: Town of Gordo
Hazard Probability Assessment**

Natural Hazards	Number of Historical Occurrences	Probability of Future Occurrence	Extent	Area Affected
Thunderstorm	5	50%	5-10%	Town-wide
Lightning	0	Unknown	5-10%	Town-wide
Hail	3	30%	<5%	Town-wide
Tornado	2	20%	5-10%	Town-wide
Flood/Flash Flood	9	90%	<5%	Town-wide
Drought/Extreme Heat	16	1.6%	5-10%	Town-wide
Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	7	70%	<5%	Town-wide
Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind	8	80%	<5%	Town-wide
Sinkhole/Expansive Soil	0	Unknown	<5%	Town-wide
Landslide	0	Unknown	Unknown	N/A
Earthquake	0	Unknown	<5%	Town-wide
Wildfire (1997-2012 – 15 year study period)	419	>100%	5-10%	Town-wide
Dam/Levee Failure	0	Unknown	Unknown	N/A

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, 2014

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 15 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 5-22: Town of Gordo Critical Facilities

Facility	Location	Use	Value
Governmental Services			
Gordo City Hall	313 Main Street South	Local Government	\$300,000
Gordo Fire Department	Tuscaloosa Avenue	Fire & Rescue	\$350,000
Gordo Police Department	313 Main Street South	Police/ Fire Dispatch	\$250,000
Community Safe Room	401 1 st Ave. West	Community	\$125,000
Public Works			
City Shop	313 Main Street South	Local Government	\$1,300,000
Waste Treatment Plant	Highway 82	Sewage Treatment	\$2,000,000
Water Tank	High Glass Hill	Water Storage	\$300,000
Water Tank	East of Gordo	Water Storage	\$200,000
Water Treatment Plant	3rd St SE	Water Treatment	\$650,000
Water Treatment/Sullivan Well	Gordo City Rd	Water Treatment	\$400,000
Sewer Pumping Station	Hwy 159	Sewage	\$90,000
Sewer Pumping Station	Hwy 82	Sewage	\$90,000
Sewer Pumping Station	Fairview	Sewage	\$90,000
Sugar Hill Sub #30 Pumps	Sugar Hill Subdivision	Water Supply	\$100,000
Brown Circle #8 Pump	Brown's Circle	Water Supply	\$24,000
Education			
Gordo Elementary School	4th ST NW	Education	\$10,623,000
Gordo High School	4th ST NW	Education	\$12,976,900
<i>Note: Since the 2009 plan revision, the Oaklane Head Start Project has been sold to a local church and there is no activity in the building at this time.</i>			
Industrial			
Peco Foods & Feed Mill	Main Street	Major Employer	\$5,000,000
Noland Lumber	1st Ave E	Major Employer	\$5,000,000
Austell Forest Products	1916 Highway 159	Major Employer	\$2,000,000
Peco Foods Hatchery	County Road 57 (Hargrove Church Road)	Major Employer	\$5,000,000
Miscellaneous			
Alabama Power Substation	2nd Street SW	Electrical	\$1,500,000
Doctor Office	27340 Hwy 86	Health Care	\$250,000
Outdoor Warning Siren (#10)	313 Main St S	Weather Warning	\$25,000
<i>Source: Local Jurisdiction, 2014</i>		TOTAL	\$48,643,900

**Table 5-23: Town of Gordo
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	.5	0	0	\$0	\$2,000	\$2,180
Lightning	0	0	0	\$0	\$0	Unknown
Hail	.3	0	0	\$0	\$200	\$218
Tornado	.2	0	0	\$0	\$6,100	\$6,649
Flood/Flash Flood	.9	0	0	\$0	\$2,600	\$2,834
Drought/Extreme Heat	1.6	0	0	\$0	\$0	Unknown
Winter Storm/Frost Freeze/Heavy Snow/ Ice Storm/Winter Weather/Extreme Cold	.7	0	0	\$0	\$0	Unknown
Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind	.8	0	1	\$2,318	\$201,541	\$222,206
Sinkhole/Expansive Soil	0	0	0	\$0	\$0	Unknown
Landslide	0	0	0	\$0	\$0	Unknown
Earthquake	0	0	0	\$0	\$0	Unknown
Wildfire (15 year study period)	27.9	0	0	\$0	\$14,633	\$15,950
Dam/Levee Failure	0	0	0	\$0	\$0	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, 2014

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 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 denotes no data available to determine the average occurrences, average loss or projected loss per event.

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Town of Gordo Mitigation Action Plan

The Town of Gordo recognizes the importance of mitigation planning and will incorporate mitigation planning in planning documents as they are revised or initiated. The town has been very active with their mitigation projects, as noted below under benchmarking.

The Town of Gordo completed a new flood assessment in 2009. Due to a weather event on September 3, 2012 that resulted in 12 inches of rain falling in Gordo in less than three hours, in addition to two flooding events within the past two years, the town is pursuing new actions to mitigate infrastructure damages and washed out bridges as a result of drainage issues.

Mitigation Status

In order to track the progress of identified actions, the Town of Gordo's 2009 Mitigation Action Plan is shown below. The current statuses of the proposed actions are shown in italics.

BENCHMARKING:

Town of Gordo Mitigation Action Plan (2009)

1. Install additional outdoor warning sirens – *Action was revised and is ongoing*
 - No outdoor warning sirens have been installed in the past five years. The town's one outdoor warning siren that was installed more than five years ago is not operating correctly and needs work; therefore in addition to installing an additional outdoor warning siren in the town limits, the town would like to replace or make functional the existing siren.
2. Construct long-term community storm shelter – *Action was revised and is ongoing*
 - A hundred person community safe room has been installed at 401 1st Ave. West. The town is pursuing another community safe room within the next five years.
3. Encourage individual storm shelters – *Action is ongoing*
 - The town continues to encourage individuals to install safe rooms by placing information at the city hall for public distribution. Several individual storm shelters have been installed in the last five years.

4. Provide generators to critical facilities – *Action is ongoing*
 - An emergency backup generator has been installed at the waste water treatment facility; however during the next five years, the town is pursuing an emergency backup generator for the police department/city hall.

5. Enforce floodplain management requirements; regulate construction or improvements in Special Flood Hazard Areas (SFHAs) - *Action is ongoing*

Table 5-24 shows the Town of Gordo’s mitigation actions for the 2015 plan revision. During the plan update process, two actions were revised and two new actions were identified and added to the plan. All actions from previous plan revision are ongoing.

Mitigation Strategy – Town of Gordo

Goal 1: Protect life

Objective 1.1 Improve Warning and Emergency Communication Systems

Action 1.1.1 Make operable the existing outdoor warning siren and install additional outdoor warning sirens

Objective 1.2 Reduce impact of hazards on vulnerable populations

Action 1.2.1 Construct/install community safe rooms with backup generators

Action 1.2.2 Encourage individual storm shelters

Objective 1.3 Improve disaster response and recovery

Goal 2: Protect property

Objective 2.1 Reduce losses to critical facilities/assets

Action 2.1.1 Provide generators to critical facilities

Objective 2.2 Continue Participation in NFIP program

Action 2.2.1 Enforce floodplain management requirements; regulate construction or improvements in Special Flood Hazard Areas (SFHAs).

Objective 2.3 Provide and maintain essential public services

Objective 2.4 Reduce losses due to drainage problems

Action 2.4.1 Develop a drainage plan and implement actions that will divert flood waters

Action 2.4.2 Replace wooden bridges with new bridges meeting current Dept. of Transportation standards

Goal 3: Reduce economic impacts of disasters

Objective 3.1 Maintain operations of critical businesses and major employers

Goal 4: Protect environment and natural resources

Objective 4.1 Identify, protect, and properly manage floodplains

Goal 5: Increase public preparedness for disasters

Objective 5.1 Continue to train severe weather spotters

Table 5-24: Town of Gordo Mitigation Actions 2015

Mitigation Action 1.1.1	Make the existing outdoor warning siren operable and install additional outdoor warning sirens
Hazard(s) Addressed	All
Applies to new/existing asset	New and Existing
Local Planning Mechanism	Pickens County, Town of Gordo
Time frame for Completion	One year from funding availability
Estimated Cost	\$25,000 each
Funding Sources	HMGP, Local
Priority	High
Mitigation Action 1.2.1	Construct/install community safe rooms with backup generators
Hazard(s) Addressed	All
Applies to new/existing asset	New and Existing
Local Planning Mechanism	Pickens County EMA, Town of Gordo
Time frame for Completion	Three years from funding availability
Estimated Cost	\$100,000 each
Funding Sources	HMGP, ADECA, Governor's Emergency Relief Fund, Local
Priority	High
Mitigation Action 1.2.2	Encourage Individual storm shelters
Hazard(s) Addressed	All
Applies to new/existing asset	New and Existing
Local Planning Mechanism	Pickens County EMA, Individuals
Time frame for Completion	Three years from funding availability
Estimated Cost	\$5,000 each
Funding Sources	HMGP, ADECA, Governor's Emergency Relief Fund, Local
Priority	Medium
Mitigation Action 2.1.1	Provide generators to critical facilities
Hazard(s) Addressed	All
Applies to new/existing asset	Existing
Local Planning Mechanism	Pickens County, Town of Gordo, Pickens County School Board
Time frame for Completion	One year from funding availability
Estimated Cost	\$25,000 each
Funding Sources	HMGP, ADECA, Local
Priority	High

Mitigation Action 2.2.1	Enforce floodplain management requirements; regulate construction or improvement in Special Flood Hazard Areas (SFHA's)
Hazard(s) Addressed	Flood
Applies to new/existing asset	New and Existing
Local Planning Mechanism	Town of Gordo
Time frame for Completion	Ongoing
Estimated Cost	
Funding Sources	NFIP, Local
Priority	Low
Mitigation Action 2.4.1	Develop a drainage plan and implement actions that will divert flood waters
Hazard(s) Addressed	Flood
Applies to new/existing asset	New and Existing
Local Planning Mechanism	Town of Gordo
Time frame for Completion	Ongoing
Estimated Cost	
Funding Sources	NFIP, CDBG, Local
Priority	Medium
Mitigation Action 2.4.2	Replace wooden bridges with new bridges meeting current Dept. of Transportation standards
Hazard(s) Addressed	Flood
Applies to new/existing asset	New and Existing
Local Planning Mechanism	Town of Gordo
Time frame for Completion	Ongoing
Estimated Cost	
Funding Sources	HMGP, DOT, Local
Priority	Medium

Town of McMullen

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

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

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 Jurisdiction, 2014)

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TABLE 5-26: TOWN OF McMULLEN HAZARD EVENTS

2 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
COUNTYWIDE	PICKENS CO.	AL	12/09/2004	06:05	CST	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	01/13/2005	08:00	CST	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
Totals:								0	0	8.00K	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 lightning 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 lightning events occurred or were reported during 01/01/2003 thru 12/31/2013.

8 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>
PICKENS (ZONE)	PICKENS (ZONE)	AL	05/18/2003	06:00	CST	Flood		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	05/20/2003	08:00	CST	Flood		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/01/2005	00:00	CST	Flood		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	06/12/2005	06:45	CST	Flood		0	0	0.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	02/05/2004	19:05	CST	Flash Flood		0	0	10.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	02/05/2004	20:30	CST	Flash Flood		0	0	5.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	02/05/2004	23:30	CST	Flash Flood		0	0	5.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	12/09/2004	06:30	CST	Flash Flood		0	0	6.00K	0.00K
Totals:								0	0	26.00K	0.00K

16 Drought/Extreme Heat 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>
PICKENS (ZONE)	PICKENS (ZONE)	AL	07/18/2006	07:00	CST	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/01/2006	00:00	CST	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/01/2006	00:00	CST	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	05/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	06/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	07/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	10/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	11/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	12/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	01/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	02/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	03/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

7 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	In	PrD	CrD
PICKENS (ZONE)	PICKENS (ZONE)	AL	12/15/2010	05:00	CST-6	Winter Weather		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	01/24/2003	00:00	CST	Extreme Cold/Wind Chill		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/07/2007	00:00	CST-6	Frost Freeze		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/08/2007	00:00	CST-6	Frost Freeze		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	01/09/2011	12:45	CST-6	Ice Storm		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	03/01/2009	00:30	CST-6	Heavy Snow		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	02/09/2011	16:15	CST-6	Heavy Snow		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

**8 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
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/16/2004	07:30	CST	High Wind (Ivan)	56 kts. EG	0	0	600.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	06/11/2005	18:00	CST	Strong Wind (Arlene)	40 kts. EG	0	0	8.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/12/2009	20:30	CST-6	Strong Wind	43 kts. EG	0	0	75.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/05/2011	12:00	CST-6	Strong Wind (Lee)	39 kts. EG	0	0	5.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/05/2011	18:00	CST-6	Strong Wind (Lee)	43 kts. EG	0	0	5.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/23/2008	12:00	CST-6	Tropical Depression (Fay)		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	07/10/2005	16:00	CST	Tropical Storm (Dennis)		0	0	65.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/29/2005	18:00	CST	Tropical Storm (Katrina)		0	1	500.00K	0.00K
Totals:								0	1	1,258.00M	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.

0 Earthquake 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.

419 Wildfire Events – 1997 thru 2012
(Source: Alabama Forestry Commission)

County	Total # of Fires	Average # of Fires	Total Acres Burned	Average Acres Burned	Average Fire Size
Pickens	419	28	3,227	215	7.7

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 5-27: Town of McMullen
Hazard Probability Assessment**

Natural Hazards	Number of Historical Occurrences	Probability of Future Occurrence	Extent	Area Affected
Thunderstorm	2	20%	>10%	Town-wide
Lightning	0	Unknown	>10%	N/A
Hail	0	Unknown	5-10%	N/A
Tornado	0	Unknown	>10%	N/A
Flood/Flash Flood	8	80%	<5%	Town-wide
Drought/Extreme Heat	16	>100%	>10%	Town-wide
Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	7	70%	>10%	Town-wide
Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind	8	80%	>10%	Town-wide
Sinkhole/Expansive Soil	0	Unknown	Unknown	N/A
Landslide	0	Unknown	<5%	Town-wide
Earthquake	0	Unknown	<5%	Town-wide
Wildfire (1997-2012 – 15 year study period – 5,475 days)	419	>100%	<5%	Town-wide
Dam/Levee Failure	0	Unknown	Unknown	N/A

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, 2014

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 15 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 5-28: Town of McMullen Critical Facilities

Facility	Location	Use	Value
Governmental Services			
McMullen Town Hall	McMullen Drive	Local Government	
Public Works			
Sewer Pumping Station	McMullen Drive	Water Supply	\$180,000
Education			
Industrial			
Miscellaneous			
<i>Source: Local Jurisdiction, 2014</i>		TOTAL	\$180,000

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

Natural Hazards	Annual Average Occurrences	Total Deaths	Total Injuries	Average Death and Injury Loss (per event)	Average Crop and Property Loss (per event)	Projected Loss (per event)
Thunderstorm	.2	0	0	\$0	\$800	\$872
Lightning	0	0	0	\$0	Unknown	Unknown
Hail	0	0	0	\$0	Unknown	Unknown
Tornado	0	0	0	\$0	Unknown	Unknown
Flood/Flash Flood	.8	0	0	\$0	\$2,600	\$2,834
Drought/Extreme Heat	1.6	0	0	\$0	Unknown	Unknown
Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	.7	0	0	\$0	Unknown	Unknown
Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind	.8	0	1	\$2,318	\$201,541	\$222,206
Sinkhole/Expansive Soil	0	0	0	\$0	Unknown	Unknown
Landslide	0	0	0	\$0	Unknown	Unknown
Earthquake	0	0	0	\$0	Unknown	Unknown
Wildfire (15 year study period)	27.9	0	0	\$0	\$14,633	\$15,950
Dam/Levee Failure	0	0	0	\$0	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, 2014

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 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 denotes no data available to determine the average occurrences, average loss or projected loss per event.

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Town of McMullen Mitigation Action Plan

The Town of McMullen 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 Town of McMullen's original 2009 Mitigation Plan list is shown below. The current status of the proposed action is shown in Italics.

BENCHMARKING:

Town of McMullen Mitigation Action Plan (2009)

Construct/install community safe rooms with backup generators

Encourage individual storm shelters

Become participant in NFIP upon identification of Special Flood Hazard Areas

1. Construct long-term community storm shelter – *Action was revised and is ongoing*
2. Encourage individual storm shelters – *Action is ongoing*
 - The town continues to encourage individuals to install safe rooms by placing information at the town hall for public distribution. Several individual storm shelters have been installed in the last five years.
3. Provide generators to critical facilities – *Action was revised and is ongoing*

Table 5-24 shows the Town of McMullen's mitigation actions for the 2015 plan revision. During the plan update process, two actions were revised and two new actions were identified and added to the plan. All actions from previous plan revision are ongoing.

Mitigation Strategy – Town of McMullen

Goal 1: Protect life

Objective 1.1 Improve Warning and Emergency Communication Systems

Objective 1.2 Reduce impact of hazards on vulnerable populations

Action 1.2.1 Construct/install community safe rooms with backup generators

Action 1.2.2 Encourage individual storm shelters

Objective 1.3 Improve disaster response and recovery

Goal 2: Protect property

Objective 2.1 Reduce losses to critical facilities/assets

Objective 2.2 Participate in NFIP program

Action 2.2.1 Become participant in NFIP upon identification of Special Flood Hazard Areas

Objective 2.3 Provide and maintain essential public services

Objective 2.4 Reduce losses due to drainage problems

Goal 3: Reduce economic impacts of disasters

Objective 3.1 Maintain operations of critical businesses and major employers

Goal 4: Protect environment and natural resources

Objective 4.1 Identify, protect, and properly manage floodplains

Goal 5: Increase public preparedness for disasters

Objective 5.1 Continue to train severe weather spotters

Table 5-30: Town of McMullen Mitigation Actions 2015

Mitigation Action 1.2.1	Construct/install community safe rooms with backup generators
Hazard(s) Addressed	All
Applies to new/existing asset	New and Existing
Local Planning Mechanism	Pickens County EMA, Town of McMullen
Time frame for Completion	Three years from funding availability
Estimated Cost	\$100,000 each
Funding Sources	HMGP, ADECA, Governor's Emergency Relief Fund, Local
Priority	High
Mitigation Action 1.2.2	Encourage Individual storm shelters
Hazard(s) Addressed	All
Applies to new/existing asset	New and Existing
Local Planning Mechanism	Pickens County EMA, Individuals
Time frame for Completion	Three years from funding availability
Estimated Cost	\$5,000 each
Funding Sources	HMGP, ADECA, Governor's Emergency Relief Fund, Local
Priority	Medium
Mitigation Action 2.2.1	Become a program participant with the NFIP
Hazard(s) Addressed	Flood
Applies to new/existing asset	N/A
Local Planning Mechanism	Pickens County EMA, Town of McMullen
Time frame for Completion	Upon identification of Special Flood Hazard Areas
Estimated Cost	N/A
Funding Sources	Local
Priority	Medium

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Town of Memphis

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

Natural Hazards	Hazard Identification	Mitigation Actions Prioritization	Prioritized Occurrence Threat	Vulnerability
Thunderstorm	X	1	5	H
Lightning	X	3	7	H
Hail	X	4	6	H
Tornado	X	2	7	H
Flood	X	6	4	M
Drought/Extreme Heat	X	7	2	M
Winter Storm/Frost Freeze/ Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	X	9	4	L
Hurricane/Tropical Storm/ Tropical Depression/ High Wind/ Strong Wind	X	8	3	L
Sinkhole/Expansive Soil	N/A	N/A	7	N/A
Landslide	N/A	N/A	7	N/A
Earthquake	X	10	7	L
Wildfire	X	5	1	M
Dam/Levee Failure	X	11	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 fifteen 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)

(Sources: NOAA NCDC Storm Events Database; Alabama Forestry Commission; National Forestry Service; Alabama Geological Survey; Participating Jurisdictions, 2014)

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TABLE 5-32: TOWN OF MEMPHIS HAZARD EVENTS

2 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
COUNTYWIDE	PICKENS CO.	AL	12/09/2004	06:05	CST	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	01/13/2005	08:00	CST	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
Totals:								0	0	8.00K	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.

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
MEMPHIS	PICKENS CO.	AL	08/06/2013	15:05	CST-6	Hail	0.75 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.

8 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>
PICKENS (ZONE)	PICKENS (ZONE)	AL	05/18/2003	06:00	CST	Flood		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	05/20/2003	08:00	CST	Flood		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/01/2005	00:00	CST	Flood		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	06/12/2005	06:45	CST	Flood		0	0	0.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	02/05/2004	19:05	CST	Flash Flood		0	0	10.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	02/05/2004	20:30	CST	Flash Flood		0	0	5.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	02/05/2004	23:30	CST	Flash Flood		0	0	5.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	12/09/2004	06:30	CST	Flash Flood		0	0	6.00K	0.00K
Totals:								0	0	26.00K	0.00K

16 Drought/Extreme Heat 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>
PICKENS (ZONE)	PICKENS (ZONE)	AL	07/18/2006	07:00	CST	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/01/2006	00:00	CST	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/01/2006	00:00	CST	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	05/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	06/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	07/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	10/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	11/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	12/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	01/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	02/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	03/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

7 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
PICKENS (ZONE)	PICKENS (ZONE)	AL	12/15/2010	05:00	CST-6	Winter Weather		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	01/24/2003	00:00	CST	Extreme Cold/Wind Chill		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/07/2007	00:00	CST-6	Frost Freeze		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/08/2007	00:00	CST-6	Frost Freeze		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	01/09/2011	12:45	CST-6	Ice Storm		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	03/01/2009	00:30	CST-6	Heavy Snow		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	02/09/2011	16:15	CST-6	Heavy Snow		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

**8 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
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/16/2004	07:30	CST	High Wind (Ivan)	56 kts. EG	0	0	600.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	06/11/2005	18:00	CST	Strong Wind (Arlene)	40 kts. EG	0	0	8.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/12/2009	20:30	CST-6	Strong Wind	43 kts. EG	0	0	75.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/05/2011	12:00	CST-6	Strong Wind (Lee)	39 kts. EG	0	0	5.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/05/2011	18:00	CST-6	Strong Wind (Lee)	43 kts. EG	0	0	5.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/23/2008	12:00	CST-6	Tropical Depression (Fay)		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	07/10/2005	16:00	CST	Tropical Storm (Dennis)		0	0	65.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/29/2005	18:00	CST	Tropical Storm (Katrina)		0	1	500.00K	0.00K
Totals:								0	1	1,258.00M	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.

0 Earthquake 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.

419 Wildfire Events – 1997 thru 2012
(Source: Alabama Forestry Commission)

County	Total # of Fires	Average # of Fires	Total Acres Burned	Average Acres Burned	Average Fire Size
Pickens	419	28	3,227	215	7.7

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 5-33: Town of Memphis
Hazard Probability Assessment**

Natural Hazards	Number of Historical Occurrences	Probability of Future Occurrence	Extent	Area Affected
Thunderstorm	2	20%	>10%	Town-wide
Lightning	0	Unknown	>10%	Town-wide
Hail	1	10%	>10%	Town-wide
Tornado	0	Unknown	>10%	Town-wide
Flood/Flash Flood	8	80%	5-10%	Town-wide
Drought/Extreme Heat	16	>100%	5-10%	Town-wide
Winter Weather/ Extreme Cold/Frost Freeze/Ice Storm/ Heavy Snow	7	70%	<5%	Town-wide
Hurricane/Tropical Storm/Tropical Depression/Strong Wind/High Wind	8	80%	<5%	Town-wide
Sinkhole/Expansive Soils	0	Unknown	Unknown	N/A
Landslide	0	Unknown	Unknown	N/A
Earthquake	0	Unknown	<5%	Town-wide
Wildfire (1997-2012 – 15 year study period – 5,475 days)	419	>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, 2014

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 15 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 5-34: Town of Memphis Critical Facilities

Facility	Location	Use	Value
Governmental Services			
Town Hall (Not Functional)	128 Memphis Circle	Local Government	\$6,000
Public Works			
Education			
Industrial			
Miscellaneous			
Outdoor Siren (#3) (Not operational)	708 Williams Price Rd	Weather Warning	\$25,000
<i>Source: Local Jurisdiction, 2014</i>			TOTAL \$31,000

**Table 5-35: Town of Memphis
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	\$0	\$800	\$872
Lightning	0	0	0	\$0	\$0	Unknown
Hail	0.1	0	0	\$0	\$0	Unknown
Tornado	0	0	0	\$0	\$0	Unknown
Flood/Flash Flood	0.8	0	0	\$0	\$2,600	\$2,834
Drought/Extreme Heat	1.6	0	0	\$0	\$0	Unknown
Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	0.7	0	0	\$0	\$0	Unknown
Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind	0.8	0	1	\$2,318	\$201,541	\$222,206
Sinkhole/Expansive Soil	0	0	0	\$0	\$0	Unknown
Landslide	0	0	0	\$0	\$0	Unknown
Earthquake	0	0	0	\$0	\$0	Unknown
Wildfire (15 year study period)	27.9	0	0	\$0	\$14,633	\$15,950
Dam/Levee Failure	0	0	0	\$0	\$0	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, 2014

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 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 denotes no data available to determine the average occurrences, average loss or projected loss per event.

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Town of Memphis Mitigation Action Plan

The Town of Memphis recognizes the importance of mitigation planning and will incorporate mitigation planning in planning documents as they are revised or initiated. The Town of Memphis is working diligently to acquire a grant to replace their current town hall, which is nonfunctional in its present state. The town recently applied for a Community Development Block Grant (CDBG) to accomplish this task; however, the town's application was denied. The town intends to work with the county to further develop the infrastructure of the Town of Memphis.

Mitigation Status

In order to track the progress of identified actions, the Town of Memphis' 2009 Mitigation Plan list is shown below. The current statuses of the proposed actions are shown in italics.

BENCHMARKING:

Town of Memphis Mitigation Action Plan (2009)

1. Construct long-term community safe rooms - *Action has been revised and is ongoing*
 - The town lacked funding for this action.
2. Become a participant in NFIP upon identification of Special Flood Hazard Areas - *Action has been revised and is ongoing.*
 - The Town of Memphis was NFIP sanctioned in 2011; however, the town has not become a member to date. According to the mayor, the Town of Memphis is not in a flood zone and has not experienced any flooding during the last five years.

Table 5-30 shows the Town of Memphis' mitigation actions for the 2015 plan revision. During the plan update process, two actions were revised and a new action was identified and added to the plan. All actions from previous plan revision are ongoing.

Mitigation Strategy – Town of Memphis

Goal 1: Protect life

Objective 1.1 Improve Warning and Emergency Communication Systems

Action 1.1.1 Upgrade/make operable the existing outdoor warning siren located on Williams Price Road

Objective 1.2 Reduce impact of hazards on vulnerable populations

Action 1.2.1 Install/construct community safe rooms with backup generators and include outdoor warning sirens if needed

Objective 1.3 Improve disaster response and recovery

Action 1.3.1 Install/construct a multi-purpose community safe room with backup generator (Town Hall will be co-located here)

Goal 2: Protect property

Objective 2.1 Reduce losses to critical facilities/assets

Objective 2.2 Participate in the NFIP program

Action 2.2.1 Become member of the NFIP

Objective 2.3 Maintain essential public services

Action 2.3.1 See Action 1.3.1 above

Objective 2.4 Reduce losses due to drainage problems

Goal 3: Reduce economic impacts of disasters

Objective 3.1 Maintain operations of critical businesses and major employers

Goal 4: Protect environment and natural resources

Objective 4.1 Identify, protect, and properly manage floodplains

Goal 5: Increase public preparedness for disasters

Objective 5.1 Continue to train severe weather spotters

Table 5-36: Town of Memphis Mitigation Actions 2015

Mitigation Action 1.1.1	Upgrade/make operable the existing outdoor warning siren located on Williams Price Road
Hazard(s) Addressed	All
Applies to new/existing asset	Existing
Local Planning Mechanism	Pickens County EMA, Town of Memphis
Time frame for Completion	Two years from funding availability
Estimated Cost	\$25,000
Funding Sources	HMGP, ADECA, Local
Priority	High
Mitigation Action 1.2.1	Construct/install community safe rooms with backup generators and include outdoor warning sirens if necessary
Hazard(s) Addressed	All
Applies to new/existing asset	New and Existing
Local Planning Mechanism	Pickens County EMA, Town of Memphis
Time frame for Completion	Two years from funding availability
Estimated Cost	\$100,000 - \$250,000 ea
Funding Sources	HMGP, ADECA, Governor's Emergency Relief Fund, Local
Priority	High
Mitigation Action 1.3.1	Install/construct a multi-purpose community safe room with backup generator (Town Hall will be co-located here)
Hazard(s) Addressed	All
Applies to new/existing asset	New
Local Planning Mechanism	Pickens County EMA, Town of Memphis
Time frame for Completion	Two years from funding availability
Estimated Cost	\$300,000
Funding Sources	HMGP, ADECA, Governor's Emergency Relief Fund, Local
Priority	High
Mitigation Action 2.2.1	Become a participating member of the NFIP
Hazard(s) Addressed	Flood
Applies to new/existing asset	N/A
Local Planning Mechanism	Town of Memphis
Time frame for Completion	Upon identification of Special Flood Hazard Areas (Memphis was sanctioned in 2011)
Estimated Cost	
Funding Sources	Local
Priority	Medium

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Town of Pickensville

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**Table 5-37: Town of Pickensville
Risk and Vulnerability Overview**

Natural Hazards	Hazard Identification	Mitigation Actions Prioritization	Prioritized Occurrence Threat	Vulnerability
Thunderstorm	X	1	6	H
Lightning	X	5	8	H
Hail	X	7	8	H
Tornado	X	2	7	H
Flood	X	6	3	L
Drought/Extreme Heat	X	4	2	M
Winter Storm/Frost Freeze/ Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	X	3	5	H
Hurricane/Tropical Storm/ Tropical Depression/ High Wind/ Strong Wind	X	8	4	H
Sinkhole/Expansive Soil	N/A	N/A	8	N/A
Landslide	N/A	N/A	8	N/A
Earthquake	X	10	8	L
Wildfire	X	9	1	M
Dam/Levee Failure	N/A	N/A	8	N/A

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 fifteen 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, 2014)

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TABLE 5-38: TOWN OF PICKENSVILLE HAZARD EVENTS

5 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
COUNTYWIDE	PICKENS CO.	AL	12/09/2004	06:05	CST	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	01/13/2005	08:00	CST	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
PICKENSVILLE	PICKENS CO.	AL	07/04/2008	15:15	CST-6	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
PICKENSVILLE	PICKENS CO.	AL	08/04/2010	18:45	CST-6	Thunderstorm Wind	55 kts. EG	0	0	1.50K	0.00K
PICKENSVILLE	PICKENS CO.	AL	04/20/2011	21:00	CST-6	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
Totals:								0	0	15.50K	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.

3 Tornado 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
PICKENSVILLE	PICKENS CO.	AL	01/10/2008	15:10	CST-6	Tornado	EF0	0	0	10.00K	0.00K
PICKENSVILLE	PICKENS CO.	AL	05/06/2009	07:20	CST-6	Tornado	EF1	0	0	50.00K	0.00K
PICKENSVILLE	PICKENS CO.	AL	04/11/2013	11:48	CST-6	Tornado	EF1	0	0	0.00K	0.00K
Totals:								0	0	60.00K	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>
PICKENS (ZONE)	PICKENS (ZONE)	AL	05/18/2003	06:00	CST	Flood		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	05/20/2003	08:00	CST	Flood		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/01/2005	00:00	CST	Flood		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	06/12/2005	06:45	CST	Flood		0	0	0.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	02/05/2004	19:05	CST	Flash Flood		0	0	10.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	02/05/2004	20:30	CST	Flash Flood		0	0	5.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	02/05/2004	23:30	CST	Flash Flood		0	0	5.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	12/09/2004	06:30	CST	Flash Flood		0	0	6.00K	0.00K
PICKENSVILLE	PICKENS CO.	AL	01/06/2009	14:00	CST-6	Flash Flood		2	1	50.00K	0.00K
PICKENSVILLE	PICKENS CO.	AL	09/20/2009	18:35	CST-6	Flash Flood		0	0	10.00K	0.00K
Totals:								2	1	86.00K	0.00K

16 Drought/Extreme Heat 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>
PICKENS (ZONE)	PICKENS (ZONE)	AL	07/18/2006	07:00	CST	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/01/2006	00:00	CST	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/01/2006	00:00	CST	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	05/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	06/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	07/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	10/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	11/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	12/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	01/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	02/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	03/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

7 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
PICKENS (ZONE)	PICKENS (ZONE)	AL	12/15/2010	05:00	CST-6	Winter Weather		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	01/24/2003	00:00	CST	Extreme Cold/Wind Chill		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/07/2007	00:00	CST-6	Frost Freeze		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/08/2007	00:00	CST-6	Frost Freeze		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	01/09/2011	12:45	CST-6	Ice Storm		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	03/01/2009	00:30	CST-6	Heavy Snow		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	02/09/2011	16:15	CST-6	Heavy Snow		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

8 Hurricane/Tropical Storm/Tropical Depression/Strong Wind/High 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
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/16/2004	07:30	CST	High Wind (Ivan)	56 kts. EG	0	0	600.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	06/11/2005	18:00	CST	Strong Wind (Arlene)	40 kts. EG	0	0	8.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/12/2009	20:30	CST-6	Strong Wind	43 kts. EG	0	0	75.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/05/2011	12:00	CST-6	Strong Wind (Lee)	39 kts. EG	0	0	5.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/05/2011	18:00	CST-6	Strong Wind (Lee)	43 kts. EG	0	0	5.00K	0.00K
PICKENS	PICKENS	AL	08/23/2008	12:00	CST-	Tropical Depression		0	0	0.00K	0.00K

(ZONE)	(ZONE)				6	(Fay)					
PICKENS (ZONE)	PICKENS (ZONE)	AL	07/10/2005	16:00	CST	Tropical Storm (Dennis)		0	0	65.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/29/2005	18:00	CST	Tropical Storm (Katrina)		0	1	500.00K	0.00K
Totals:								0	1	1,258.00M	0.00K

Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind Events –
(Source: Local Input)

Location	Date	Type	Mag	Dth	Inj	PrD	CrD	Total Cost	Comments
Pickensville	8/29/2005	Tropical Storm	N/A			\$250		\$250	Katrina
TOTALS		N/A			0	\$250	\$0	\$250	

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.

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

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

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

419 Wildfire Events – 1997 thru 2012

(Source: Alabama Forestry Commission)

County	Total # of Fires	Average # of Fires	Total Acres Burned	Average Acres Burned	Average Fire Size
Pickens	419	28	3,227	215	7.7

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.

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**Table 5-39: Town of Pickensville
Hazard Probability Assessment**

Natural Hazards	Number of Historical Occurrences	Probability of Future Occurrence	Extent	Area Affected
Thunderstorm	5	50%	>10%	Town-wide
Lightning	0	Unknown	>10%	Town-wide
Hail	0	Unknown	>10%	Town-wide
Tornado	3	30	>10%	Town-wide
Flood	10	100%	<5%	Town-wide
Drought/Extreme Heat	16	>100%	5-10%	Town-wide
Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	7	70%	>10%	Town-wide
Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind	8	80%	>10%	Town-wide
Sinkhole/Expansive Soil	0	Unknown	Unknown	N/A
Landslide	0	Unknown	Unknown	N/A
Earthquake	0	Unknown	<5%	Town-wide
Wildfire (1997-2012 – 15 year study period – 5,475 days)	419	>100%	5-10%	Town-wide
Dam/Levee Failure	0	Unknown	Unknown	N/A

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, 2014

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 15 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 4-5). Zero denotes no data available to determine the probability, extent, or affected area.

TABLE 5-40: Town of Pickensville Critical Facilities

Facility	Location	Use	Value
<i>Governmental Services</i>			
Pickensville Fire Department	81 Water Avenue	Fire & Rescue	\$750,000
Pickensville Town Hall	16831 Hwy 14	Local Government	\$300,000
Police Dept	16832 Hwy 14	Police	\$150,000
Community Safe Room	11 Jackson Ferry Road	Storm Shelter	\$108,229
<i>Public Works</i>			
Pickensville Water Well/County	16831 Hwy 14	Water Supply	\$300,000
Pumping Station/County	16832 Hwy 14	Water Supply	\$250,000
<i>Education</i>			
<i>Industrial</i>			
<i>Miscellaneous</i>			
Century-Tel Telephone Substation	Water Ave & Hwy 86	Communications	\$300,000
Outdoor Warning Siren (#11)	Water Ave & Hwy 86	Outdoor Warning	\$25,000
TOTAL			\$2,183,229

(Source: Local Jurisdiction, 2014)

**Table 5-41: Town of Pickensville
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	0.5	0	0	\$0	\$1,550	\$1,690
Lightning	0	0	0	\$0	\$0	Unknown
Hail	0	0	0	\$0	\$0	Unknown
Tornado	0.3	0	0	\$0	\$6,000	\$6,540
Flood	1	2	1	\$735,518	\$8,600	\$811,089
Drought/Extreme Heat	1.6	0	0	\$0	\$0	Unknown
Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	0.7	0	0	\$0	\$0	Unknown
Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind	0.8	0	1	\$2,318	\$201,541	\$222,206
Sinkhole/Expansive Soil	0	0	0	\$0	\$0	Unknown
Landslide	0	0	0	\$0	\$0	Unknown
Earthquake	0	0	0	\$0	\$0	Unknown
Wildfire (15 year study period)	27.9	0	0	\$0	\$14,633	\$15,950
Dam/Levee Failure	0	0	0	\$0	\$0	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, 2014

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 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 denotes no data available to determine the average occurrences, average loss or projected loss per event.

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Town of Pickensville Mitigation Action Plan

The Town of Pickensville 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 Town of Pickensville's 2009 Mitigation Plan list is shown below. The current statuses of the proposed actions are shown in italics.

BENCHMARKING:

Town of Pickensville Mitigation Action Plan (2009)

1. Plan, fund, and build long-term community storm shelter (to include running water, kitchen, and backup generator) – *Action was revised and is ongoing.*
 - The town is in the process of installing a community safe room with a backup generator at 11 Jackson Ferry Road using a HMGP grant and local funds.

2. Upgrade drainage system to include new pipe and culverts and enlarge ditches – *Action is ongoing.*
 - The town has completed some drainage system work using a HMGP grant and local funds. Additional work is needed on Old Mill Road.

3. Install emergency generators at critical facilities – *Action is ongoing.*
 - The town installed an emergency generator at their fire department. The town is in need of an emergency generator for its town hall.

4. Install additional fire hydrants throughout town limits – *Action is ongoing.*

- The town has not installed additional fire hydrants due to lack of funds.
5. Enforce floodplain management requirements; regulate construction or improvements in Special Flood Hazard Areas (SFHAs) – *Action is ongoing.*
- The Town of Pickensville is a participating community in the NFIP.

Table 5-42 shows the Town of Pickensville mitigation actions for the 2015 plan revision. During the plan update process, one action was revised and no new actions were identified. All actions from previous plan revision are ongoing.

Mitigation Strategy – Town of Pickensville

Goal 1: Protect life

Objective 1.1 Improve Warning and Emergency Communication Systems

Objective 1.2 Reduce impact of hazards on vulnerable populations

Action 1.2.1 Construct/install community safe rooms with backup generators and include outdoor warning sirens if necessary

Objective 1.3 Improve disaster response and recovery

Goal 2: Protect property

Objective 2.1 Reduce losses to critical facilities/assets

Action 2.1.1 Install emergency generators at critical facilities

Objective 2.2 Continue participation in NFIP program

Action 2.2.1 Enforce floodplain management requirements and regulate construction or improvements in Special Flood Hazard Areas (SFHAs)

Objective 2.3 Provide and maintain essential public services

Action 2.3.1 Install additional fire hydrants throughout town limits

Objective 2.4 Reduce losses due to drainage problems

Action 2.4.1 Upgrade drainage system to include new pipe and culverts and enlarge ditches

Goal 3: Reduce economic impacts of disasters

Objective 3.1 Maintain operations of critical businesses and major employers

Goal 4: Protect environment and natural resources

Objective 4.1 Identify, protect, and properly manage floodplains

Objective 4.2 Enforce local codes and regulations related to NFIP

Goal 5: Increase public preparedness for disasters

Objective 5.1 Continue to train severe weather spotters

Table 5-42: Town of Pickensville Mitigation Actions 2015

Mitigation Action 1.2.1	Construct/install community safe rooms with backup generators and include outdoor warning sirens if necessary
Hazard(s) Addressed	All
Applies to new/existing asset	New and Existing
Local Planning Mechanism	Pickens County EMA, Town of Pickensville
Time frame for Completion	Two years from funding availability
Estimated Cost	\$100,000 - \$250,000 ea
Funding Sources	HMGP, ADECA, Governor's Emergency Relief Fund, Local
Priority	High
Mitigation Action 2.1.1	Install emergency generators at critical facilities
Hazard(s) Addressed	All
Applies to new/existing asset	New and Existing
Local Planning Mechanism	Pickens County EMA, Town of Pickensville
Time frame for Completion	One year from funding availability
Estimated Cost	\$5,000 - \$25,000 ea
Funding Sources	HMGP, ADECA, Local
Priority	High
Mitigation Action 2.2.1	Enforce floodplain management requirements; regulate construction or improvements in Special Flood Hazard Areas (SFHA's)
Hazard(s) Addressed	Flood
Applies to new/existing asset	New
Local Planning Mechanism	Town of Pickensville
Time frame for Completion	Continuous
Estimated Cost	
Funding Sources	NFIP, CDBG, Local
Priority	Low
Mitigation Action 2.3.1	Install additional fire hydrants throughout town limits
Hazard(s) Addressed	Wildfire
Applies to new/existing asset	New
Local Planning Mechanism	Town of Pickensville
Time frame for Completion	Two years from funding availability
Estimated Cost	\$2,600 ea
Funding Sources	CDBG, Fire Grant, Local
Priority	Medium
Mitigation Action 2.4.1	Upgrade drainage system to include new pipe and culverts and enlarge ditches
Hazard(s) Addressed	Flooding
Applies to new/existing asset	Existing
Local Planning Mechanism	Town of Pickensville
Time frame for Completion	Two years from funding availability
Estimated Cost	\$200,000
Funding Sources	NFIP, CDBG, Local
Priority	Medium

Town of Reform

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**Table 5-43: Town of Reform
Risk and Vulnerability Overview**

Natural Hazards	Hazard Identification	Mitigation Actions Prioritization	Prioritized Occurrence Threat	Vulnerability
Thunderstorm	X	2	4	H
Lightning	X	6	7	H
Hail	X	3	6	H
Tornado	X	1	7	H
Flood	X	5	3	L
Drought/Extreme Heat	X	8	2	M
Winter Storm/Frost Freeze/ Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	X	4	5	L
Hurricane/Tropical Storm/ Tropical Depression/ High Wind/ Strong Wind	X	9	4	L
Sinkhole/Expansive Soil	X	N/A	7	N/A
Landslide	X	N/A	7	N/A
Earthquake	X	10	7	L
Wildfire	X	7	1	M
Dam/Levee Failure	N/A	N/A	7	N/A

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 fifteen 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, 2014)

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TABLE 5-44: TOWN OF REFORM HAZARD EVENTS

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

Location	County/Zone	St.	Date	Time	I.Z.	Type	Mag	Dth	Inj	PrD	CrD
COUNTYWIDE	PICKENS CO.	AL	12/09/2004	06:05	CST	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	01/13/2005	08:00	CST	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
REFORM	PICKENS CO.	AL	05/10/2006	10:40	CST	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
REFORM	PICKENS CO.	AL	11/15/2006	10:45	CST-6	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
REFORM	PICKENS CO.	AL	08/02/2008	18:30	CST-6	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
REFORM	PICKENS CO.	AL	06/15/2010	16:50	CST-6	Thunderstorm Wind	55 kts. EG	0	0	3.00K	0.00K
REFORM	PICKENS CO.	AL	09/03/2012	20:00	CST-6	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
REFORM	PICKENS CO.	AL	09/03/2012	20:50	CST-6	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
Totals:								0	0	20.00K	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.

6 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
REFORM	PICKENS CO.	AL	03/22/2005	19:46	CST	Hail	0.75 in.	0	0	0.00K	0.00K
REFORM	PICKENS CO.	AL	12/04/2005	14:41	CST	Hail	0.75 in.	0	0	0.00K	0.00K
REFORM	PICKENS CO.	AL	04/03/2006	01:14	CST	Hail	0.75 in.	0	0	0.00K	0.00K
REFORM	PICKENS CO.	AL	04/07/2006	23:36	CST	Hail	0.75 in.	0	0	0.00K	0.00K
REFORM	PICKENS CO.	AL	06/12/2009	15:25	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
REFORM	PICKENS CO.	AL	09/03/2012	20:50	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.

9 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>
PICKENS (ZONE)	PICKENS (ZONE)	AL	05/18/2003	06:00	CST	Flood		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	05/20/2003	08:00	CST	Flood		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/01/2005	00:00	CST	Flood		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	06/12/2005	06:45	CST	Flood		0	0	0.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	02/05/2004	19:05	CST	Flash Flood		0	0	10.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	02/05/2004	20:30	CST	Flash Flood		0	0	5.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	02/05/2004	23:30	CST	Flash Flood		0	0	5.00K	0.00K
COUNTYWIDE	PICKENS CO.	AL	12/09/2004	06:30	CST	Flash Flood		0	0	6.00K	0.00K
REFORM	PICKENS CO.	AL	09/05/2011	09:00	CST-6	Flash Flood		0	0	0.00K	0.00K
Totals:								0	0	26.00K	0.00K

16 Drought/Extreme Heat 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>
PICKENS (ZONE)	PICKENS (ZONE)	AL	07/18/2006	07:00	CST	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/01/2006	00:00	CST	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/01/2006	00:00	CST	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	05/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	06/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	07/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	10/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	11/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	12/01/2007	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	01/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	02/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	03/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/01/2008	00:00	CST-6	Drought		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

7 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
PICKENS (ZONE)	PICKENS (ZONE)	AL	12/15/2010	05:00	CST-6	Winter Weather		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	01/24/2003	00:00	CST	Extreme Cold/Wind Chill		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/07/2007	00:00	CST-6	Frost Freeze		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/08/2007	00:00	CST-6	Frost Freeze		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	01/09/2011	12:45	CST-6	Ice Storm		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	03/01/2009	00:30	CST-6	Heavy Snow		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	02/09/2011	16:15	CST-6	Heavy Snow		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

**8 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
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/16/2004	07:30	CST	High Wind (Ivan)	56 kts. EG	0	0	600.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	06/11/2005	18:00	CST	Strong Wind (Arlene)	40 kts. EG	0	0	8.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	04/12/2009	20:30	CST-6	Strong Wind	43 kts. EG	0	0	75.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/05/2011	12:00	CST-6	Strong Wind (Lee)	39 kts. EG	0	0	5.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	09/05/2011	18:00	CST-6	Strong Wind (Lee)	43 kts. EG	0	0	5.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/23/2008	12:00	CST-6	Tropical Depression (Fay)		0	0	0.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	07/10/2005	16:00	CST	Tropical Storm (Dennis)		0	0	65.00K	0.00K
PICKENS (ZONE)	PICKENS (ZONE)	AL	08/29/2005	18:00	CST	Tropical Storm (Katrina)		0	1	500.00K	0.00K
Totals:								0	1	1,258.00M	0.00K

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

(Source: Local Input)

Location	Date	Type	Mag	Dth	Inj	PrD	CrD	Total Cost	Comments
Reform	8/29/2005	Tropical Storm	N/A			\$19,332		\$19,332	Katrina
TOTALS			n/a		0	\$19,332		\$19,332	

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.

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

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

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

419 Wildfire Events – 1997 thru 2012

(Source: Alabama Forestry Commission)

County	Total # of Fires	Average # of Fires	Total Acres Burned	Average Acres Burned	Average Fire Size
Pickens	419	28	3,227	215	7.7

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.

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**Table 5-45: Town of Reform
Hazard Probability Assessment**

Natural Hazards	Number of Historical Occurrences	Probability of Future Occurrence	Extent	Area Affected
Thunderstorm	8	80%	>10%	Town-wide
Lightning	0	Unknown	>10%	Town-wide
Hail	6	60%	>10%	Town-wide
Tornado	0	Unknown	>10%	Town-wide
Flood/Flash Flood	9	90%	<5%	Lubbub Creek and Tributary
Drought/Extreme Heat	16	>100%	5-10%	Town-wide
Winter Storm/Frost Freeze/ Heavy Snow/ Ice Storm/Winter Weather/Extreme Cold	7	70%	<5%	Town-wide
Hurricane/Tropical Storm/Tropical Depression/High Wind/ Strong Wind	8	80%	<5%	Town-wide
Sinkhole/Expansive Soil	0	Unknown	Unknown	N/A
Landslide	0	Unknown	Unknown	N/A
Earthquake	0	Unknown	<5%	Town-wide
Wildfire (1997-2012 – 15 year study period)	419	>100%	5-10%	Town-wide
Dam/Levee Failure	0	Unknown	Unknown	N/A
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, 2014)</i>				

TABLE 5-46: Town of Reform Critical Facilities

Facility	Location	Use	Value
<i>Governmental Services</i>			
Reform City Hall/ Police Dept	104 3rd Ave SE	Local Government	\$262,396
Reform Fire Department	104 3rd Ave SE	Police/ Fire Dispatch	\$70,745
Reform Public Library	300 1st Street South	Library	\$350,000
Reform Primary Care			
<i>Public Works</i>			
Water Tanks (2)	Hopewell Circle	Water Service	\$500,000
Water Well & Pump House #1	300 Block of 3rd St SW	Water Service	\$200,000
Water Well & Pump House #2	7th Ave SW	Water Service	\$200,000
Sewage Treatment Plant	3rd Ave SE	Sewage Treatment	\$2,100,000
Booster Station	Hopewell Circle	Water Service	\$75,000
Booster Station	7th St NW	Water Service	\$75,000
Lift Station	Behind Gas Plant	Sewer	\$125,000
Lift Station	24th Ave SE	Sewer	\$125,000
Lift Station	11th Ave NW	Sewer	\$125,000
<i>Education</i>			
Pickens County High School	205 4th Avenue SE	Education	\$12,762,500
Reform Elementary School	815 7th Ave SE	Education	\$8,136,500
<i>Industrial</i>			
Nature Earth			\$
<i>Miscellaneous</i>			
Southern Natural Gas	1800 Block of Hwy 17 South	Gas Service	\$5,000,000
Pickens County Rescue Squad	104 3rd Ave SE	Rescue Squad	\$250,000
Outdoor Weather Siren (#12)	711 Park Drive	Weather Warning	
Pickens County Airport	Airport Drive	Air service	\$10,000,000
Alabama Southern Railroad			\$
<i>(Source: Local Jurisdiction, 2014)</i>			TOTAL \$40,357,141

**Table 5-47: Town of Reform
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	0.8	0	0	\$0	\$2,500	\$2,725
Lightning	0	0	0	\$0	\$0	Unknown
Hail	0.6	0	0	\$0	\$0	Unknown
Tornado	0.0	0	0	\$0	\$0	Unknown
Flood/Flash Flood	0.9	0	0	\$0	\$2,889	\$3,149
Drought/Extreme Heat	1.6	0	0	\$0	\$0	Unknown
Winter Storm/Frost Freeze/Heavy Snow/Ice Storm/Winter Weather/Extreme Cold	0.7	0	0	\$0	\$0	Unknown
Hurricane/Tropical Storm/Tropical Depression/High Wind/Strong Wind	0.8	0	1	\$2,897	\$157,250	\$174,560
Sinkhole/Expansive Soil	0	0	0	\$0	\$0	Unknown
Landslide	0	0	0	\$0	\$0	Unknown
Earthquake	0	0	0	\$0	\$0	Unknown
Wildfire (15 year study period)	27.9	0	0	\$0	\$14,633	\$15,950
Dam/Levee Failure	0	0	0	\$0	\$0	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, 2014

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 during the ten-year period with the exception of wildfire which was a 15-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 denotes no data available to determine the average occurrences, average loss or projected loss per event.

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Town of Reform Mitigation Action Plan

The Town of Reform 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 Town of Reform's 2009 Mitigation Plan list is shown below. The current statuses of the proposed actions are shown in italics.

BENCHMARKING:

Town of Reform Mitigation Action Plan (2009)

1. Install additional outdoor warning sirens - *Action is ongoing*
 - During the past five years, the Town of Reform has installed additional outdoor warning sirens.
2. Provide generators at critical facilities – *Action was revised and is ongoing*
 - During the past five years, the Town of Reform has placed emergency generators at existing critical facilities.
3. Enforce floodplain management requirements; regulate construction or improvements in Special Flood Hazard Areas (SFHAs) - *Action is ongoing*
 - During the past five years, the Town of Reform has made improvements in the enforcement of flood plain management requirements.

Table 5-48 shows the Town of Reform's mitigation actions for the 2015 plan revision. During the plan update process, one action was revised and one new action was identified and added to the plan.

Mitigation Strategy – Town of Reform

Goal 1: Protect life

Objective 1.1 Improve Warning and Emergency Communication Systems

Action 1.1.1 Install additional outdoor warning sirens

Objective 1.2 Reduce impact of hazards on vulnerable populations

Action 1.2.1 Construct/install community safe rooms with emergency backup generators

Objective 1.3 Improve disaster response and recovery

Goal 2: Protect property

Objective 2.1 Reduce losses to critical facilities/assets

Action 2.1.1 Provide generators at critical facilities

Objective 2.2 Continue Participation in NFIP program

Action 2.2.1 Enforce floodplain management requirements, regulate construction or improvements in Special Flood Hazard Areas (SFHAs)

Objective 2.3 Provide and maintain essential public services

Objective 2.4 Reduce losses due to drainage problems

Goal 3: Reduce economic impacts of disasters

Objective 3.1 Maintain operations of critical businesses and major employers

Goal 4: Protect environment and natural resources

Objective 4.1 Identify, protect, and properly manage floodplains

Objective 4.2 Enforce local codes and regulations related to NFIP

Goal 5: Increase public preparedness for disasters

Objective 5.1 Continue to train severe weather spotters

Table 5-48: Town of Reform Mitigation Actions 2015

Mitigation Action 1.1.1	Install additional outdoor warning sirens
Hazard(s) Addressed	All
Applies to new/existing asset	New
Local Planning Mechanism	Pickens County EMA, Town of Reform
Time frame for Completion	One year from funding availability
Estimated Cost	\$25,000
Funding Sources	HMGP, Local
Priority	Medium
Mitigation Action 1.2.1	Construct/install community safe rooms with emergency backup generators
Hazard(s) Addressed	All
Applies to new/existing asset	New/Existing
Local Planning Mechanism	Pickens County EMA, Town of Reform
Time frame for Completion	Three years from funding availability
Estimated Cost	\$100,000-\$150,000
Funding Sources	HMGP, ADECA, Governor's Emergency Relief Fund, Local
Priority	High
Mitigation Action 2.1.1	Add back-up generators at critical facilities
Hazard(s) Addressed	All
Applies to new/existing asset	New/Existing
Local Planning Mechanism	Pickens County EMA, Town of Reform, Board of Education
Time frame for Completion	One year from funding availability
Estimated Cost	\$25,000 ea
Funding Sources	HMGP, ADECA, Local
Priority	Medium
Mitigation Action 2.2.1	Enforce floodplain management requirements; regulate construction or improvement in Special Flood Hazard Areas (SFHA's)
Hazard(s) Addressed	Flood
Applies to new/existing asset	New and Existing
Local Planning Mechanism	Town of Reform
Time frame for Completion	Continuous
Estimated Cost	
Funding Sources	NFIP, CDBG, Local
Priority	Low

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Pickens County Fire Association

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Pickens County Fire Association Action Plan

The Pickens County Fire Association 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 Pickens County Fire Association's Mitigation Plan has been added to this plan update. **Table 5-49** shows the Pickens County Fire Association's mitigation actions.

BENCHMARKING:

Prior to this plan revision, no actions were listed for this organization; therefore, no benchmarking can be made.

MITIGATION STRATEGY – PICKENS COUNTY FIRE ASSOCIATION

Goal 1: Protect life

Objective 1.2 Reduce impacts of hazards on vulnerable populations

Action 1.2.1 Construct storm retrofits to fire buildings

Action 1.2.2 Construct/install community safe rooms at fire buildings to include generators

Action 1.2.3 Construct/install individual storm shelters at fire buildings

Goal 2: Protect property

Objective 2.3 Provide and maintain essential public services

Action 2.3.1 Provide generators for fire buildings

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Table 5-49: Pickens County Fire Association Mitigation Actions

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

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Pickens County Board of Education

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Pickens County Board of Education Action Plan

The Pickens County Board of Education 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 Pickens County Board of Education's Mitigation Plan has been added to this plan update. **Table 5-50** shows the Pickens County Board of Education's mitigation actions.

BENCHMARKING:

Prior to this plan revision, no actions were listed for this organization; therefore, no benchmarking can be made.

MITIGATION STRATEGY – PICKENS COUNTY BOARD OF EDUCATION

Goal 1: Protect life

Objective 1.2 Reduce impacts of hazards on vulnerable populations

Action 1.2.1 Construct storm retrofits to educational buildings

Action 1.2.2 Construct/install community safe rooms at educational buildings to include generators

Action 1.2.3 Construct/install individual storm shelters at educational buildings

Goal 2: Protect property

Objective 2.1 Reduce losses to critical facilities/assets

Action 2.1.1 Install security measures at Pickens County's critical educational facilities

Objective 2.3 Provide and maintain essential public services

Action 2.3.1 Provide generators for educational buildings

Table 5-50: Pickens County BOE Mitigation Actions

Mitigation Action	Construct storm retrofits to educational buildings
Hazard(s) Addressed	Thunderstorms, Tornados, Hurricanes
Applies to new/existing asset	Existing
Local Planning Mechanism	Pickens County BOE
Time frame for Completion	One year from funding availability
Estimated Cost	\$400,000 each
Funding Sources	HMGP, ADECA, Governor’s Emergency Relief Fund, Local
Priority	Low
Mitigation Action	Construct/install community safe rooms to educational buildings to include generators
Hazard(s) Addressed	Thunderstorm, Tornado
Applies to new/existing asset	New and Existing
Local Planning Mechanism	Pickens County BOE
Time frame for Completion	One year from funding availability
Estimated Cost	\$100,000 each
Funding Sources	HMGP, ADECA, Governor’s Emergency Relief Fund, Local
Priority	High
Mitigation Action	Construct/install individual storm shelters to educational buildings
Hazard(s) Addressed	Thunderstorm, Tornado
Applies to new/existing asset	New and Existing
Local Planning Mechanism	Pickens County BOE
Time frame for Completion	One year from funding availability
Estimated Cost	\$5,000 each
Funding Sources	HMGP, ADECA, Governor’s Emergency Relief Fund, Local
Priority	Low
Mitigation Action	Provide generators for educational buildings
Hazard(s) Addressed	All
Applies to new/existing asset	Existing
Local Planning Mechanism	Pickens County BOE
Time frame for Completion	One year from funding availability
Estimated Cost	\$25,000 ea
Funding Sources	HMGP, ADECA, Local
Priority	High

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Pickens County Medical Center

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Pickens County Medical Center Action Plan

The Pickens County Medical Center 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 Pickens County Medical Center's Mitigation Plan has been added to this plan update. **Table 5-31** shows the Pickens County Medical Center's mitigation actions.

BENCHMARKING:

Prior to this plan revision, no actions were listed for this organization; therefore, no benchmarking can be made.

MITIGATION STRATEGY – PICKENS COUNTY MEDICAL CENTER

Goal 1: Protect life

Objective 1.2 Reduce impacts of hazards on vulnerable populations

Action 1.2.1 Construct storm retrofits to medical buildings

Goal 2: Protect property

Objective 2.1 Reduce losses to critical facilities/assets

Action 2.1.1 Install security measures at Pickens County's Medical Center facilities

Objective 2.3 Provide and maintain essential public services

Action 2.3.1 Provide generators for medical buildings

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Table 5-51: Pickens County Medical Center Mitigation Actions

Mitigation Action	Construct storm retrofits to medical buildings
Hazard(s) Addressed	Thunderstorms, Tornados, Hurricanes
Applies to new/existing asset	Existing
Local Planning Mechanism	Pickens County Medical Center
Time frame for Completion	One year from funding availability
Estimated Cost	\$400,000 each
Funding Sources	HMGP, ADECA, Local
Priority	Low
Mitigation Action 2.1.1	Install security measures at Pickens County Medical Center
Hazard(s) Addressed	Manmade Hazards
Applies to new/existing asset	Existing
Local Planning Mechanism	Pickens County Medical Center
Time frame for Completion	One year from funding availability
Estimated Cost	\$500,000
Funding Sources	HMGP, Local
Priority	Medium
Mitigation Action	Provide generators for medical buildings
Hazard(s) Addressed	All
Applies to new/existing asset	Existing
Local Planning Mechanism	Pickens County Medical Center
Time frame for Completion	One year from funding availability
Estimated Cost	\$25,000 each
Funding Sources	HMGP, ADECA, Local
Priority	High

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Section Six: Mitigation Plan Maintenance

The plan may be reviewed at any time at the request of any local government, by the Chairman (Pickens County EMA Director) of the Hazard Mitigation Planning Committee, or at the EMA Director's discretion. Local governments may submit a formal letter to the Pickens County EMA Director or the Chairman of the Pickens 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 Pickens County EMA Director or the Chairman of the Pickens 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, update, 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 the minimum, the Hazard Mitigation Planning Committee will annually monitor, evaluate, and amend this plan. Public participation is encouraged to allow the public an opportunity to participate in the process. Efforts will be made to have the annual survey form placed on all jurisdictional websites for the public to complete and return. The Hazard Mitigation Planning Committee will review a variety of resources and examine conditions, which may affect mitigation activities for natural 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

For monitoring, evaluating, and updating this plan, Director of the Pickens County EMA will serve as the point of contact for all amendments to the plan and will coordinate all additions, deletions or amendments 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.

During the past five years, the Pickens County EMA kept no records of the annual plan reviews; therefore, regular plan monitoring will be conducted differently in the next five years. Regular plan monitoring will be achieved through the County EMA's efforts to track mitigation activities. The Director of the Pickens County EMA 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. Again, efforts will be made to have the annual survey form placed on all jurisdictional websites for the public to complete and return.

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 Director 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. 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 Pickens County Hazard Mitigation Plan is a stand-alone plan; however, will be placed alongside the current Pickens County Emergency Operations Plan that is administered by

the Pickens County Emergency Management Agency. The Pickens County Hazard Mitigation Plan update has also been incorporated into the District II Comprehensive Economic Development Strategy (CEDS). District II covers the West Alabama counties of Bibb, Fayette, Greene, Hale, Lamar, Pickens, and Tuscaloosa.

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.

Many 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.

The jurisdictions are funded through their local budgets and utilize grants that allow them to expand on and improve existing policies and programs. The EMA distributes educational material and reaches out to the citizens and businesses in the county. **Table 1-1** provides a list of plans, policies, and ordinances available to each jurisdiction. These plans, policies, and ordinances, along with an engineer, planners, GIS staff, a building inspector, emergency managers, and grant writers help to expand on and improve the jurisdictions' capabilities.

APPENDIX I

Adopting Resolutions

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Appendix D - 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 Pickens County Commission or Director of the Pickens County Emergency Management Agency.

The Pickens 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 Pickens County, and was developed in a joint and cooperative venture by members of the Pickens County Hazard Mitigation Planning.

Pickens 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. Pickens 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 CCEMA 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 Pickens 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 Pickens County, Alabama.

4-23-2015

Date



Ken Gibson, Director

Pickens County Emergency Management Agency

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County of Pickens

2015 Pickens County Hazard Mitigation Plan Update

Resolution of Adoption

WHEREAS, the Pickens County Hazard Mitigation Plan has been updated in accordance with FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, the County of Pickens participated in the updating of a multi-jurisdictional plan, Pickens County Hazard Mitigation Plan; and

WHEREAS, the County of Pickens 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 Pickens 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 Pickens adopts the 2015 Pickens County Hazard Mitigation Plan Update, and resolves to execute the actions in the plan.

ADOPTED, this 28th day of April, 2015 at the meeting of the County Commission.


Chairman, Pickens County Commission

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MAYOR
W. R. McKinzeý, Jr.

CITY CLERK/COURT CLERK
Dineki McCaa

CITY MAGISTRATE
Susan Jones

CITY OF ALICEVILLE
419 Memorial Parkway East
ALICEVILLE, AL 35442
(205) 373-6611
City of Aliceville

COUNCIL MEMBERS
Warren E. Lavender, II
Mayor Pro-tem

Max Allen
Marva Gipson
Richard D. Hughes
Robert Wilder

2015 Pickens County Hazard Mitigation Plan Update

**Resolution of Adoption
RESOLUTION 2015-10**

WHEREAS, the Pickens County Hazard Mitigation Plan has been updated in accordance with FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, the City of Aliceville participated in the updating of a multi-jurisdictional plan, Pickens County Hazard Mitigation Plan; and

WHEREAS, the City of Aliceville 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 Aliceville 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 Aliceville adopts the 2015 Pickens County Hazard Mitigation Plan Update, and resolves to execute the actions in the plan.

ADOPTED, this 22 day of May, 2015 at the meeting of the City Council.



W. R. McKinzeý Jr., Mayor

Fax: (205) 373-3165

Email: dmccaa@nctv.com

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Town of Carrollton
2015 Pickens County Hazard Mitigation Plan Update
Resolution of Adoption

WHEREAS, the Pickens County Hazard Mitigation Plan has been updated in accordance with FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, the Town of Carrollton participated in the updating of a multi-jurisdictional plan, Pickens County Hazard Mitigation Plan; and

WHEREAS, the Town of Carrollton 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 Carrollton 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 Carrollton adopts the 2015 Pickens County Hazard Mitigation Plan Update, and resolves to execute the actions in the plan.

ADOPTED, this 7th day of May, 2015 at the meeting of the Town Council.



President, Carrollton Town Council

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Town of Ethelsville
2014 Pickens County Hazard Mitigation Plan Update
Resolution of Adoption

WHEREAS, the Pickens County Hazard Mitigation Plan has been updated in accordance with FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, the Town of Ethelsville participated in the updating of a multi-jurisdictional plan, Pickens County Hazard Mitigation Plan; and

WHEREAS, the Town of Ethelsville 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 Ethelsville 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 Ethelsville adopts the 2015 Pickens County Hazard Mitigation Plan Update, and resolves to execute the actions in the plan.

ADOPTED, this 23rd day of APRIL, 2015 at the meeting of the Town Council.



President, Ethelsville Town Council

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Town of Gordo

2015 Pickens County Hazard Mitigation Plan Update

Resolution of Adoption

WHEREAS, the Pickens County Hazard Mitigation Plan has been updated in accordance with FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, the Town of Gordo participated in the updating of a multi-jurisdictional plan, Pickens County Hazard Mitigation Plan; and

WHEREAS, the Town of Gordo 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 Gordo 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 Gordo adopts the 2015 Pickens County Hazard Mitigation Plan Update, and resolves to execute the actions in the plan.

ADOPTED, this 4th day of May, 2015 at the meeting of the

Town Council.



President, Gordo Town Council

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Town of McMullen

2015 Pickens County Hazard Mitigation Plan Update

Resolution of Adoption

WHEREAS, the Pickens County Hazard Mitigation Plan has been updated in accordance with FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, the Town of McMullen participated in the updating of a multi-jurisdictional plan, Pickens County Hazard Mitigation Plan; and

WHEREAS, the Town of McMullen 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 McMullen 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 McMullen adopts the 2015 Pickens County Hazard Mitigation Plan Update, and resolves to execute the actions in the plan.

ADOPTED, this 12 day of June, 2015 at the meeting of the Town Council.



President, McMullen Town Council

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Town of Memphis

2015 Pickens County Hazard Mitigation Plan Update

Resolution of Adoption

WHEREAS, the Pickens County Hazard Mitigation Plan has been updated in accordance with FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, the Town of Memphis participated in the updating of a multi-jurisdictional plan, Pickens County Hazard Mitigation Plan; and

WHEREAS, the Town of Memphis 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 Memphis 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 Memphis adopts the 2015 Pickens County Hazard Mitigation Plan Update, and resolves to execute the actions in the plan.

ADOPTED, this 10 day of June, 2015 at the meeting of the Town Council.



President, Memphis Town Council

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Town of Pickensville

2015 Pickens County Hazard Mitigation Plan Update

Resolution of Adoption

WHEREAS, the Pickens County Hazard Mitigation Plan has been updated in accordance with FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, the Town of Pickensville participated in the updating of a multi-jurisdictional plan, Pickens County Hazard Mitigation Plan; and

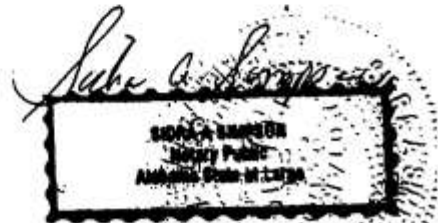
WHEREAS, the Town of Pickensville is a local unit of government that has afforded the citizens an opportunity to comment and provide input in the plan and the actions in the plan; and

WHEREAS, the Town of Pickensville 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 Pickensville adopts the 2015 Pickens County Hazard Mitigation Plan Update, and resolves to execute the actions in the plan.

ADOPTED, this 9th day of June, 2015 at the meeting of the Town Council.


President, Pickensville Town Council



My Commission Expires
January 5, 2016

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Resolution 05052015
Town of Reform
2015 Pickens County Hazard Mitigation Plan Update
Resolution of Adoption

WHEREAS, the Pickens County Hazard Mitigation Plan has been updated in accordance with FEMA requirements at 44 C.F.R. 201.6; and

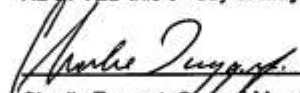
WHEREAS, the Town of Reform participated in the updating of a multi-jurisdictional plan, Pickens County Hazard Mitigation Plan; and

WHEREAS, the Town of Reform 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

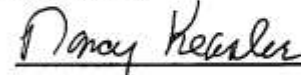
WHEREAS, the Town of Reform has reviewed the plan and affirms that the plan will be updated no less than every five years.

NOW THEREFORE, BE IT RESOLVED by the Town Council that the Town of Reform adopts the 2015 Pickens County Hazard Mitigation Plan Update, and resolves to execute the actions in the plan.

ADOPTED this 5th day of May, 2015, at the meeting of the Town Council.



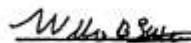
Charlie Taggart, Council Member #1



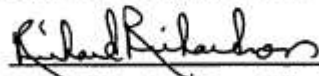
Nancy Keasler, Council Member #4




John Dean, Council Member #2



Willie Littles, Council Member #5



Richard Richardson, Council Member #3

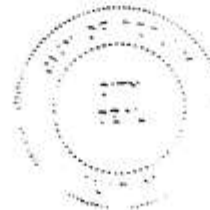


Bennie E. Harton, Mayor

ATTEST:



Annette Maughan, City Clerk



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Pickens County Board of Education
2015 Pickens County Hazard Mitigation Plan Update
Resolution of Adoption

WHEREAS, the Pickens County Hazard Mitigation Plan has been updated in accordance with FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, the Pickens County Board of Education participated in the updating of a multi-jurisdictional plan, Pickens County Hazard Mitigation Plan; and

WHEREAS, the Pickens County Board of Education 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 Pickens County Board of Education 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 Board that the Pickens County Board of Education adopts the 2015 Pickens County Hazard Mitigation Plan Update, and resolves to execute the actions in the plan.

ADOPTED, this 4th day of May, 2015 at the meeting of the Pickens County Board of Education.



Superintendent, Pickens County Board of Education

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Pickens County Fire Association

2014 Pickens County Hazard Mitigation Plan Update

Resolution of Adoption

WHEREAS, the Pickens County Hazard Mitigation Plan has been updated in accordance with FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, the Pickens County Fire Association participated in the updating of a multi-jurisdictional plan, Pickens County Hazard Mitigation Plan; and

WHEREAS, the Pickens County Fire Association 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 Pickens County Fire Association 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 Board/Chief that the Pickens County Fire Association adopts the 2015 Pickens County Hazard Mitigation Plan Update, and resolves to execute the actions in the plan.

ADOPTED, this 28th day of May, 2015 at the meeting of the Pickens County Fire Association.



President, Pickens County Fire Association

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Pickens County Medical Center
2015 Pickens County Hazard Mitigation Plan Update
Resolution of Adoption

WHEREAS, the Pickens County Hazard Mitigation Plan has been updated in accordance with FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, the Pickens County Medical Center participated in the updating of a multi-jurisdictional plan, Pickens County Hazard Mitigation Plan; and

WHEREAS, the Pickens County Medical Center 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 Pickens County Medical Center 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 Administrator that the Pickens County Medical Center adopts the 2015 Pickens County Hazard Mitigation Plan Update, and resolves to execute the actions in the plan.

ADOPTED, this 27th day of April, 2015.



Administrator, Pickens County Medical Center

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U.S. Department of Homeland Security
FEMA Region IV
3003 Chamblee Tucker Road
Atlanta, GA 30341



FEMA

April 23, 2015

Ms. Kelli Alexander
State Hazard Mitigation Officer
Recovery Division
Alabama Emergency Management Agency
Post Office Drawer 2160
Clanton, Alabama 35046-2160

Reference: Multi-jurisdictional Hazard Mitigation Plan: Pickens County, AL

Dear Ms. Alexander:

We are pleased to inform you that the revisions to the Pickens County Multi-jurisdictional Plan are in compliance with the Federal hazard mitigation planning requirements resulting from the Disaster Mitigation Act of 2000, as contained in 44 CFR 201.6. The plan is approved for a period of five (5) years, to April 22, 2020.

This plan approval extends to the following participating jurisdiction that provided a copy of their resolution adopting the plan:

- Town of Ethelsville

The approved participating jurisdiction is hereby an eligible applicant through the State for the following mitigation grant programs administered by the Federal Emergency Management Agency (FEMA):

- Hazard Mitigation Grant Program (HMGP)
- Pre-Disaster Mitigation (PDM)
- Flood Mitigation Assistance (FMA)

National Flood Insurance Program (NFIP) participation is required for some programs.

We commend Pickens County for development of a solid, workable plan that will guide hazard mitigation activities over the coming years. Please note that all requests for funding will be evaluated individually according to the specific eligibility and other requirements of the particular program under which the application is submitted. For example, a specific mitigation activity or project identified in the plan may not meet the eligibility requirements for FEMA funding, and even eligible mitigation activities are not automatically approved for FEMA funding under any of the aforementioned programs.

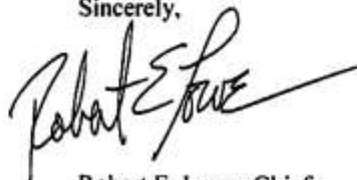
We strongly encourage each community to perform an annual review and assessment of the effectiveness of their hazard mitigation plan; however, a formal plan update is required at least every five (5) years.

We also encourage each community to conduct a plan update process within one (1) year of being included within a Presidential Disaster Declaration or of the adoption of major modifications to their local Comprehensive Land Use Plan or other plans that affect hazard mitigation or land use and development.

When the plan is amended or revised, it must be resubmitted through the State as a "plan update" and is subject to a formal review and approval process by our office. If the plan is not updated prior to the required five (5) year update, please ensure that the Draft update is submitted at least six (6) months prior to expiration of this plan.

The State and the participants in the Pickens County plan should be commended for their close coordination and communications with our office in the review and subsequent approval of the plan. If you or Pickens County have any questions or need any additional information, please do not hesitate to contact Jeffrey Brewer, of the Hazard Mitigation Assistance Branch, at (770) 220-5661, or Linda L. Byers of my staff at (770)-220-5498.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert E. Lowe", with a long horizontal flourish extending to the right.

Robert E. Lowe, Chief
Risk Analysis Branch
Mitigation Division