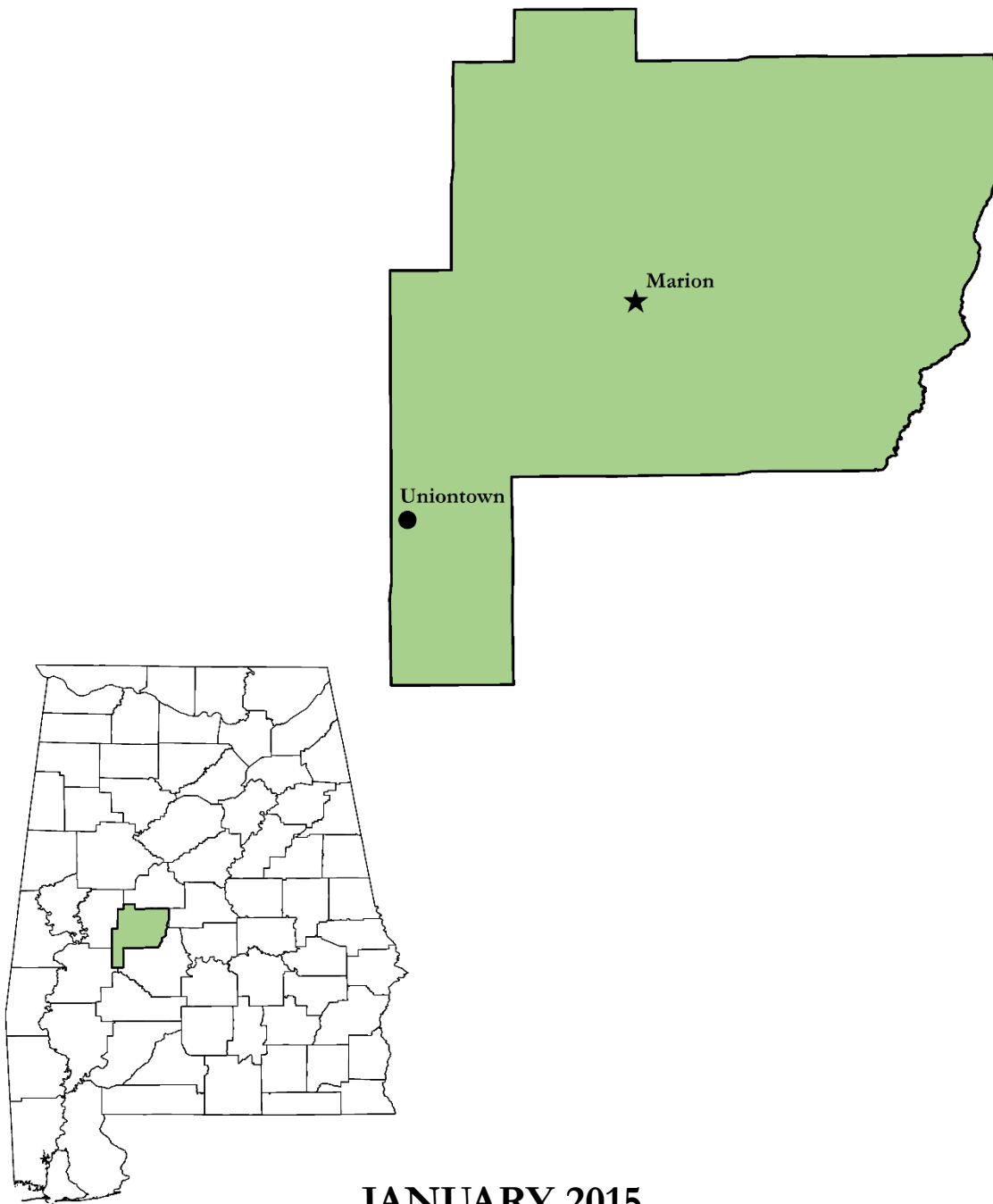


PERRY COUNTY, ALABAMA NATURAL HAZARDS MITIGATION PLAN



JANUARY 2015

The Alabama Tombigbee Regional Commission prepared this plan with guidance from the Perry County Emergency Management Agency and the Perry County Natural Hazards Steering Committee.

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APPENDICES

- Appendix 1- Sign in sheets, mailing lists, meeting notices**
- Appendix 2- Past Occurrence Documentation**

Summary of Changes Made in Plan Update

Section I. The Hazard Mitigation Plan

The first section of the plan gives a basic overview of the need and purpose of a Hazard Mitigation Plan. For the update, the Perry County EMA and the Alabama Tombigbee Regional Commission reviewed this section before changes were presented at the first committee meeting. Only a minimal amount changes were needed. Section C (Funding) was revised by the Alabama Tombigbee Regional Commission to reflect funding for this update process. Section F (Multijurisdictional Planning Participation) was also revised to be more user friendly in the identification of participants. Sections A (Perry County Natural Hazards Mitigation Plan), B (Authority), D (Scope), and E (Purpose) were not revised. The information contained in these sections is general information and has not changed. The hazard steering committee approved all changes prior to the final revision of the plan.

I. THE HAZARD MITIGATION PLAN

A. Perry County Natural Hazards Mitigation Plan

The Natural Hazards Mitigation Plan for Perry County, Alabama 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. This plan covers the entire county including all unincorporated areas, the Perry County School System, and the municipalities of Marion and Uniontown.

B. 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. Perry County's current plan was approved 3/4/2010.

C. Funding

Funding for the update of the Perry County Mitigation Plan was made available through the Hazard Mitigation Grant Program (HMGP). The Perry County Commission received funding from the Alabama Emergency Management Agency. The Alabama Tombigbee Regional Commission facilitated the development of Perry County's plan.

D. Scope

The Natural Hazards Mitigation Plan for Perry County, Alabama geographically includes all incorporated and unincorporated areas in Perry County. The plan addresses all natural hazards identified by the Federal Emergency Management Agency. All hazards that may affect Perry County and its residents are identified. Hazard mitigation strategies are discussed in terms of short term and long-term goals. Responsibility for implementation of strategies is discussed and possible funding sources are identified.

E. 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 Natural Hazards Mitigation Plan for Perry County, Alabama is an effort to identify mitigation strategies that address the hazards, which Perry County is the most vulnerable. This plan is only one of many steps Perry County will take to achieve a safer, more hazard resistant environment for its residents.

F. Multi-Jurisdictional Planning Participation

All three jurisdictions in Perry County participated in the planning process. These jurisdictions are the Perry County Commission, the City of Marion, and the City of Uniontown. The Perry County Board of Education also participated. All participants are continuing participants. Participation included completing hazard questionnaires, supplying information on critical facilities, and providing project lists. Each participant will formally adopt the plan when FEMA agrees the plan is approvable.

Summary of Changes Made in Plan Update Section II. Planning Process

The planning process section of this plan addresses requirement §201.6(c) (1) by providing documentation of the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.

This section contains a variety of organizational and basic information that deals with the update process. Committee and stakeholders lists were updated to reflect current information. The participating jurisdiction section was added to provide more detail on how each jurisdiction participated. Appendix 1 was added to the plan to document the planning process through meeting notices, sign in sheets, mailing lists, and general correspondence. This appendix is referred to during the discussion of the process in this section. A section containing synopses of the changes made to each section was also added. The section on existing plans was also reviewed and updated. The hazard steering committee approved all changes prior to the final revision of the plan.

II. PLANNING PROCESS

A. Hazard Mitigation Steering Committee

The Perry County Natural Hazards Mitigation Plan was updated in the fall of 2014 and winter of 2015. The Alabama Tombigbee Regional Commission worked with the Perry County Emergency Management Agency to update the plan. The plan was developed with the guidance of the Natural Hazards Steering Committee. This committee was established in 2004 to develop the original plan. The purpose of this committee was to ensure the interests and concerns of everyone in Perry County were addressed. The committee was re-evaluated by the EMA Director for the update and new appointees were chosen for the entire five-year planning cycle. The EMA director elected to leave all participation requirements the same from the original plan.

Natural Hazards Steering Committee

The Natural Hazards Steering Committee was comprised of representatives from the following entities:

- ❖ Perry County EMA, Director
- ❖ Perry County Engineering Department, Engineer
- ❖ City of Marion, Mayor or Representative
- ❖ City of Uniontown, Mayor or Representative
- ❖ Perry County Commission, Chairman or representative from Commission
- ❖ Perry County School System, Superintendent or representative
- ❖ Perry County Department of Human Resources, Director or representative

The EMA director charged the committee with the following tasks that were carried over from the current plan:

- To develop and oversee a comprehensive natural hazard mitigation planning process that:*
 - ✓ *Engages public participation and support,*
 - ✓ *Facilitates federal, state, regional, and local agencies' coordination,*
 - ✓ *Constantly monitors and evaluates the potential risks of hazards to life and property*
- ✓ *Actively mobilizes all available community resources and measures to mitigate the threats of hazards,*
 - ✓ *Results in programmed actions with specific results.*

Each member of the Steering Committee contributed his/her opinion on the following topics:

- ❖ Update of the identification of hazards,
- ❖ Additional existing plans,
- ❖ Revising lists of critical facilities,
- ❖ Revision of goals, objectives, and possible projects;
- ❖ Update of plan maintenance guidelines.

The Perry County EMA Director reviewed the list of requirements for the Natural Hazards Steering Committee that each member was required to fulfill in order to remain a part of the multi-jurisdictional plan. The EMA director elected to keep these requirements as they were. Each member of the committee was notified of these requirements verbally. All members stated they understood the requirements. The requirements are as follows:

- ❖ Members, or their representative, are encouraged to attend committee meetings or notify ATRC to receive materials and worksheets from the meeting missed
- ❖ Information requested must be submitted within the specified time frame for that material
- ❖ Full cooperation (working together, striving to resolve conflicts, showing respect) between municipalities, Perry County EMA, and Alabama Tombigbee Regional Commission throughout the entire planning process.

The first committee meeting was held at the Perry County Courthouse Annex in Marion. The committee met on December 10, 2014. Appendix 1 contains a sample letter sent to committee members and stakeholders along with the sign in sheet. Also provided is the public meeting notice which was posted at the Perry County Courthouse, Marion City Hall, and Uniontown City Hall. Committee members, stakeholders, and the public were invited and encouraged to attend these meetings. The first update meeting was used to review each section of the original plan and receive any comments or suggestions. All comments were noted and used to update the document.

The second meeting was held on January 27, 2015 in the Perry County Commission Chambers. This meeting provided the committee, surrounding jurisdictions, stakeholders, and the public an opportunity to make suggestions regarding the draft document. A draft of the plan was available online at www.atrcregion6.org. Draft copies of the document were also available at the Perry County EMA Offices and Alabama Tombigbee Regional Commission.

Each municipality, the county, and the Board of Education were also individually contacted regarding the plan. Each entity was asked to review the sections of the plan pertinent to them and provide updated information and revisions.

B. Public Involvement

An important aspect of the planning process is involving the public at every step. Perry County EMA and ATRC took steps to involve the public at every juncture. Both committee meetings were opened to the public. Notices were posted throughout the county to notify the public. The first public meeting held on December 10, 2014 discussed each section of the plan. Attendees went through each section of the plan and provide input and suggestions regarding what changes needed to be made. The second public meeting held on January 27, 2015 gave the public an opportunity to look over the draft document and comment on it prior to its submission to AEMA.

Two private citizens chose to attend meetings. The county acknowledges the lack of public participation and will initiate a more aggressive campaign to encourage public participation for the next update. The campaign will include the use of the local newspaper and social media. Survey Monkey or an equivalent online survey website will be used to gather public opinion on hazard mitigation issues. The county will also more actively encourage stakeholders and neighboring counties (Bibb, Hale, Marengo, Dallas, Autauga, and Chilton) to participate. EMA will contact them personally to solicit their participation.

A public hearing to receive comments will be held by each jurisdiction prior to their adoption of the plan. Once an approvable letter is received from FEMA, these meetings will be held and the plans will be formally adopted.

C. Interagency and Intergovernmental Coordination

The following state, regional, county, and local agencies and organizations were contacted regarding the plan update. All of these organizations received invitations to participate in the planning meetings. Information was also requested from many of these entities. All surrounding jurisdictions (Bibb, Hale, Marengo, Dallas, Autauga, and Chilton counties) were also notified of the planning meetings and the updated plan’s availability. They were also given the opportunity to comment on the draft. The following table lists each agency contacted and how they participated. Appendix 1 contains a stakeholder and committee mailing list.

Entities that served on the Natural Hazards Steering Committee participated in a discussion of the following subjects: identified hazards, existing plans, critical facility lists, goals, objectives, possible projects, and plan maintenance guidelines.

Entities Serving on Natural Hazards Steering Committee & Providing Information
Perry County EMA, Director
Perry County Engineering Department, County Engineer
City of Marion, Public Works Superintendent
City of Uniontown, Mayor
Perry County Commission, Chairman
Perry County Board of Education, Superintendent
Perry County Department of Human Resources, Director’s representative
Perry County Healthcare Coordinator

The following entities were invited to committee meetings and also sent notice that a draft of the plan was available for review.

Entities Notified of the Update, but Chose Not to Participate
Alabama Forestry Commission, Perry County Forester
American Red Cross of Central Alabama, Director
Berean Baptist Head Start, Director
Bibb County, County Commission Chairman
Chilton County, County Commission Chairman
Dallas County, County Commission Chairman
Hale County, County Commission Chairman
Judson College, President
Marengo County, County Commission Chairman
Marion Military Institute, President
Montgomery County Community Action, Director
Perry County Department of Public Health, Director
Perry County Extension Service, Director
Perry County Nursing Home, Director
State NFIP Coordinator

In addition to local, state, and regional agencies, the public was given an opportunity to participate in the planning process. The public participation component of this plan is discussed in detail in section B of this chapter. The plan was available for review in each jurisdiction. Before each jurisdiction adopts the plan, the public will be given another chance to comment. This opportunity

was in the form of a hearing held in each jurisdiction before plan adoption. These hearings were open to everyone and posted within each jurisdiction. Hearings were held on the following dates:

- ❖ Perry County Commission: (date of meeting prior to adoption to be inserted)
- ❖ Perry County Board of Education: (date of meeting prior to adoption to be inserted)
- ❖ City of Marion: (date of meeting prior to adoption to be inserted)
- ❖ City of Uniontown: (date of meeting prior to adoption to be inserted)

D. Participating Jurisdictions

All jurisdictions within Perry County have participated in the planning process and will adopt the final plan by formal resolution once a letter stating the plan is approvable is received from FEMA. Each jurisdiction participated as follows:

- ❖ City of Marion: Reviewed jurisdiction specific information and submitted changes, attended first and second committee meeting, reviewed draft plan.
- ❖ City of Uniontown: Reviewed jurisdiction specific information and confirmed no changes, and reviewed draft plan.
- ❖ Perry County: Reviewed jurisdiction specific information and submitted changes, attended first and second committee meeting, reviewed draft plan.
- ❖ Perry County Board of Education: Reviewed jurisdiction specific information and submitted changes, attended first committee meeting, reviewed draft plan.

E. Update Process

The update process began with a full review of the existing Hazard Mitigation Plan for Perry County, Alabama by the staff at the Alabama Tombigbee Regional Commission and Perry County EMA. The two agencies began by identifying all areas where there were known additions, revisions, and deletions. A list was compiled by the Alabama Tombigbee Regional Commission to use as a resource during the compilation of the update, but every section was reevaluated by the natural hazards committee and meeting attendees regardless if initial revisions were identified. The committee approved all final revisions to the document.

Each section was reviewed as follows:

- ❖ The Hazard Mitigation Plan: The Hazard Mitigation Plan section of the plan was preliminarily revised prior to the first committee meeting. Section C (Funding) was revised by the Alabama Tombigbee Regional Commission to reflect funding for this update process. Section F (Multijurisdictional Planning Participation) was also revised to be more user friendly in the identification of participants. The natural hazards steering committee and meeting attendees reviewed these changes and provided additional information. The hazard steering committee approved all changes prior to the final revision of the plan. Sections A (Perry County Natural Hazards Mitigation Plan), B (Authority), D (Scope), and E (Purpose) were not revised. The information contained in these sections is general information and has not changed.
- ❖ Planning Process: The Planning Process was updated after the first committee meeting was held and the remainder of the plan had been revised. The planning process section was extensively revised by the Alabama Tombigbee Regional Commission (ATRC) using comments received from AEMA and committee members. Committee and stakeholders lists were updated to reflect current information. The participating jurisdiction section was to add more detail on how each jurisdiction participated. Appendix 1 was added to the plan to document the planning process through meeting notices, sign in sheets, meeting notes, mailing lists, and general correspondence. This appendix is referred to

during the discussion of the process in this section. A section containing synopses of the changes made to each section was also added. The section on existing plans was also reviewed and updated. The hazard steering committee approved all changes prior to the final revision of the plan.

- ❖ **County Profile:** The Alabama Tombigbee Regional Commission reviewed and updated the County Profile prior to the first committee meeting. Section A (Geology) was not updated, due to the nature of geology. In Section B (Transportation), traffic counts were updated to reflect the latest information from the Alabama Department of Transportation. Section C (Economy) was revised to provide a narrative description of the county's economy. Section D (Utilities) was revised to reflect the dissolution of the county's water systems. There were no revisions to Section E (Media). Section F (Social and Economic Characteristics) was revised extensively to incorporate data from the American Community Survey. All revisions were gone over at the first meeting and suggestions/corrections were solicited. The hazard steering committee approved all changes prior to the final revision of the plan.
- ❖ **Risk Assessment:** The Risk Assessment section was initially reviewed and updated prior to the first committee meeting. ATRC reviewed each hazard and researched to find any additional information that could help determine risk. Past occurrences were updated using the Storm Events Database and probabilities were recalculated. The Risk Assessment was reviewed at the first committee meeting and attendees were asked to provide additional feedback. Attendees provided feedback on additional occurrences of many hazards. All new information received from attendees was incorporated into the update. No attendee or non-attendee stakeholders requested any changes be made to the risk level previously assigned to any hazard. The hazard steering committee approved all changes prior to the final revision of the plan.
- ❖ **Assessing Vulnerability:** Sections A-D were revised prior to the first committee meeting. Section A (Overview of Hazard Vulnerability and Impact) was revised to include additional information on dams. Updated American Community Survey information was used to identify affected populations (Section B) and socially vulnerable populations (Section C). HAZUS-MH was used to get updated building stock numbers for Section D. Sections A-D were reviewed at the first committee meeting in order to solicit any suggestions or comments, no attendee had any suggestions or changes. Section E (Identification of Critical Facilities) was reviewed also, but participants were asked to identify additional facilities. For Sections F (Critical Facilities by Jurisdiction) and G (Future Critical Facilities), participating jurisdictions were given their critical facility information from the current plan and asked to update it and resubmit it. Section H was compiled once all data was received back from participating jurisdictions. Section I was revised prior to the first committee meeting to reflect more up to date population projections and was reviewed with the attendees. The hazard steering committee approved all changes prior to the final revision of the plan.
- ❖ **Ongoing Mitigation Assessment:** This section underwent revisions requested by FEMA. A new section Existing Authorities, Policies, Programs, and Resources by Jurisdiction was added to detail capabilities by jurisdiction. Capabilities were determined by talking with each jurisdiction via phone calls. The information on the Perry County EMA was moved to Section B. The hazard steering committee approved all changes prior to the final revision of the plan.
- ❖ **Mitigation Goals, Objectives, and Actions by Jurisdiction:** Each participating jurisdiction received their information from the previous plan at the first committee meeting. Jurisdictions with no one present at the meeting were contacted directly. Each jurisdiction reviewed their information and either confirmed there were no revisions or submitted changes. The hazard steering committee approved all changes prior to the final revision of the plan.
- ❖ **Plan Maintenance:** The plan maintenance section was reviewed by ATRC and the Perry County EMA. This process was reviewed at the first committee meeting and suggestions were solicited. Additional entities were added to the Hazard Mitigation Committee Structures at the request of the EMA. The Incorporation in Existing Planning Mechanisms section was also revised to provide information by jurisdiction. The hazard steering committee approved all changes prior to the final revision of the plan.

As noted above, the update process consisted of two Natural Hazards Steering Committee meetings held on December 10, 2014 and January 27, 2015 at the Perry County Courthouse Annex these meetings were also public involvement meetings.

The draft plan was available for review and comment on ATRC's website, atrcregion6.org. Hard copies of the draft were also available at the Perry County EMA and Alabama Tombigbee offices. No comments were received on the draft plan.

F. Integration with Existing Plans

Throughout the update process those who participated in the planning process identified many plans. Some of these plans were the same plans consulted during the last update, but had been updated recently. These plans were consulted for various types of information. The Alabama Tombigbee Regional Commission reviewed these documents and incorporated them as deemed necessary. All sources of information are cited throughout the plan. These include:

- ❖ The Perry County Emergency Operations Plan: information for hazard identification and capabilities
- ❖ NOAA and NWS records: past occurrence data
- ❖ Flood Insurance Rate Maps: areas in flood plains
- ❖ Perry County Flood Insurance Study
- ❖ A Strategic Plan for the Alabama Tombigbee Region: review of regional goals to ensure mitigation goals and strategies did not conflict
- ❖ Alabama State Data Center Estimates and Projections: socio economic data
- ❖ State of Alabama: State Hazard Mitigation Plan Update: hazard information
- ❖ Perry County, Alabama Soil Survey: Soils Information
- ❖ Census 2010, U.S. Department of Commerce: socioeconomic information.
- ❖ American Community Survey, US Census Bureau
- ❖ Maps from Cartographic Research Laboratory, The University of Alabama
- ❖ Geologic Hazards Information the Geologic Survey of Alabama: <http://www.gsa.state.al.us>
- ❖ Geologic Hazard Information from the United States Geological Survey: <http://www.usgs.gov>
- ❖ Hazard Information from National Oceanic and Atmospheric Administration: <http://www.aoml.noaa.gov>
- ❖ Hazard Information: <http://www.hazardmaps.gov>
- ❖ Landslide Information: <http://www.nhoem.state.nh.us/mitigation/fig%203-17.htm>
- ❖ Hazard Information from Federal Emergency Management Agency: <http://www.fema.gov>
- ❖ Wildfire Information: Alabama Forestry Commission
- ❖ Tropical Cyclone Tracking Probability: Historical probability of a tropical cyclone crossing various locations around the world- Florida State University.

Summary of Changes Made in Plan Update

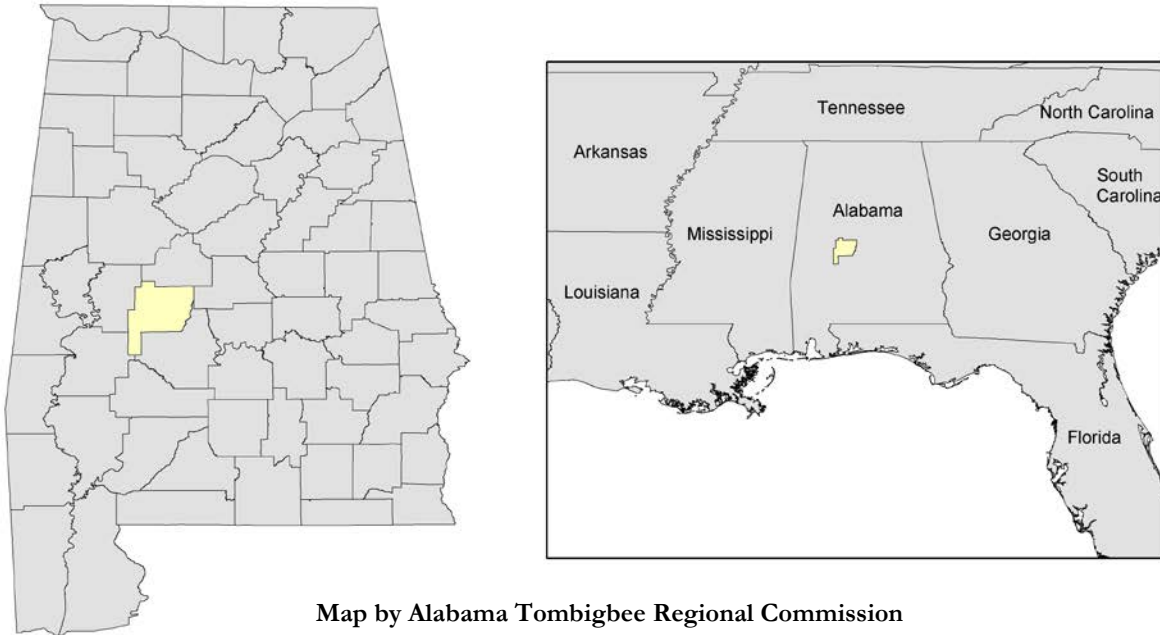
Section III. County Profile

This section gives a brief overview of the county as a whole. It is intended to help the reader become more familiar with the county. This is not a required section of the mitigation plan. The Alabama Tombigbee Regional Commission reviewed and updated the County Profile. Section A (Geology) was not updated, due to the nature of geology. In Section B (Transportation), traffic counts were updated to reflect the latest information from the Alabama Department of Transportation. Section C (Economy) was revised to provide a narrative description of the county's economy. There were no revisions to Section D (Utilities) due to no changes. Section E (Media) was revised to add an additional newspaper. Section F (Social and Economic Characteristics) was revised extensively to incorporate data from the American Community Survey. The hazard steering committee approved all changes prior to the final revision of the plan.

III. COUNTY PROFILE

Perry County was established on December 13, 1819. It is named for Commodore O.H. Perry of Rhode Island. Perry is a predominately rural county in the west central portion of the state known as the “Black Belt.” It is bordered by Bibb County to the north, Hale and Marengo Counties to the west, and Dallas and Chilton Counties to the east. The county is the 28th largest in the state covering 719 square miles.

Figure 3.1 Perry County in Relation to Alabama and the Southeast United States

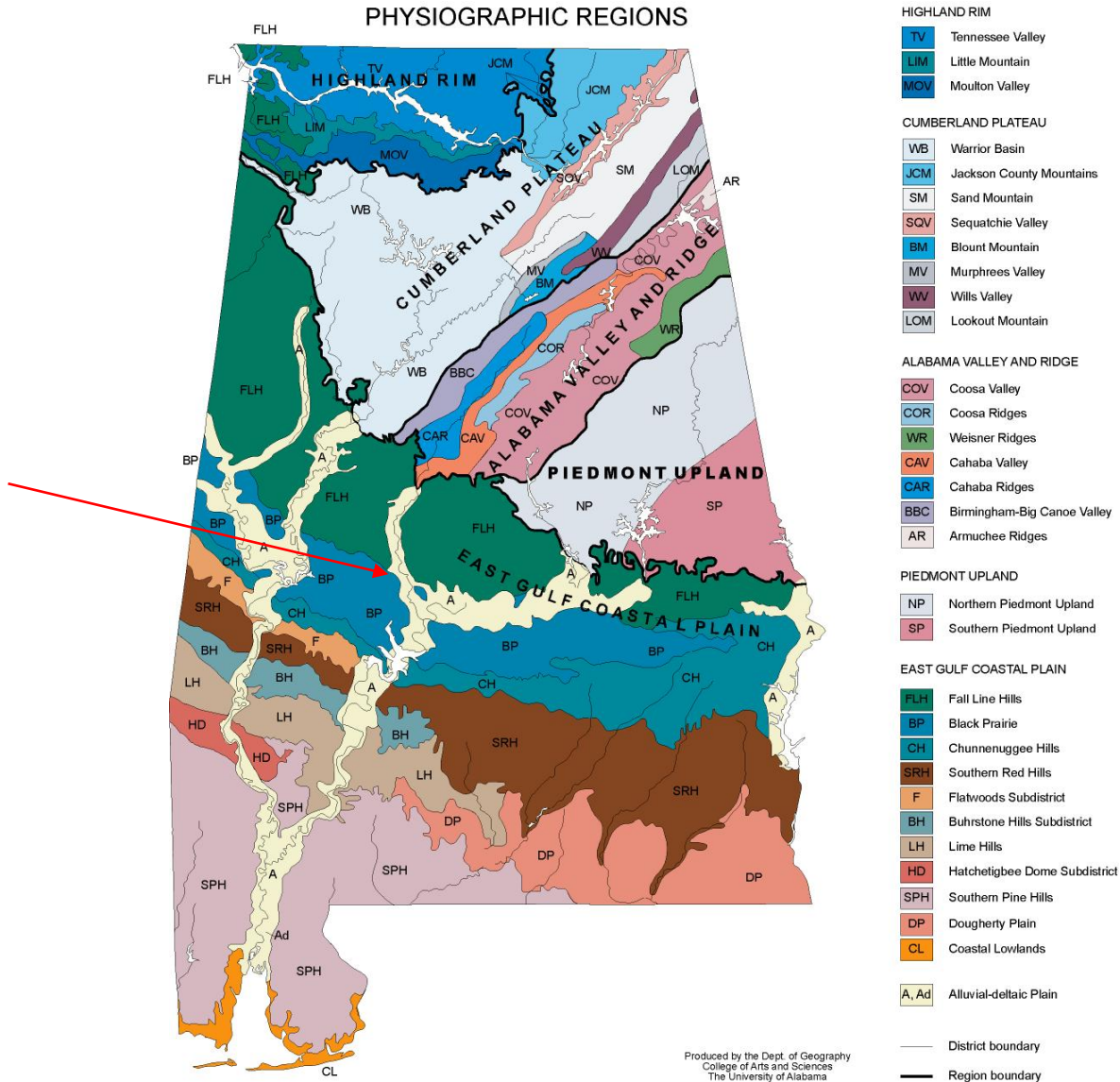


Map by Alabama Tombigbee Regional Commission

A. Geology

Perry County is located in the Coastal Plain physiographic province. Within the county there are three physiographic regions: the Blackland Prairies, the Coastal Plain uplands, and the river terraces (Figure 3.2). Geologic units dating from the Upper Cretaceous, Pleistocene, and Holocene are present. These units are sedimentary in origin and contain considerable amounts of clay and chalk. Deposits of chalk are widespread in the southern portion of the county.

Figure 3.2 Physiographic Regions of Alabama
PHYSIOGRAPHIC REGIONS



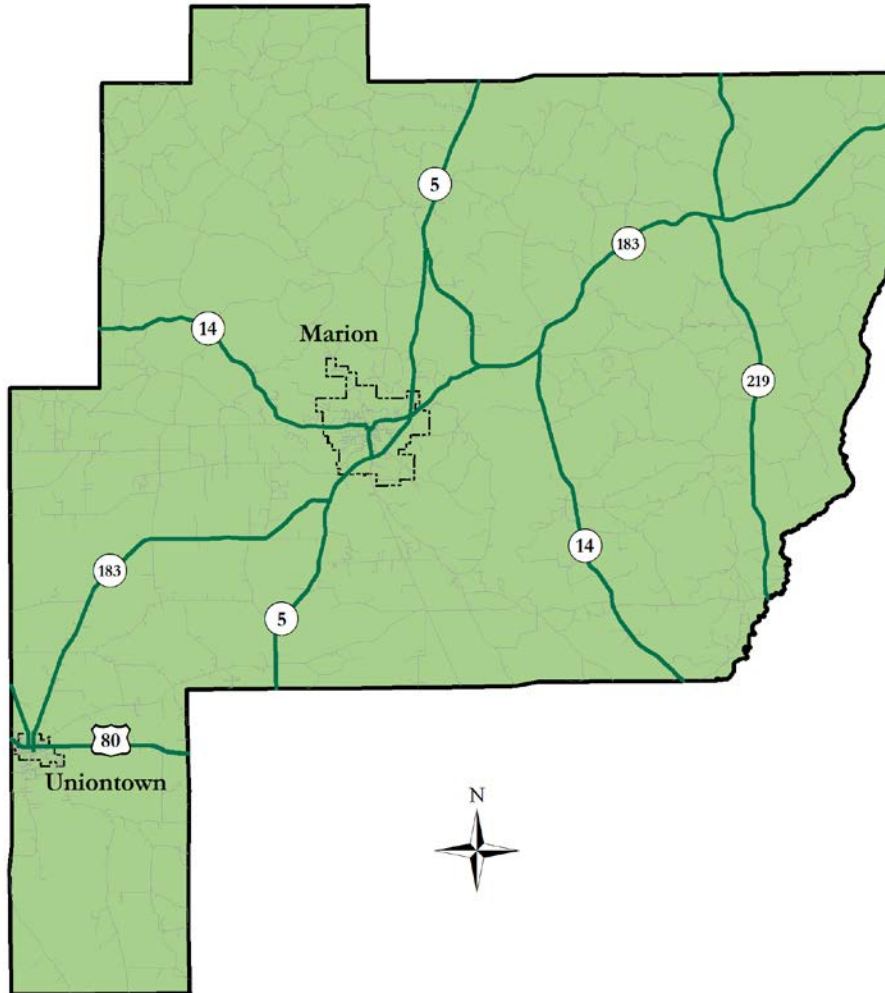
Source: Cartographic Research Laboratory, The University of Alabama
http://alabamamaps.ua.edu/contemporarymaps/alabama/physical/al_physio.jpg
 Accessed on April 4, 2014

B. Transportation

Highways

The only federal highway to run through Perry County is United States Highway 80 that runs through the southern portion of the county (Figure 3.3). The only city located on this route within the county is Uniontown. Four state highways also transect the county. The most traveled is State Highway 5 which runs through the City of Marion. In addition to these routes there is a system of county roads throughout the county.

Figure 3.3 Major Roadways in Perry County

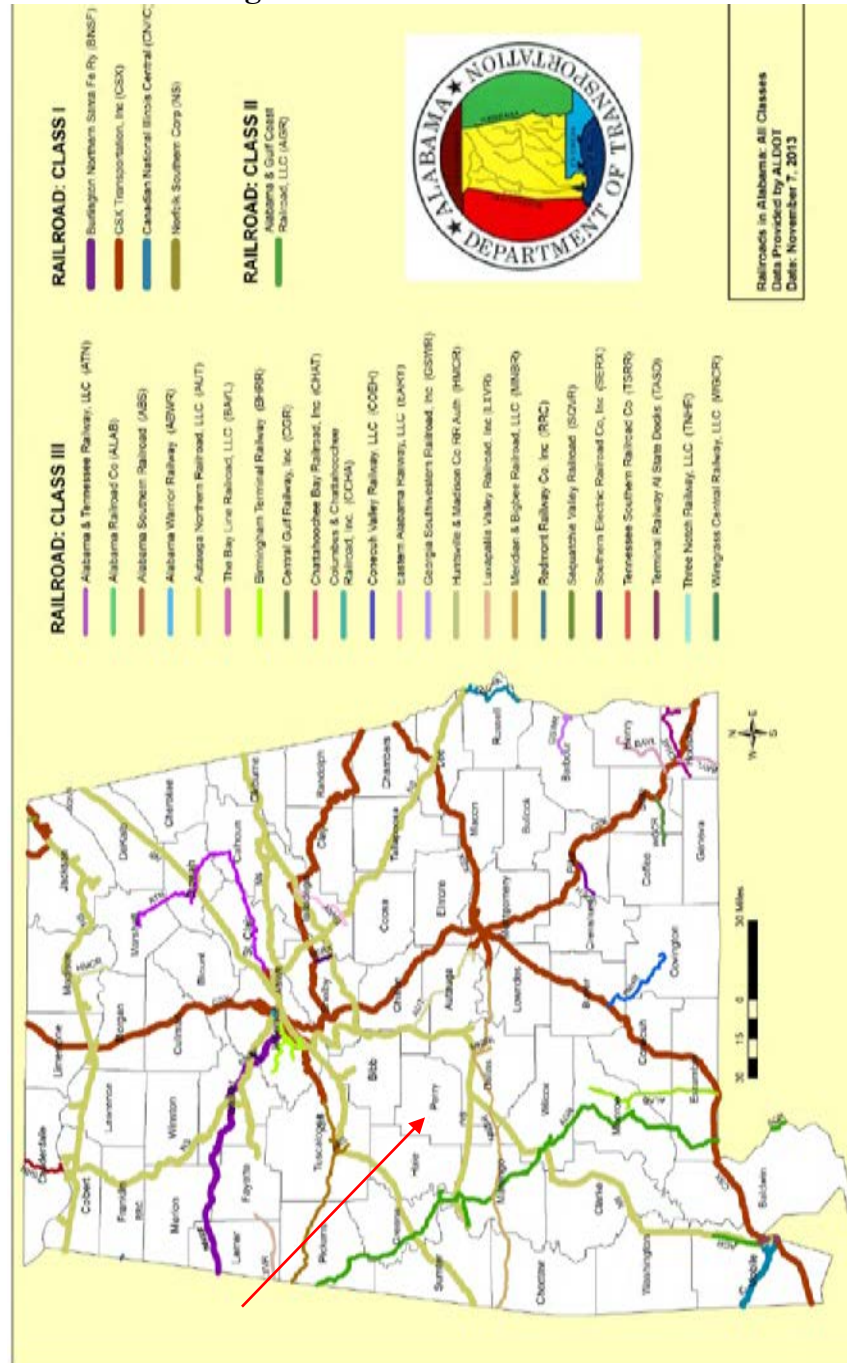


Map by Alabama Tombigbee Regional Commission, 2014

Railroads

Class I railroads are U.S. line haul freight railroads with operating revenue in excess of \$272.0 million. Norfolk Southern operates a Class I railway that runs east to west through the southern portion of the county (Figure 3.4). The City of Uniontown is along this route. Major commodities shipped on this route include agricultural and paper products.

Figure 3.4 Railroads of Alabama

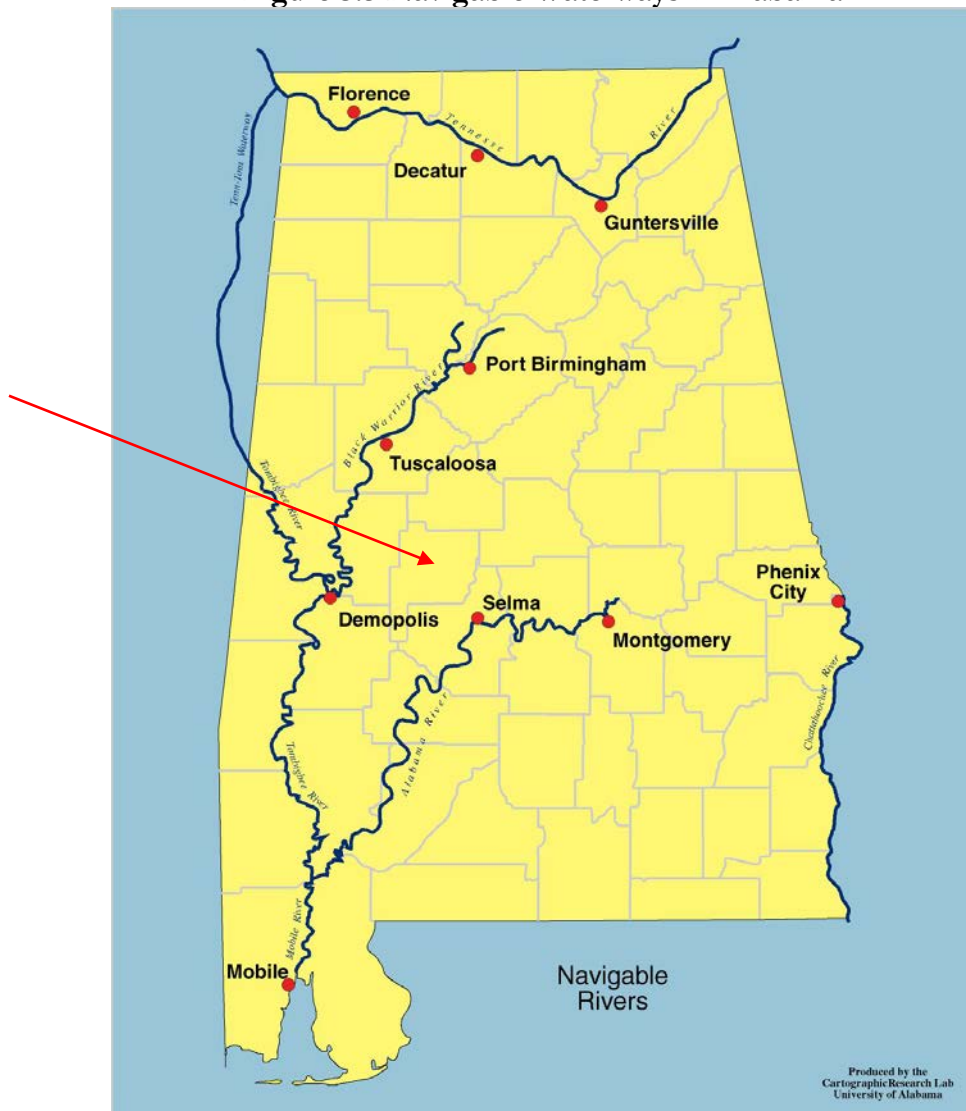


Source: *Alabama Rail Directory, June 2014*

Navigable Waterways

There are no navigable waterways located within Perry County (Figure 3.5).

Figure 3.5 Navigable Waterways in Alabama

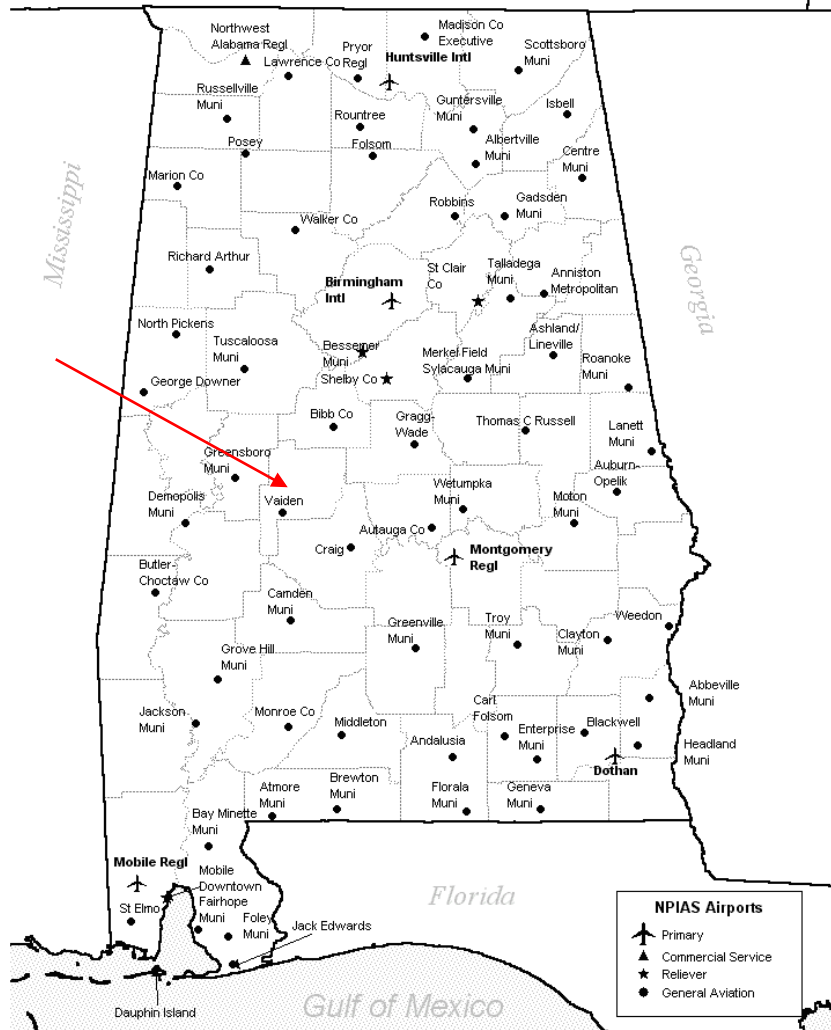


Source: Cartographic Research Laboratory, The University of Alabama
<http://alabamamaps.ua.edu/contemporarymaps/alabama/transportation/navwat.pdf>
Accessed on April 4, 2014

Airports

One airport is located within Perry County. Figure 3.6 and Table 3.1 provides details.

Figure 3.6 Airports in Alabama



Source: Alabama Map

<http://www.alabama-map.org/alabama-airports.gif>

Last Accessed: December 18, 2014

Table 3.1 Perry County Airports

Name	Runway Length	Paved Runway	Lighted Runway	Hangers
Vaiden Field	6,400 ft.	Yes	No	N/A

Source: <http://www.airnav.com/airport/A08>

C. Economy

Perry County is an economically distressed county in the heart of Alabama's Black Belt. Jobs are scarce. Unemployment rates are high. There is a large out migration of jobs and individuals. The largest employers in the county are the County Board of Education and County Commission.

D. Utilities

Electricity: Alabama Power

Water: City of Marion, Utility Board of Uniontown, Perry County Water Authority, Hale County Water Authority

Natural gas: Alabama Gas Corporation, United Gas Pipeline

Telecommunications: AT&T

E. Media

- *Perry County Herald*
- *Marion Times Standard*

F. Social and Economic Characteristics

The most up to date socioeconomic data for Perry County and both municipalities that is not considered an estimate is the 2010 Census. American Community Survey Estimates (ACS) are available for the county and City of Marion, but not the City of Uniontown. Table 3.2 is a brief overview of the county's demographics. The county's median age (35.8 years) is lower than both the state (38.1) and national (37.3) averages (ACS Five Year Estimates 2009-2013). The educational attainment level of the county (70.2) is well below the state (83.1) and national (86) averages (ACS Five Year Estimates 2009-2013). Perry County also has low median and per capita income levels compared to the state and national averages. The percentage of families, children, seniors, and individuals living below the poverty level is also significantly higher than average.

Table 3.2 Perry County Demographic Profile

Population	10,591
Male	4,908
Female	5,482
White	3,142
Black	7,097
Other	352
Median Age	35.8
Total Housing Units	4,708
Occupied Housing Units	3,400
Population 3 and Over Enrolled in School	2,641
Percent high school graduate or better	34.8
Percent bachelor's degree or higher	1.6
Median Household Income	28,209
Per Capita Income	13,716
Families below the poverty level	24.5
Individuals below the poverty level	25.6

Source: American Community Survey Five Year Estimates 2009-2013

There are two municipalities within the county, Marion and Uniontown. Marion is the county seat and most populated municipality. Table 3.3 gives basic social characteristics about these

populations. Both Uniontown and Marion have a large portion of their populations belonging to a minority group. Large percentages of these populations are under the age of 18. Both municipalities also have low per capita and median incomes.

Table 3.3 Perry County Municipalities' Demographic Profiles

	Marion	Uniontown
Population	3,686	1,775
Minority Percent	64.1%	91%
65 Years and Older	10%	10.31%
18 Years and Under	57.6%	35.77%
Housing Units	1,377	910

Source: US Census Bureau, Census 2010

Marion is by far the largest municipality based on, not only population, but area also (Table 3.4). Marion covers over ten square miles, while Uniontown covers under one and a half square miles. The population and housing densities of Uniontown are significantly higher. These densities are no surprise compared to Marion's. Comparatively speaking you have the same amount as half the population of Marion living on a tenth of the land.

Table 3.4 Population and Housing Density by Municipality

Municipality	Land Area*	Water Area*	Total Area*	Housing Units	Housing Density**	Population	Population Density**
Marion	10.58	0.10	10.68	1,377	130.2	3,686	348.3
Uniontown	1.34	0.0	1.34	910	679.1	1,775	1,324.6

*square miles

**density per square mile of land

Source: US Census Bureau, Census 2010

Summary of Changes Made in Plan Update Section IV. Risk Assessment

The Risk Assessment section of this plan addresses requirement §201.6(c)(2)(i). It provides a description of the type, location, and extent of all natural hazards that can affect Perry County. It also includes information on previous occurrences of hazard events and on the probability of future hazard events.

The *Risk Assessment* portion of the plan was reviewed with the Steering Committee. Each hazard was reviewed and the committee decided whether or not more detail was needed. This section underwent extensive changes. These changes are outlined below. There were a number of hazards with no changes made due to their nature.

- **Dam Failure:** Number of dams in the county changed due to National Inventory of Dams standards.
- **Earthquakes:** More general information was provided on earthquake intensity and magnitude. Occurrence data was updated. Risk map was updated.
- **Extreme Heat& Drought:** More detailed information regarding measuring extreme heat and drought was provided.
- **Flooding:** Areas subject to flash flooding were updated.
- **Hurricanes and Coastal Storms:** The probability of a hurricane occurring in the county was updated. Past occurrences were updated.
- **Severe Storms:** Information regarding the number of thunderstorm days, hail days, and lightning distribution was updated. More detailed information regarding hail was provided.
- **Tornadoes:** Updated information concerning recent tornadoes.
- **The Extent of Each Identified Hazards table** was updated.
- **All previous occurrences** were updated.
- **Probabilities of Future Occurrences** were updated.

IV. RISK ASSESSMENT

The risk assessment process is necessary to identify those natural hazards that pose a risk to Perry County. This process does not only use empirical data, but also information given by members of the Perry County Hazard Mitigation Steering Committee to identify these hazards. The following sections detail each step of this process.

A. Identification of Hazards

Avalanche

Avalanches are masses of snow, which slide down mountain slopes. They occur when snow becomes dislodged or unstable on a mountain slope. Perry County has neither steep slopes nor any regular snowfall; therefore, avalanches are not considered a risk for Perry County.

Coastal Erosion

Coastal erosion is the breakdown and movement of rock and soil from coastal locations by processes such as weathering. Wind and water are two common agents in this process. Perry County has no risk of coastal erosion.

Dam Failure

The National Inventory of Dams lists seventy dams as being located in Perry County. The NID consists of dams meeting at least one of the following criteria: 1) High hazard classification - loss of one human life is likely if the dam fails, 2) Significant hazard classification - possible loss of human life and likely significant property or environmental destruction, 3) Equal or exceed 25 feet in height and exceed 15 acre-feet in storage, 4) Equal or exceed 50 acre-feet storage and exceed 6 feet in height.

Table 4.1 gives the number of dams classified in each potential downstream hazard category. No dams are classified as having high hazard potential; meaning their failure or misoperation would probably result in the loss of human life. Twenty-three dams are listed in the significant risk category meaning their failure or misoperation would probably not result in the loss of life, but would result in economic loss, environmental damage, and disruption of lifeline facilities. The remaining forty seven dams in the county are listed as at low risk meaning that their failure or misoperation would not result in the loss of life and only low economic or environmental damage.

Table 4.1 Perry County Dams in the National Inventory of Dams by Hazard Category	
Hazard Categories	Number of Dams
High	0
Significant	23
Low	47
Undetermined	0
Total	70
Accessed on April 4, 2014 Source: US Army Corps of Engineers http://geo.usace.army.mil/pgis/f?p=397:1:0	

At this time the Perry County Natural Hazards Steering Committee has decided that dam failure is a low risk due to the lack of critical infrastructure and residents potentially affected by the hazard.

Earthquakes

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

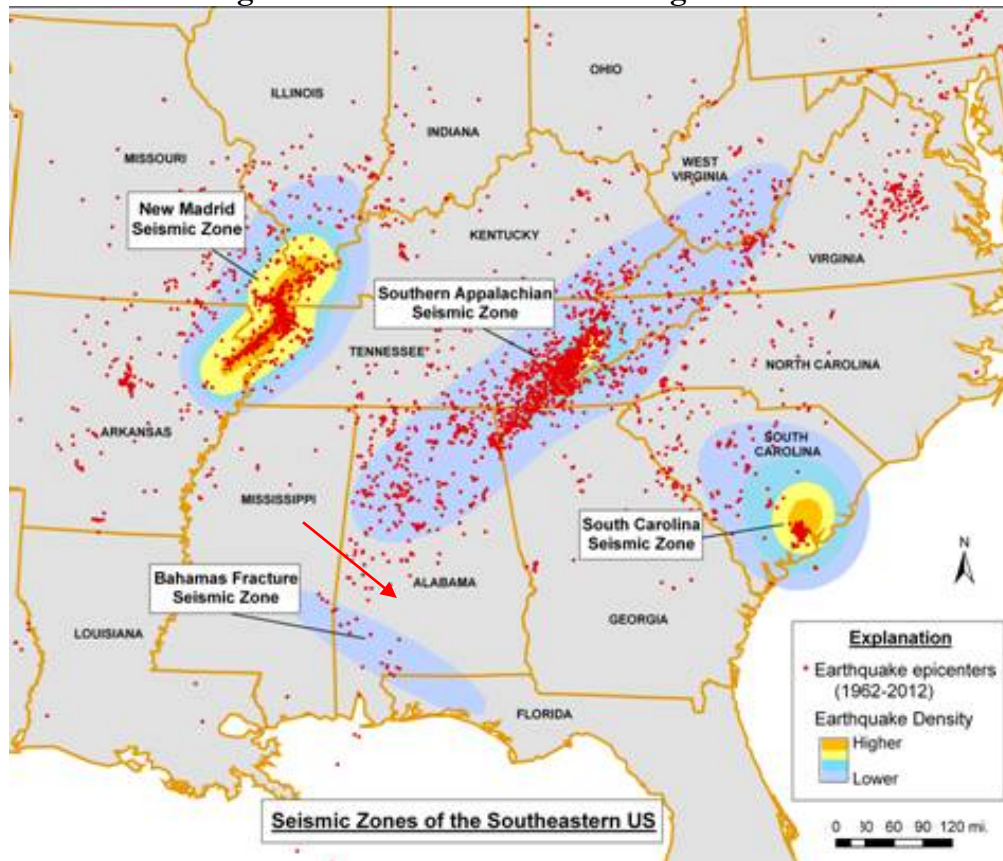
Earthquakes are measured using the Mercalli Scale. Table 4.2 gives a description of this scale.

Table 4.2 Mercalli Earthquake Measurement Scale			
PGA (%g)	Magnitude (Richter)	Intensity (MMI)	Description (MMI)
<0.17 – 1.4	1.0 – 3.0	I	Not felt except by a very few under especially favorable conditions.
0.17 – 1.4	3.0 – 3.9	II – III	II. Felt only by a few persons at rest, especially on upper floors of buildings. III. Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated.
1.4 – 9.2	4.0 – 4.9	IV – V	IV. Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rock noticeably. V. Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.
9.2 – 34	5.0 – 5.9	VI – VII	VI. Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight. VII. Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.
34 – 124	6.0 – 6.9	VIII – IX	VIII. Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. IX. Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.

Table 4.2 Mercalli Earthquake Measurement Scale			
PGA (%g)	Magnitude (Richter)	Intensity (MMI)	Description (MMI)
>124	7.0 and higher	VIII or Higher	<p>X. Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.</p> <p>XI. Few, if any (masonry) structures remain standing. Bridges destroyed. Rails bent greatly.</p> <p>XII. Damage total. Lines of sight and level are distorted. Objects thrown into the air.</p>
<p>Source: United States Geological Survey http://earthquake.usgs.gov Last accessed 12/09/2014</p>			

Although many areas of the United States are better known for their susceptibility, earthquakes do occur in Alabama. There are four seismic zones that affect the state; these zones are the New Madrid Seismic Zone, Southern Appalachian Seismic Zone, Bahamas Fracture Seismic Zone, and the South Carolina Seismic Zone (SCSZ) (Figure 4.1). Perry County is not located within any of these zones.

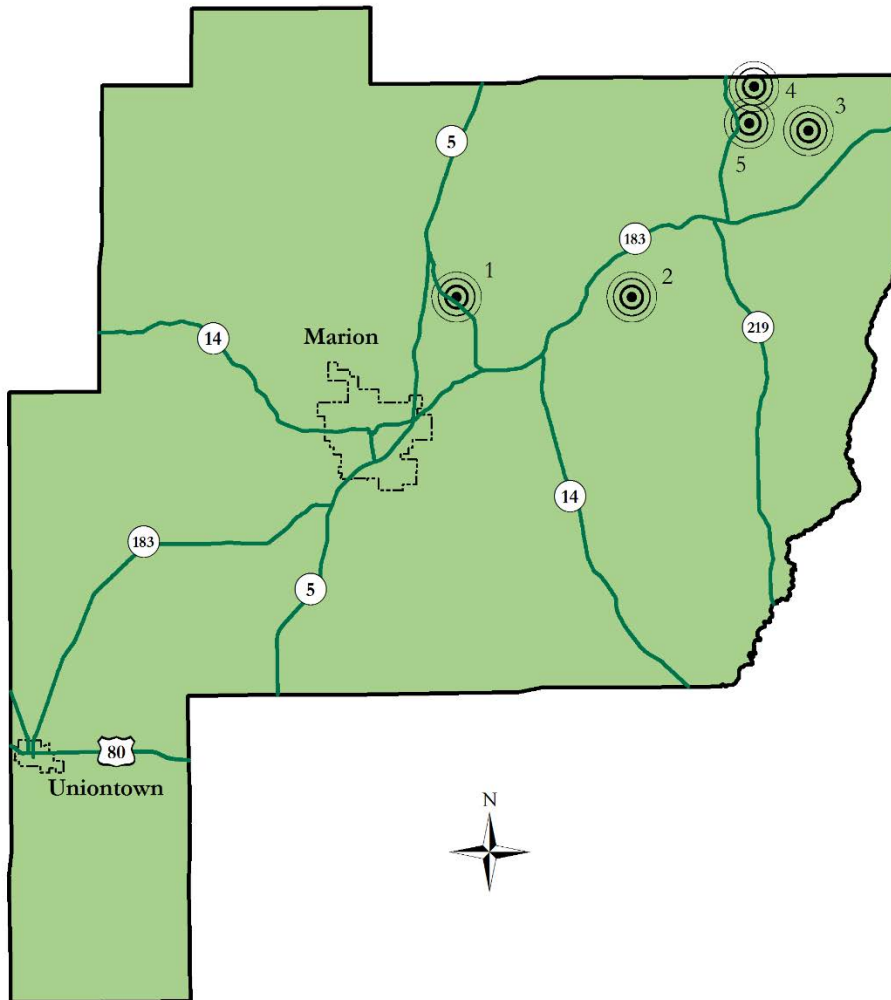
Figure 4. 1 Seismic Zones Affecting Alabama



Source: Geological Survey of Alabama
http://gsa.state.al.us/gsa/geologichazards/Quakes_AL.htm#AdditionalInfo
 Last Accessed: 04/19/2014

There are five earthquakes on record for Perry County (Figure 4.2); Table 4.3 gives details of these. No major damage has been reported as a result of these incidents.

Figure 4.2 Historical Earthquake Occurrences



Map by Alabama Tombigbee Regional Commission, September 2014
Source data from Geological Survey of Alabama, 2014

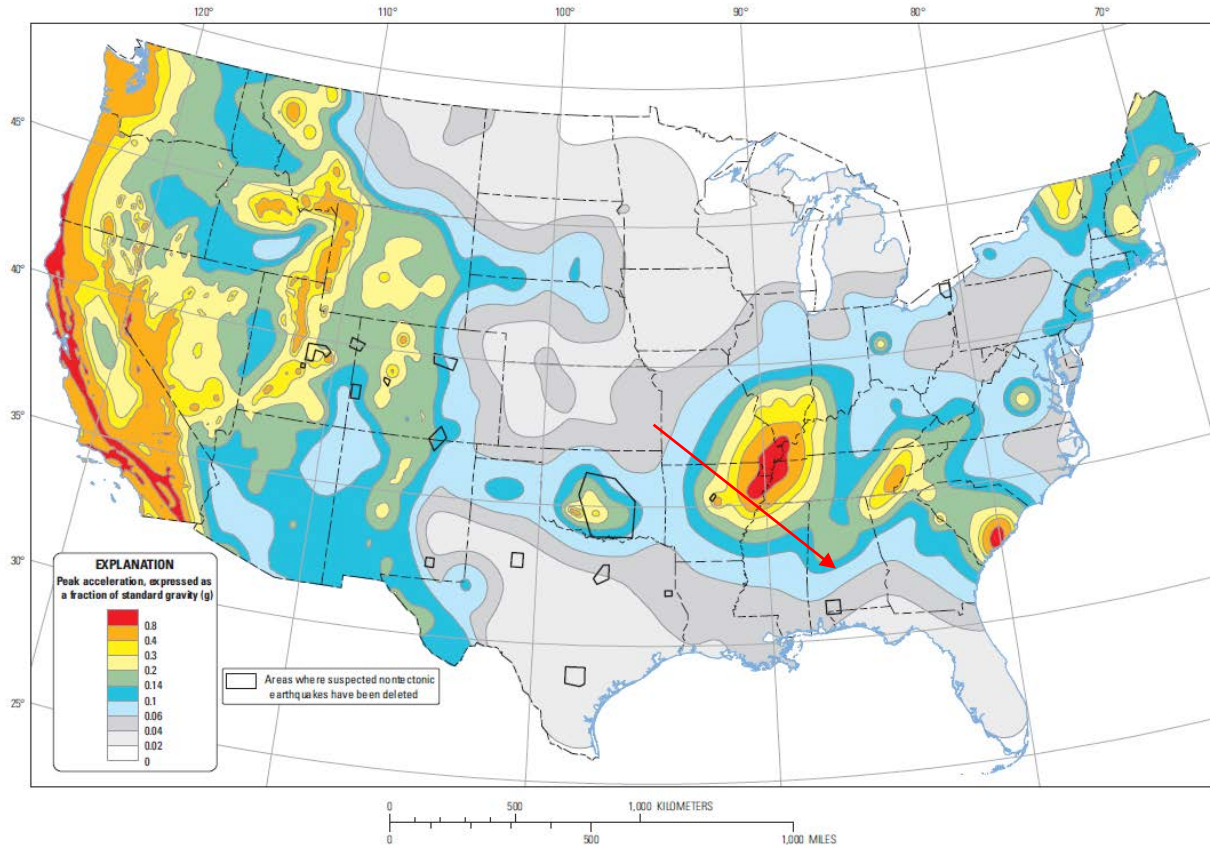
Table 4.3 Perry County Earthquakes

Map Reference #	Date	County	Latitude	Longitude	Magnitude (Richter)
1	February 14, 1987	Perry	32.71	-87.27	2.8
2	May 7, 2000	Perry	32.71	-87.17	2.4
3	February 18, 2009	Perry	32.805	-87.069	2.2
4	April 21, 2009	Perry	32.83	-87.1	3.3
5	April 22, 2009	Perry	32.809	-87.103	2.9

Source: Geological Survey of Alabama, 2014

The county falls within the peak acceleration values of 0.1 and 0.14. (Figure 4.3). Peak acceleration is a measure of how fast the rate of the earth's movement changes compared to the gravitational acceleration rate during an earthquake. These rates translate into only a minimal risk.

**Figure 4.3 Two-Percent Probability of Exceedance in 50 years
Map of Peak Ground Acceleration**



Source: United States Geologic Survey
http://earthquake.usgs.gov/hazards/products/conterminous/2014/2014_pga2pct50yrs.pdf
Last Accessed: 12/08/2014

Due to minimal risk and limited incidences, the Perry County Hazard Steering Committee has decided that earthquakes are a low risk to the county.

Expansive Soils

Expansive soils are soils that swell when they come in contact with water. The occurrence of clay is generally the cause of such behavior. Figure 4.4 shows the general soil areas for the state. Perry County has Prairie, Coastal Plain, and Major Flood Plain and Alluvial soils.

Figure 4.4 General Soil Areas of Alabama



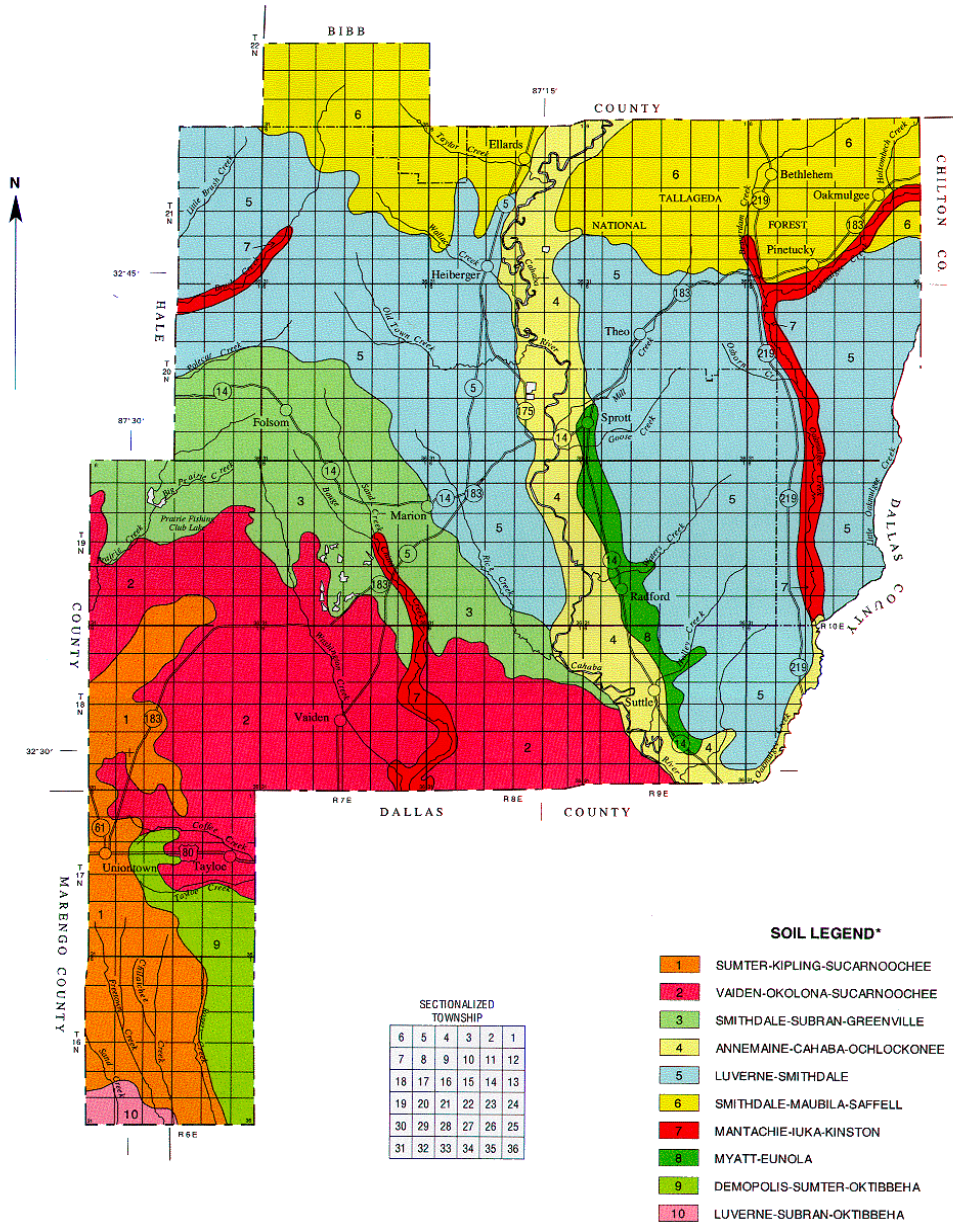
Source: The University of Alabama, Department of Geography
Cartographic Research Lab

http://alabamamaps.ua.edu/contemporarymaps/alabama/physical/soils_map.jpg

Last Accessed on 12/09/2014

Figure 4.5 is a generalized soil map of Perry County. Seventy four percent of Perry County is covered by shrink swell soil. Table 4.4 is a listing of major soil groups from the map and their suitability and limitations for different uses. These soils are not suited for urban or residential construction. They are however suitable for crop cultivation, pasture land, and woodland. The majority of land in Perry County is used as farmland, pastureland, or woodland.

Figure 4.5 General Soil Areas in Perry County



SOIL LEGEND*

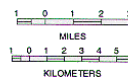
- 1 SUMTER-KIPLING-SUCARNOOCHEE
- 2 VAIDEN-OKOLONA-SUCARNOOCHEE
- 3 SMITHDALE-SUBRAN-GREENVILLE
- 4 ANNEMAIN-CAHABA-OCHLOCKONEE
- 5 LUVERNE-SMITHDALE
- 6 SMITHDALE-SUBRAN-MAUBILA-SAFFELL
- 7 MANTACHIE-IUKA-KINSTON
- 8 MYATT-EUNOLA
- 9 DEMOPOLIS-SUMTER-OKTIBBEHA
- 10 LUVERNE-SUBRAN-OKTIBBEHA

*The units on this legend are described in the text under the heading "General Soil Map Units."

Compiled 1997

UNITED STATES DEPARTMENT OF AGRICULTURE
 NATURAL RESOURCES CONSERVATION SERVICE
 In Cooperation With
 ALABAMA AGRICULTURAL EXPERIMENT STATION AND THE
 ALABAMA SOIL AND WATER CONSERVATION COMMITTEE

**GENERAL SOIL MAP
 PERRY COUNTY, ALABAMA**



Each area outlined on this map consists of more than one kind of soil. The map is thus meant for general planning rather than a basis for decisions on the use of specific tracts.

Source: Soil Survey of Perry County, Alabama, 1991
 (http://soils.usda.gov/survey/online_surveys/alabama/perry/gsm.gif)
 Last Accessed: December 09, 2014

Table 4.4 Suitability of Perry County Soils

Map unit	Extent of area	Cultivated crops	Pasture and hay	Woodland	Urban uses
	Pct				
1. Sumter-Kipling-Sucarnoochee---	8	Suited: wetness, flooding, hazard of erosion.	Suited: wetness, flooding.	Poorly suited: restricted use of equipment, seedling mortality.	Poorly suited: flooding, wetness, shrink-swell potential, very slow permeability.
2. Vaiden-Okolona-Sucarnoochee-----	16	Suited: wetness, flooding, poor tilth.	Suited: wetness, flooding.	Poorly suited: restricted use of equipment, seedling mortality.	Poorly suited: flooding, wetness, shrink-swell potential, very slow permeability.
3. Smithdale-Subran-Greenville-----	8	Suited: slope, low fertility, hazard of erosion.	Well suited---	Well suited-----	Suited: moderate to slow permeability, shrink-swell potential, slope.
4. Annemaine-Cahaba-Ochlockonee-----		Well suited---	Well suited---	Well suited-----	Poorly suited: flooding, wetness, slow permeability.
5. Luverne-Smithdale--	40	Poorly suited: slope, low fertility, hazard of erosion.	Suited: slope, low fertility.	Well suited-----	Suited: slope, moderate and moderately slow permeability, shrink-swell potential.
Smithdale-Maubila-Saffell-----	13	Poorly suited: slope, low fertility, hazard of erosion.	Suited: slope, low fertility, droughtiness.	Well suited-----	Poorly suited: slope, moderate and slow permeability, small stones.
7. Mantachie-Iuka-Kinston-----	3	Poorly suited: flooding, wetness.	Poorly suited: flooding, wetness.	Suited: restricted use of equipment, seedling mortality.	Not suited: flooding, wetness.

Map unit	Extent of area	Cultivated crops	Pasture and hay	Woodland	Urban uses
	Pct				
8. Myatt-Eunola-----	2	Suited: wetness.	Suited: wetness.	Suited: restricted use of equipment, seedling mortality.	Poorly suited: flooding, wetness.
9. Demopolis-Sumter- Oktibbeha-----	3	Suited: depth to rock, droughtiness, hazard of erosion.	Suited: droughtiness.	Poorly suited: seedling mortality, restricted use of equipment.	Poorly suited: depth to rock, shrink-swell potential, very slow permeability.
10. Luverne-Subran- Oktibbeha-----	1	Poorly suited: slope, hazard of erosion.	Suited: slope.	Well suited-----	Poorly suited: slope, shrink-swell potential, moderately slow and very slow permeability.

Source: Soil Survey of Perry County, Alabama, 1991
Last Accessed: December 09, 2014

Due to the widespread presence of expansive soils, the committee feels that this is an important hazard; however, the committee has ranked the hazard as a low priority due to the nature of the hazard.

Extreme Heat and Drought

The National Weather Service defines drought as a persistent and abnormal moisture deficiency having adverse impacts on vegetation, animals, and people. Meteorological, hydrological, and agricultural are the three types of droughts. Meteorological droughts occur when precipitation departs from normal amounts, high temperatures may also play a role in this type of drought. Hydrological droughts are deficiencies in surface or subsurface water levels. Agricultural droughts occur when there is not enough soil moisture to support crop growth. Some degree of drought is common in Alabama's Black Belt area during the summer months.

Drought can be measured numerous ways. Perry County used local information along with information provided by the Drought Mitigation Center's Drought Monitor to assess risk. Table 4.5 provides a description of the monitor's classification scheme.

Table 4.5 US Drought Monitor Classification Scheme

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

Source: United States Drought Monitor
<http://droughtmonitor.unl.edu/AboutUs/ClassificationScheme.aspx>
 Last Accessed on 12/09/2014

High, subtropical temperatures are common in Alabama’s blackbelt. Under normal conditions, frequent afternoon thunderstorms produce enough precipitation to alleviate drought concerns. However over that past four years according to the US Drought Monitor, Perry County has experienced some degree of drought conditions. Due to this information and historical occurrence, the Steering Committee feels this hazard is a high risk.

Extreme heat is defined as temperatures that are ten or more degrees or higher than average daily temperatures and last for several weeks. Extreme heat can damage an area economically by resulting in crop losses. The health of persons living and working within the area is also threatened. Health conditions that result from extreme heat range from mild to severe. These conditions include sunburn, heat cramps, heat exhaustion, and heat stroke.

Heat can be deadly regardless of the length of time it persists. The National Weather Service issues three types of heat related advisories:

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

The National Weather Service’s heat index chart is given below in Table 4.6. The heat index is a measure of how hot it feels outside. Humidity is factored into this calculation. In Perry County, high temperatures and high humidity occur on a regular basis during the summer months making heat a high risk hazard.

Table 4.6 NOAA’s National Weather Service Heat Index
Temperature (°F)

	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	128	136					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity
 Caution Extreme Caution Danger Extreme Danger

Source: National Oceanic and Atmospheric Administration
<http://www.nws.noaa.gov/os/heat/index.shtml#heatindex>
 Last Accessed on 12/09/2014

Flooding

Generally there are three types of flooding: river flooding, urban/area flooding, and flash flooding. River flooding occurs when rains fill river basins with water too quickly. Basins may be filled with water from successive days of rainfall or from torrential rains that occur as hurricanes move inland. The Cahaba River flows through the county and is subject to flooding after heavy rainfalls.

According to the *Alabama State Hazard Mitigation Plan Update*, the population in Perry County in the 1% annual chance flood hazard area is 5,495. The City of Marion participates in the National Flood Insurance Program (NFIP). The flood panels for Marion indicate a Flood Zone A for areas along Rice Creek parallel to the east city limits. There are no critical facilities and a minimal number of structures in this identified area. The City of Uniontown and Perry County do not participate in the NFIP. There are no reported repetitive loss properties in the county on file with FEMA.

The following describes all flood zones identified on the county's NFIP panels.

Flood Zones:

Unincorporated areas

-Zone A is located along Little Brush Creek, Big Branch Creek, Wallace Creek, Old Town Creek, Potato Patch Creek, Beaverdam Creek, Bennett Creek, Barnett Branch, Mill Creek, Dutch Creek, Oakmulgee Creek, Little Oakmulgee Creek, Picket Branch, Polecat Creek, Big Prairie Creek, Washington Creek, Bogue Chitto Creek, Sand Creek, Rice Creek, Wells Creek, Waters Creek, Dry Creek, Bursh Creek, Chaney Creek, Holley Creek, Silver Creek, Possum Creek, Duncan Branch, Coffee Creek, Tayloe Creek, Chilatchee Creek, Mud Creek, County Line Branch, Cahaba River

City of Marion

-Zone A is located along Rice Creek

City of Uniontown

-Zone A is located along Coffee Creek and Tayloe Creek

Urban/area flooding occurs from the increased runoff caused by paving large areas. Paved areas cannot absorb rainwater like unpaved or grassy areas, so torrential rains can cause flooding in these areas. Flash flooding is one of the deadliest natural hazards. It can occur almost anywhere and often has a rapid onset. Areas where flash flooding frequently occurs was identified by members of the committee. The following locations were identified as being frequently subject to flash floods:

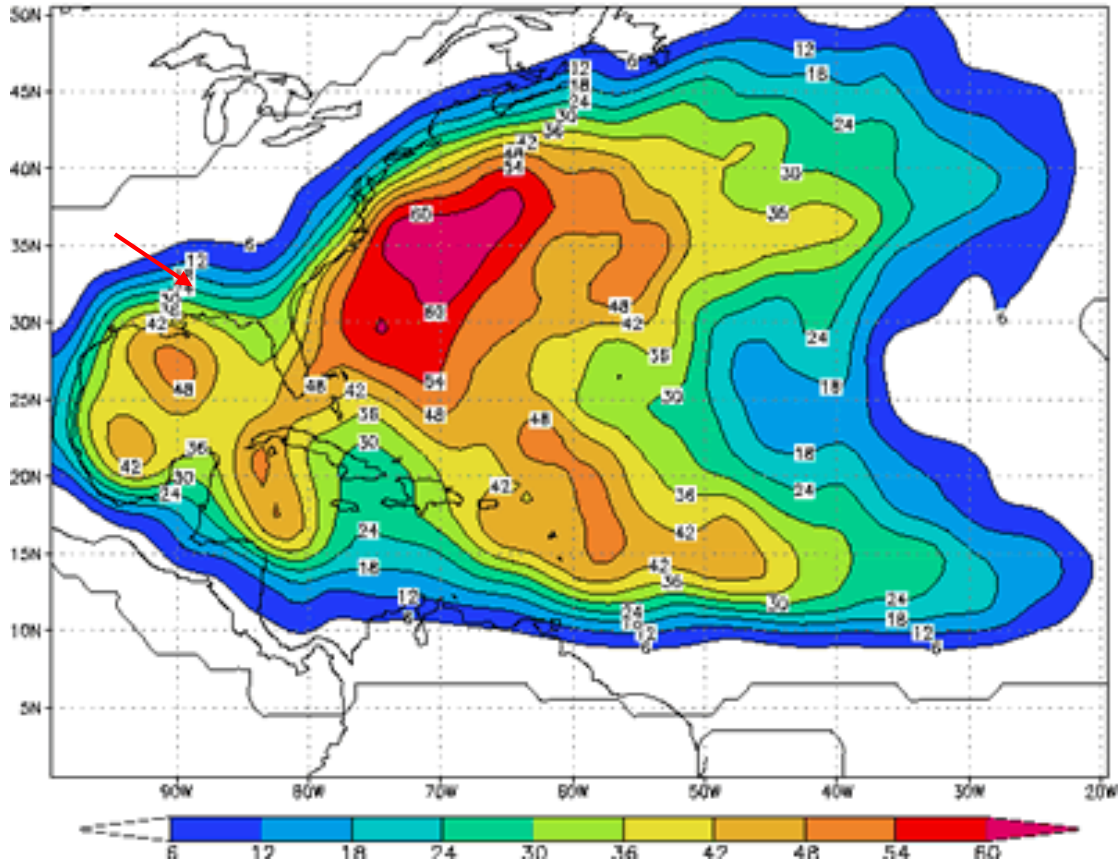
- County Road 49 near State Highway 183
- County Road 4
- Bush Oak Road
- Timberline Grocery Road
- Oakmulgee Creek Drainage Basin
- River Bottom Road
- Upper River Road
- Brenda Stewart Road
- Popular Grove Road
- Dobyne Road
- Jim Fountain Road
- Oakmulgee Church Road

Based on the information provided in this plan, the Natural Hazards Steering Committee feels river flooding is a low risk and flash flooding is a moderate risk hazard.

Hurricanes and Coastal Storms

Hurricanes are low-pressure systems over tropical or sub-tropical waters with organized convection present (<http://www.aoml.noaa.gov/hrd/tcfaq/A1.html>). The Atlantic hurricane season is from June through November. The Atlantic Oceanographic and Meteorological Laboratory analyzed hurricane activity from 1944-1999. A map showing probabilities of a strike that will affect the area sometime during the season was created. Figure 4.6 is the result of this analysis. It shows the results drawn from total hits from hurricanes or storms within one hundred miles of the location. Perry County lies within the 18% probability range.

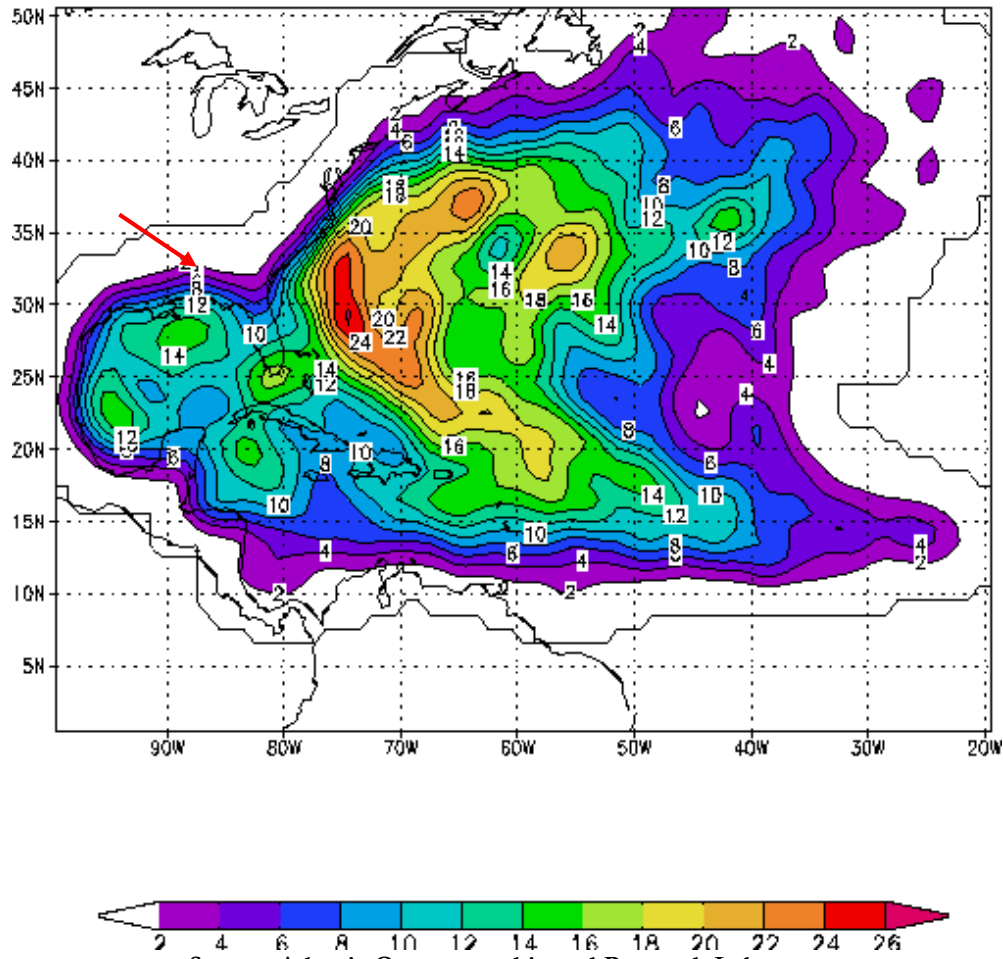
Figure 4.6 Empirical Probability of a Named Storm



Source: Atlantic Oceanographic and Research Laboratory
<http://www.aoml.noaa.gov/hrd/tcfaq/G11.html>
Last accessed on 4/19/14

Figure 4.7 shows the results of analysis using hurricanes or storms that struck within sixty miles of a location. This figure illustrates that probability. Perry County lies within the 2% percent probability.

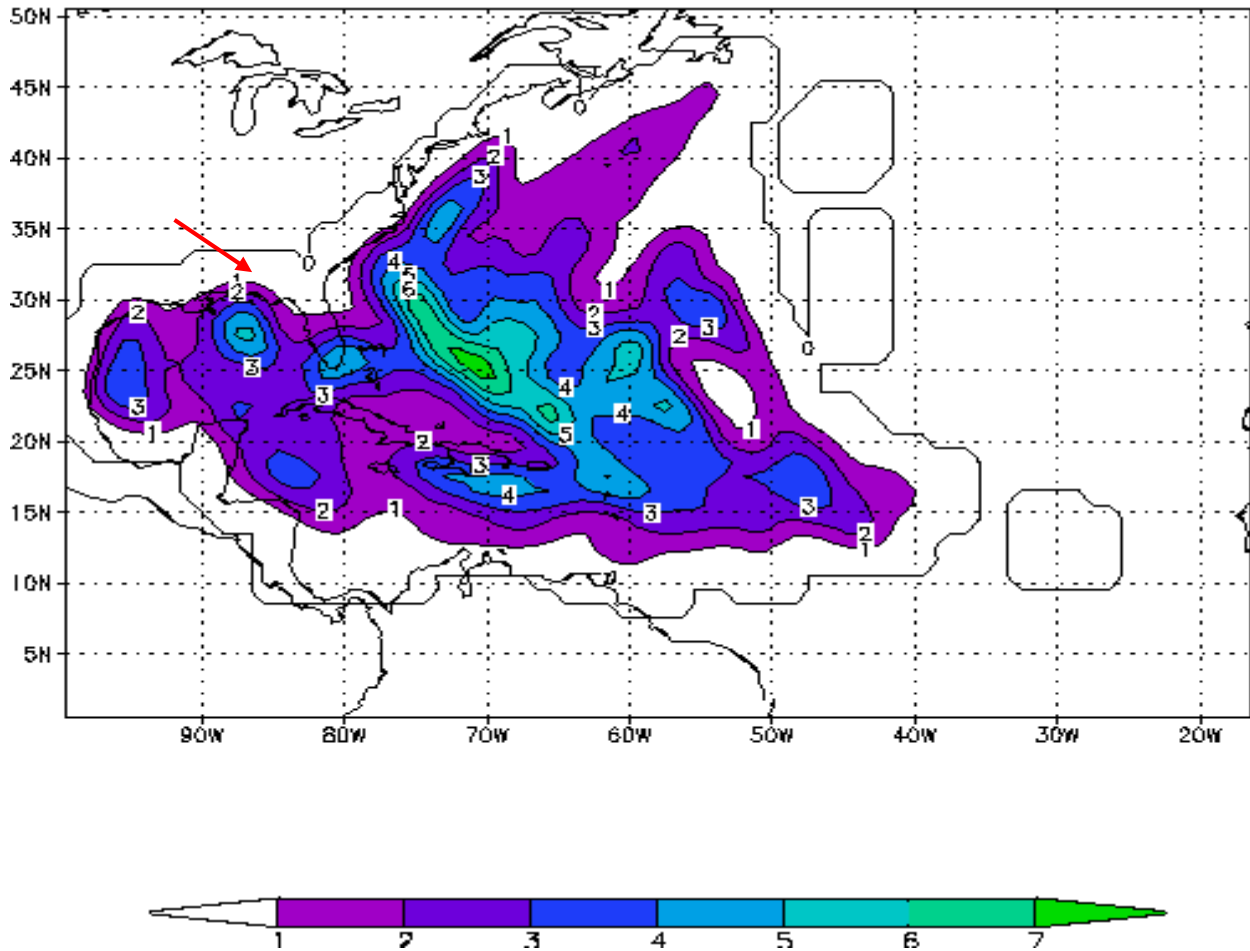
Figure 4.7 Probability of a Hurricane



Source: Atlantic Oceanographic and Research Laboratory
http://www.aoml.noaa.gov/hrd/tcfaq/h_prob.gif
Last accessed on 4/19/14

Figure 4.8 shows the probability of an intense hurricane affecting an area during the June through November season. An intense hurricane is defined as a Category 3, 4, or 5 storms. These probabilities were derived from analysis of hurricanes that hit within thirty miles of a location. Perry County lies within the 0% probability.

Figure 4.8 Probability of an Intense Hurricane

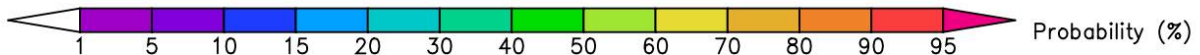
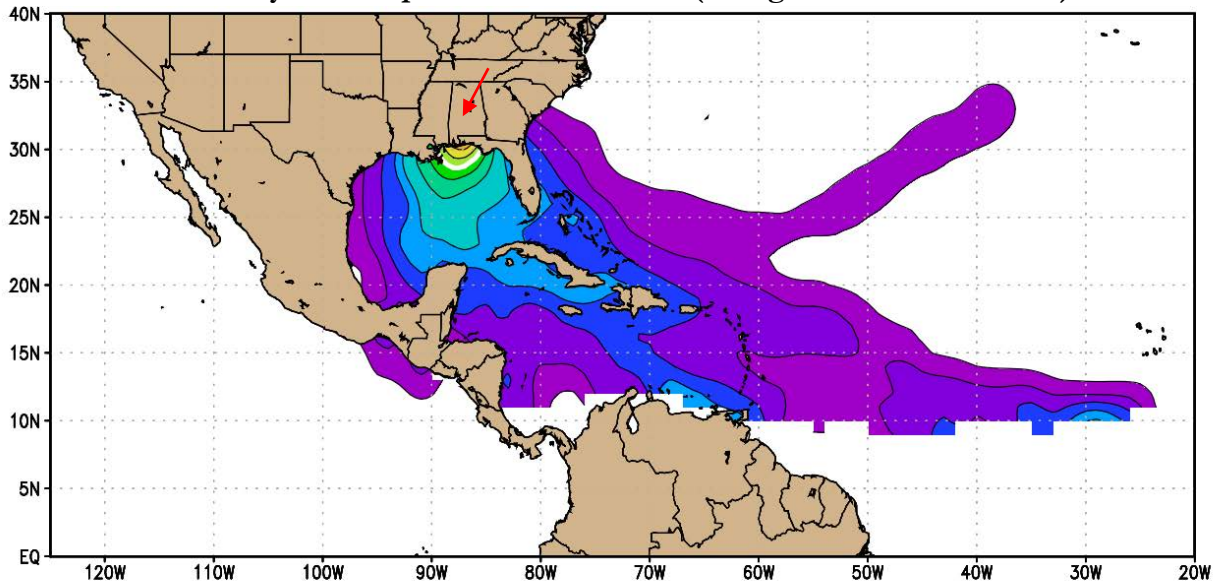


Source: Atlantic Oceanographic and Research Laboratory
http://www.aoml.noaa.gov/hrd/tcfaq/ih_prob.gif
Last accessed on 4/19/14

Florida State University's Meteorology Department also analyzed hurricane tracks. Their research included hurricanes occurring from 1886-2012. The following figures (4.9-4.11) depict the results of their research.

Figure 4.9 shows that based on FSU's research the probability of a hurricane of any intensity passing over Alabama is between 60% and 80%.

Figure 4.9 Probability of a Tropical Cyclone Eventually Passing over Alabama at Any Intensity Based upon a Given Position (Using 1886-2012 best track)



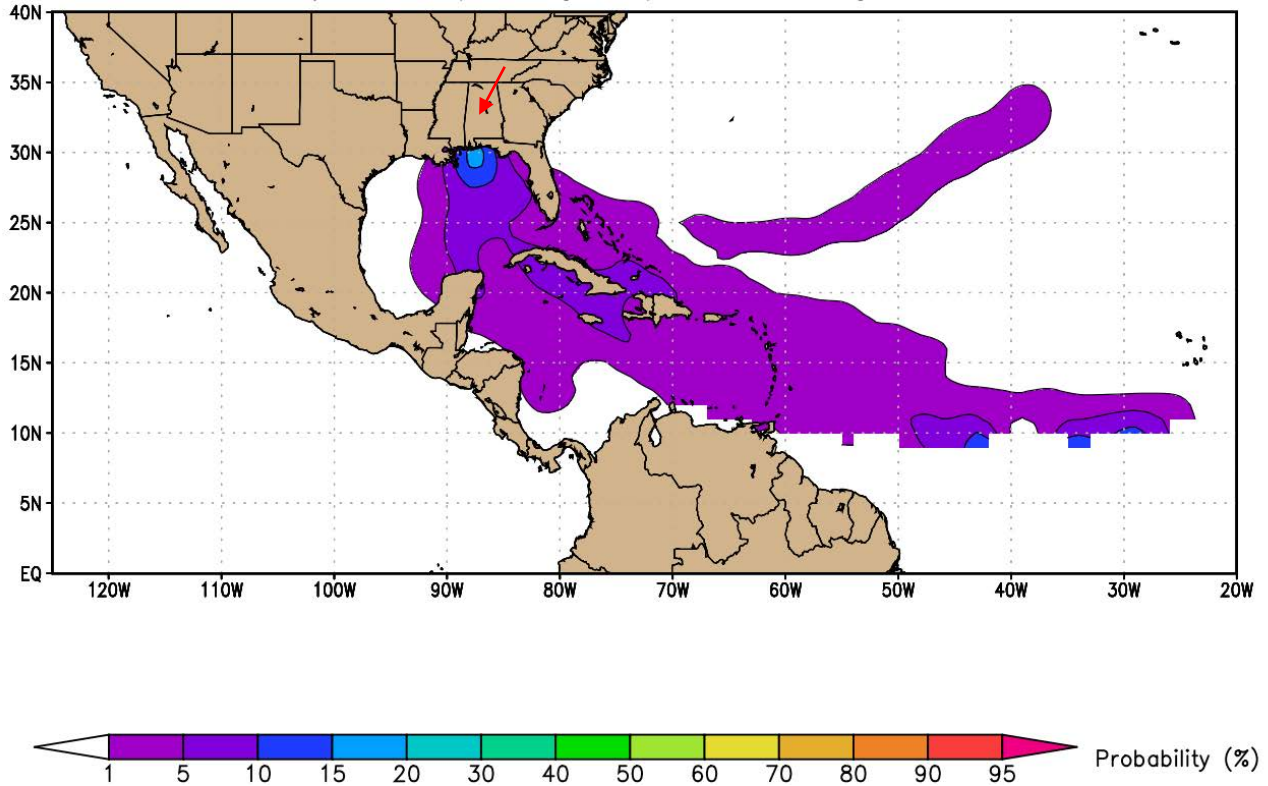
Source: Florida State University Meteorology-Robert Hart

<http://moe.met.fsu.edu/tcprob>

Last Accessed on 05/03/2014

Figure 4.10 shows that the probability of a storm passing over Alabama with winds exceeding 64 knots (74 miles per hour) is between 15% and 20%.

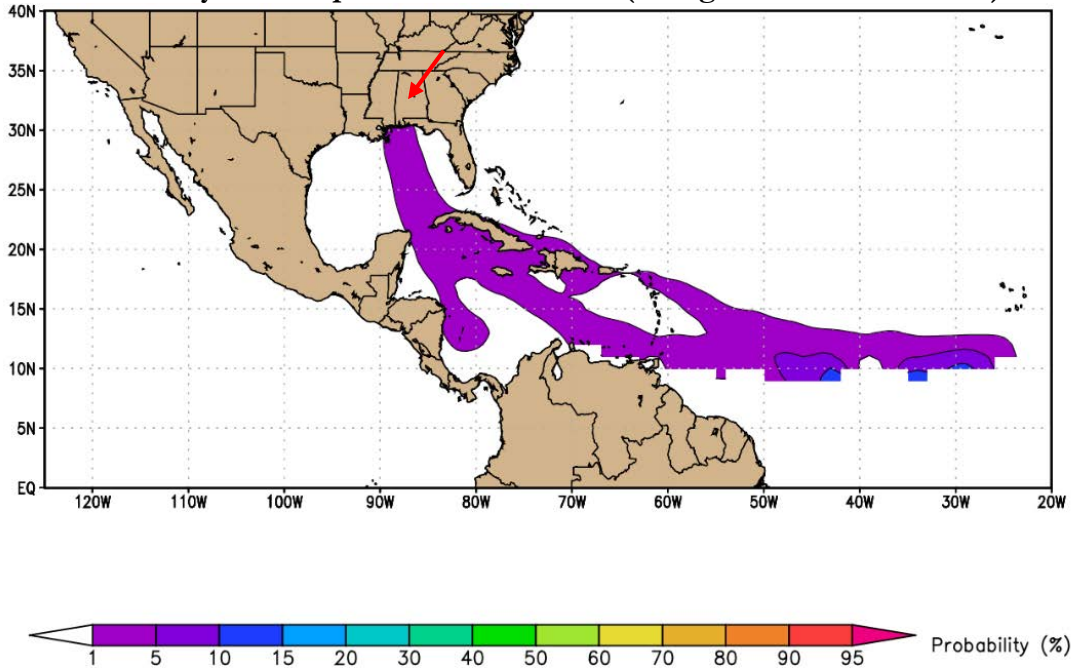
Figure 4.10 Probability of a Tropical Cyclone Eventually Passing over Alabama at 64+ Knot Intensity Based upon a Given Position (Using 1886-2012 best track)



Source: Florida State University Meteorology-Robert Hart
<http://moe.met.fsu.edu/tcprob>
Last Accessed on 05/03/2014

Figure 4.11 shows the probability of a cyclone passing over Alabama with winds greater than 96 knots (110 miles per hour) is between 1% and 5%.

Figure 4.11 Probability of a Tropical Cyclone Eventually Passing over Alabama at 96+ Knot Intensity Based upon a Given Position (Using 1886-2012 best track)



Source: Florida State University Meteorology-Robert Hart
<http://moe.met.fsu.edu/tcprob>
 Last Accessed on 05/03/2014

In Perry County the greatest threat from hurricanes and tropical storms is damage received from high winds, heavy rains, and spin off tornadoes. The landscape of Perry County is heavily wooded, which leads to the possibility of significant tree damage and property damage. Debris removal becomes a major cost for local governments, especially due to impassable roads. According to the National Weather Service, the effects of the following storms have been felt in recent years:

- In 1995 Hurricane Opal brought high winds to Perry County. Opal blew many trees down and left hundreds without power.
- In September 2004, Hurricane Ivan made landfall in Orange Beach, Alabama as a strong Category 3 hurricane. It maintained hurricane strength until it approached Uniontown in Perry County. The storm was then downgraded to a tropical storm with winds still gusting over 60 mph. The following was taken from a National Weather Service Damage Report describing damage in Perry County:

“Hundreds of trees and power lines were blown down.

Several roads were temporarily impassable due to fallen trees. A few homes were damaged by the fallen trees. Numerous power outages were reported.

(http://www.srh.noaa.gov/bmx/significant_events/2004/09_16_Ivan/lsr.php.)”

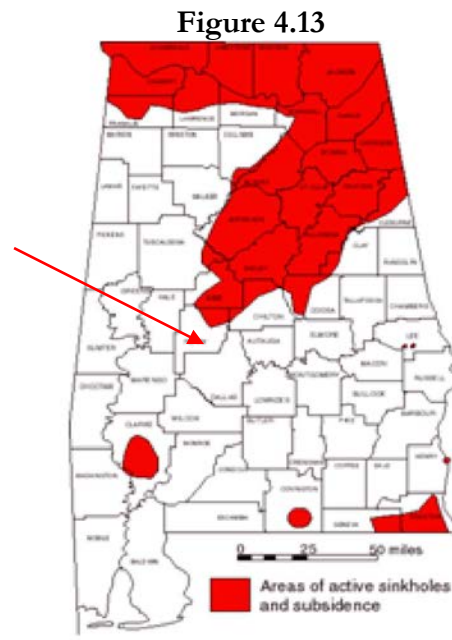
- In 2005 Tropical Storm Arlene brought heavy rains and gusting winds to Perry County. Trees were blown down causing damage to many roofs. Flash flooding was also reported as a result of the storm.

- In August 2005 Perry County felt the after effects of Hurricane Katrina as trees and powerlines were damaged.
- In 2012, the remnants of Hurricane Isaac brought heavy rains and flooding to the county. The county was included in a disaster declaration as a result of these rains.

In Alabama Emergency Management Agency's *Hazard Risks and Vulnerability Analysis*, Perry County is listed as being at a medium risk for hurricanes. The Perry County Steering Committee has elected to categorize hurricanes as a moderate risk.

Land Subsidence

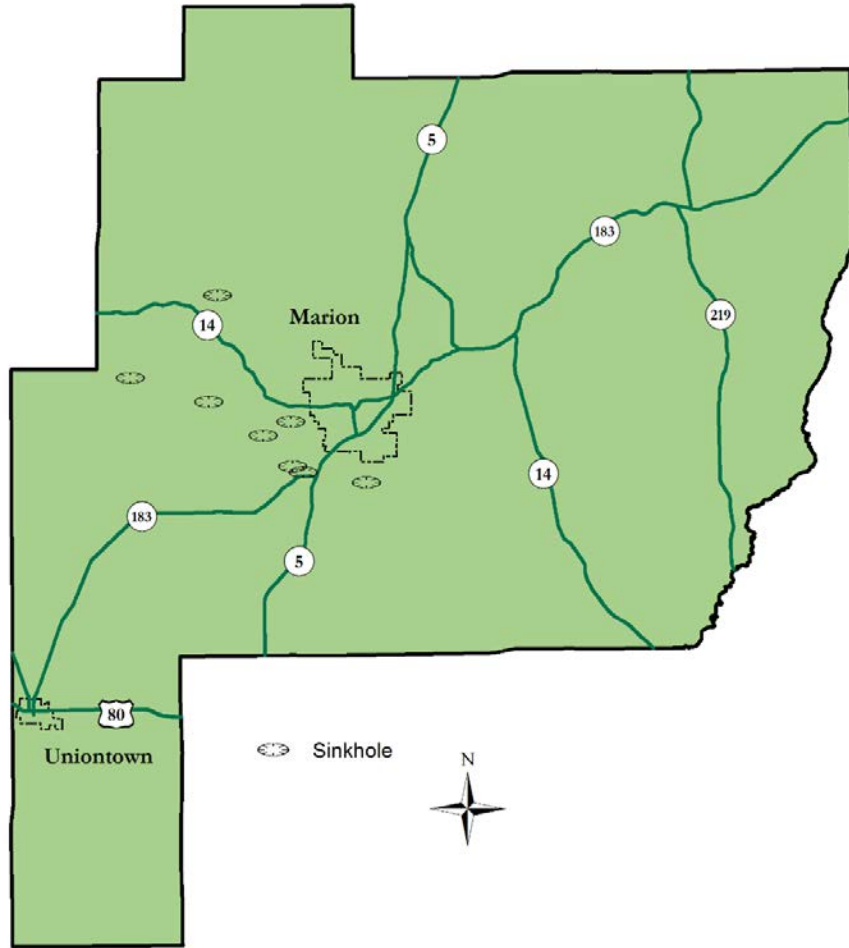
Land subsidence is the collapse of the ground generally in areas with carbonate bedrock or underlying abandoned mines. Carbonate rocks underlie the southern portion of Perry County, but there are no reported areas of subsidence in this part of the county (Figure 4.12). There are active areas of sinkholes and subsidence in northeastern Perry County (Figure 4.13). This area of active subsidence lies mainly within the Talladega National Forest.



Source: Geological Survey of Alabama
<http://www.gsa.al.state>
 Last accessed on 04/04/2014

Figure 4.14 and Table 4.7 provide information on known sinkholes in the county. All of these occurrences are in the western half of the county.

Figure 4.14 Known Sinkholes in Perry County



Map by Alabama Tombigbee Regional Commission, September 2014
Source data from Alabama Geological Survey, 2014

Table 4.7 Perry County Sinkholes		
Latitude	Longitude	Quad Name
32.5875	-87.31071	Marion South
32.59354	-87.348801	Marion South
32.597052	-87.355377	Marion South
32.615915	-87.373097	Marion South
32.624037	-87.356388	Marion South
32.636017	-87.405941	Morgan Springs
32.650473	-87.453305	Morgan Springs
32.700311	-87.400702	Morgan Springs

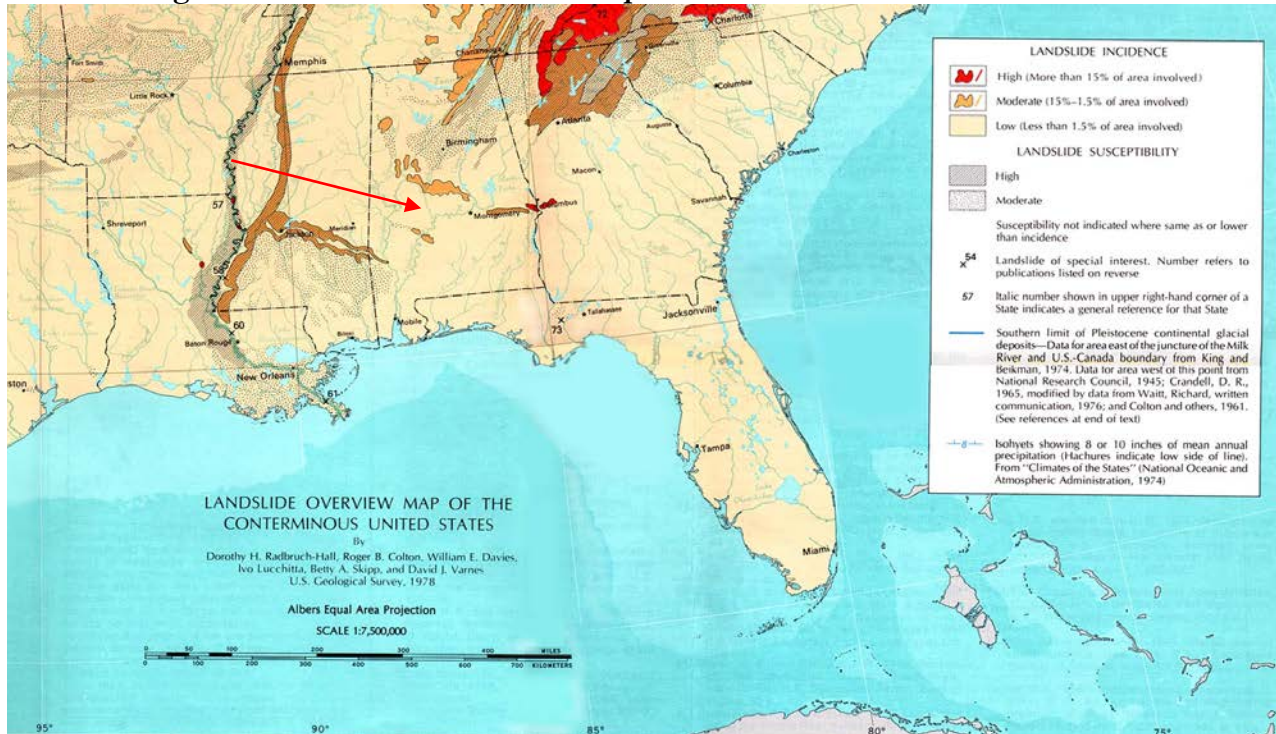
Source data from Alabama Geological Survey, 2014

Due to the location and nature of this hazard, the committee classifies land subsidence as a low risk hazard.

Landslides

Landslides are the downward and outward movement of soil and rocks under the influence of gravity (<http://www.gsa.state.al.us/>). Naturally induced landslides occur as a result of weakened rock composition, heavy rain, changes in ground water levels, and seismic activity. Figure 4.15 is a landslide map of the conterminous United States illustrating susceptibility to landslides.

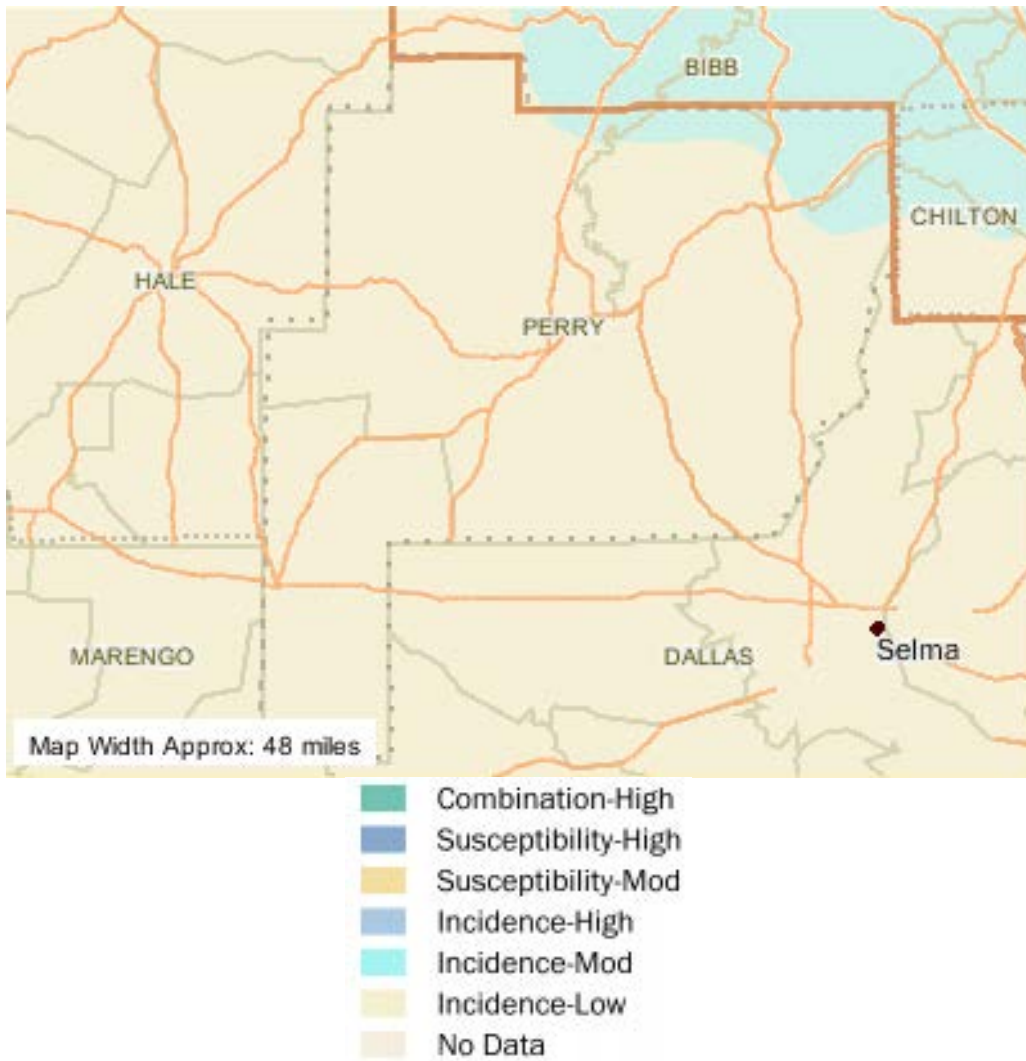
Figure 4.15 Landslide Overview Map of the Conterminous United States



Source: United States Geologic Survey
<http://pubs.usgs.gov/pp/p1183/plate1.html>
Last Accessed on 05/02/2014

Figure 4.16 gives a closer look at Perry County's susceptibility. There is a small area of moderate incidence located in the northeastern portion of the county. The Geologic Survey of Alabama has record of one reported landslide event in the county. The reported event was on County Road 7 in the Township 20N, Range 8 East, Section 30. Due to the fact that there is only a small area of incidence and one reported landslide this hazard will be classified as a low risk.

Figure 4.16 Map of Perry County Landslide Susceptibility and Incidence



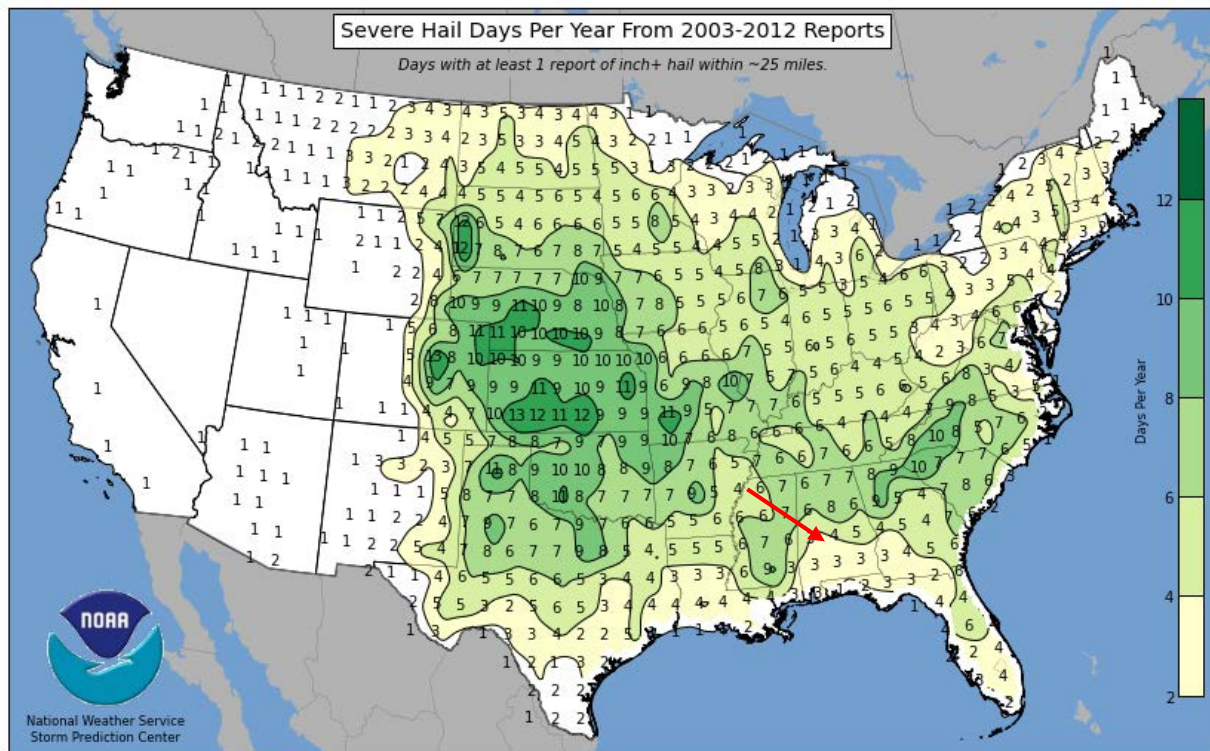
Source: United States Geologic Survey
www.usgs.gov
Last accessed on 05/03/2014

Severe Storms (hail, high winds, lightning and thunderstorms)

Thunderstorms, lightning, hail, and high winds will all be grouped into the category of severe storms in this analysis. These type of storm events occur often especially during the spring and summer in Perry County.

Hail is precipitation in the form of irregular pellets or balls of ice more than 5 mm in diameter. Figure 4.17 illustrates the average number of severe hail days each year. Perry County lies in the 3-4 range. Hail storms can lead to injury, death, and property damage.

Figure 4.17 Severe Hail Days per Year from 2003-2012 Reports



Source: National Oceanic and Atmospheric Administration
<http://www.spc.noaa.gov/wcm/2013/HAIL.png>
Accessed: 11/23/2014

Tables 4.8 and 4.9 provide information on the Torro Hail Intensity Scale. In the past Perry County has experienced hail up to H7 or tennis ball size.

Table 4.8 TORRO Hailstorm Intensity Scale				
	Intensity Category	Typical Hail Diameter (mm)*	Probable Kinetic Energy, J-m²	Typical Damage Impacts
H0	Hard Hail	5	0-20	No damage
H1	Potentially Damaging	5-15	>20	Slight general damage to plants, crops
H2	Significant	10-20	>100	Significant damage to fruit, crops, vegetation
H3	Severe	20-30	>300	Severe damage to fruit and crops, damage to glass and plastic structures, paint and wood scored
H4	Severe	25-40	>500	Widespread glass damage, vehicle bodywork damage
H5	Destructive	30-50	>800	Wholesale destruction of glass, damage to tiled roofs, significant risk of injuries
H6	Destructive	40-60		Bodywork of grounded aircraft dented, brick walls pitted
H7	Destructive	50-75		Severe roof damage, risk of serious injuries
H8	Destructive	60-90		(Severest recorded in the British Isles) Severe damage to aircraft bodywork
H9	Super Hailstorms	75-100		Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open
H10	Super Hailstorms	>100		Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open

Source: The Tornado and Storm Research Organization
<http://www.torro.org.uk/site/hscale.php>
 Last Accessed: 12/09/2014

Table 4.9 Hail size and diameter in relation to TORRO Hailstorm Intensity Scale

Size code*	Maximum Diameter (mm)	Description
0	5-9	Pea
1	10-15	Mothball
2	16-20	Marble, grape
3	21-30	Walnut
4	31-40	Pigeon's egg > squash ball
5	41-50	Golf ball > Pullet's egg
6	51-60	Hen's egg
7	61-75	Tennis ball > cricket ball
8	76-90	Large orange > Soft ball
9	91-100	Grapefruit
10	>100	Melon

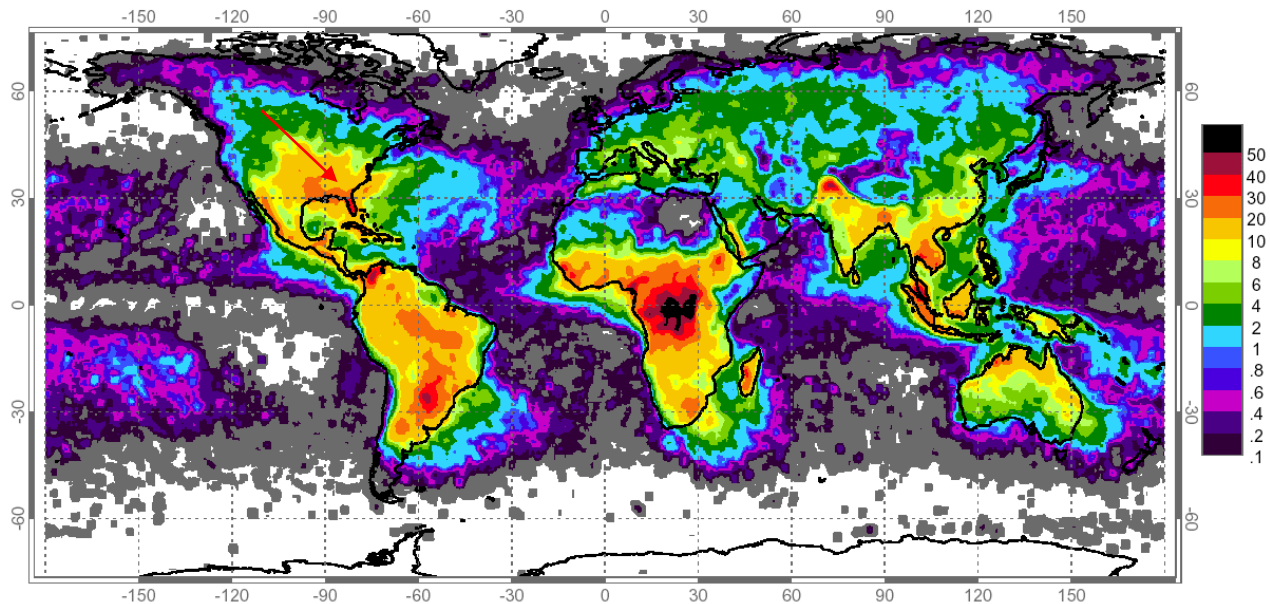
** The Size Code is the maximum reported size code accepted as consistent with other reports and evidence.*

Source: The Tornado and Storm Research Organization
<http://www.torro.org.uk/site/hscale.php>
Last Accessed: 12/09/2014

High winds are defined as winds 40 mph or greater lasting for an hour or longer, or winds of 58 mph or greater for any duration. During the spring and summer months these conditions are common in Perry County. High winds can lead to tree damage, utility outages, and pose a risk to drivers.

“Lightning is a rapid discharge of electrical energy in the atmosphere. The resulting clap of thunder is the result of a shock wave created by the rapid heating and cooling of the air in the lightning channel. (http://www.lightningsafety.noaa.gov/resources/lightning3_050714.pdf)”. Lightning is one of the most deadly weather occurrences in the United States. Figure 4.18 shows the worldwide distribution of lightning strikes. Perry County lies within the 20 flashes/km²/year range, which is a significant figure.

Figure 4. 18 Distribution of Worldwide Lightning Strikes
Units: flashes/km²/yr.



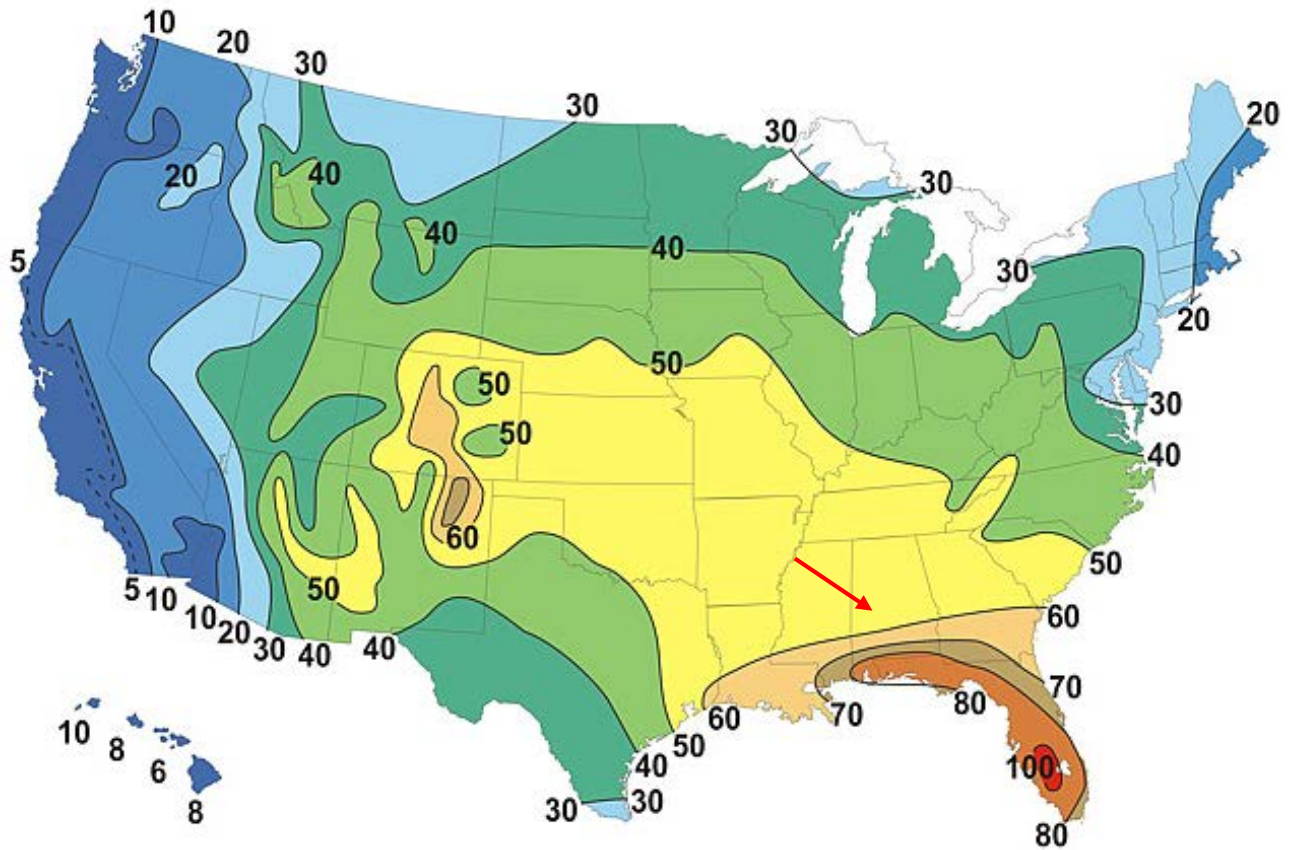
Source: National Aeronautics and Space Administration
http://science.nasa.gov/media/medialibrary/2001/12/02/ast05dec_1_resources/lightningmap_large.gif
 Accessed: 12/08/2014

“A thunderstorm is a local storm produced by a cumulonimbus cloud and accompanied by lightning and thunder (<http://w1.weather.gov/glossary/index.php?letter=t>).” According to the National Weather Service there are four types of thunderstorms:

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

Perry County has experienced each type of thunderstorm historically. Figure 4.19 illustrates the average number of thunderstorm days each year. Perry County lies in the 50-60 range.

Figure 4.19 Average Number of Thunderstorm Days Each Year



Source: National Oceanic and Atmospheric Administration
http://www.srh.noaa.gov/jetstream/tstorms/tstorms_intro.htm
Accessed on 11/23/2014

All of these events (hail, high winds, lightning, and severe storms) have occurred historically. These events have resulted in property and crop damage on numerous occasions. These events are expected to occur in the future; therefore, they are considered a high risk hazard.

Severe Winter Storms

Severe winter storms are associated with strong winds, extreme cold, ice, and snow. These storms are uncommon in Perry County, but when they occur they have wide ranging impacts. Ice damages vegetation and often causes limbs to break and trees to fall. Motorists are unaccustomed to traveling in this weather, so accidents occur as a result. Also many homes and buildings, especially in rural areas, lack proper insulation or heating leading to the risk of hypothermia. Municipalities generally do not have the resources on hand to deal with winter weather, such as salt, sand, and snow removal equipment. The committee has decided to rank snow and ice as a low risk due to the low probability of occurrence of a significant event.

Tornadoes

The National Weather Service defines a tornado as, “A violently rotating column of air in contact with the ground and extending from the base of a thunderstorm
[http://www.srh.noaa.gov/oun/severewx/glossary4.php#Tornado.](http://www.srh.noaa.gov/oun/severewx/glossary4.php#Tornado)” The occurrence of tornadoes

cannot be predicted, but past occurrences and basic weather patterns can be used to identify areas more susceptible.

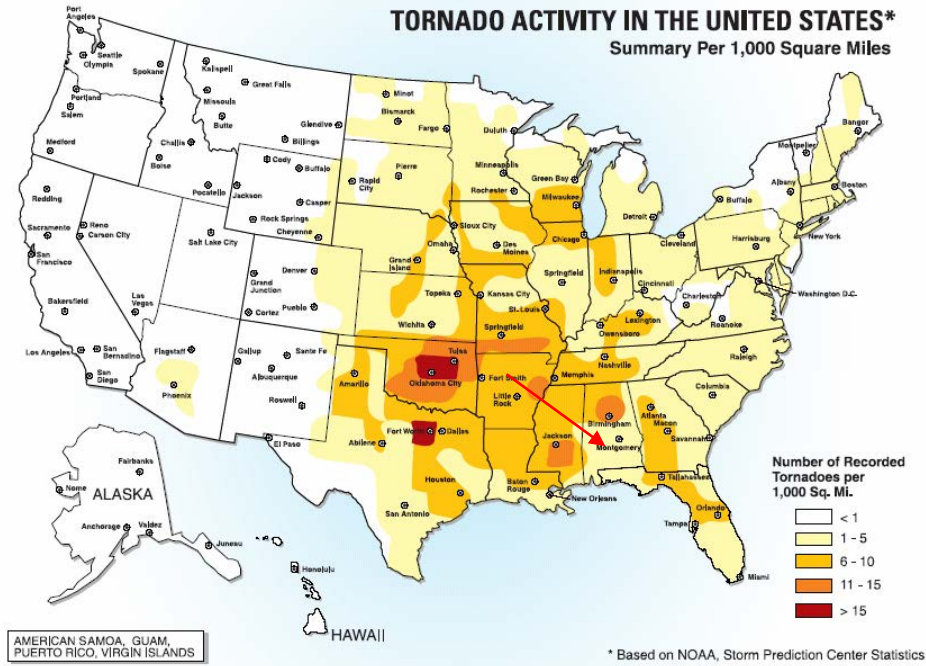
Table 4.10 shows the Fujita-Pearson scale. This scale is used to classify the intensity of tornadoes. Historically, the strongest tornado the county has experienced has been an EF-4.

Table 4.10 Fujita- Pearson Tornado Scale						
FUJITA SCALE			DERIVED EF SCALE		OPERATIONAL EF SCALE	
F Number	Fastest 1/4-mile (mph)	3 Second Gust (mph)	EF Number	3 Second Gust (mph)	EF Number	3 Second Gust (mph)
0	40-72	45-78	0	65-85	0	65-85
1	73-112	79-117	1	86-109	1	86-110
2	113-157	118-161	2	110-137	2	111-135
3	158-207	162-209	3	138-167	3	136-165
4	208-260	210-261	4	168-199	4	166-200
5	261-318	262-317	5	200-234	5	Over 200

Source: National Oceanic and Atmospheric Administration
<http://www.spc.noaa.gov/faq/tornado/ef-scale.html>
Last Accessed on 12/09/2014

Figure 4.20 is a summary of tornado activity in the United States per one thousand square miles. Perry County is located within the 1-5 tornadoes per one thousand square mile range. The United States Wind Zone map (Figure 4.21) shows how intense and frequent strong winds occur across the United States. Perry County is located in Wind Zone IV, which has a design wind speed of 250 miles per hour. Design wind speed is the wind speed that homes should be constructed to withstand. Locations within this zone have historically had the most intense and frequent occurrences of tornadoes and strong winds.

Figure 4.20 Tornadoes per 1,000 square miles



Source: Federal Emergency Management Agency
<http://www.fema.gov/pdf/library/2ismsec1.pdf>
 Last accessed on 07/27/2014

Figure 4.21 Wind Zones in the United States

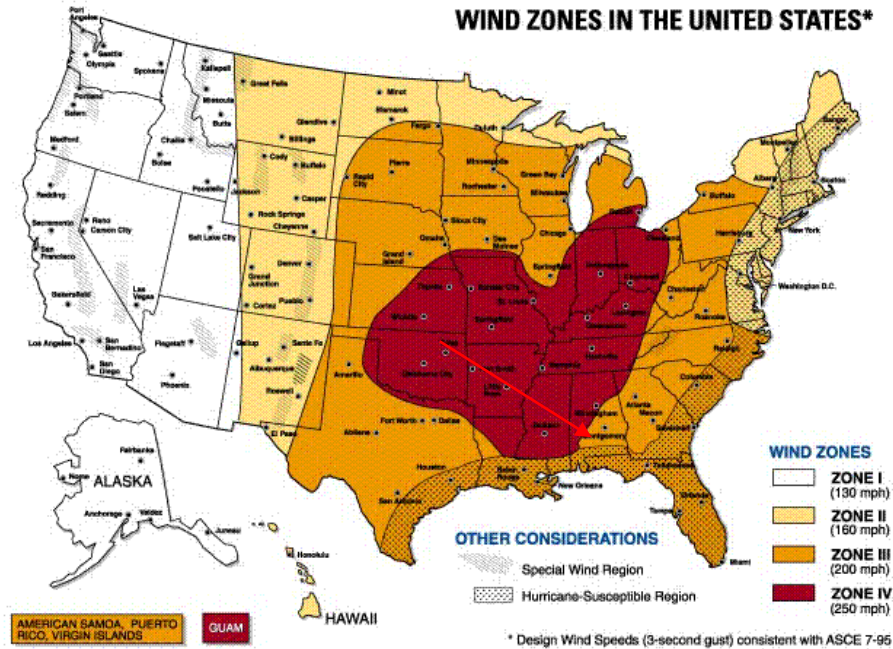


Figure 1.2 Wind zones in the United States

Source: Federal Emergency Management Agency
<http://www.fema.gov/graphics/fima/tsfsm01.gif>
 Last accessed on 07/27/2014

There have been many past occurrences of tornadoes documented in Perry County. A description of recorded tornadoes over the past five years is given below:

- ❖ April 19, 2009: A tornado touched down in a wooded ravine, between Nichols Lane and CR-7. It then traveled east-northeast for just over a mile, and lifted near the intersection of Coles Truck Stop Road and AL-5. Along the path, approximately 100 hardwood trees were snapped, and near the end of the path, several hardwoods were uprooted. A home sustained minor damage to shingles and siding. The occupant of the home took refuge in a closet, and was unharmed, after her brother called to inform her of the tornado warning.



- ❖ April 19, 2009: A tornado touched down on Luke Jackson Road, just east of AL-61. From there, it traveled to the east-northeast, crossing over several dirt roads before lifting near Webb Road. Along the path, several large hardwood trees were uprooted and snapped, and softwoods were snapped. One home sustained minor shingle damage near the beginning of the path. A large deer stand was destroyed near the end of the path.



- ❖ November 30, 2010: A tornado touched down briefly near CR-3, about a half mile south of CR-24. Several large pine trees were snapped off and several large hardwood trees were uprooted. The brick siding of one side of a home was heavily damaged, and a nearby storage shed was destroyed.



- ❖ April 15, 2011: Winds were estimated at 115 mph and this tornado was witnessed by several people and storm spotters. The tornado touched down about 2.7 miles north of Hamburg just west of County Road 45. There was some damage to the roof of a barn and several dozen hardwood and softwood trees were uprooted and snapped. The tornado crossed County Road 45 where a significant number of hardwood trees were also uprooted and snapped. The tornado lifted about 0.5 miles west of County Road 45.
- ❖ April 15, 2011: Winds were estimated around 85 mph. The tornado touched down just north of Cooper Road off Highway 65. It traveled east-northeast to just south of Highway 80 off of Tayloe Road. The tornado uprooted and snapped numerous trees and did significant damage to 2 outbuildings.
- ❖ April 27, 2011: National Weather Service meteorologists surveyed damage across south central Perry County where a tornado touched down 5.5 miles south of Marion, 1 mile west of CR 35 and tracked northeastward. The tornado destroyed an outbuilding and damaged the roof of a single family home along CR 38. The tornado strengthened to EF-1 with winds of 90 mph as it crossed CR 45, north of Vilula. Many trees were knocked down near the Faith Chapel Baptist Church. The tornado damaged a couple barns along Kynard Road and quickly dissipated just east of CR 4.
- ❖ April 27, 2011: The tornado continued northeast and passed just north of Uniontown where it crossed Highways 61 and 183. Here, it uprooted trees and damaged structures in a 200 yard wide path. The tornado eventually dissipated just east of Highway 183 in southwest Perry County.
- ❖ March 2, 2012: National Weather Service meteorologists surveyed the damage in southeastern Perry, northern Dallas, and northwestern Autauga Counties and determined that it was a result of an EF1 tornado. The tornado touched down in rural southeast Perry County along Oscar Price Road just northeast of Suttle. In Perry County, dozens of trees were snapped or uprooted, and one hunting camp mobile home was destroyed



- ❖ January 23, 2012: The supercell which produced the County Road 7 EF-1 tornado in central Perry County quickly generated a second tornado just south of the first tornado path. This tornado tracked through eastern Perry County and through much of Chilton County before dissipating north of Clanton. The total path length for this tornado was over 39 miles. The tornado touched down along County Road 16, east of Alabama Road 175 in Perry County, damaging one home, one manufactured home, and downing numerous trees. It moved northeast, crossing the Cahaba River and into the Talladega National Forest, where thousands of trees were knocked down along the tornado's path. As the tornado crossed County Road 9, winds strengthen to 125 MPH and the sanctuary of historic Ephesus Church was destroyed as the roof and steeple were partially blown away. The tornado moved along Alabama Highway 183 for approximately 6 miles causing extensive tree damage and destroying several outbuildings. The tornado crossed Mat Moore Road and into Chilton County, at Jim Foundry Road, south of Alabama Highway 183.
- ❖ January 23, 2012: A tornado, with winds of 110 MPH, briefly touched down along County Road 7 and moved northeast crossing County Road 16 and Alabama Highway 5. Scores of hardwood and softwood trees were snapped or uprooted along the path. The tornado lifted just after crossing Alabama Road 175.



- ❖ November 17, 2014: The tornado first touched down a few hundred yards west of Boots Northcutt Road, north of Alabama Hwy 14 in western Perry County. As it crossed the road to the east, the tornado tossed numerous unsecured objects around a home and into the woods, where a few hardwood trees were snapped. The tornado tracked to the northeast across inaccessible land, then crossed Lower Polecat Road. Numerous hardwood and softwood trees were snapped and tossed into an open field, and a few hardwoods at the opposite edge of the field were uprooted. The tornado crossed more inaccessible land and weakened as it crossed County Road 23, then quickly dissipated.



Due to its location in Wind Zone IV along with numerous past occurrences, the committee considers tornadoes a high risk hazard for Perry County. The entire county is at the same risk for this hazard.

Tsunamis

“A tsunami is a sea wave of local or distant origin that results from large-scale seafloor displacements associated with large earthquakes, major submarine slides, or exploding volcanic islands (http://earthquake.usgs.gov/image_glossary/tsunami.html).” Tsunamis occur predominately in the Pacific Ocean and more specifically as a result of seismic activity in the “Ring of Fire” of the Pacific Rim. Perry County is not located in an area at risk for tsunamis.

Volcanoes

Volcanoes are accumulations of volcanic materials erupted through volcanic vents on Earth's surface. Within the United States the risk from volcanic activity is only prevalent in the Pacific Northwest, Alaska, and Hawaii. The state of Alabama is not identified as being at risk for volcanic activity.

Wildfire

Wildfires are responsible for burning thousands of acres of land each year. These fires are uncontrolled and in dry conditions can spread rapidly through the surrounding vegetation and in some cases structures. There are two types of wildfires; these are wildland fires and urban-wildland interface fires. Wildland fires are those fires that occur in areas where the only development is utilities or infrastructure. Urban-wildland fires occur in areas where development occurs near or within the vegetative cover.

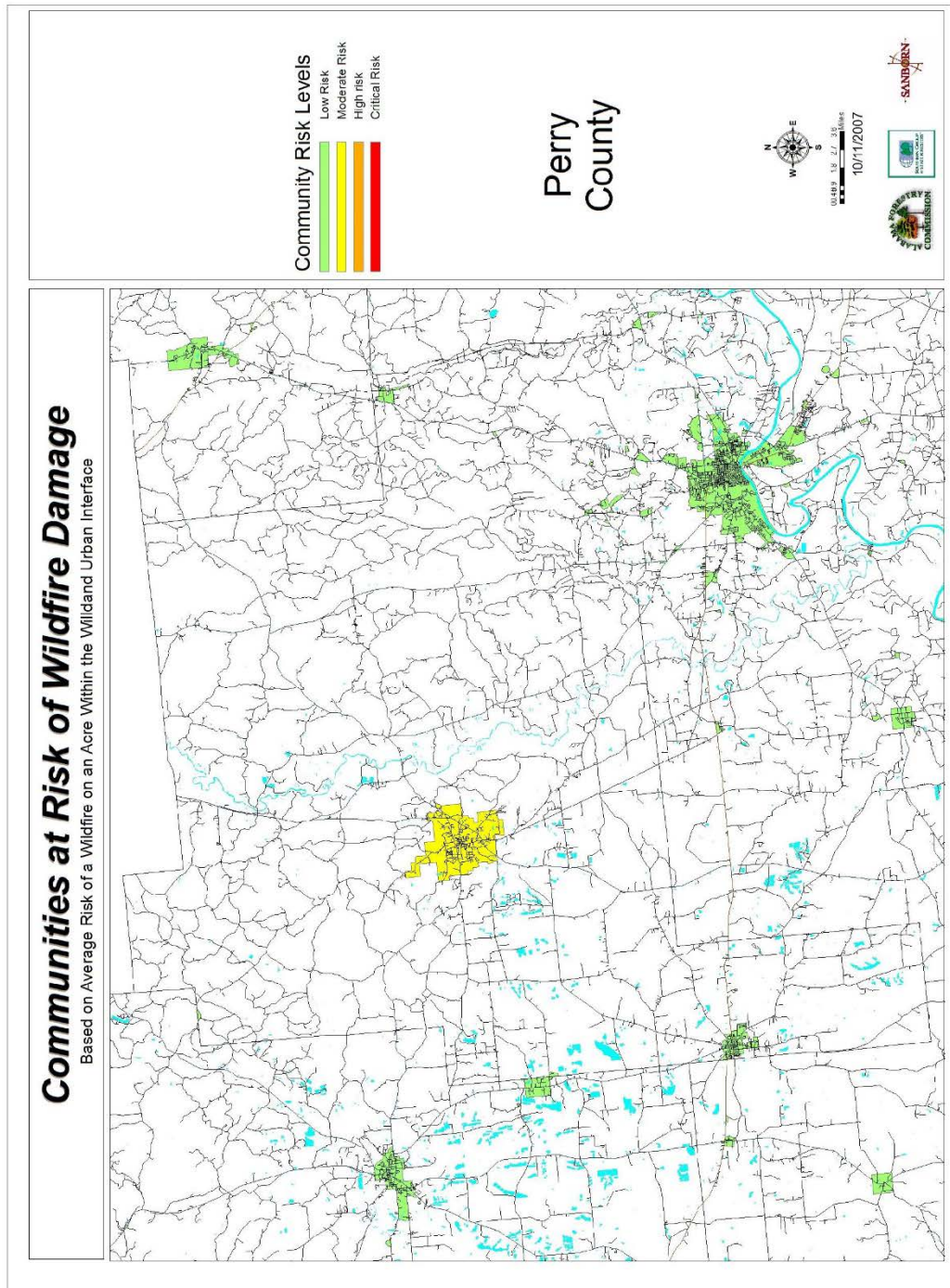
The Alabama State Forestry Commission has produced a series of maps for each county detailing fire related statistics. These maps are provided as Figures 4.22-4.23. Figure 4.22 shows wildfire risk by community. There are no communities at critical or high risk in Perry County. All municipalities are at low risk except for a small area south of the City of Marion.

Figure 4.23 shows data relating to the occurrence of fires per 1,000 acres. There are very few areas classified as having a high number of occurrences. These areas are located in the City of Marion, the community of Adler, and the community of North Perry. There are also many areas in the County classified as having a medium number of occurrences. Unincorporated areas along with portions of Marion and Uniontown are all in the medium category. It is obvious that based on past occurrences, the County and both municipalities are vulnerable to wildfires.

The *Alabama State Hazard Mitigation Plan* provides information by county on wildfires that occurred from 1997-2012. Perry County had a total of 638 wildfires during this time period. These fires burned 5,383 acres of land. Based on this information, the committee has elected to classify wildfires as a high risk.

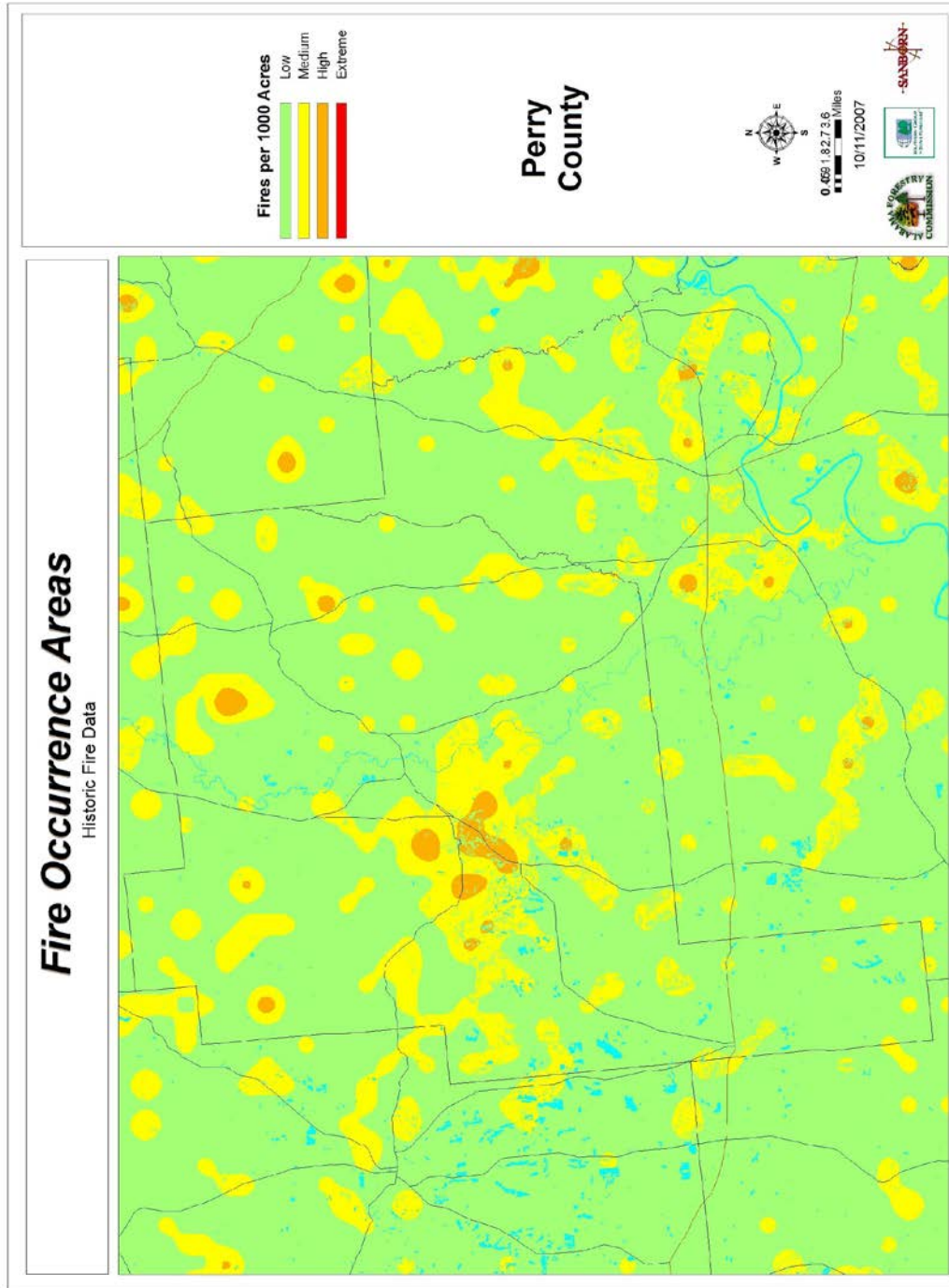
Based on the information from the Alabama Forestry Commission, Perry County and all municipalities have some degree of risk. Based on this information, the committee has classified wildfire as a high risk.

Figure 4.22 Communities at Risk of Wildfire Damage



Source: Alabama Forestry Commission

Figure 4.23 Fire Occurrence Areas



Source: Alabama Forestry Commission

Table 4.11 Perry County Risk Assessment Summary

Hazard	How Identified	Why Identified	Why Not Identified
Avalanche (no risk)	----	----	*Location
Coastal Erosion (no risk)	----	----	*Location
Coastal Storm and Hurricane (moderate risk)	*past occurrences *local input *risk assessment *state vulnerability assessment	* local concern * medium risk in state vulnerability assessment *probability of occurrence	----
Dam Failure (low risk)	*review of National Inventory of Dams Data	*23 Significant Downstream Hazard Risk	----
Earthquake (low risk)	*past occurrence *review of peak acceleration information	*low/borderline seismic risk	----
Expansive Soils (low risk)	*review of Perry County soil survey	*Expansive soils are prevalent throughout the county.	----
Extreme Heat and Drought (high risk)	*local input *FEMA Extreme Heat & Drought Backgrounder	*local concern * possibility of occurrence	----
Flood/Flash Flooding (medium risk)	*FIRM maps *local officials	*Flash flooding: local concern, probability of occurrence	---

Landslides (low risk)	*Geologic Survey of Alabama	*one reported landslide on record	----
Land Subsidence (low risk)	*Geologic Survey of Alabama	*Active area of subsidence	----
Severe Storms (hail, winds, lightning and thunderstorms) (high risk)	*past occurrences *local input	*local concern *frequency of occurrence	---
Severe Winter Storm (snow and ice) (low risk)	*local input	*local concern *wide ranging effects *lack of facilities and resources to respond	----
Tornado (high risk)	*local input *past occurrences *risk assessment	*frequency *local concern *deadliness *wind zone designation	----
Tsunami (no risk)	----	----	*Location
Volcano (no risk)	----	----	*Location
Wildfire (high risk)	*local input *risk assessment	*amount of forested land *presence of national forest *previous occurrences	----

B. Area Affected by Each Identified Hazard

Table 4.12 illustrates the geographic areas susceptible to each hazard identified in the risk assessment. Although some areas are susceptible to the same hazards, the extent to which they are susceptible varies. The susceptibility also may vary within a jurisdiction. An example is wildfire susceptibility, while all areas are in fact susceptible; those areas with little or no defensible space are more susceptible. Also structures within the Talladega National Forest are by far more susceptible than most areas of the county. Areas also may have different susceptibility to flooding. Areas of lower elevation or poor drainage are more susceptible than higher better-drained areas.

Appendix 2 gives more specific location information with regards to historic occurrences. It is evident by the data in these tables that the all areas in the county have been affected by the identified hazards.

Table 4.12 Locations Susceptible to Each Identified Hazard

Hazard	Unincorporated	Marion	Uniontown
Avalanche			
Coastal Erosion			
Coastal Storm and Hurricane	X	X	X
Dam Failure	X		
Earthquakes			
Expansive Soils	X	X	X
Extreme Heat and Drought	X	X	X
Flood/Flash Flooding	X	X	X
Landslides	X		
Land Subsidence	X		
Severe Storms (hail, winds, lightning and thunderstorms)	X	X	X
Severe Winter Storm (snow and ice)	X	X	X
Tornado	X	X	X
Tsunamis			
Volcanoes			
Wildfire	X	X	X

C. Extent and Impact of Each Identified Hazard

The extent, or potential magnitude or severity, of each hazard is addressed in Table 4.13. The information in this table is based on how bad each hazard could be in Perry County.

Table 4.13 Extent and Impact of Identified Hazards

Hazard	Unincorporated	Marion	Uniontown
Avalanche			
Coastal Erosion			
Coastal Storm and Hurricane	Category 5 hurricane leading to catastrophic damage. Sustained winds greater than 155mph. Heavy flood and wind damage, loss of life, injuries, temporary loss of utilities, timber loss	Category 5 hurricane leading to catastrophic damage. Sustained winds greater than 155mph. Heavy flood and wind damage, loss of life, injuries, temporary loss of utilities, timber loss	Category 5 hurricane leading to catastrophic damage. Sustained winds greater than 155mph. Heavy flood and wind damage, loss of life, injuries, temporary loss of utilities, timber loss
Dam Failure			
Earthquakes			
Expansive Soils	Structural Damage to structures built on soil	Structural Damage to structures built on soil	Structural Damage to structures built on soil
Extreme Heat and Drought	Temperatures above 100°,D4 drought, crop loss, public health concern, wildfire susceptibility	Temperatures above 100°,D4 drought, crop loss, public health concern, wildfire susceptibility	Temperatures above 100°,D4 drought, crop loss, public health concern, wildfire susceptibility
Flood/ Flash Floods	Up to 7-8 feet of water leading to road closures, property damage, injury and loss of life	Up to 7-8 feet of water leading to road closures, property damage, injury and loss of life	Up to 7-8 feet of water leading to road closures, property damage, injury and loss of life
Landslides			
Land Subsidence			
Severe Storms (hail, winds, lightning and thunderstorms)	Winds up to 250 mph (Wind Zone IV), Hail up to H10 on TORRO Scale (melon size), large hail, wind damage, property damage, crop loss, death, injury	Winds up to 250 mph (Wind Zone IV), Hail up to H10 on TORRO Scale (melon size), large hail, wind damage, property damage, crop loss, death, injury	Winds up to 250 mph (Wind Zone IV), Hail up to H10 on TORRO Scale (melon size), large hail, wind damage, property damage, crop loss, death, injury
Severe Winter Storms (Snow and Ice)	Between 6-8 feet of snow leading to tree damage, utility damage, property damage, death and serious injury	Between 6-8 feet of snow leading to tree damage, utility damage, property damage, death and serious injury	Between 6-8 feet of snow leading to tree damage, utility damage, property damage, death and serious injury
Tornado	F0-F5 Extensive property damage possible, death, injury	F0-F5 Extensive property damage possible, death, injury	F0-F5 Extensive property damage possible, death, injury
Tsunamis			
Volcanoes			
Wildfire	All 719 square miles of land charred by wildfire leading to property loss, timber destruction, revenue losses, deaths, and injury.	All 719 square miles of land charred by wildfire leading to property loss, timber destruction, revenue losses, deaths, and injury.	All 719 square miles of land charred by wildfire leading to property loss, timber destruction, revenue losses, deaths, and injury.

D. Previous Occurrences

There are previous occurrences on record for each type of hazard identified in this risk assessment. The Perry County EMA does not keep records of storm events. The best available data was taken from the National Weather Service. Once a total review of all National Weather Service records was completed, it was evident that all occurrence numbers were drastically low (Table 4.14). The lack of historical records of storm events will again be addressed in the mitigation strategies section of this plan. The county is in the process of addressing these deficiencies.

Table 4.14 also illustrates that a number of reported occurrences vary greatly between jurisdictions. By far unincorporated areas have more incidences in every category, but this of course is due to those areas encompassing a much greater area in Perry County. Both municipalities have experienced at least one incidence of the hazards in the table. By far, the most numerous events seem to be severe storms. These occurrences are expected to be numerous, due to the climate in South Alabama.

Table 4.14 Past Occurrences by Jurisdiction

Hazard	County (including unincorporated)	Marion	Uniontown
Avalanche			
Coastal Erosion			
Coastal Storm and Hurricane	9	9	9
Dam Failure	Not available	Not available	Not available
Earthquakes	5	Not available	Not available
Expansive Soils	Not applicable	Not applicable	Not applicable
Extreme Heat and Drought	30	30	30
Flood/Flash Flooding	7	7	7
Landslides	Not available	Not available	Not available
Land Subsidence	8	Not available	Not available
Severe Storms (hail, winds, lightning and thunderstorms)	97	32	13
Severe Winter Storms (Snow and Ice)	9	3	3
Tornado	24	3	2
Tsunamis			
Volcanoes			
Wildfire	Not available	Not available	Not available

E. Past Occurrence Documentation

Past occurrence data is provided in Appendix 2 of this plan. The information was taken from the National Weather Service's Storm Events Database (<https://www.ncdc.noaa.gov/stormevents/>), and the Birmingham Office of the National Weather Service's Tornado database (http://www.srh.noaa.gov/bmx/?n=tornadodb_main). **This data is the best available data for Perry County.** The storm descriptions are taken from these sources. This section is broken into three parts one for Marion, Uniontown, and Perry County. **Time periods available for each hazard may vary; this is a result of incomplete data and could not be corrected. The county is in the process of addressing these deficiencies.**

Many hazards did not have data readily available these include dam failure and landslides. Wildfire occurrences are provided for the county as a whole in the Risk Assessment section. Expansive soils do not have occurrence data due to their nature.

F. Probability of Future Occurrences

By calculating the probability of future occurrences one can empirically provide the probability that a certain type of hazard will occur. The following tables (Tables 4.15-4.17) provide probabilities calculated from the historic numbers. Some hazards do not have historic occurrences and/or damage values available; therefore, these are assigned a value of NA or not available. The formulas used in these tables are as follows:

$$\text{Probability of Occurrence} = \text{Number of historic occurrences} / \text{Time frame in which they occurred}$$

$$\text{Expected Damages} = \text{Damages from historic occurrences} / \text{Number of historic occurrences.}$$

Table 4.15 Probability of Future Occurrence Based on Historical Data –Perry County*

Hazard	Past Occurrences	Time Frame	Past Damages (\$)	Probability of Occurrence (Per year)	Expected Damages (\$)
Avalanche	--	--	--	--	--
Coastal Erosion	--	--	--	--	--
Coastal Storm and Hurricane	9	16 years	N/A	56%	N/A
Dam Failure	--	--	--	--	--
Earthquakes	--	--	--	--	--
Expansive Soils	--	--	--	--	--
Extreme Heat and Drought	34	18 years	N/A	>100%	N/A
Flood/Flash Flooding	7	13 years	N/A	53%	N/A
Landslides	--	--	--	--	--
Land Subsidence	--	--	--	--	--
Severe Storms (hail, high winds, lightning, and thunderstorms)	97	53 years	4.341M	>100%	44,752
Severe Winter Storms (Snow and Ice)	9	18 years	N/A	50%	N/A
Tornado	24	53 years	30.61M	45%	1,275,416
Tsunamis	--	--	--	--	--
Volcanoes	--	--	--	--	--
Wildfire	N/A	N/A	N/A	N/A	N/A

Table 4.16 Probability of Future Occurrence Based on Historical Data – Marion*

Hazard	Past Occurrences	Time Frame	Past Damages (\$)	Probability of Occurrence (Per year)	Expected Damages (\$)
Avalanche	--	--	--	--	--
Coastal Erosion	--	--	--	--	--
Coastal Storm and Hurricane	9	16 years	N/A	56%	N/A
Dam Failure	--	--	--	--	--
Earthquakes	--	--	--	--	--
Expansive Soils	--	--	--	--	--
Extreme Heat and Drought	34	18 years	N/A	100%	N/A
Flooding/Flash Flooding	7	13 years	N/A	53%	N/A
Landslides	--	--	--	--	--
Land Subsidence	--	--	--	--	--
Severe Storms (hail, high winds, lightning, and thunderstorms)	32	18 years	375,000	>100%	11,718
Severe Winter Storms (Snow and Ice)	9	18 years	N/A	50%	N/A
Tornado	3	15 years	1.452M	20%	484,000
Tsunamis	--	--	--	--	--
Volcanoes	--	--	--	--	--
Wildfire	N/A	N/A	N/A	N/A	N/A

Table 4.17 Probability of Future Occurrence Based on Historical Data – Uniontown*

Hazard	Past Occurrences	Time Frame	Past Damages (\$)	Probability of Occurrence (Per year)	Expected Damages (\$)
Avalanche	--	--	--	--	--
Coastal Erosion	--	--	--	--	--
Coastal Storm and Hurricane	9	16 years	N/A	56%	N/A
Dam Failure	--	--	--	--	--
Earthquakes	--	--	--	--	--
Extreme Heat and Drought	34	18 years	N/A	>100%	N/A
Flooding\Flash Flooding	7	13 years	N/A	53%	N/A
Landslides	--	--	--	--	--
Land Subsidence	--	--	--	--	--
Severe Storms (hail, high winds, lightning, and thunderstorms)	13	12 years	295,000	>100%	22,692
Severe Winter Storms (Snow and Ice)	9	18 years	N/A	50%	N/A
Tornado	2	10 years	755,000	20%	377,500
Tsunamis	--	--	--	--	--
Volcanoes	--	--	--	--	--
Wildfire	N/A	N/A	N/A	N/A	N/A

*Due to insufficient storm event data the Perry County EMA feels these probabilities are significantly lower than they should be for every hazard with the exception of tornadoes.

Summary of Changes Made in Plan Update Section V. Assessing Vulnerability

The Assessing Vulnerability section of this plan addresses federal requirement §201.6 (c) (2) (ii) - an overall summary of each hazard and its impact on the community. It also addresses §201.6 (c) (2) (ii) (A) by providing the types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas. §201.6 (c) (2) (ii) (B) is also addressed by providing an estimate of the potential dollar losses to vulnerable structures identified and a description of the methodology used to prepare the estimate. §201.6 (c) (2) (ii) (B) is addressed by providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.

The most up-to-date data available for Perry County is the 2008-2012 American Community Survey Five Year Estimates from the Census Bureau. Changes to this section were made by the Alabama Tombigbee Regional Commission under the direction of the Perry County EMA.

- Updated Vulnerability Section on Hazards
- Updated vulnerable populations
- Updated Critical Facilities

V. ASSESSING VULNERABILITY

The Perry County Hazard Steering Committee reviewed all risk assessment analysis. The steering committee, stakeholders, Perry County EMA, and Alabama Tombigbee Regional Commission worked together to develop the following section. These were developed using personal knowledge, hazard information, and past events.

A. Overview of Hazard Vulnerability and Impact

Dam Failure

The dams at significant risk for failure in Perry County are all in agricultural settings. If these dams were to fail, the impact would be loss of crops and environmental damage.

Earthquakes

The southern half of the county is at a low risk for earthquakes and the northern section is at a moderate risk based on peak acceleration values. There are numerous earthquakes on record. The strongest quake on record in this area measured a 3.3 on the Richter scale. A quake this size is noticeably felt by people indoors. Vibrations similar to that of a passing truck may be felt.

Expansive Soils

Expansive soils cover large areas of Perry County. Their main impact is building limitations. Contractors in the area are accustomed to constructing housing that is conducive to these soils. These soils are also disruptive to many septic systems.

Extreme Heat and Drought

Both extreme heat and drought could occur at any location in the continental United States according to FEMA. Droughts would most greatly affect agriculture and water supply. Extreme heat could lead to heatstroke, heat cramps, and heat exhaustion. A widespread extreme heat event could possibly overcrowd local clinics with persons suffering from the heat's effects. Increased use of electricity to run fans and air conditioners may also put a strain on electric utilities. In addition, during droughts the risk of wildfire is greater. All 10,591 residents of Perry County are at risk to the effects of extreme heat and drought.

Flooding/Flash Floods

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

- County Road 49 near State Highway 183
- County Road 4
- Bush Oak Road
- Timberline Grocery Road
- Oakmulgee Creek Drainage Basin
- River Bottom Road
- Upper River Road

- Brenda Stewart Road
- Popular Grove Road
- Dobyne Road
- Jim Fountain Road
- Oakmulgee Church Road

Flood zones are identified along numerous creeks in the county. The City of Marion participates in the NFIP program. Both the City of Uniontown and Perry County do not participate. There are no repetitive loss properties in Perry County. According to the *Alabama State Hazard Mitigation Plan Update*, the population in Perry County in the 1% annual chance flood hazard area is 5,495.

Hurricanes & Coastal Storms

Atlantic hurricane season is from June 1 to November 30. According to NOAA the highest number of Atlantic hurricanes to make landfall in the United States is six (in 1960 and 1985), while the lowest is zero, which has occurred often (<http://www.aoml.noaa.gov/hrd/tcfaq/E9.html>).

According to the National Weather Service, over the past fifty years Perry County has been affected by nine tropical systems and has felt the after effects of numerous storms. Severe storms, tornadoes, high winds, hail, torrential rains, river flooding, and flash flooding are all associated with hurricanes. Potentially all of Perry County is at risk. The effects of a hurricane are like those of a tornado. The loss of life, property and possessions is common. Interruption of utility and communication service is expected. Perry County is far enough inland that advance warning of the approaching storm can be heeded and residents can prepare themselves. In instances such spawned tornadoes and flash flooding where warning time may be short or nonexistent the risk factors are higher.

The vulnerable populations identified above are applicable to hurricanes. In addition, low-lying areas and areas prone to flooding are at higher risk of hurricane related damage. Another concern regarding hurricanes is the large amount of debris that results. Debris blocks roadways and makes travel unsafe. Debris removal is a major cost with regards to hurricanes. Due to the nature of hurricanes, the entire county is at comparable risk. Of course, residents in low lying areas are at greater risk of flash flooding caused by hurricanes.

Landslides

The areas identified as being affected by landslides are located in the Talladega National Forest. These slides main impact would be disruption to campers and hikers and possible environmental habitat damage.

Land Subsidence

The areas identified as being affected by land subsidence are located in the Talladega National Forest. These slides main impact would be disruption to campers and hikers and possible environmental habitat damage.

Severe Storms (Hail, winds, lightning, and thunderstorms)

Damage from severe storms can have a wide range of severity. Common incidences are a result of falling trees and flying debris. Lightning can cause substantial property damage and death. Utility disruption and blocked roadways are common. Historically Perry County has experienced these storms every year with varying frequency and intensity. Winds of 78 knots have been recorded

during these events within the county. Hailstorms as large as 2.5 inches have occurred in the area with property damage resulting. Generally severe storms follow no common track or an exact pathway; therefore, the whole county is at risk.

Severe Winter Storms (Snow and Ice)

Winter storms are a rare occurrence in Perry County, but when they do occur they have a significant impact. Local governments do not have snow removal equipment on hand. Local drivers are not used to driving in those adverse conditions and automobile accidents are common occurrences. Ice and snow can weigh down limbs and power lines causing them to break under pressure, resulting in power failure and property damage. During extended times of power failure, residents and businesses are not equipped with backup generators. The impacts of these storms are generally the result of the infrequency of their occurrence. All residents of Perry County are vulnerable to severe winter storms because these storms have no defined track.

Tornadoes

There are two tornado seasons in Alabama; these are in May and November. Tornadoes are not constrained to follow any definite path, so every area and every resident of Perry County is at risk. A tornadoes path is generally 300-400 yards wide and four miles long (NOAA 1973). Areas within that path may suffer from slight to severe damage depending on the tornados strength. Injury and death can occur as a result of even the weakest tornado. In Perry County, historically there have been F0, F1, F2, F3, and F4 tornadoes recorded.

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

The highest potential for death or injuries resulting from tornadoes occurs in areas with higher population densities. In Perry County, the cities of Marion and Uniontown are the most densely populated areas. The occurrence of dense housing also increases the probability of not only death or injury, but also property damage. Marion and Uniontown also have the highest housing densities in the county. Other areas that are more vulnerable to damage from a tornado include areas with high percentages of mobile homes. These structures are not capable of withstanding the strong winds associated with tornadoes as well as traditional housing. In Perry County, there are significant numbers of mobile homes throughout the county.

Wildfire

Due to the large areas of forest-covered land in Perry County, wildfires are a real threat to all residents of Perry County. These fires can ignite and spread quickly, charring everything in their path. In Perry County, wildfires are a threat to the residents' property and health. Fires can encroach on homes and destroy subdivisions. These fires not only threaten the lives of residents, but also may cause respiratory problems for many residents. At a significantly higher risk of wildfire are those residents and structures within the Talladega National Forest. The USDA Forest Service estimates that there are 1,400 privately owned structures within the forest of these 450 are private residences. They also estimate up to 600 private citizens live within the forest.

B. Overview of Affected Populations by Hazard

The population affected by natural disasters varies by hazard type. Table 5.2 gives a broad overview of the estimated populations that are at risk from each designated hazard.

Table 5.2 Population Affected by Individual Hazards

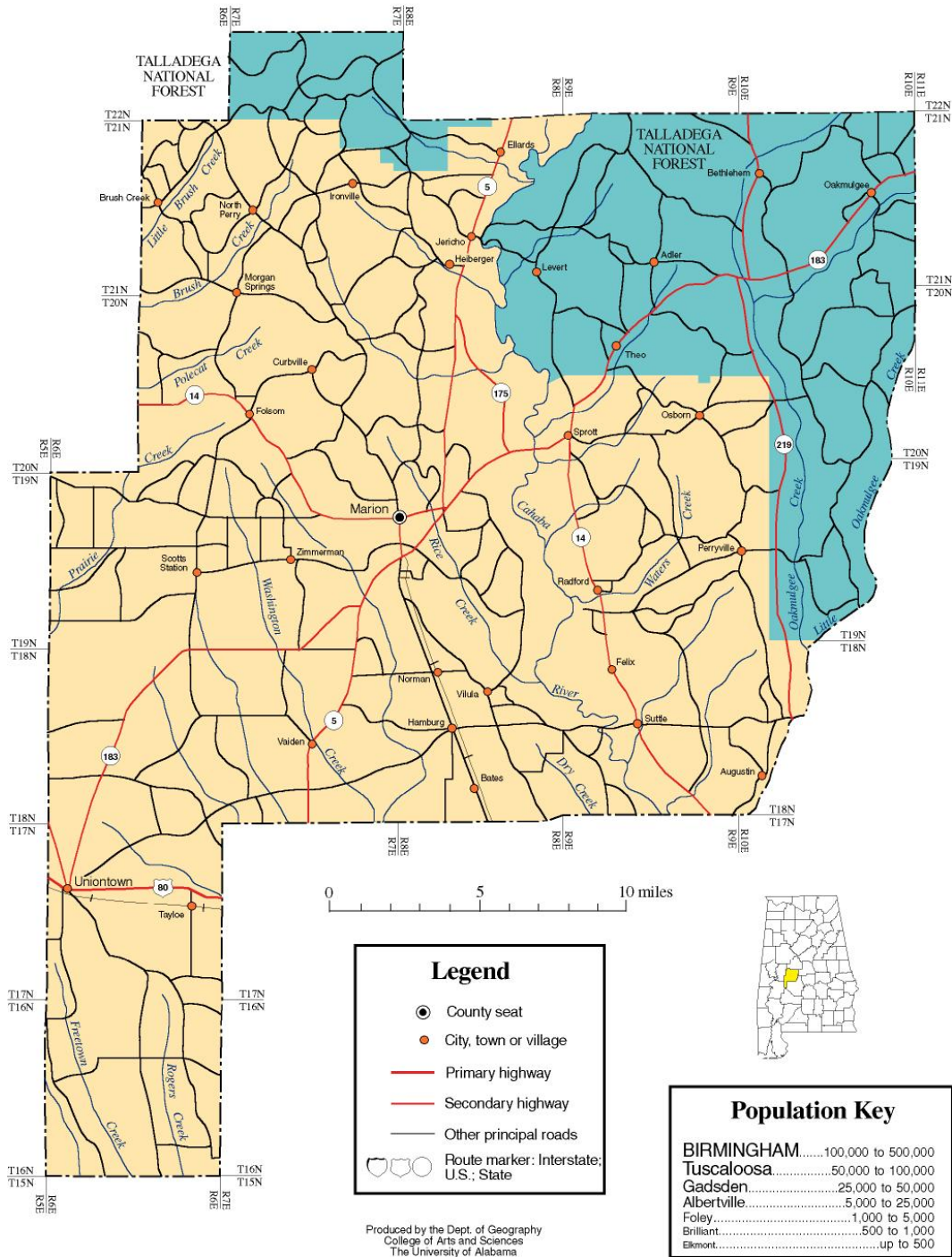
Hazard	Unincorporated County	Marion	Uniontown	Total
Dam Failure	0	0	0	0
Earthquakes	1,500	0	1,636	3,136
Expansive Soils	N/A	N/A	N/A	N/A
Extreme Heat & Drought	5,130	3,686	1,775	10,591
Flooding/Flash Floods	N/A	N/A	N/A	N/A
Hurricane	5,130	3,686	1,775	10,591
Landslides	N/A	N/A	N/A	N/A
Land Subsidence	N/A	N/A	N/A	N/A
Severe Storms (lightning, hail, wind, thunderstorms)	5,130	3,686	1,775	10,591
Severe Winter Storms (Snow and Ice)	5,130	3,686	1,775	10,591
Tornado	5,130	3,686	1,775	10,591
Wildfire	5,130	3,686	1,775	10,591
At higher risk	600	0	0	600

C. Identification of Socially Vulnerable Populations

Table 5.2 shows vulnerability due to physical location. Location is not the only factor in determining vulnerability. Social and economic characteristics can also be studied to determine vulnerability. Certain populations are generally more affected by any type of natural hazard and their after effects. These populations can be defined in terms of social, racial, and economic characteristics. The following section identifies Perry County's socially vulnerable populations by Census Tract. Figure 5.1 is a Perry County map produced by the University of Alabama's Cartographic Research Lab, it is provided for the reader to better understand the geographies note in the following discussion. Figure 5.2 is a map of the county with each tract identified.

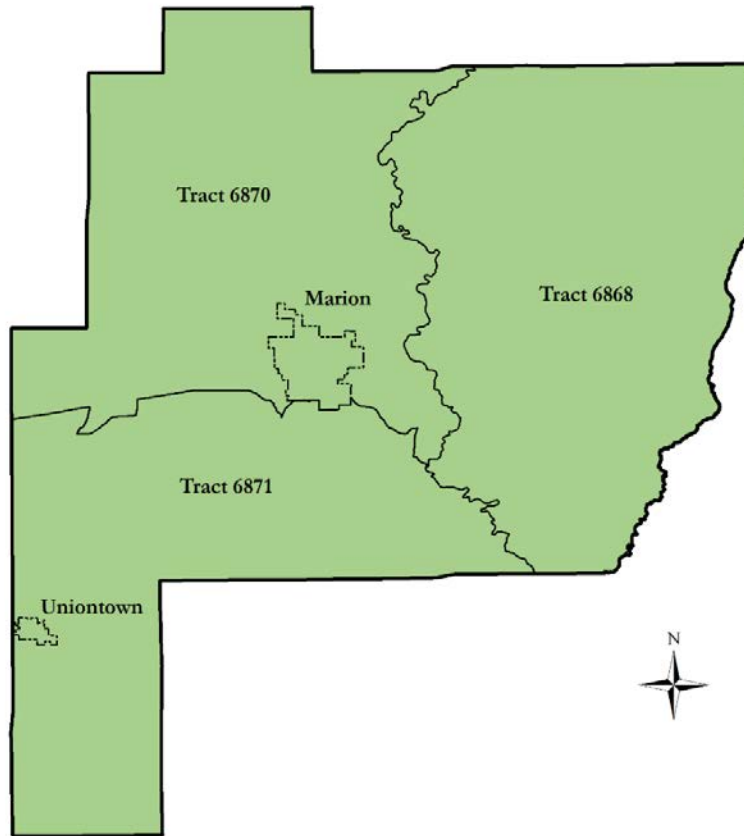
The American Community Survey Five Year Estimates data is the most current data available for many statistics. Estimates from the state data center and local knowledge have been used when available. Table 5.3 is a summary of these statistics.

Figure 5.1 Perry County Map
PERRY COUNTY



Source: The University of Alabama's Cartographic Research Lab

Figure 5.2 Perry County 2012 Census Tract Map



Map Created by the Alabama Tombigbee Regional Commission using 2012 TIGER files

Table 5.3 Summary of Social and Economic Vulnerability Statistics

	Census Tract				Alabama Average	US Average
	6868	6870	6871	Perry County		
Population	1,173	5,616	3,601	10,390		
% Minority of Population	58%	63.5%	83.3%	69.8%	30.7%	26%
% Over 65 Years (Total Population)	24.8%	20%	10%	16.9%	14.2%	13.4%
% Under 18 Years (Total Population)	18%	21%	30.1%	23.8%	23.4%	23.7%
Housing Units	731	2,465	1,512	4,708		
% Mobile Homes of Housing Units	27.6%	27.4%	23.3%	26.1%	13.9%	6.5%
Median Value of Housing Units	\$54,500	\$75,500	\$43,800	\$58,000	\$122,500	\$176,700
% Individuals below Poverty Level	18.5%	19.8%	35.7%	25.6%	18.6%	15.4%
Median Family Income	\$36,563	\$33,750	\$27,667	\$32,108	\$54,362	\$64,719

Source: US Census Bureau, ACS Five Year Estimates 2009-2013

Population

In terms of population there are a number of factors that affect vulnerability. A main factor is the population of an area. The larger the population is the greater the risk. In Perry County, the cities of Marion and Uniontown have the largest concentrations of population. The remainder of the population is in numerous smaller communities such as Heiberger and Sprott.

The population over sixty-five years old and under eighteen years old is especially vulnerable due to their age. These groups are at a higher risk for injury and medical complications that may occur during or as a result of a natural disaster. Also, these groups need evacuating and special shelter. In Perry County, there is a higher percent of persons over the age of 65 in the eastern part of the county. With regards to persons under the age of eighteen, the southern leg of the county including the City of Uniontown has a higher percentage of these persons.

Housing

Housing is always a concern when you are looking at mitigation planning (Figure 5.5). The concentration and type of housing are two main concerns. In Perry County there are a total of 4,708 housing units. Not surprisingly, the concentrations of housing coincide with the more populated areas. The areas in and around the cities of Marion and Uniontown have concentrations of housing units.

Not only are concentrations of units important, but also type of unit is important. Within Perry County there are a significant number of mobile homes. These homes are more vulnerable to damage from natural hazards. All census tracts have over one fourth of the housing stock being mobile homes. Overall, the entire county has a higher percentage of mobile homes than average.

Income

In addition to population and housing characteristics of the county, income levels are also important when identifying vulnerable populations. Lower income individuals may not have the resources to prepare or recover from natural disasters. The effects of disasters are felt by this group due to their lack of resources.

Median family income divides the income distribution into two equal groups, one having incomes above the median, and other having incomes below the median. In Perry County the median family income countywide was \$32,108 in 2013, this figure is lower than both the state (\$54,362) and national (\$64,719) averages. In Perry County, there are pockets of poverty throughout the county. Every municipality has a low income area and the majority of the unincorporated areas are considered low income.

D. Overview of County Building Stock

In addition to populations, it is also important to examine the number and value of potential structures that may be damaged by natural hazards. Table 5.4 lists the total number of structures by general occupancy for each census tract. Marion has the highest building count, followed by the tract containing Uniontown.

Table 5.4 Building Count by General Occupancy

Tract	Residential	Commercial	Industrial	Agricultural	Religious	Government	Education	Total Count
6868	840	0	0	0	1	0	0	841
6870	2,695	99	17	5	15	7	8	2,846
6871	2,210	31	7	6	9	4	1	2,268

Source: HAZUS-MH

Table 5.5 also gives dollar exposure figures, but these are broken down by general occupancy. These estimates include structure and contents. Residential values exceed all other categories. Tract 9870 has the largest dollar exposure in both residential and commercial categories. This tract includes the City of Marion. This tract along with Tract 9872 contains the bulk of dollar exposure within the county in every category.

Table 5.5 Total Exposure in Thousands of Dollars

Tract	Residential	Commercial	Industrial	Agricultural	Religious	Government	Education	Total Exposure
6868	90,061,000	0	0	0	1,104,000	0	0	91,165,000
6870	303,080,000	112,991,000	36,684,000	1,924,000	20,488,000	8,691,000	17,132,000	500,990,000
6871	203,112,000	35,520,000	6,852,000	2,674,000	11,732,000	2,756,000	5,200,000	267,846,000

Source: HAZUS-MH

E. Identification of Critical Facilities

The Perry County Hazard Mitigation Steering Committee identified critical facilities in the following six categories:

- A. A critical facility is critical to the health and welfare of the entire jurisdiction. They become essential in the event of a natural disaster. These facilities include police stations, fire stations, schools, and hospitals.
- B. Critical facilities are lifelines that provide the jurisdiction with necessities such as potable water.
- C. Critical facilities include the transportation corridors necessary to keep the jurisdiction connected.
- D. Critical facilities include those facilities that house persons with special needs (jails, nursing homes). They may also include locations where large groups often meet.
- E. Critical facilities include locations with hazardous materials. These materials may pose a threat to health and safety if disrupted.
- F. Critical facilities include those in which potential losses, both human and economic, are high.

F. Critical Facilities by Jurisdiction

Tables 5.6-5.8 break down critical facilities by the jurisdiction in which they are located. Also cost estimates are given. These values are only estimates made from data provided by the municipalities. These estimates are based on insurance values. Other values were provided by the individual entities. All categories of critical facilities are included, except category E. There was very limited data available for those facilities. The critical facilities were reviewed and there have been no additions to the facilities in the hazard areas. NO PLANNED/FUTURE CRITICAL FACILITIES WERE IDENTIFIED.

Table 5.6 Perry County Critical Facilities

Facility	Estimated Value
Perry County Correctional Facility	\$15,000,000
Sprott VFD*	\$750,000
Suttle VFD*	\$750,000
Oakmulgee Creek VFD*	\$750,000
East Perry VFD*	\$750,000
North Perry VFD*	\$750,000
Heiberger VFD*	\$750,000
Hamburg VFD*	\$750,000
Total	\$20,250,000

* Estimate only

Table 5.7 City of Marion Critical Facilities

Facility	Estimated Value
Albert Turner Sr. Elementary School	\$14,268,802
Berean Baptist- Centreville St.	\$75,000
Berean Baptist Head Start Office	\$90,000
Berean Baptist- West Monroe	\$20,460
Francis Marion High School	\$16,431,748
Judson College	\$35,000,000

Marion Academy	\$1,500,000
Marion City Hall/ Police Department*	\$375,000
Marion Military Institute	\$45,000,000
Marion Sewer Treatment Plant*	\$5,000,000
Marion VFD*	\$1,500,000
Marion Water Treatment Plant*	\$5,000,000
Perry County Nursing Home*	\$4,500,000
Southland Nursing Home*	\$3,750,000
Water Tanks (4)*	\$3,000,000
Depot	\$1,250,000
Sowing Seeds of Hope	\$350,000
Perry County Courthouse	\$5,500,000
Sheriff's Office & Jail	\$6,000,000
Perry County Road and Bridge Department	\$5,500,000
H&H Building	\$2,500,000
Total	\$156,611,010

* Estimate only

Table 5.8 City of Uniontown Critical Facilities

Facility	Estimated Value
Berean Baptist- Lucian St.	\$45,000
Robert C. Hatch High School	\$12,966,505
Uniontown City Hall/ Police Department*	\$500,000
Uniontown Elementary School	\$8,397,516
Uniontown VFD*	\$750,000
Vaughan Clinic*	\$200,000
Southeastern Cheese LLC	\$7,000,000
Harmony Hall Trucking	\$1,000,000
Alabama Livestock Auction	\$2,000,000
Harvest Select Catfish	\$5,500,000
Total	\$35,359,021

* Estimate only

G. Future Critical Facilities

The participants did not identify any future critical facilities during the update process.

H. Critical Facilities by Hazard

Table 5.9 breaks these facilities down by total exposure to each hazard. The sum of all buildings affected by each hazard was used to compute these numbers.

Example: City of Uniontown Critical Facilities

Facility	Estimated Value
Berean Baptist- Lucian St.	\$45,000
Robert C. Hatch High School	\$12,966,505
Uniontown City Hall/ Police Department*	\$500,000
Uniontown Elementary School	\$8,397,516
Uniontown VFD*	\$750,000
Vaughan Clinic*	\$200,000
Southeastern Cheese LLC	\$7,000,000
Harmony Hall Trucking	\$1,000,000
Alabama Livestock Auction	\$2,000,000
Harvest Select Catfish	\$5,500,000
Total	\$35,359,021

Table 5.9 Dollar Exposure of Critical Facilities by Hazard

Hazard	Unincorporated	Marion	Uniontown	Total Countywide
Extreme Heat and Drought	\$20,250,000	\$156,611,010	\$35,359,021	\$212,220,031
Expansive Soils	\$20,250,000	\$156,611,010	\$35,359,021	\$212,220,031
Flood	N/A	N/A	N/A	N/A
Hurricane	\$20,250,000	\$156,611,010	\$35,359,021	\$212,220,031
Landslide	N/A	N/A	N/A	N/A
Land Subsidence	N/A	N/A	N/A	N/A
Severe Storms	\$20,250,000	\$156,611,010	\$35,359,021	\$212,220,031
Severe Winter Storms	\$20,250,000	\$156,611,010	\$35,359,021	\$212,220,031
Tornado	\$20,250,000	\$156,611,010	\$35,359,021	\$212,220,031
Wildfire	\$20,250,000	\$156,611,010	\$35,359,021	\$212,220,031

Tables 5.10 and 5.11 give estimates of potential housing losses by jurisdiction. Housing unit totals in Table 5.12 were taken from Census 2000.

Table 5.10 Housing Units by Jurisdiction by Hazard

Hazard	Unincorporated	Marion	Uniontown	Total
Extreme Heat and Drought				
Flash Flood	N/A	N/A	N/A	N/A
Hurricane	2,421	1,377	910	4,708
Severe Storms	2,421	1,377	910	4,708
Snow and Ice	2,421	1,377	910	4,708
Tornado	2,421	1,377	910	4,708
Wildfire	2,421	1,377	910	4,708

For Table 5.13 potential loss totals were calculated by multiplying by the median value of a housing unit in each jurisdiction by the number of units in that jurisdiction.

Example:
 Marion Potential Housing Losses =
 Number of units in City of Marion
 (1,377) * Median Value of Housing Unit in City of Marion (\$89,800)
 = \$123,654,600

Table 5.11 Dollar Exposure of Housing Facilities by Hazard

Hazard	Unincorporated	Marion	Uniontown	Total
Extreme Heat and Drought				
Flash Flood	N/A	N/A	N/A	N/A
Hurricane	\$140,418,000	\$123,654,600	\$52,780,000	\$316,852,600
Severe Storms	\$140,418,000	\$123,654,600	\$52,780,000	\$316,852,600
Snow and Ice	\$140,418,000	\$123,654,600	\$52,780,000	\$316,852,600
Tornado	\$140,418,000	\$123,654,600	\$52,780,000	\$316,852,600
Wildfire	\$140,418,000	\$123,654,600	\$52,780,000	\$316,852,600

H. Analyzing Development Trends

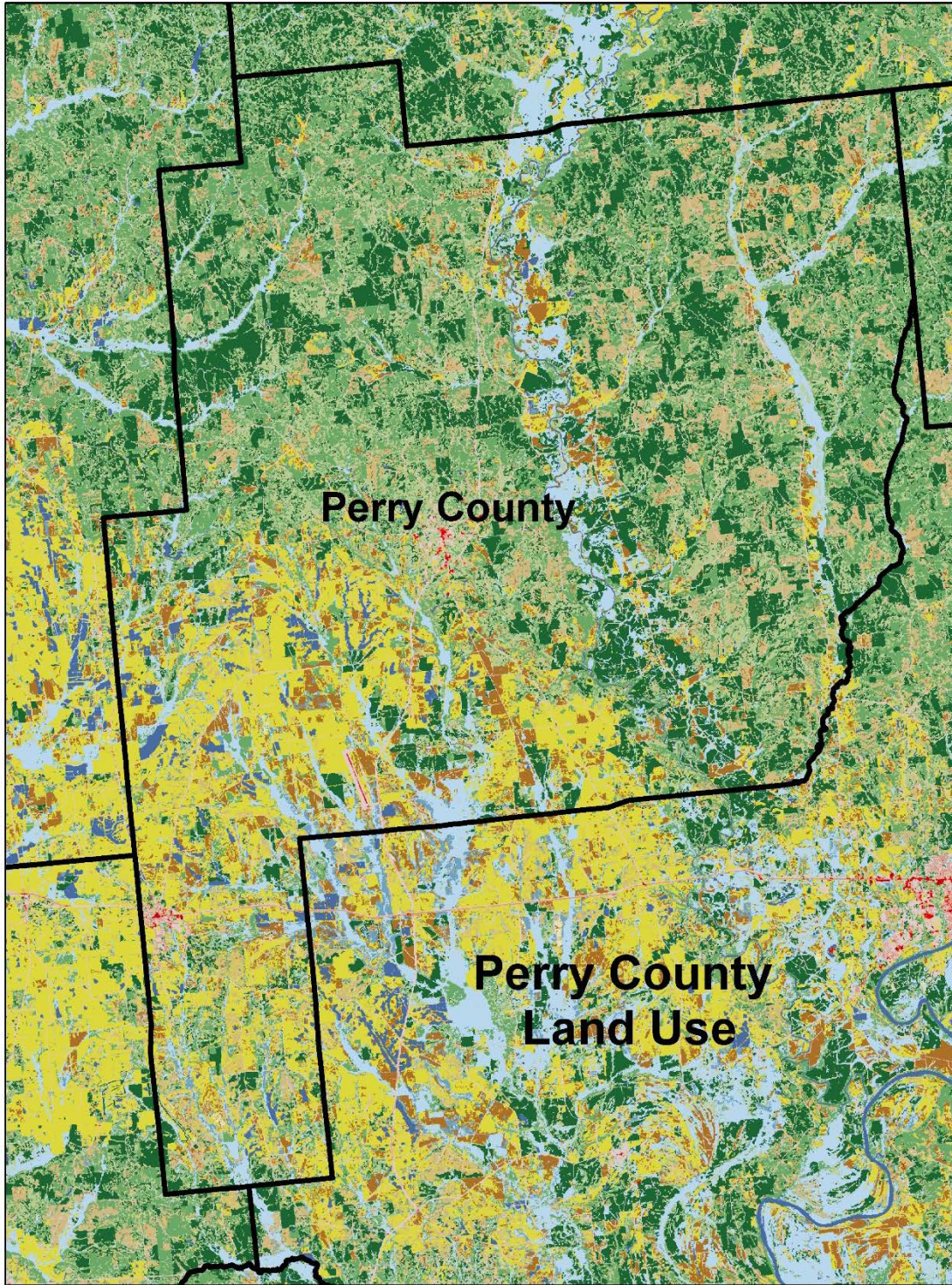
Figure 5.4 shows land use data for Perry County. By far the largest amount of land use is forestland due mainly to the presence of the Talladega National Forest. Agricultural use is the second largest land use. The large amount of land in agriculture is due partly to the numerous catfish ponds throughout the county. It is evident that there is little built-up land in Perry County. **Over the next five, even twenty-five years, this not expected to change.**

Data from the United States Census Bureau (Table 5.12) shows that there is an over a twenty one percent decline in population expected over the next twenty five years. Based on these figures, no significant increase in residential construction is expected. There are also no expected increases in commercial or industrial land uses expected. For all jurisdictions growth and development trends will be similar in that **there will be minimal growth at the most.**

Table 5.12 Population Projections 2005-2025

	Census	Census							Change 2010-2040	
County	2000	2010	2015	2020	2025	2030	2035	2040	Number	Percent
Perry	11,861	10,591	10,031	9,579	9,184	8,842	8,539	8,298	-2,293	-21.7
Note: These projections are driven by population change between Census 2000 and Census 2010. Recent data on births and deaths from the Alabama Department of Public Health are used to derive birth and death rates for the state and each county.										
Source: U.S. Census Bureau and Center for Business and Economic Research, The University of Alabama, Fall 2012.										

Figure 5.4 Perry County Land Use



Summary of Changes Made in Plan Update Section VI. Ongoing Mitigation Assessment

This section underwent major revisions from the last update. This section was previously titled “Capability Assessment.” A new section Existing Authorities, Policies, Programs, and Resources by Jurisdiction was added to detail capabilities by jurisdiction. Capabilities were determined by talking with each jurisdiction via phone calls. The information on the Perry County EMA was moved to Section B.

VI. ONGOING MITIGATION ASSESSMENT

A. Existing Authorities, Policies, Programs, and Resources by Jurisdiction

A brief assessment was conducted by each jurisdiction before goals, objectives, and strategies were discussed. This assessment was completed by contacting local officials by phone, regional planning commission knowledge, and internet research. Table 6.1 details the results of the assessment by jurisdiction.

Table 6.1 Existing Authorities, Policies, Programs, and Resources by Jurisdiction		
Perry County Commission	Marion	Uniontown
Road and Bridge Department	Utility Department	Utility Department
Emergency Management	Ability to tax	Ability to tax
Sheriff's Office	Building Codes	Building Codes
Volunteer Fire Departments	Police Department	Police Department
Regional Hazmat Team	Volunteer Fire Department	Volunteer Fire Department
	Member of NFIP	Regional Hazmat Team
	Regional Hazmat Team	Subdivision Regulations
	Subdivision Regulations	Zoning Ordinances
	Zoning Ordinances	

The extent to which each jurisdiction can expand on existing policies and programs varies. In the State of Alabama, home rule is limited by its Constitution. While municipalities have the power to levy taxes (subject to constitutional limitations on ad valorem taxes), adopt zoning regulations, annex property, select and change their form of government, construct streets and assess the cost against the abutting property, engage in redevelopment and urban renewal projects and establish public agencies to operate hospitals, libraries, recreational facilities, counties do not. Counties that hold these powers have received them through legislative acts, which are written at the local level and presented to the state legislature.

With regards to zoning ordinances, jurisdictions with ordinances in place (Marion & Uniontown) may amend them to address any issues that may arise as long as adequate public notice and a public comment period are given. These jurisdictions hear all requests with regards to the ordinances. In order for the Perry County Commission to enact a zoning ordinance, an act must be passed by the

Alabama legislature in Montgomery. At this time, there is no indication that the county desires to enact a new set of ordinances.

Each jurisdiction in the county has the ability to enforce building codes to the extent it sees fit. Depending on budget and available personnel, these jurisdictions may modify the extent of their enforcement at any time. Funding for public works, utility departments, police, and fire also depend on each jurisdiction's available funding. Taxes are the most significant source of funding for these activities. Municipalities may enact new taxes without legislative approval, but county's may not.

Comprehensive planning is an area where every jurisdiction has the opportunity to analyze hazard mitigation. Planning at this time is limited to those jurisdictions that can afford to pay for a plan or have been accepted into the Alabama Communities of Excellence Program.

B. Perry County Emergency Management Agency

The Perry County EMA Office is located in Marion. The county does not have an Emergency Operations Center. The EMA director is a part time position and there is no support staff to help in day-to-day operations. The office receives weather alerts from the national Weather Service out of Birmingham. The county is a rural county with limited personnel to respond to natural disasters.

Summary of Changes Made in Plan Update

Section VII. Mitigation Goals, Objectives, and Strategies

Section VII. of this plan addresses federal requirement §201.6 (c) (3) (i)-(iv).

(3) A mitigation strategy that provides the jurisdiction's blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools.

This section shall include:

(i) A description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.

(ii) A section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure. All plans approved by FEMA after October 1, 2008, must also address the jurisdiction's participation in the NFIP, and continued compliance with NFIP requirements, as appropriate.

(iii) An action plan describing how the actions identified in paragraph (c)(3)(ii) of this section will be prioritized, implemented, and administered by the local jurisdiction. Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.

(iv) For multi-jurisdictional plans, there must be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan.

The *Mitigation Goals, Objectives, and Actions* section of the plan was also revised. Each jurisdiction reviewed their goals, objectives, and actions. A number of jurisdictions modified projects and estimates. Columns were added to indicate project status and timeframes.

VII. MITIGATION GOALS, OBJECTIVES, AND STRATEGIES

After the updated risk assessment for the county was completed, each jurisdiction was asked to re-prioritize their list of hazards. Prioritization was based on information from the risk assessment and personal knowledge of their jurisdiction. They were also asked to review their goals, objectives, and strategies based on the findings. FEMA's definitions of goals and objectives were used.

“Goal: General guidelines that explain what you want to achieve. They are usually broad policy-type statements that are long term and represent global visions.”

“Objective: Define strategies or implementation steps to attain the identified goals.”

Each committee member and everyone attending the committee meetings were asked to review the possible goals, objectives, and strategies for the jurisdiction they represented. A copy of the last plan was provided to aid in the process. The reevaluation of goals was based solely on what the individual felt the jurisdiction needed. Objectives were reviewed based on determining ways to work towards achieving the stated goals.

Each jurisdiction was also asked to reevaluate mitigation strategies. Members were asked to consider the following: funding options, political support, public support, legality, preservation of the environment, and staff capability. The committee was also reminded to look 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 things such as social effects. Simply put, if a project's benefits outweighed its' cost and did so in a reasonable amount of time, the project was considered to be a good strategy for the jurisdiction.

Once strategies had been reevaluated based on these criteria, each jurisdiction was asked to prioritize them. Ongoing, Low, Medium, or High priority was assigned to each strategy. Prioritization was also based on the before mentioned considerations. The timeframe for each priority ranking was changed in this update to be more reasonable in terms of funding. Strategies with Low priority have a time frame of 5-7 years, Medium priority strategies have timeframes of 3-5 years, and High priority strategies will be undertaken within the next three years depending on funding. All new strategies are to be considered only possibilities at this point. These actions must be considered only possibilities due to budgetary and political concerns.

The following pages detail the mitigation goals, objectives, and strategies of each municipality.

Please refer to the following when using project listings:

Priority

Low- Actions classified as needed (5-7 year timeframe)

Medium- Actions classified as important (3-5 year timeframe)

High- Actions classified as most important (1-3 year timeframe)

Status

Complete- Action has been completed

Partially Complete- A percentage of the project has been completed

Active- Project is underway

Planned- Project is planned, but contingent on available funding

Perry County
Prioritized Threat by Jurisdiction (1=highest priority)

1. Tornado
2. Extreme Heat and Drought
3. Severe Storms
4. Flash Flood
5. Wildfire
6. Severe Winter Storm
7. Expansive Soils
8. Coastal Storms and Hurricanes

Goals

- ❖ *Minimize losses due to natural disasters in Perry County.*
- ❖ *Minimize injury and death due to natural disasters in Perry County.*
- ❖ *Improve public awareness of safety issues concerning natural hazards.*
- ❖ *Ensure the continuity of local government operations will not be significantly disrupted by natural disasters.*

Objectives

- ❖ *Research and identify funding opportunities for mitigation related projects.*
 - ❖ *Educate citizens on safety issues related to natural hazards.*
 - ❖ *Improve drainage throughout the county.*
 - ❖ *Improve stormwater management throughout the county.*
 - ❖ *Improve early warning systems throughout the county.*
 - ❖ *Provide storm shelters for citizens.*
 - ❖ *Retrofit critical facilities.*

Possible Mitigation Actions

Priority	Status	Timeframe (Years)	Mitigation Action	Hazards Addressed	Estimated Cost	Responsible Agency	Funding
High	Active	1-3	Continue to clear debris from roads and drainage ways	All	Road and Bridge Dept. Time	Perry County Road and Bridge Department	Perry County Road and Bridge Department Budget
High	Active	1-3	Continue to improve and maintain county road system	All	Road and Bridge Dept. Time	Perry County Road and Bridge Department	Perry County Road and Bridge Department Budget
High	Active	1-3	Continue to offer shelter to individuals and families affected by natural hazards	All	Utilities at shelter, food cost	Perry County Commission	Perry County Commission Budget
High	Active	1-3	Contact utilities in the event of natural hazard so they can inspect their infrastructure for damage	All	Road and Bridge Dept. Time	Perry County Road and Bridge Department	Perry County Road and Bridge Department Budget

High	Active	1-3	Encourage jurisdictions to commit matches for grants dealing with mitigation	All	EMA Director's time	Perry County Emergency Management Agency	Perry County Emergency Management Agency Budget
High	Active	1-3	Provide the public information on actions to take during severe weather through newspaper and radio announcements	All	EMA Director's time	Perry County Emergency Management Agency	Perry County Emergency Management Agency Budget
High	Active	1-3	Provide information to municipalities regarding natural hazards and general principles outlining procedures	All	EMA Director's time	Perry County Emergency Management Agency	Perry County Emergency Management Agency Budget

High	Active	1-3	Provide information to citizens regarding natural hazards safety	All	EMA Director's time	Perry County Emergency Management Agency	Perry County Emergency Management Agency Budget
High	Planned	1-3	Join NFIP program	Flood	Minimal	Perry County Emergency Management Agency/Perry County Commission	Perry County Emergency Management Agency/Perry County Commission
High	Planned	1-3	Apply for funding to update/revise mitigation plan when needed	All	25,000	Perry County Commission, EMA	Perry County Budget/HMGP Planning Grants
Medium	Planned	3-5	Early Warning Alert Notification Systems	All	Unknown	Perry County Commission, EMA	Perry County Budget
Medium	Planned	3-5	Purchase generators for critical facilities and fire stations	All	75,000	Perry County, Marion, Uniontown, VFDs	HMGP Grants/local match

Medium	Planned	3-5	Purchase NOAA weather radios	All	\$250,000	County Commission, EMA	HMGP Grants/local match
Medium	Planned	3-5	Community Storm Shelters	All	\$1,000,000	Perry County Emergency Management	HMGP Grants/local match
Medium	Planned	3-5	Individual Storm Shelters	All	\$250,000	Perry County Emergency Management	HMGP Grants/local match
Medium	Planned	3-5	Promotion of safe rooms in new residences.	All	EMA Director's Time	Perry County Emergency Management	Perry County Emergency Management Budget
Medium	Planned	3-5	Purchase of tornado sirens for areas with concentrations of population	Tornado	\$250,000	Perry County	HMGP Grants/local match

Medium	Planned	3-5	Provide storm shelters in areas of high population density and mobile home communities	Severe Storms, Tornadoes, Hurricanes	\$10,000,000	Perry County EMA, County Commission	PDM/HMGP/Local Match
Medium	Planned	3-5	Improve drainage infrastructure throughout County	Floods, Severe Storms	\$10,000,000	County, Commission, EMA, County Engineer	CDBG/HMGP/Local Funds
Medium	Planned	3-5	Drainage projects in areas identified as being flood prone	Flooding/Flash Flooding	\$7,500,000	County Commission	CDBG/HMGP/Local Funds
Medium	Planned	3-5	Stormwater Management Projects throughout the County	Flood, Rains	\$1,500,000	Perry County	CDBG/HMGP/Local Funds
Medium	Planned	3-5	Open buildings to the public during extreme heat	Extreme Heat	Utilities and staff costs	Perry County EMA/Commission & DHR	Perry County EMA/Commission & DHR Budget

Medium	Planned	3-5	Retrofitting of critical facilities	Wind Events	\$2,500,000	Perry County, Marion, Uniontown	PDM/HMGP/Local Match
Medium	Planned	3-5	Fire hydrants in rural areas	Fires	\$1,000,000	Perry County Commission, EMA	USDA/CDBG/Local Match
Medium	Planned	3-5	Seek weatherization funding for low income residents	All	\$1,000,000	Perry County Commission	Community Action
Medium	Planned	3-5	Begin maintaining an inventory of critical facilities with value and contact information	All	Staff time	Perry County Emergency Management	Perry County Emergency Management Budget
Medium	Planned	3-5	Work closely with Perry Forester to mitigate wildfire dangers	Wildfire	EMA Director's time	Perry County EMA/Commission	Perry County Emergency Management Budget

Low	Planned	5-7	Research procedures for keeping historical storm data with location, magnitude, and loss values for each event	All	Staff time	Perry County Emergency Management	Perry County Emergency Management Budget
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City of Marion
Prioritized Threat by Jurisdiction (1=highest priority)

1. Tornado
2. Extreme Heat and Drought
3. Severe Storms
4. Flash Flood
5. Wildfire
6. Severe Winter Storms
7. Expansive Soils
8. Coastal Storms and Hurricanes

Goals

- ❖ *Minimize losses due to natural disasters in Marion.*
- ❖ *Minimize injury and death due to natural disasters in Marion.*
- ❖ *Improve public awareness of safety issues concerning natural hazards.*
- ❖ *Ensure the continuity of local government operations will not be significantly disrupted by natural disasters.*

Objectives

- ❖ *Research and identify funding opportunities for mitigation related projects.*
 - ❖ *Educate citizens on safety issues related to natural hazards.*
 - ❖ *Improve drainage throughout the City.*
 - ❖ *Improve stormwater management throughout the City.*
 - ❖ *Improve early warning systems throughout the City.*
 - ❖ *Provide storm shelters for citizens.*
 - ❖ *Retrofit critical facilities.*
- ❖

Possible Mitigation Actions

Priority	Status	Timeframe (Years)	Mitigation Action	Hazards Addressed	Estimated Cost	Responsible Agency	Funding
High	Active	1-3	Continue to send law enforcement and fire personnel to emergency response training	All	Training cost, travel costs	City of Marion	City of Marion budget
High	Active	1-3	Continue to participate in the National Flood Insurance Program by enforcing flood ordinance	Flood	-----	City of Marion	City of Marion budget
Medium	Planned	3-5	Purchase generators for critical facilities and fire stations	All	\$250,000	City of Marion	City of Marion budget, HMGP
Medium	Planned	3-5	Purchase of tornado sirens for areas with concentrations of population	Tornado	\$150,000	City of Marion	City of Marion budget, HMGP

Medium	Planned	3-5	Provide storm shelters in areas of high population density and mobile home communities	Tornado	--	City of Marion, HMGP, PDM	City of Marion, HMGP, PDM
Medium	Planned	3-5	Safe rooms in community center buildings	Tornado, Severe Storms	\$1,500,000	City of Marion, HMGP, PDM	City of Marion, HMGP, PDM
Medium	Planned	3-5	Drainage Projects in areas identified as being prone to flooding	Flood	\$1,500,000	City of Marion, HMGP, PDM	City of Marion, HMGP, PDM
Medium	Planned	3-5	Stormwater Management Projects throughout City	Flood, Rain	\$1,000,000	City of Marion, HMGP, PDM	City of Marion, HMGP, PDM
Medium	Planned	3-5	Retrofitting of critical facilities	Wind Events	\$750,000	City of Marion, HMGP, PDM	City of Marion, HMGP, PDM

Medium	Planned	3-5	Work closely with Perry Forester to mitigate wildfire dangers	Wildfire	Employee time	City of Marion	City of Marion budget
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City of Uniontown
Prioritized Threat by Jurisdiction (1=highest priority)

1. Tornado
2. Extreme Heat and Drought
3. Severe Storms
4. Flash Flood
5. Wildfire
6. Severe Winter Storms
7. Expansive Soils
8. Coastal Storms and Hurricanes

Goals

- ❖ *Minimize losses due to natural disasters in Uniontown.*
- ❖ *Minimize injury and death due to natural disasters in Uniontown.*
- ❖ *Improve public awareness of safety issues concerning natural hazards.*
- ❖ *Ensure the continuity of local government operations will not be significantly disrupted by natural disasters.*

Objectives

- ❖ *Research and identify funding opportunities for mitigation related projects.*
 - ❖ *Educate citizens on safety issues related to natural hazards.*
 - ❖ *Improve drainage throughout the City.*
 - ❖ *Improve stormwater management throughout the City.*
 - ❖ *Improve early warning systems throughout the City.*
 - ❖ *Provide storm shelters for citizens.*
 - ❖ *Retrofit critical facilities.*

Possible Mitigation Actions

Priority	Status	Timeframe (Years)	Mitigation Action	Hazards Addressed	Estimated Cost	Responsible Agency	Funding
High	Active	1-3	Continue to send law enforcement and fire personnel to emergency response training	All	Training cost plus travel	City of Uniontown	City of Uniontown budget
Medium	Planned	3-5	Join and participate in the National Flood Insurance Program	Flood	--	City of Uniontown	City of Uniontown budget
Medium	Planned	3-5	Purchase generators for critical facilities and fire stations	All	\$50,000	City of Uniontown	City of Uniontown budget/HMGP
Medium	Planned	3-5	Purchase of tornado sirens for areas with	Tornado	\$75,000	City of Uniontown	City of Uniontown budget/HMGP

			concentrations of population				
Medium	Planned	3-5	Provide storm shelters in areas of high population density and mobile home communities	Tornado	\$500,000	City of Uniontown	City of Uniontown budget/HMGP/PDM
Medium	Planned	3-5	Safe rooms in community center buildings	Tornado, Severe Storms	\$1,500,000	City of Uniontown	City of Uniontown, HMGP, PDM
Medium	Planned	3-5	Stormwater Management Projects throughout City	Flood, Rain	\$750,000	City of Uniontown	City of Uniontown, HMGP, PDM
Medium	Planned	3-5	Drainage Projects in areas identified as being prone to flooding	Flood	\$500,000	City of Uniontown	City of Uniontown, HMGP, PDM

Medium	Planned	3-5	Retrofitting of critical facilities	Wind Events	\$750,000	City of Uniontown	City of Uniontown, HMGP, PDM
Medium	Planned	3-5	Work closely with Perry Forester to mitigate wildfire dangers	Wildfire	Employee time	City of Uniontown	City of Uniontown budget

Perry County School Board
Prioritized Threat by Jurisdiction (1=highest priority)

1. Tornado
2. Extreme Heat and Drought
3. Severe Storms
4. Flash Flood
5. Wildfire
6. Severe Winter Storms
7. Expansive Soils
8. Coastal Storms and Hurricanes

Goals

- ❖ *Provide better warning system to students.*
- ❖ *Minimize the loss of life and injury to students.*
 - ❖ *Ensure continuity of education system.*
 - ❖ *Ensure safety of campuses from hazards.*

Objectives

- ❖ *Weather sirens at schools.*
- ❖ *Storm shelters at schools.*
- ❖ *Retrofit school buildings.*
- ❖ *Correct drainage/stormwater management issues on campuses.*

Possible Mitigation Actions

Priority	Status	Timeframe (Years)	Mitigation Action	Hazards Addressed	Estimated Cost	Responsible Agency	Funding
High	Active	1-3	Continue to offer shelter to individuals and families affected by natural hazards	All	Utilities/staff time	Perry County Emergency Management/Perry County BOE	Perry County Commission
Medium	Planned	3-5	Purchase generators for critical facilities	All	\$500,000	Perry County School Board	HMGP Grants
Medium	Planned	3-5	Provide storm shelters at schools	Tornado	\$5,000,000	Perry County School Board, Perry County	HMGP/PDM Grants
Medium	Planned	3-5	Retrofitting of schools	Wind Events	\$12,000,000	Perry County School Board	HMGP/PDM Grants
Medium	Planned	3-5	Correct stormwater management/drainage issues on school grounds	Flood	\$500,000	Perry County School Board	HMGP/PDM Grants

Summary of Changes Made in Plan Update Section VIII. Plan Maintenance

Section VIII of this plan addresses requirement §201.6 (c) (iv) A plan maintenance process that includes:

(i) A section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.

(ii) A process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, when appropriate.

(iii) Discussion on how the community will continue public participation in the plan maintenance process.

Section VIII was reviewed and updated as needed. The EMA Director along with the ATRC staff reviewed the plan maintenance section and made recommendations to the steering committee. The steering committee provided suggestions and comments regarding the maintenance process. The changes that the steering committee felt were necessary were then made.

VIII. PLAN MAINTENANCE

The planning cycle for the Perry County Hazard Mitigation Plan is five years. The Natural Hazards Steering Committee determined this planning cycle. In addition the plan maintenance section was compiled using suggestions from the Natural Hazards Steering Committee.

A. Hazard Mitigation Committee Structures

The structure of the committee will be kept as it was for the development of this update. The Natural Hazard Steering Committee will be appointed by position. The following is the list of agencies or positions that will be requested to serve on the committee:

- Emergency Management Agency, Director – Chairman of Hazard Mitigation Steering Committee
- Public Health Officer for Perry County
- Regional Planning Agency, Planner
- County Fire Association, President
- Perry County Board of Education- Superintendent
- Chamber of Commerce-Director
- Public Safety Officials- Sheriff's Department, Marion PD, Uniontown PD
- Perry County Road & Bridge Department- Perry County Engineer
- City of Marion- Mayor and Clerk
- City of Uniontown- Mayor and Clerk
- Perry County Commission- Administrator and Chairman

B. Monitoring and Evaluation of the Plan

The county's EMA director has monitored and evaluated the plan on an annual basis. He has contacted each jurisdiction and agency by telephone to monitor the implementation of the mitigation plan. After he has received information regarding the progress of all jurisdictions and agencies involved in implementing mitigation strategies, he has evaluated the plan. The following criteria have been used to monitor the plan's effectiveness:

- Do the goals and objectives outlined in the plan still apply to current conditions?
- Has the nature, magnitude, and/or type of risk changed?
- Are the resources currently available to implement the plan appropriately?
- Has any jurisdiction had implementation problems and if so, what is the nature of them (technical, political, funding, etc.)?
- Have the outcomes from implemented strategies been the expected outcomes?
- Has each jurisdiction or agency worked toward its hazard mitigation goals?

The EMA Director has also completed this evaluation after each disaster declaration in the county also. There have been four declarations during this planning cycle (April 2009, April 2011, February 2012, September 2012, and May 2014). All

If the EMA Director had felt the plan was not satisfying the above criteria, he would have called a meeting of the Natural Hazards Steering Committee.

This method of evaluation has worked well during the last planning cycle. Participating jurisdictions, the natural hazards steering committee, and stakeholders were asked for recommendations to improve the evaluation process. All participating jurisdictions felt the annual process was sufficient and should be used for this planning cycle also, but it was suggested that the EMA begin requesting formal responses from participants instead of just verbal updates. During this planning cycle, the EMA will formally request a response in order to document participation in the maintenance and evaluation process.

C. Updating the Plan

The Perry County Natural Hazards Mitigation Plan will be updated every five years as required by FEMA. At the beginning of the fifth year, the EMA director will begin making arrangements for the plan's update. The process of updating the plan will be undertaken in the same way as the development of this update.

At least two public meetings will be held to involve the public in the update process. The public did not actively participate during this update process. During the next plan update, the county will expand its public outreach to encourage more participation from the public. Notices for meetings will be advertised in the local newspaper. The EMA will reach out to local media to help promote the meetings. The county will also use social media, such as Facebook, to promote meetings. Survey Monkey or an equivalent online survey website will be used to gather public opinion on hazard issues. Drafts of the updated plan will also be available for public comment.

Within the five-year cycle, a jurisdiction may request to update the plan. If the jurisdiction would like to update only a jurisdiction specific portion, such as mitigation goals/strategies it may do so. Any jurisdiction **MUST** contact the EMA director in order to ensure he has an amended copy of their part of the plan. Private citizens and/or local businesses may request an update within the five-year planning cycle also. All request made by private citizens and/or local businesses must be made directly to the EMA. When the EMA receives a request to update any portion of the plan that is not jurisdiction specific, the Natural Hazards Steering Committee will meet to determine the necessity of the update.

D. Incorporation into Existing Planning Mechanisms

The Perry County Hazard Mitigation Plan will be incorporated into existing planning mechanisms in all participating jurisdictions:

Perry County Commission: No formal planning is in place for unincorporated areas in Perry County. If the county undertakes any planning effort, such as a comprehensive plan, mitigation goals and objectives will be reflected. No strategies will be included that would hinder natural hazard mitigation.

City of Marion: No formal planning is in place for the City of Marion. If the city undertakes any planning effort, such as a comprehensive plan, mitigation goals and objectives will be reflected. No strategies will be included that would hinder natural hazard mitigation.

City of Uniontown: No formal planning is in place for the City of Uniontown. If the town undertakes any planning effort, such as a comprehensive plan, mitigation goals and objectives will be reflected. No strategies will be included that would hinder natural hazard mitigation.

Both Marion and Uniontown have building codes and zoning ordinances and will incorporate hazard mitigation strategies into existing codes. These updates will occur as budgets and time allow. Perry County does not have a zoning ordinance or building code, but if in the future they decide to adopt new ordinances, they will be required to reflect the goals and objectives they set forth in the plan. Those jurisdictions undertaking comprehensive planning efforts will also have to reflect their hazard mitigation goals and objectives in their plans. The Perry County EMA will also incorporate the plan in the Emergency Operations Plan at the next update.

Since the original plan, no updates to comprehensive plans, zoning ordinances, or building codes have been completed in any participating jurisdiction. Currently, there are no planning mechanisms in place in Perry County. Perry County is a rural County with no planning in place. The cities and county consult the mitigation plan when issues related to it occur. The consultation is to ensure no project proposal contradicts information presented in the plan.

Participating jurisdictions will incorporate the mitigation plan into their planning efforts and code/zoning changes as they occur. This incorporation will be done by reviewing the mitigation plan to ensure that any proposed changes (i.e. land use) will not conflict with strategies identified in the plan. The mitigation plan will also be consulted to ensure that no hazards (i.e. landslides, subsidence, and expansive soil) are present when permits or variances are granted. Strategies and goals identified in the mitigation plan will also be incorporated into other planning mechanisms' strategies and goals as deemed applicable to the purpose of those plans.

E. Continued Public Involvement

Copies of the plan will be available to the public by submitting a request to the EMA. Copies of the plan will also be available in each jurisdiction. Information regarding where to send comments on the plan is provided inside of the front cover of the document. The EMA will be responsible for keeping a file of all comments received. These comments will be considered during the next regularly scheduled plan update. These comments will be considered during any update or monitoring of the plan, whether it be regularly scheduled or between cycles.

Summary of Changes Made in Plan Update
Section IX. Adopting Resolutions of Participating Jurisdictions

Section IX was added to provide a place where all adopting resolutions could be provided for reference.

**RESOLUTIONS WILL BE INSERTED ONCE THE PLAN IS
APPROVABLE**

APPENDIX 1

PERRY COUNTY STAKEHOLDERS

HAZARD MITIGATION

Organization	Title	Address	City	State	Zip
American Red Cross of Central Alabama	Director	5015 Woods Crossing Drive	Montgomery	Alabama	36106
Montgomery County Community Action	Director	1066 Adams Avenue	Montgomery	Alabama	36104
Perry County DHR	Director	1609 Highway 5, South	Marion	Alabama	36756
Perry County Health Department	Director	P.O. Box 119	Marion	Alabama	36756
Perry County Extension Service	Director	1710 South Washington Street, Suite 107	Marion	Alabama	36756
Alabama Forestry Commission-Perry County	Forester	1900 Albert Turner Sr. Memorial Highway	Marion	Alabama	36756
Bibb County Commission	Chairman	157 SW Davidson Drive	Centreville	Alabama	35042
Hale County Commission	Chairman	P.O. Box 396	Greensboro	Alabama	36744
Marengo County Commission	Chairman	P.O. Box 480715	Linden	Alabama	36748
Dallas County Commission	Chairman	P.O. Box 987	Selma	Alabama	36702
Chilton County Commission	Chairman	P.O. Box 1948	Clanton	Alabama	35045
Berean Baptist Head Start	Director	P.O. Box 355	Marion	Alabama	36756
Perry County Nursing Home	Director	505 East Lafayette Street	Marion	Alabama	36756
Judson College	President	302 Bibb Marion Street	Marion	Alabama	36756
Marion Military Institute	President	1101 Washington Street	Marion	Alabama	36756

PERRY COUNTY COMMITTEE
HAZARD MITIGATION

Prefix	First	Last	Title	Organization	Address	City	State	Zip
Mr.	Anthony	Long	Mayor	City of Marion	P.O. Drawer 959	Marion	Alabama	36756
Mr.	Jamaal	Hunter	Mayor	City of Uniontown	P.O. Box 1069	Uniontown	Alabama	36786
Mr.	Ronald	Miller	Chairman	Perry County Commission	P.O. Box 478	Marion	Alabama	36756
Mrs.	Tamara	Kennie	Administrator	Perry County Commission	P.O. Box 478	Marion	Alabama	36756
Mr.	John	Heard	Superintendent	Perry County Board of Education	P.O. Box 900	Marion	Alabama	36756
Mr.	James	Hood	Sheriff	Perry County Sheriff's Office	P.O. Box 157	Marion	Alabama	36756
Mr.	John	Martin	Director	Perry County Chamber of Commerce	1293 Washington Street	Marion	Alabama	36756

PERRY COUNTY HAZARD MITIGATION PLAN UPDATE MEETING
 DECEMBER 10, 2014 - 2:00 PM @ Perry County Courthouse Annex

NAME	ORGANIZATION	EMAIL	PHONE NUMBER
Brandy Wilkerson	ATRC	brandy.wilkerson@atrc.net	334-683-4234
Tom Sanderson	City of Marion & Perry Co. Comm.	TSanderson@gmail.com	334-683-6391
Debra Debraugh	Perry County EMA	percyeng@bellsouth.net	334-247-2372
Estella Moore	Perry County DHR	estella.moore@dhr.alabama.gov	334-683-5500
Kevin Ketchum	Tek Pak	sketchum@TekPakInc.com	205-799-4297
Bob Wilkerson	Perry Co. Bd. of Ed.	jheidi@aol.com	334-683-6528
Charles J. & Frances J. Miller	Serving Seeds of Hope Perry County Comm	fford504@gmail.com	(334) 683-6152
Charlene		M + Miller03@yahoo.com	334-422-1002

PERRY COUNTY HAZARD MITIGATION PLAN UPDATE MEETING
 January 27, 2014 - 5:00 PM @ Perry County Courthouse Annex

NAME	ORGANIZATION	EMAIL	PHONE NUMBER
<i>Tim Dade</i>	<i>Perry Co. Comm.</i>		<i>334-683-679</i>
<i>Scott</i>	<i>" "</i>		<i>334-683-6136</i>
<i>Lee</i>	<i>Care</i>		<i>334-510-0242</i>
<i>Scott</i>	<i>Perry Co Comm.</i>		<i>334-683-2200</i>
<i>Frank W. Mills</i>	<i>Perry Co Comm</i>		<i>334-683-3124</i>
<i>Dell Kumbel</i>	<i>Care Ambulance</i>		<i>206-442-2848</i>
<i>Walt Eismann</i>	<i>CARE Ambulance</i>		<i>407-832-8150</i>
<i>Debra Jindrich</i>	<i>Perry County EMA</i>	<i>perryco@bellsouth.net</i>	<i>334-354-8619</i>
<i>Larry Skatton</i>	<i>Citizens</i>	<i>1-streetner@att.net</i>	<i>334-874-3669</i>

PUBLIC MEETING NOTICE

HAZARD MITIGATION PLAN UPDATE

MEETING

The Perry County EMA and Alabama Tombigbee Regional Commission are in the process of updating Perry County's Hazard Mitigation Plan. This plan is a multi-jurisdictional effort to evaluate and mitigate all natural hazards that may affect Perry County and its residents. A meeting will be held on December 10, 2014 at 2:00 P.M. at the Perry County Courthouse Annex regarding this update. **The public is encouraged to attend and provide feedback.** If you require special accommodations and plan on attending, contact the Perry County Commission at least 24 hours prior to the meeting.

PUBLIC MEETING NOTICE
HAZARD MITIGATION PLAN UPDATE
MEETING

The Perry County EMA and Alabama Tombigbee Regional Commission are in the process of updating Perry County's Hazard Mitigation Plan. This plan is a multi-jurisdictional effort to evaluate and mitigate all natural hazards that may affect Perry County and its residents. A meeting will be held on January 27, 2015 at 5:30 P.M. at the Perry County Courthouse Annex regarding this update. **The public is encouraged to attend and provide feedback.** If you require special accommodations and plan on attending, contact the Perry County Commission at least 24 hours prior to the meeting.

HAZARD MITIGATION DRAFT AVAILABLE FOR REVIEW

The Perry County EMA and Alabama Tombigbee Regional Commission are in the process of updating Perry County's Hazard Mitigation Plan. This plan is a multi-jurisdictional effort to evaluate and mitigate all natural hazards that may affect Perry County and its residents. A draft of the plan update is available for review at atrcregion6.org.

The public is encouraged to review the plan and submit comments.

APPENDIX 2

PAST OCCURRENCES BY JURISDICTION PERRY COUNTY

Perry County Past Occurrences – Extreme Temperatures & Drought

Location	Date	Type	Deaths	Injuries	Property Damage	Crop Damage
1. Perry	02/03/1996	Extreme Cold	0	0	0	N/A
2. Perry	02/23/1996	Heat	0	0	0	N/A
3. Perry	03/07/1996	Extreme Cold	0	0	0	N/A
4. Perry	01/24/2003	Extreme Cold	0	0	0	N/A
5. Perry	07/18/2006	Drought	0	0	0	N/A
6. Perry	08/01/2006	Drought	0	0	0	N/A
7. Perry	09/01/2006	Drought	0	0	0	N/A
8. Perry	03/27/2007	Drought	0	0	0	N/A
9. Perry	04/01/2007	Drought	0	0	0	N/A
10. Perry	05/01/2007	Drought	0	0	0	N/A
11. Perry	06/01/2007	Drought	0	0	0	N/A
12. Perry	07/01/2007	Drought	0	0	0	N/A
13. Perry	08/01/2007	Drought	0	0	0	N/A
14. Perry	08/08/2007	Heat	0	0	0	N/A
15. Perry	09/01/2007	Drought	0	0	0	N/A
16. Perry	10/01/2007	Drought	0	0	0	N/A
17. Perry	11/01/2007	Drought	0	0	0	N/A
18. Perry	12/01/2007	Drought	0	0	0	N/A
19. Perry	01/01/2008	Drought	0	0	0	N/A
20. Perry	02/01/2008	Drought	0	0	0	N/A
21. Perry	03/01/2008	Drought	0	0	0	N/A
22. Perry	04/01/2008	Drought	0	0	0	N/A
23. Perry	05/01/2008	Drought	0	0	0	N/A
24. Perry	06/01/2008	Drought	0	0	0	N/A
25. Perry	08/05/2008	Drought	0	0	0	N/A
26. Perry	08/02/2011	Drought	0	0	0	N/A
27. Perry	09/01/2011	Drought	0	0	0	N/A
28. Perry	10/01/2011	Drought	0	0	0	N/A

29. Perry	11/01/2011	Drought	0	0	0	N/A
30. Perry	12/01/2011	Drought	0	0	0	N/A
31. Perry	07/01/2012	Heat	0	0	0	N/A
32. Perry	07/03/2012	Heat	0	0	0	N/A
33. Perry	08/01/2012	Heat	0	0	0	N/A
34. Perry	01/06/2014	Extreme Cold	0	0	0	N/A
Totals			0	0	0	N/A

1. A strong Arctic cold front brought extremely cold air to Alabama and west-central Georgia in on the 3rd, 4th and 5th. New record lows were established at numerous locations across the area
2. The last five days of February were very warm with above normal temperatures and numerous high temperature records set.
3. Extreme cold weather set new record lows across much of Alabama.
4. The coldest temperatures in 7 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. Several lawn sprinkler systems also froze and broke making many areas very icy. One woman in Talladega was found outside dead, apparently succumbing to the harsh, cold conditions. Many area farmers lost a large part of their strawberry crops.
5. An extended period of low rainfall caused severe drought (D2) conditions to spread northward into most of Central Alabama, including all but the northeastern counties. Hydrologic and agricultural impacts lasted through the remainder of the month.
6. Severe (D2) to extreme (D3) drought conditions, that developed in July, continued and spread across all of Central Alabama through the month of August. The area with the greatest impact, with extreme (D3) conditions through the first half of the month, was generally along and south of U.S. Route 80. Summer crops were adversely impacted, and many cities put water restriction rules into effect due to the hydrologic impact.
7. D2 (severe) to isolated D3 (extreme) drought conditions continued from the summer through the first half of September. Several bouts of significant precipitation in the middle of the month helped conditions improve to better than D2 drought by the morning of the 19th.
8. An extremely dry spring led to severe drought (D2) conditions across a large part of Central Alabama by the end of March that continued into April.
9. A lack of rainfall through the month of April continued the severe (D2) to extreme (D3) drought conditions across a large part of Central Alabama that had begun in March. Hydrologic and agricultural impacts were felt across the area.
10. Rainfall was much below normal across Central Alabama throughout the month of May, and severe (D2) to extreme (D3) drought conditions continued to develop and spread across the area. Most stream flows reached or nearly reached record low levels, and reservoir operators struggled to fill pools to normal summer levels. Rainfall for the month was below a half inch in most areas, with some locations receiving less than one tenth of an inch of rain. By the end of May, year-to-date rainfall deficits ranged from 10 to 20 inches, with the highest deficits in the northern and northwest sections of Central Alabama. Area water utility companies enacted conservation plans. Agriculture also remained highly impacted.
11. Below normal rainfall (generally one to three inches) across Central Alabama through the month of June exacerbated the ongoing drought conditions. By the end of the month, all or portions of 24 Central Alabama counties were placed in the Exceptional (D4) Drought category. This area was generally from the cities Demopolis, Clanton, Ashland, and Heflin, northward. Most of the remainder of Central Alabama experienced Extreme (D3) Drought conditions as June drew to a close. Hydrologic and agricultural impacts were widely felt. Crops became highly stressed due to the lack of rainfall, with losses by the end of the month ranging from 50 to nearly 100 percent in some Central Alabama counties. Stream flows on Area Rivers and waterways remained near record low levels, and most reservoir levels were well below normal. 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.

12. Severe (D2) to Exceptional (D4) drought conditions continued across all of Central Alabama through the month of July, despite a small increase in the frequency and amount of rainfall. Agricultural, hydrologic, and sociological impacts continued to be widely felt. By the end of the month, more than 3/4 of the corn crop was still considered to be in poor or very poor condition, as well as about half of the cotton and soybean crop, along with livestock and hay production. Major rivers and reservoirs continued to run much below normal, with serious negative impacts. Area water utility companies continued to enforce fines and surcharges for excessive water usage, and water restriction plans remained in effect.

13. Continued dry and very hot conditions across Central Alabama in the month of August led to worsening drought conditions. By the end of the month, more than 90 percent of Central Alabama had been placed in the Exceptional Drought (D4) designation, with the remainder in Severe Drought (D3).

Agricultural, hydrologic, and sociological impacts continued to be widely felt. 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. 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. Major rivers and reservoirs continued to run much below normal. Navigation on major rivers became significantly impacted, and many boat landings on major lakes became unusable due to extremely low lake levels. Area water utility companies continued to enforce fines and surcharges for excessive water usage, and water restriction plans remained in effect.

14. A large ridge of high pressure, combined with very dry ground from the recent drought, combined to produce the hottest month on record across Central Alabama in the month of August. The core of the heat wave started around August 4th, when the temperatures first topped the 100 degree mark in several cities. The heat reached its peak August 10th through the 15th, as the mercury climbed above 105 degrees to as high as 109 degrees. Daily record maximum temperatures were broken or tied on 11 days in Anniston, 10 days in Birmingham, 12 days in Montgomery, and 14 days in Tuscaloosa, and all cities broke or tied their August maximum temperature records. At least 408 people required medical treatment due to the heat, and 11 people died due to heat-related illness.

15. Drought conditions continued across Central Alabama through the month of September, despite slightly increased thunderstorm activity and rainfall from the remnants of Tropical Storm Humberto. By the end of the month, roughly 3/4 of Central Alabama remained in the Exceptional Drought (D4) designation, with the remainder in Severe (D2) to Extreme (D3) Drought.

Agricultural, hydrologic, and sociological impacts continued to be widely felt. Around 80 percent of the corn crop, 70 percent of the soybean and cotton crop, and 40 percent of the peanut crop, was considered to be in poor or very poor condition by month's end. According to the USDA, this was one of the worst seasons ever for cotton. In addition, about 60 percent of the livestock, and 75 percent of pasture lands, were also considered to be poor or very poor.

Major rivers and reservoirs continued to run much below normal. Navigation on major rivers remained significantly impacted, and many boat landings on major lakes were unusable due to extremely low lake levels. Most water utility companies continued to enforce fines and surcharges for excessive water usage, and water restriction plans remained in effect.

16. Drought conditions continued across most of Central Alabama through the month of October, despite the rainfall received from a pair of storm systems that brought some showers and thunderstorms to the state during the latter half of the month. By the end of the month, roughly half of Central Alabama remained in the Exceptional Drought (D4) designation, with the remainder in Moderate (D1) to Extreme (D3) Drought.

Agricultural, hydrologic, and sociological impacts continued to be widely felt. The rainfall that did occur in October came too late to help many crops. The majority of cotton and soybean crops, as well as livestock and pasture conditions, remained poor to very poor. Major rivers and reservoirs continued to run much below normal. Navigation on major rivers remained significantly impacted, and many boat landings on major lakes were unusable due to extremely low lake levels. On Lake Martin, all marinas had to be shut down because there was no access to them due to the low lake levels. Many water utility companies continued to enforce fines and surcharges for excessive water usage, and water restriction plans remained in effect.

17. Drought conditions continued across most of Central Alabama through the month of November, despite the rainfall received from several storm systems that brought some showers and thunderstorms to the state. By the end of the month, roughly three-quarters of Central Alabama was considered to be in Exceptional Drought (D4), with the remainder in Moderate (D1) to Extreme (D3) Drought.

Agricultural, hydrologic, and sociological impacts continued to be widely felt. The rainfall that did occur in November came too late to help many crops. The majority of livestock and pasture conditions remained poor to

very poor. The dry weather also hampered the planting of winter crops, due to very dry and hard soils. Although rainfall during the month produced some very minor rises on Area Rivers and reservoirs, most continued to be much below normal with serious negative impacts continuing. Pool levels on some reservoirs were at or near record low levels. Some of the most serious impacts continued on the Coosa and Tallapoosa Rivers. Navigation on the Alabama River below Montgomery was adversely impacted by low river stages. The threat of water shortages for municipal water systems persisted, and most water restriction plans already in place continued.

18. Drought conditions continued across most of Central Alabama through the month of December, with monthly rainfall deficits around 2 to 3 inches. By the end of the month, roughly three-quarters of Central Alabama remained in Exceptional Drought (D4), with the remainder in Moderate (D1) to Extreme (D3) Drought. Agricultural impacts were lessened due to the end of the autumn harvesting season. However, hydrologic and sociological impacts continued to be widely felt. Most stream and river levels across Central Alabama continued to be much below normal with serious negative impacts continuing. Some of the most serious impacts continued on the Coosa and Tallapoosa Rivers. The threat of water shortages for municipal water systems persisted, and most water restriction plans already in place continued.

19. Drought conditions continued across most of Central Alabama through the month of January, with monthly rainfall deficits ranging from .5 to 2.5 inches. By the end of the month, roughly three-quarters of Central Alabama remained in Exceptional Drought (D4), with the remainder in Moderate (D1) to Extreme (D3) Drought. Agricultural impacts were relatively low due to being in between growing seasons. However, hydrologic and sociologic impacts continued to be felt. Most stream and river levels across Central Alabama continued to be much below normal, with flow levels generally 25 percent or less of normal. Reservoir levels showed limited improvement due to rainfall that occurred during the month. The threat of water shortages for municipal water systems persisted, and most water restriction plans already in place continued.

20. Several storm systems across Central Alabama brought limited improvement to the ongoing drought that had begun in the spring of 2007. By the end of February, only about 10 percent of Central Alabama remained in Exceptional (D4) Drought. This area was roughly from the cities of Jasper, Birmingham, Pell City, and Piedmont, northward. Most of the remainder of Central Alabama remained in Moderate (D1) to Extreme (D3) Drought. Soil moistures improved to 30 to as much as 70 percent of normal, and stream flows and reservoir levels improved to near normal seasonal levels by the end of the month.

21. Several storm systems across Central Alabama brought limited improvement to the ongoing drought that had begun in the spring of 2007. In the first week of March, the last remaining area of Exceptional (D4) Drought was eliminated in Central Alabama, and by the end of the month, the area of Extreme (D3) Drought had been reduced as well. This area was roughly from the cities of Birmingham, Centreville, Selma, Montgomery, and Auburn, north and eastward. Most of the remainder of Central Alabama remained in Moderate (D1) to Severe (D2) Drought.

22. Several storm systems across Central Alabama brought some improvement to the ongoing drought that had begun in the spring of 2007. By the end of the month, less than one quarter of Central Alabama remained in Extreme Drought (D3), although a large portion of the region remained in a Severe Drought (D2) designation.

23. Several storm systems across Central Alabama brought limited improvement to the ongoing drought that had begun in the Spring of 2007, but also helped keep the drought from getting worse. By the end of the month, less than one quarter of Central Alabama remained in Extreme Drought (D3), although a large portion of the region remained in a Severe Drought (D2) designation.

24. Several storm systems across Central Alabama brought improvement to the drought that had begun in the Spring of 2007. Areas from Tuscaloosa, south and westward to Selma and Montgomery, were removed from the Severe Drought (D2) designation on June 17.

25. Despite several storm systems that brought scattered rain during the beginning of the month, Severe (D2) Drought conditions expanded to several more counties in south central Alabama. However, the remnants of Tropical Storm Fay brought widespread rainfall during the period of August 23 to 26, which helped conditions in these counties improve to the Abnormally Dry (D0) category.

26. Very little rain fell across central Alabama during the month of August, resulting in drought conditions spreading to a larger portion of the area. By the end of the month Talladega, Shelby, Bibb, Tuscaloosa, Hale, Perry, Chilton, Dallas, Autauga, Elmore, and Coosa Counties were all under Extreme (D3) drought conditions. Perry County experienced Severe Drought (D2) conditions beginning on the 2nd and was upgraded to Extreme Drought (D3) conditions on the 30th.

27. Below normal rainfall fell across much of central Alabama during the month of September. Although some areas received some very heavy rainfall during the first week of the month, only a few locations saw any relief. Perry County started the month with Extreme Drought (D3) conditions and was downgraded to Severe Drought (D2) conditions on the 30th.

28. Below average rainfall occurred across central Alabama during the month, offering no relief to drought stricken areas. Extreme drought conditions were felt in locations to the right of a line from near Louisville to Society Hill to Troy, and then continuing from Near Fort Deposit to White Hall to Sprott to Montevallo to Sylacauga to Graham. Meanwhile, Severe drought conditions were felt in locations to the right of a line from near Macedonia to Newbern to Mertz to Maylene to Childersburg to South of Fruithurst. Perry County began the month in Severe (D2) drought conditions and was upgraded to Extreme (D3) drought conditions on the 25th.
29. Below average rainfall persisted through the first part of November offering no relief to drought stricken areas. The most severe drought conditions were located in east-central and southeast sections of central Alabama. Periodic rainfall during the second part of November brought some relief to drought conditions, however all locations that began the month in drought, ended the month in drought as well. Perry County began the month in Extreme (D3) drought conditions and was downgraded to Severe (D2) drought conditions on the 29th.
30. Over 2 inches of rain fell across portions of central Alabama during the first half of December, bringing much needed relief to drought stricken hours. This caused drought conditions to end for Autauga, Bibb, Chilton, Dallas, Perry, Shelby, and Talladega counties on December 20th. Perry County began the month in Severe (D2) drought conditions, however ample rainfall during the latter half of December caused drought conditions to end for Perry County.
31. A strong upper level ridge across much of the southeastern Continental United States resulted in unseasonably warm weather and record setting temperatures for early July. Temperatures over 100 degrees and dew points in the 70s sent heat index values over 105 degrees across all of Central Alabama on Sunday, July 1, before scattered afternoon thunderstorms brought relief to portions of the area.
32. A strong upper level ridge across much of the southeastern Continental United States resulted in unseasonably warm weather for early July. Temperatures warmed to 100 degrees or above across portions of Central Alabama from July 2 through July 6. Unseasonably warm temperatures didn't affect the entire area due to scattered afternoon thunderstorms each day.
33. A strong upper level ridge across the southeastern Continental United States combined with a moist air mass across Central Alabama, resulting in heat index values over 105 degrees August 1 for portions of the area.
34. A strong arctic cold front moved through Central Alabama on Sunday night, January 5th. Northwest winds of 15 to 25 mph behind the front brought extremely cold air to the area, and wind chill values were in the teens and single digits through the day on Monday, January 6th. Winds subsided Monday night as temperatures fell into the low teens and single digits. Even light winds caused wind chills to drop below zero across the area late Monday night through Tuesday morning. Although, official data sites are limited, temperature data was gathered from a variety of sources and compared with general wind data across Central Alabama.

Perry County Past Occurrences: Flash Flooding

Location	Date	Deaths	Injuries	Property Damage	Crop Damage
1. Perry (Countywide)	01/07/1998	0	0	N/A	N/A
2. Perry	04/01/2005	0	0	N/A	N/A
3. Perry (Countywide)	04/01/2005	0	0	N/A	N/A
4. Uniontown	07/10/2005	0	0	N/A	N/A
5. Perry	09/19/2009	0	0	N/A	N/A
6. Perry	06/15/2010	0	0	N/A	N/A
7. Perry	03/09/2011	0	0	N/A	N/A
Totals		0	0	N/A	N/A

1. A strong low pressure system move over Alabama from the Gulf of Mexico, bringing heavy rain to the state. Rivers, creeks and ditches were all out of their banks. Numerous streets were closed due to water over the road. Bridges were washed out in Cullman, Etowah, and Marshall counties. A five year old girl was killed in Shelby

county when she was playing in a storm drain and was sucked in and couldn't get out. There were numerous traffic accidents due to wet roads and several motorists were stranded on top of their cars while trying to cross flooded roads. The following counties were affected by the flooding. Lauderdale, Colbert, Franklin, Limestone, Lawrence, Morgan, Madison, Jackson, Marshall, DeKalb, Marion, Winston, Cullman, Blount, Etowah, Lamar, Fayette, Walker, Jefferson, St. Clair, Pickens, Tuscaloosa, Bibb, Shelby, Sumter, Greene, Hale, Perry, Chilton, Coosa, Marengo, Dallas, Autauga, Lowndes, Montgomery, Cherokee, Calhoun, Cleburne, Talladega, Clay, Randolph, Tallapoosa, Chambers, Lee, Elmore, Macon, Russell, Bullock, Barbour, and Pike. Every county received over two inches with several counties receiving over six inches.

2. April began on an active note hydrologically across north central Alabama. Heavy rainfall occurred across much of north central Alabama through the 2nd of April, with rainfall totals of 2 to 5 inches common, especially in areas to the south of a Tuscaloosa to Birmingham to Anniston line. Local amounts of 8 to 10 inches occurred over the lower portions of the Alabama River basin below Selma. These rains produced mostly minor flooding on the lower Tallapoosa and Black Warrior Rivers, as well as on the Tombigbee, Cahaba, Sucarnoochee and Alabama Rivers. Most of the flooding was minor, overflowing mostly farmlands and woodlands along these mainstems. However, moderate flooding occurred from around Selma downstream due to the locally heavy inflow that occurred from the very heavy (8 to 10 inches) localized rainfall in these areas. In the Selma area, Bloch Park and the Selma Country Club experienced flooding, and some roads were closed in the area due to high water. Below Selma, flooding of some camps and cabins along the river occurred. Moderate flooding also occurred on the Tallapoosa River in the vicinity of the Tallapoosa Water Plant, flooding portions of Lower Wetumpka Road. However, no reports of major damage from the flooding have been received.

3. Doppler radar estimated several inches of rain in a short period of time across the county. The rain fell on already saturated ground. Several roads were temporarily impassable due to high water. Many local creeks and streams were out of their banks. A large sinkhole developed on Tutwiler Street in Marion due to the heavy rain.

4. Hurricane Dennis's local effects were widespread across central Alabama. Storm total rain amounts were generally 3 to 6 inches west of Interstate 65 with isolated higher amounts. Areas east of Interstate 65 received 1 to 3 inches of rain with isolated higher totals, especially near the Alabama/Georgia state line. Many counties experienced flash flooding. Several homes and roadways sustained minor flooding damage. A few road sections and bridges were washed away. No injuries were attributed to the flash flooding. Broadway Avenue and County Road 26 were flooded and were temporarily impassable.

5. A slow moving upper level disturbance helped spark several days of thunderstorms across Central Alabama. The storms were slow moving, and produced very heavy rainfall in some locations, which led to flash flooding. Overflow of Oakmulgee Creek caused road closures near the intersection of AL-219 and CR-64, east of the Sprott community.

6. Very unstable conditions due to abundant moisture and intense heating resulted in widespread severe thunderstorms and flooding across Central Alabama. A creek overflowed its banks, causing a portion of Troy Perkins Road to become temporarily impassible.

7. A line of thunderstorms moved through the state of Alabama on the morning of March 9th. Along with heavy rainfall that caused flash flooding in areas, these storms produced strong winds causing tree and structure damage. Several Roads were closed due to flooding in Marion. Four homes were also flooded.

Perry County Past Occurrences: Hurricanes

Location	Date	Type	Magnitude (knots)	Deaths	Injuries	Property Damage	Crop Damage
1. Perry (Countywide)	10/04/1995	Hurricane Opal/High Winds	N/A	0	0	N/A	N/A
2. Perry (Countywide)	08/06/2001	Heavy Rain	N/A	0	0	N/A	N/A
3. Perry	09/14/2004	High Wind	78	0	0	N/A	N/A
4. Perry	06/11/2005	Strong Wind	N/A	0	0	N/A	N/A

5. Perry	07/10/2005	Tropical Storm	N/A	0	0	N/A	N/A
6. Perry	08/29/2005	Tropical Storm	N/A	0	0	N/A	N/A
7. Perry	08/23/2008	Tropical Depression	N/A	0	0	\$5,000	0
8. Perry	11/09/2009	Tropical Depression	N/A	0	0	\$1,000	0
9. Perry	09/05/2011	Tropical Storm/ Strong Wind	39	0	0	\$5,000	0
Totals				0	0	\$11,000	0

1. No description available.

2. The remnants of Tropical Storm Barry moved northwestward cutting across the southern and central portions of Alabama. The center of the remnants moved from Dallas County across Hale, Greene, and Pickens counties. Heavy rain occurred generally from Troy to Montgomery to the Birmingham area with much of the area getting 1.50 to 3 inches of rain. Relatively dry conditions in the week before helped to reduce the impact of any heavy rain. One big impact of the rain was the cancellation of an N'Sync concert scheduled for Legion Field in Birmingham. The loss from the cancellation of the concert alone was estimated to be \$2 million. Wind was not a major factor with the storm as wind gusts in the area peaked out around 35 mph. Some specific wind gust values included Birmingham with 31 mph, Calera with 29 mph, Montgomery with 39 mph, and Troy with 31 mph.

3. Thousands of trees and power lines were snapped off or blown down. At least 1100 customers were without power. Power was not completely restored in some spots for two weeks. Several hundred homes and mobile homes were damaged. Many county roads were blocked and impassable due to fallen trees. Maximum wind gusts were estimated around 90 miles an hour.

4. 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.

5. Numerous trees and power lines were downed as Dennis moved across the area. At least 2200 customers were without power for many hours. Several vehicles and homes were damaged by fallen trees.

6. Numerous trees and power lines were knocked down during Katrina. Numerous structures, homes and vehicles were damaged. Power outages were extensive.

7. Tropical Storm Fay, and its remnants after landfall, brought high winds, heavy rain, and numerous tornadoes to Central Alabama. Tropical Storm Fay weakened to a Tropical Depression after it made its final landfall on the Florida Panhandle and entered Southern Alabama. In Central Alabama, the highest sustained wind of 35 mph, and highest gust of 49 mph, were both recorded at Montgomery. Storm total rainfall ranged from 2.48 inches near Guin (Marion County), to 11.87 inches at Valley (Chambers County). One person drowned while swimming in rough waters on Lake Martin. No other fatalities or injuries were reported in Central Alabama. The winds blew down numerous trees in several counties, resulting in an estimated property damage of around \$125,000. More than 80,000 customers lost electric service during the peak of the event. The remnants of Fay also produced 11 tornadoes in Central Alabama, resulting in an estimated \$345,000 in property damage. In total, the remnants of Fay resulted about \$470,000 in property damage, and one fatality.

8. The remnants of what was at one time Hurricane Ida brought very heavy rain and gusty winds to a large portion of Central Alabama. The effects of what was once Hurricane Ida, but had weakened into a Tropical Depression, were felt as early as Monday afternoon, November 9, in Pike, Barbour and Montgomery Counties, as light rain began falling around 2 pm. The rain continued to move northward and intensified Monday night and into the day on Tuesday, November 10. Rains continued across Central Alabama through Tuesday evening. By the time the last area of rain exited Cherokee and Cleburne Counties after midnight on Wednesday,

November 11, nearly everyone across Central Alabama had seen at least 3 inches of rain. The highest storm total rainfall of 9.83 inches was reported just south of Opelika. Daily rainfall records were set on November 11 at Anniston (3.51 inches), Birmingham (4.01 inches), Montgomery (2.33 inches), and Tuscaloosa (2.89 inches). Sustained winds around Central Alabama maxed out between 20 and 30 mph, with peak wind gusts generally between 30 and 40 mph. These winds blew down a few trees around the area, especially shallow rooted trees where the saturated soil likely played a significant role.

9. Gradient winds associated with the remnants of Tropical Storm Lee knocked down numerous trees across Perry County.

Perry County Past Occurrences: Hail

Location or County	Date	Type	Magnitude (inches)	Deaths	Injuries	Property Damage	Crop Damage
1. Perry	05/28/1960	Hail	0.75	0	0	0	0
2. Perry	03/27/1984	Hail	1.25	0	0	0	0
3. Perry	05/23/1989	Hail	0.75	0	0	0	0
4. Marion	05/03/1998	Hail	1.75	0	0	\$10,000	\$4,000
5. Marion	05/06/1998	Hail	2.00	0	0	\$10,000	\$20,000
6. Perry	03/10/2000	Hail	1.75	0	0	\$5,000	0
7. Perry	03/10/2000	Hail	1.00	0	0	\$2,000	0
8. Perry	03/10/2000	Hail	1.75	0	0	\$5,000	0
9. Marion	03/29/2000	Hail	1.00	0	0	\$3,000	0
10. Perry	07/20/2000	Hail	0.88	0	0	0	0
11. Uniontown	12/16/2000	Hail	1.75	0	0	\$4,000	0
12. Marion	12/16/2000	Hail	0.75	0	0	0	0
13. Marion	02/21/2001	Hail	1.00	0	0	0	0
14. Perry	11/24/2001	Hail	1.75	0	0	0	0
15. Perry	04/30/2002	Hail	1.75	0	0	\$5,000	0
16. Perry	04/25/2003	Hail	2.50	0	0	\$75,000	0
17. Perry	04/25/2003	Hail	1.25	0	0	\$5,000	0
18. Marion	04/25/2003	Hail	1.50	0	0	\$8,000	0
19. Perry	04/25/2003	Hail	1.25	0	0	\$18,000	0
20. Uniontown	04/25/2003	Hail	0.88	0	0	0	0
21. Uniontown	05/02/2003	Hail	1.75	0	0	\$250,000	0
22. Marion	05/02/2003	Hail	1.50	0	0	\$25,000	0
23. Perry	06/02/2003	Hail	1.75	0	0	\$6,000	0
24. Marion	04/10/2004	Hail	1.00	0	0	0	0
25. Marion	03/31/2005	Hail	0.75	0	0	0	0
26. Marion	04/21/2005	Hail	1.75	0	0	\$2,000	0

27. Marion	04/22/2005	Hail	1.00	0	0	\$1,000	0
28. Uniontown	04/22/2005	Hail	0.75	0	0	\$1,000	0
29. Uniontown	04/22/2005	Hail	1.00	0	0	\$1,000	0
30. Perry	04/08/2006	Hail	0.75	0	0	0	0
31. Perry	09/23/2006	Hail	0.75	0	0	0	0
32. Marion	02/13/2007	Hail	1.00	0	0	0	0
33. Uniontown	04/11/2007	Hail	0.75	0	0	0	0
34. Perry	02/17/2008	Hail	0.88	0	0	0	0
35. Perry	04/04/2008	Hail	0.75	0	0	0	0
36. Perry	02/18/2009	Hail	1.75	0	0	0	0
37. Marion	02/18/2009	Hail	1.00	0	0	0	0
38. Perry	02/27/2009	Hail	1.00	0	0	0	0
39. Perry	03/26/2011	Hail	1.50	0	0	0	0
40. Perry	03/19/2013	Hail	2.00	0	0	0	0
41. Marion	03/23/2013	Hail	1.75	0	0	0	0
42. Perry	03/23/2013	Hail	0.88	0	0	0	0
43. Marion	05/17/2013	Hail	1.00	0	0	0	0
Totals				0	0	\$436,000	\$24,000

- 1-3. No description available.
4. Golf ball size hail was reported in Radford.
5. Four to five trailers had their windows knocked out by Hen Egg sized hail along SR 219. Twenty-three acres of timber was damaged due to the hail. The hail damage continued into Perry county along SR 219 where mostly tree damage occurred.
6. Golf ball size hail was reported at the Heiberger Grocery Store on SR 5.
7. One inch diameter size hail fell near Sprott.
8. Golf ball size hail was reported in Heiberger.
9. One inch diameter size hail fell in Marion.
10. Nickel size hail fell in northeastern Perry County near Oakmulgee.
11. Golf ball size was reported by the Uniontown Police Department.
12. Dime size hail was observed in the city of Marion.
13. Quarter size hail was reported near Marion.
14. Golf ball size hail was reported 4 miles northwest of North Perry near the Bibb County line. The hail fell in a rural area with no damage reports received.
15. Dime to golf ball size hail fell across extreme northern Perry County just north of North Perry. The hail fell in a rural area but crossed CR 29.
16. On this day, several steady state, rotating thunderstorms, referred to as supercells, cut swaths of damage through Alabama. The first storm affected 12 counties dropping hail from penny to softball size. Numerous homes and automobiles were damaged by the large hail. Damaging winds also accompanied the storm. Many trees were snapped off, uprooted, or blown down along the path. Several homes were damaged from the falling trees. Supercell 2 merged with Supercell 1 across southern Tallapoosa County. Although there were no reports of injuries, several hundred thousand dollars of damage occurred. Several supercell thunderstorms affected Alabama on this day. This storm was not the only supercell to cause damage, but it was one of the most costly storms of the day. The supercell thunderstorm moved along the Bibb and Perry County line throwing large hail into extreme northern Perry County. Hail ranging from penny size up to the size of lemons was reported. The

hail fell from north of North Perry, to north of Heiberger, and into the Talladega National Forest near Oakmulgee.

17. Supercell 2 developed on the heels of Supercell 1 but offset slightly south. Some locations reported hail twice in a 30 minute period. Supercell 2 affected seven counties across central Alabama before merging with Supercell 1 over extreme eastern Elmore and southern Tallapoosa counties. Several trees were blown down along the path of the storm. Hail ranged in size from penny to slightly larger than golf ball. Many locations sustained hail damage and hail completely covered the ground many places. The second supercell thunderstorm to affect Perry County within an hour followed a path only slightly south of the first storm. Many locations reported twice. Penny to half dollar size hail was reported along the path of this storm. The hail may have been larger but fell in a sparsely populated areas in northern Perry County.

18. Supercell 3 formed over extreme southern Greene County just east of Forkland. The storm started off by producing a weak tornado that moved through by Greene County Steam Plant and crossed the Black Warrior River ending just inside Hale County. The supercell continued strengthening and produced a swath of wind and hail damage along its path. Hail sizes ranged from penny to softball size. Significant wind and hail damage occurred from Autaugaville to Prattville to Montgomery. Several funnel cloud reports were received with the storm. The supercell moved across Russell County and eventually moved into Georgia. A swath of hail fell across central Perry County associated with supercell 3. Hail was reported from penny size to ping pong ball size. A few locations observed minor accumulations of the hail. The hail may have been larger in the rural areas and was therefore not observed.

19. Supercell 4 was a right member of a splitting thunderstorm over southern Sumter County. The supercell split several times during its evolution. This supercell followed almost the same path a Supercell 3 and this fact eventually led to its demise. The storm did not become severe until it reached southern Perry County. The storm produced hail up to tennis ball size before weakening across northern Montgomery and Macon counties. Supercell 4 became severe across extreme southern Perry County. Hail up to half dollar size was reported along the path.

20. Supercell 5 developed across extreme northwest Marengo County and quickly became severe in the vicinity of the Hale, Marengo, and Perry county lines. Supercell 5 was similar to Supercell 4 in the fact that it, too, was a right member of a splitting thunderstorm. The storm only produced hail up to the size of nickels, although the hail may have been larger in surrounding rural areas. The storm became outflow dominated over northern Dallas County and weakened considerably. No more severe weather was reported with this storm. Nickel size hail was reported in and around Uniontown. The hail may have been much larger in surrounding rural areas.

21. Golf ball size hail pelted areas in and around Uniontown. Several automobiles were damaged. Numerous trees were also blown down in extreme southern Perry County.

22. A swath of large hail occurred from west central Perry County near Scotts Station to near the Vaiden Airport. The hail may have been much larger in surrounding rural areas. A few trees were also blown down and one outbuilding was destroyed.

23. Golf ball size hail was reported near Suttle along SR 14.

24. A supercell thunderstorm moved across Greene, Hale, and Perry Counties and produced significant wind damage along with very large hail. The supercell produced minor tree damage in extreme northwest Greene County north of Boligee and then became stronger. The most extensive damage started just northeast of Eutaw, in Greene County, along US 11 and ended just north of the Wedgewood community, in Hale County, along SR 60. The swath of damage was 1.5 miles wide at the beginning point and 3 miles wide at the ending point. The path length was approximately 6.5 miles long. Inside this extensive damage area, thousands of trees were snapped off or uprooted, numerous power lines were snapped off or blown down, and many structures were damaged by falling trees. The storm continued across eastern Hale and into Perry County past Marion, where numerous trees continued to be knocked down. Very large hail also fell during the storm. The largest hail observed was 2.50 inches in diameter and drifted to over one foot deep in many places. The hail damaged a few homes and several automobiles. Some locations reporting hail and wind damage include Eutaw, Boligee, Sawyerville, Akron, Greensboro, and Marion.

25. Penny size hail was reported near the Perry Municipal Airport along CR 45.

26. Quarter to golf ball size hail was observed in and around the city of Marion.

27. Quarter size hail briefly fell near the Coleman community.

28. Penny size hail fell in and around Uniontown.

29. Quarter size hail was reported in and near Uniontown.

30. No description available.

31. No description available.

32. No description available.

33. Supercell thunderstorms developed in the afternoon and evening hours, producing severe weather that included tornadoes and very large hail.
34. A broken squall line, sparked by an advancing cold front and strong upper level storm, caused severe thunderstorms and tornadoes across Central Alabama. Nickle size hail was observed near the Hale and Perry County line.
35. A slow moving cold front helped spark thunderstorms across Central Alabama, some of which produced large hail, damaging winds, and tornadoes.
36. A powerful low pressure system and associated cold front pushed through the area, and helped trigger numerous thunderstorms. Some became supercells, that produced long swaths of large hail, areas of damaging winds, and at least one tornado. Reported on AL-183, northeast of Uniontown.
37. A powerful low pressure system and associated cold front pushed through the area, and helped trigger numerous thunderstorms. Some became supercells, that produced long swaths of large hail, areas of damaging winds, and at least one tornado.
38. A slow moving cold front brought an extended period of severe weather and heavy rain, that lasted about 24 hours. The storms produced damaging winds, large hail, flooding rains, and at least 4 tornadoes.
39. A stalled boundary sagged southward into North Central Alabama on Saturday, March 26, and became a focus for convection ahead of an approaching storm system. Through the day, as the air mass south of the boundary became increasingly unstable, thunderstorms developed across much of the area. This activity continued into the overnight hours. With the approach of a surface low and cold front, activity reintensified early Sunday morning, March 27, and continued through the pre-dawn hours on Monday as the cold front slowly moved through the area.
40. An upper trough became negatively tilted as it moved into the Mississippi River Valley. A strong cold front trailed southward from the trough and swept through the state. Ahead of this cold front, an intense derecho moved through central Alabama during the afternoon and evening hours of Monday, March 18th. The morning started out cloudy across Alabama, but as dry air aloft filtered into the state from the southwest, the clouds thinned, allowing surface based instability to increase into the 1250-1750 J/kg range ahead of the developing line of thunderstorms. As the line entered the state from Mississippi, it brought with it damaging straight line winds of widespread reports of 60 to 80 mph, including a measured report of 88 mph. These winds resulted in trees and power lines down across the northern two-thirds of central Alabama. Along with the wind from the derecho, up to two inch hail was reported and eventually a tornado spun up in northern Etowah County. Ahead of the derecho, discrete thunderstorms developed as well. It was within these individual storms where some of the largest hail was reported, including baseball sized hail in Chilton County.
41. On the morning of Saturday, March 23, an upper trough began digging into the center of the country. That evening, within the resultant southwesterly flow aloft that was streaming through the southeastern United States, a surface low began to develop near New Orleans. Because of the lack of any real upper level feature to drag it or the warm front northward, the surface low never really amounted to much. North of the warm front, which was draped across the Gulf Coast, elevated storms began to develop. Steep mid-level lapse rates (evident in the 12z/March 23 BMX and 00z/March 24 JAN upper air soundings below), along with sufficient hail growth zone CAPE values of 1000-1500 J/kg and 0-3km Storm Relative Helicity values of 400-600 m^2/s^2 , these elevated storm became well-organized. Starting in south-central Mississippi and moving into central Alabama, one of these storms traversed Sumter, Hale, Perry, Bibb, Chilton, Coosa and Tallapoosa Counties, dropped hail stones of 1 to 1.75 inches in diameter and created damaging wind gusts.
42. On the morning of Saturday, March 23, an upper trough began digging into the center of the country. That evening, within the resultant southwesterly flow aloft that was streaming through the southeastern United States, a surface low began to develop near New Orleans. Because of the lack of any real upper level feature to drag it or the warm front northward, the surface low never really amounted to much. North of the warm front, which was draped across the Gulf Coast, elevated storms began to develop. Steep mid-level lapse rates (evident in the 12z/March 23 BMX and 00z/March 24 JAN upper air soundings below), along with sufficient hail growth zone CAPE values of 1000-1500 J/kg and 0-3km Storm Relative Helicity values of 400-600 m^2/s^2 , these elevated storm became well-organized. Starting in south-central Mississippi and moving into central Alabama, one of these storms traversed Sumter, Hale, Perry, Bibb, Chilton, Coosa and Tallapoosa Counties, dropped hail stones of 1 to 1.75 inches in diameter and created damaging wind gusts.
43. On Friday, May 17th, a slow-moving upper level low was rotating across the mid Mississippi River Valley with an associated surface low over Arkansas and surface trough extending southeastward into Alabama. Warm, moist airflow resulted in widespread showers and thunderstorms across northwest Central Alabama during the day, while stronger thunderstorms developed south of the rain area in a more unstable airmass. Some of these storms produced large hail. As this area of rain shifted east through the evening hours on Friday,

May 17th, additional thunderstorms developed upstream and tracked across east Central Alabama. A mid level short wave rotating around the upper level low interacted with a low level convergent zone and continued moisture transport into the area to focus developing thunderstorms, which then tracked over the same areas for many hours, resulting in flash flooding during the early morning hours on Saturday, May 18th. Precipitable water values were around 1.70 inches, the 99th percentile for normal precipitable water values for that day. Rainfall estimates of three to five inches with localized amounts over eight inches occurred.

Perry County Past Occurrences: Thunderstorms

Location or County	Date	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Perry	07/05/1962	Thunderstorm Winds	0 knots	0	0	0	0
2. Perry	05/25/1963	Thunderstorm Winds	0 knots	0	0	0	0
3. Perry	05/17/1969	Thunderstorm Winds	0 knots	0	0	0	0
4. Perry	12/24/1977	Thunderstorm Winds	0 knots	0	0	0	0
5. Perry	12/03/1983	Thunderstorm Winds	0 knots	0	0	0	0
6. Perry	02/02/1987	Thunderstorm Winds	0 knots	0	1	0	0
7. Perry	02/15/1987	Thunderstorm Winds	0 knots	0	0	0	0
8. Perry	02/15/1987	Thunderstorm Winds	0 knots	0	0	0	0
9. Perry	11/04/1988	Thunderstorm Winds	0 knots	0	0	0	0
10. Perry	04/01/1990	Thunderstorm Winds	0 knots	0	0	0	0
11. Perry	06/22/1990	Thunderstorm Winds	0 knots	0	0	0	0
12. Perry	07/02/1990	Thunderstorm Winds	0 knots	0	0	0	0
13. Marion	04/20/1995	Thunderstorm Winds	0 knots	0	0	0	0
14. Marion	05/27/1996	Thunderstorm Winds	50 knots	0	0	\$10,000	0
15. Marion	11/01/1997	Thunderstorm Winds	55 knots	0	0	\$6,000	0
16. Perry	02/22/1998	High Winds	34 knots	0	0	\$4,000	0
17. Marion	07/20/1998	Thunderstorm Winds	60 knots	0	0	\$10,000	0
18. Perry	11/02/1999	High Winds	45 knots	0	0	\$2,000	0

19. Perry	01/09/2000	Thunderstorm Winds	50 knots	0	0	\$2,000	0
20. Perry	01/09/2000	Thunderstorm Winds	50 knots	0	0	\$1,000	0
21. Perry (Countywide)	08/10/2000	Thunderstorm Winds	50 knots	0	0	\$3,000	0
22. Uniontown	12/16/2000	Thunderstorm Winds	55 knots	0	0	\$15,000	0
23. Perry	10/13/2001	Thunderstorm Winds	50 knots	0	0	\$1,000	0
24. Uniontown	05/02/2003	Thunderstorm Winds	50 knots	0	0	\$5,000	0
25. Marion	04/10/2004	Thunderstorm Winds	60 knots	0	0	\$150,000	0
26. Perry	09/16/2004	High Winds	78 knots	0	0	\$3,500,000	\$200,000
27. Perry (Countywide)	03/07/2005	Thunderstorm Winds	50 knots	0	0	\$4,000	0
28. Marion	01/05/2007	Thunderstorm Winds	40 knots	0	0	\$10,000	0
29. Marion	02/13/2007	Thunderstorm Winds	50 knots	0	0	\$3,000	0
30. Marion	10/22/2007	Thunderstorm Winds	50 knots	0	0	\$10,000	0
31. Perry	10/22/2007	Thunderstorm Winds	50 knots	0	0	\$5,000	0
32. Marion	10/22/2007	Thunderstorm Winds	50 knots	0	0	\$5,000	0
33. Perry	02/18/2009	Thunderstorm Winds	61 knots	0	0	\$8,000	0
34. Uniontown	02/27/2009	Thunderstorm Winds	50 knots	0	0	\$2,000	0
35. Marion	05/03/2009	Thunderstorm Winds	60 knots	0	0	\$100,000	0
36. Marion	05/21/2010	Thunderstorm Winds	50 knots	0	0	\$2,000	0
37. Perry	06/15/2010	Thunderstorm Winds	55 knots	0	0	\$3,000	0
38. Perry	06/15/2010	Thunderstorm Winds	50 knots	0	0	\$7,000	0
39. Perry	10/25/2010	Thunderstorm Winds	60 knots	0	0	\$4,000	0
40. Perry	11/30/2010	Thunderstorm Winds	70 knots	0	0	\$6,000	0

41. Uniontown	03/09/2011	Thunderstorm Winds	75 knots	0	0	\$10,000	0
42. Marion	03/26/2011	Thunderstorm Winds	50 knots	0	0	\$2,000	0
43. Perry	04/04/2011	Thunderstorm Winds	50 knots	0	0	\$5,000	0
44. Marion	04/15/2011	Thunderstorm Winds	50 knots	0	0	\$1,000	0
45. Perry	04/15/2011	Thunderstorm Winds	65 knots	0	0	\$2,000	0
46. Perry	08/10/2011	Thunderstorm Winds	50 knots	0	0	\$4,000	0
47. Perry	08/10/2011	Thunderstorm Winds	50 knots	0	0	\$3,000	0
48. Uniontown	04/05/2012	Thunderstorm Winds	50 knots	0	0	0	0
49. Marion	07/02/2012	Thunderstorm Winds	50 knots	0	0	0	0
50. Perry	09/03/2012	Thunderstorm Winds	50 knots	0	0	0	0
51. Perry	12/25/2012	Thunderstorm Winds	50 knots	0	0	0	0
52. Marion	06/28/2013	Thunderstorm Winds	50 knots	0	0	0	0
53. Perry	06/28/2013	Thunderstorm Winds	50 knots	0	0	0	0
54. Perry	06/28/2013	Thunderstorm Winds	50 knots	0	0	0	0
Totals				0	1	\$3,905,000	\$200,000

1. Thunderstorm struck airport about 3 miles south of Marion demolishing hanger and five small aircraft. Trees were blown down and farm buildings damaged by hail and high winds. Wind caused about 90% of damage, hail 10%.
2. High winds, hail and lightning caused scattered damage as line of thunderstorms moved eastward across county. Most damage in the Suttle Community where several houses and a hatchery were unroofed or damaged, numerous outbuildings demolished and numerous trees blown down. In the Mt. Nebo and Heilberger Communities lightning destroyed 1 house and several out buildings and damaged 2 houses. All crop damage due to hail. Property damage 80% by winds and 20% by lightning.
3. No description available.
4. No description available.
5. Thunderstorm winds downed trees and damaged a mobile home in the Heilberger area.
6. No description available.
- 7-8. Thunderstorm winds snapped at least two powerline poles in Marion around 1702 CST and destroyed and unoccupied mobile home east of Marion around 1719 CST. A tree was blown across a car that was traveling along a nearby county road, but the occupants were not injured.
9. Several trees were blown down 5 miles south of Marion.
10. Several trees were blown down in Marion.
11. Trees were blown down in Heilberger

12. Large tree limbs were blown down at Suttle.
13. Several trees were down and at least one power line in the city of Marion according to the police department there.
14. Several trees were blown down along Highway 14.
15. Thunderstorm wind snapped trees north of Marion. There were also reports of structural damage north of Marion.
16. A high wind event moved through the state on the morning of the 22 nd. It moved from south to north and caused damage along most of its path. There were numerous reports of downed trees and power lines. About 50,000 people lost power across the state during the morning hours. There were several reports of trees falling on houses and cars. In the Birmingham area, where the damage was the strongest, almost 20,000 people lost power, a church lost its metal roof, and there were numerous reports of trees on homes and cars. In Clanton, the roof was torn off the baseball field's dugout. In Shelby County, several trees fell on homes and across roads. In the remaining locations the damage was minor with mostly trees and power lines down.
17. A roof of a downtown building was damaged, blowing debris over the area. Several large trees were also uprooted as well.
18. Strong, post frontal, gradient wind gusted as high as 45 mph across the area. Individual ASOS sites from around the area indicated sustained winds of 17 to 23 mph, with peak winds of 33 to 38 mph. Numerous trees were uprooted and many large limbs were broken off. Power lines were subsequently damaged due to the falling trees and six thousand customers were temporarily without power for a few hours. Many locations also received 2 to 3 inches of rainfall during same time span.
19. A barn sustained minor wind damage. A portion of its roof was peeled back and torn off and one wall was partially damaged.
20. Two trees were blown down along SR 183 near Sprott.
21. A few trees were knocked down throughout the county. Several outbuildings sustained damage.
22. A few trees were knocked down in Uniontown. One of the trees fell onto a carport and smashed a car.
23. A few trees were blown down in rural southeast Perry County.
24. Golf ball size hail pelted areas in and around Uniontown. Several automobiles were damaged. Numerous trees were also blown down in extreme southern Perry County.
25. A supercell thunderstorm moved across Greene, Hale, and Perry Counties and produced significant wind damage along with very large hail. The supercell produced minor tree damage in extreme northwest Greene County north of Boligee and then became stronger. The most extensive damage started just northeast of Eutaw, in Greene County, along US 11 and ended just north of the Wedgewood community, in Hale County, along SR 60. The swath of damage was 1.5 miles wide at the beginning point and 3 miles wide at the ending point. The path length was approximately 6.5 miles long. Inside this extensive damage area, thousands of trees were snapped off or uprooted, numerous power lines were snapped off or blown down, and many structures were damaged by falling trees. The storm continued across eastern Hale and into Perry County past Marion, where numerous trees continued to be knocked down. Very large hail also fell during the storm. The largest hail observed was 2.50 inches in diameter and drifted to over one foot deep in many places. The hail damaged a few homes and several automobiles. Some locations reporting hail and wind damage include Eutaw, Boligee, Sawyerville, Akron, Greensboro, and Marion.
26. Thousands of trees and power lines were snapped off or blown down. At least 1,100 customers were without power. Power was not completely restored in some spots for two weeks. Several hundred homes and mobile homes were damaged. Many county roads were blocked and impassable due to fallen trees. Maximum wind gusts were estimated around 90 miles an hour.
27. A few trees were blown down across the county.
28. Thunderstorms ahead of a passing cold front produced several areas of wind damage across Central Alabama. A deteriorating car repair garage was destroyed due to wind getting into the old building and blowing it out.
29. An intense winter storm and passing cold front caused several tornadoes and numerous severe thunderstorms across Central Alabama. Several trees were blown down near the intersection of of SR 5 and CR 38.
30. A very strong upper level disturbance caused several severe thunderstorms to move from the Gulf Coast northward into parts of Central Alabama. A few of these storms produced tornadoes. Numerous trees and several power lines were blown down on the western side of the city of Marion.
31. A very strong upper level disturbance caused several severe thunderstorms to move from the Gulf Coast northward into parts of Central Alabama. A few of these storms produced tornadoes. A few trees were blown down in far northwestern Perry County, near the North Perry Community. One home sustained roof damage.

32. A very strong upper level disturbance caused several severe thunderstorms to move from the Gulf Coast northward into parts of Central Alabama. A few of these storms produced tornadoes. Several trees and power lines were blown down on the eastern side of Marion.

33. A powerful low pressure system and associated cold front pushed through the area, and helped trigger numerous thunderstorms. Some became supercells, that produced long swaths of large hail, areas of damaging winds, and at least one tornado. Two homes sustained minor roof damage, several trees were blown down, and one old barn was destroyed, near Vaiden Field Airport. Winds were estimated around 70 mph.

34. A slow moving cold front brought an extended period of severe weather and heavy rain, that lasted about 24 hours. The storms produced damaging winds, large hail, flooding rains, and at least 4 tornadoes. Several trees were blown down across roadways in Uniontown.

35. A cold front dipping into the Tennessee Valley helped spark strong to severe thunderstorms for several days, with large hail, damaging winds, and several tornadoes. Thousands of trees were blown down across Perry County.

36. An upper level disturbance and associated surface frontal system, moving across the Ohio and Tennessee Valleys, caused numerous thunderstorms across Central Alabama over a two day period. Many of the storms produced damaging winds, large hail, and locally heavy rainfall. Several trees were blown down on CR-7, north of Marion.

37. Very unstable conditions due to abundant moisture and intense heating resulted in widespread severe thunderstorms and flooding across Central Alabama. Several trees were blown down on CR-6 along the Cahaba River.

38. Very unstable conditions due to abundant moisture and intense heating resulted in widespread severe thunderstorms and flooding across Central Alabama. Approximately 15 trees were blown down in Heiberger.

39. Late afternoon thunderstorms in the warm sector of a powerful storm system continued through the night becoming enhanced by a strengthening low level jet. Ample surface based instability, sufficient moisture and favorable vertical wind profiles resulted in an atmosphere supportive of super cell thunderstorms capable of producing large hail damaging wind and tornadoes. Several trees were blown down across County Road 24.

40. A powerful late fall storm system, and associated cold frontal passage through Alabama, brought widespread thunderstorms to the state. Some of the storms in Central Alabama produced damaging winds and tornadoes. Metal roofing was peeled off a porch awning and adjoining mobile home. Several large trees were snapped.

41. A line of thunderstorms moved through the state of Alabama on the morning of March 9th. Along with heavy rainfall that caused flash flooding in areas, these storms produced strong winds causing tree and structure damage. Scattered trees and powerlines were downed in Uniontown.

42. A stalled boundary sagged southward into North Central Alabama on Saturday, March 26, and became a focus for convection ahead of an approaching storm system. Through the day, as the air mass south of the boundary became increasingly unstable, thunderstorms developed across much of the area. This activity continued into the overnight hours. With the approach of a surface low and cold front, activity reintensified early Sunday morning, March 27, and continued through the pre-dawn hours on Monday as the cold front slowly moved through the area. Several trees were blown down northeast of Marion.

43. A line of showers and thunderstorms moved across central Alabama on April 4th, out ahead of a strong cold front. This line of storms produced widespread damaging winds and large hail. In addition to the winds and hail, heavy rainfall, of up to 3 inches, led to short-lived flooding in some areas. A few trees were downed in the northern portion of Perry County.

44. A potent storm system, which wreaked havoc across the eastern half of the United States on April 14-16, produced a significant and historic tornado outbreak across Central Alabama on April 15. Forty tornadoes, 30 of which touched down in Central Alabama, occurred in the state. At the time, this set a new record for number of tornadoes within the state from one event. This record was broken on April 27, 2011.

A surface low developed across the Central Plains on Thursday, April 14, and strengthened as it moved into the mid-Mississippi River Valley. In response, surface dew points in the middle to upper 60s surged northward into Central Alabama and deep vertical wind shear increased, providing support for tornadic supercell development. A weakening line of thunderstorms moved into northwest Central Alabama early Friday morning. The southern end of this line intensified by mid day as it encountered a more unstable airmass. South of the line, supercells formed in Mississippi and tracked eastward into west Central Alabama. The entire system pushed east across the area over the course of about twelve hours, exiting east Central Alabama in the early morning hours on Saturday, April 16. In addition to the thirty tornadoes, the storm system produced widespread straight line wind damage and numerous large hail reports. A tree was blown down and it blocked a road in Marion County.

45. A potent storm system, which wreaked havoc across the eastern half of the United States on April 14-16, produced a significant and historic tornado outbreak across Central Alabama on April 15. Forty tornadoes, 30 of which touched down in Central Alabama, occurred in the state. At the time, this set a new record for number of tornadoes within the state from one event. This record was broken on April 27, 2011.

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46. Persistent northwesterly flow around a strong ridge continued to bring mesoscale convective systems (MCS) and outflow boundaries into Central Alabama. On Wednesday, August 10, an outflow boundary from convection upstream moved into the area and interacted with an unstable air mass producing several clusters of thunderstorms. As the activity moved southwestward, isolated wind damage occurred across portions of west and southwest Central Alabama. Numerous trees were knocked down across Perry county, mainly affecting locations north of Marion, including the community of Sprott.

47. Persistent northwesterly flow around a strong ridge continued to bring mesoscale convective systems (MCS) and outflow boundaries into Central Alabama. On Wednesday, August 10, an outflow boundary from convection upstream moved into the area and interacted with an unstable air mass producing several clusters of thunderstorms. As the activity moved southwestward, isolated wind damage occurred across portions of west and southwest Central Alabama. Several trees were knocked down along County Road 6 and County Road 10 in southwest Perry County.

48. An upper level closed low moved across the Mississippi Valley region on Thursday, April 5th. Ahead of this feature, storms along an outflow boundary moved across Mississippi and into west central Alabama by mid morning, producing large hail and wind damage across southwest portions of central Alabama. As the upper low crossed the area during peak daytime heating, a second round of severe thunderstorms developed. These storms brought large hail and wind damage to a significant portion of the area. Several trees were blown down near the intersection of Buster Sealy Road and Alabama Highway 183.

49. On Monday, July 2, outflow boundaries from convection in Georgia moved into east central Alabama during the early morning hours and triggered thunderstorms and isolated wind damage. Two homes along Oakcrest Drive sustained minor roof damage due to fallen trees.

50. The remnants of Hurricane Issac brought heavy rainfall and flash flooding to Central Alabama during the first week of September. Hurricane Issac made landfall along the southeastern Louisiana coast late Tuesday, August 28 and slowly tracked northwestward through Louisiana and Arkansas for several days before turning to the east. The remnant upper level trough associated with Issac crossed Alabama on Monday and Tuesday, September 3 and 4. Within a moist airmass (precipitable water values over 2.00 inches), clusters of thunderstorms trained across the same areas, resulting in flash flooding and wind damage on September 3. Although storm intensity and rainfall rates weakened overnight, thunderstorms continued to develop along a convergent boundary across west Central Alabama. After sunrise on September 4, storms re-intensified and flash flooding occurred at several locations which had rainfall for much of the night. As the upper level trough axis pushed into the area, the thunderstorm clusters shifted south of the area by midday. Several trees were reported down at the intersection of Highway 5 and Country Road 16, north of Marion.

51. Late Christmas Eve, a well amplified upper level trough dug into the southern Plains. In response, a surface low developed Christmas morning over southern Texas. As the upper low deepened and tilted negatively, the surface low strengthened as it moved eastward. By Christmas afternoon, a swath of severe weather swept across the Deep South, with discrete supercells and a broken line of thunderstorms in trail. These thunderstorms moved across central Alabama during the evening hours, bringing with them strong straight line winds, numerous tornadoes, as well as flooding. Several trees were uprooted along County Road 48 west of Marion.

52. A series of decaying mesoscale convective system boundaries pushed southeastward into Central Alabama on Thursday and Friday, June 27 and 28th. Thunderstorms developed as these outflow boundaries interacted with an unstable airmass characterized by dewpoints in the 70's and CAPE values up to 3000J/kg. These storms produced scattered wind damage across central and south Central Alabama. A few homes sustained minor roof damage in Marion.

53. A series of decaying mesoscale convective system boundaries pushed southeastward into Central Alabama on Thursday and Friday, June 27 and 28th. Thunderstorms developed as these outflow boundaries interacted

with an unstable airmass characterized by dewpoints in the 70's and CAPE values up to 3000J/kg. These storms produced scattered wind damage across central and south Central Alabama. Several trees were uprooted between Marion and Vaiden along numerous county roads.

54. A series of decaying mesoscale convective system boundaries pushed southeastward into Central Alabama on Thursday and Friday, June 27 and 28th. Thunderstorms developed as these outflow boundaries interacted with an unstable airmass characterized by dewpoints in the 70's and CAPE values up to 3000J/kg. These storms produced scattered wind damage across central and south Central Alabama. Phone lines were downed along County Road 45, near Vivula.

Perry County Past Occurrences: Tornadoes

Location or County	Date	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Perry	12/11/1961	F3	0	2	\$250,000	0
2. Perry	12/17/1961	F2	0	1	\$25,000	0
3. Perry	03/06/1967	F2	0	0	\$2,500,000	0
4. Perry	05/27/1973	F4	0	0	\$25,000,000	0
5. Perry	04/22/1974	F2	0	0	\$250,000	0
6. Perry	09/20/1979	F2	0	2	\$250,000	0
7. Marion	03/06/1996	F1	0	0	\$95,000	\$25,000
8. Perry	03/10/2000	F0	0	0	\$40,000	0
9. Perry	03/10/2000	F0	0	0	\$10,000	0
10. Perry	12/16/2000	F0	0	0	\$4,000	0
11. Uniontown	10/13/2001	F1	0	0	\$110,000	0
12. Perry	02/13/2007	F0	0	0	\$5,000	0
13. Perry	04/19/2009	F1	0	0	\$10,000	0
14. Marion	04/19/2009	F1	0	0	\$30,000	0
15. Perry	11/30/2010	F1	0	0	\$25,000	0
16. Perry	04/15/2011	F0	0	0	\$23,000	0
17. Perry	04/15/2011	F2	0	0	\$38,000	0
18. Uniontown	04/27/2011	F2	0	0	\$645,000	0
19. Marion	04/27/2011	F1	0	0	\$1,300,000	0
20. Perry	01/23/2012	F1	0	0	0	0
21. Perry	01/23/2012	F2	0	0	0	0
22. Perry	01/26/2012	F0	0	0	0	0
23. Perry	03/02/2012	F1	0	0	0	0
24. Perry	11/17/2014					
Totals			0	5	\$30,610,000	\$25,000

1-6. No description available.

7. A tornado struck a farm on Highway 183 west-southwest of Marion destroying several farm buildings and downing a number of trees.

8. A weak tornado moved through mostly rural parts of northern Perry County. Numerous trees were blown down or snapped off along the 7 mile path of the tornado. At the Heiberger Grocery Store, one large portable building used for voting was totally destroyed, a glass gas sign was blown out by the high winds, windows were broken, one wall of a building was moved, and the store sustained minor roof damage. Several homes in Heiberger also had minor roof damage. One mobile home had a tree fall on it. Beginning: 32 45.800/87 23.260 Ending: 32 47.050/87 15.771

9. A weak tornado began just inside the Perry County border near SR 219 and continued on a 12 mile path into Bibb County. The tornado ended just south of Randolph near CR 36. One home had its front porch ripped off and corners of the roof partially torn up in Perry County near SR 219. Numerous trees were knocked down or snapped off during the entire track of the tornado. In Bibb County, one mobile home had damage to its roof and siding. Another home sustained minor roof damage near SR 219. In Lawley, one tree fell onto a mobile home damaging it severely. Several barns were also damaged and a few homes had minor roof damage. The tornado traveled through mostly rural areas. Beginning: 32 50.147/87 6.718 Ending: 32 53.803/86 55.024

10. A weak tornado briefly touched down just north of the city of Suttle. The tornado was briefly on the ground as it crossed SR 14 between Suttle and Radford, in rural southeast Perry County. Several trees were snapped off or blown over along the short path. This tornado occurred at the apex of a bowing line of thunderstorms. Beginning: 32 33.208/87 11.931 Ending: 32 33.452/87 10.977

11. A small tornado touched down just southwest of Uniontown in an open area and traveled north-northeast across the western portions of Uniontown. The tornado ended just north-northwest of Uniontown in an open area. The tornado tore shingles off several houses in the southwest section of Uniontown in addition to downing trees and power lines. The tornado did similar damage to residential structures in the northwest portion of Uniontown. A one-story apartment complex lost a portion of its roof. Several trees fell on homes and blocked residential streets. Beginning: 32 26.587/87 31.219 End: 32 27.857/87 30.951

12. An intense winter storm and passing cold front caused several tornadoes and numerous severe thunderstorms across Central Alabama. The tornado that touched down near Newbern, in Hale County, crossed into far western Perry County. Damage in Perry County was sporadic and light, mainly downed trees.

13. A powerful spring storm system and associated cold front brought numerous thunderstorms to central Alabama. Many of the storms produced large hail, damaging winds, and tornadoes. The tornado touched down on Luke Jackson Road, just east of AL-61. From there, it traveled to the east-northeast, crossing over several dirt roads before lifting near Webb Road. Along the path, several large hardwood trees were uprooted and snapped, and softwoods were snapped. One home sustained minor shingle damage near the beginning of the path. A large deer stand was destroyed near the end of the path.

14. A powerful spring storm system and associated cold front brought numerous thunderstorms to central Alabama. Many of the storms produced large hail, damaging winds, and tornadoes. The tornado touched down in a wooded ravine, between Nichols Lane and CR-7. It then traveled east-northeast for just over a mile, and lifted near the intersection of Coles Truck Stop Road and AL-5. Along the path, approximately 100 hardwood trees were snapped, and near the end of the path, several hardwoods were uprooted. A home sustained minor damage to shingles and siding. The occupant of the home took refuge in a closet, and was unharmed, after her brother called to inform her of the tornado warning.

15. A powerful late fall storm system, and associated cold frontal passage through Alabama, brought widespread thunderstorms to the state. Some of the storms in Central Alabama produced damaging winds and tornadoes. The tornado touched down briefly near CR-3, about a half mile south of CR-24. Several large pine trees were snapped off and several large hardwood trees were uprooted. The brick siding of one side of a home was heavily damaged, and a nearby storage shed was destroyed.

16. A potent storm system, which wreaked havoc across the eastern half of the United States on April 14-16, produced a significant and historic tornado outbreak across Central Alabama on April 15. Forty tornadoes, 30 of which touched down in Central Alabama, occurred in the state. At the time, this set a new record for number of tornadoes within the state from one event. This record was broken on April 27, 2011. A tornado touched down just north of Cooper Road off Highway 65 in Perry County. The tornado moved east-northeast where it snapped and uprooted numerous trees. Two outbuildings sustained significant damage. The tornado lifted just south of Highway 80 off of Tayloe Road.

17. A potent storm system, which wreaked havoc across the eastern half of the United States on April 14-16, produced a significant and historic tornado outbreak across Central Alabama on April 15. Forty tornadoes, 30 of which touched down in Central Alabama, occurred in the state. At the time, this set a new record for number of

tornadoes within the state from one event. This record was broken on April 27, 2011. A tornado touched down 2.7 miles north of Hamburg, just west of County Road 45. The tornado moved northeast where it snapped or uprooted several trees. As the tornado crossed County Road 45, it strengthened to an EF-2 rating, with maximum winds of 115 mph. A barn sustained roof damage and a significant number of trees were snapped or uprooted. The tornado lifted about 0.5 miles west of County Road 45.

18. 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. A tornado touched down in Smith County, Mississippi and tracked through Jasper and Clarke Counties (See Storm Data Jackson), where it caused EF4 rated damage. The tornado then crossed into Choctaw County (See Storm Data Mobile) Alabama, where it caused EF3 rated damage. The tornado tracked across portions of Sumter, Marengo and western Perry Counties, before it dissipated. The tornado crossed into Perry County north of Uniontown and produced significant tree damage. The tornado crossed AL Hwy 183, where it damaged two outbuildings and destroyed a grain silo. The tornado lifted east of AL Hwy 183, northeast of Uniontown.

19. 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.

A tornado touched down 5.5 miles south of Marion, 1 mile west of CR 35 and tracked northeastward. The tornado destroyed an outbuilding and damaged the roof of a single family home along CR 38. The tornado strengthened to EF1 with winds of 90 mph as it crossed CR 45, north of Vilula. Many trees were knocked down near the Faith Chapel Baptist Church. The tornado damaged a couple barns along Kynard Rd and quickly dissipated just east of CR 4.

20. An upper level low pressure system developed over the Great Plains and moved east across the Ohio River Valley, dragging a cold front through the lower Mississippi River Valley. As the cold front moved through Arkansas, a squall line formed, producing severe thunderstorms to areas west of Alabama. As the cold front progressed eastward, individual supercells developed in advance of the front and moved through Alabama during the early morning hours on January 23rd. Several long track supercells produced strong, long track tornadoes. A tornado, with winds of 110 MPH, briefly touched down along County Road 7 and moved northeast crossing County Road 16 and Alabama Highway 5. Scores of hardwood and softwood trees were snapped or uprooted along the path. The tornado lifted just after crossing Alabama Road 175. Merchantable timber losses estimated by the Alabama Forestry Commission for this track are approximately \$84K.

21. An upper level low pressure system developed over the Great Plains and moved east across the Ohio River Valley, dragging a cold front through the lower Mississippi River Valley. As the cold front moved through Arkansas, a squall line formed, producing severe thunderstorms to areas west of Alabama. As the cold front progressed eastward, individual supercells developed in advance of the front and moved through Alabama during the early morning hours on January 23rd. Several long track supercells produced strong, long track tornadoes. The supercell which produced the County Road 7 EF-1 tornado in central Perry County quickly generated a second tornado just south of the first tornado path. This tornado tracked through eastern Perry County and through much of Chilton County before dissipating north of Clanton. The total path length for this tornado was over 39 miles. The tornado touched down along County Road 16, east of Alabama Road 175 in Perry County, damaging one home, one manufactured home, and downing numerous trees. It moved northeast, crossing the Cahaba River and into the Talladega National Forest, where thousands of trees were knocked down along the tornado's path. As the tornado crossed County Road 9, winds strengthened to 125 MPH and the sanctuary of historic Ephesus Church was destroyed as the roof and steeple were partially blown away. The tornado moved along Alabama Highway 183 for approximately 6 miles causing extensive tree damage and destroying several outbuildings. The tornado crossed Mat Moore Rd and into Chilton County, at Jim Foundry Rd, south of Alabama Highway 183. Merchantable timber losses estimated by the Alabama Forestry Commission for this track are approximately \$1.2M.

22. An upper level low pressure system moved across the Mississippi Valley region, deepening as it moved east. A cold front extending southward from the low moved across central Alabama during the late morning hours on Thursday, January 26. This provided a focus for thunderstorms to develop in the form of a squall line. Instability and weak shear were high enough for isolated severe thunderstorms to develop. An EF0 tornado with winds of 80 mph touched down southeast of Uniontown, at the intersection of Cahaba Road and Yelverton Street. In this location several trees were uprooted. It then traveled northeastward, uprooting more trees along the path, and causing minor roof and siding damage to 5 homes. One home on Church Street was shifted off its foundation. From there the tornado traveled through a wooded area, breaking large branches off trees before it lifted. Key

indicators of this weak tornado included very small amounts of leaf and grass splattering and roof damage on the downstream side of the homes. Several eyewitnesses confirmed seeing the tornado as it left the area.

23. On March 2, 2012, a strong cold front moved through Central Alabama. Severe thunderstorms developed along and ahead of this front. Some of these thunderstorms were supercells. These supercells produced damage across southern and eastern sections of the area. Damaging straight line winds, tornadoes, large hail and localized flooding occurred with this event. A tornado touched down in rural southeast Perry County along Oscar Price Road, just northeast of Suttle. Dozens of trees were snapped or uprooted and one hunting camp mobile home was destroyed, as the tornado moved northeastward. The tornado crossed Oakmulgee Creek and moved into Northeast Dallas County, before eventually lifting in Autauga County.

Perry County Past Occurrences: Snow and Ice

Location or County	Date	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Perry	01/06/1996	Winter Storm	N/A	0	0	\$10,000	\$1,000
2. Perry	12/14/1997	Heavy Snow	N/A	0	0	0	0
3. Perry	01/28/2000	Winter Storm	N/A	0	0	\$12,000	0
4. Perry	04/07/2007	Frost/freeze	N/A	0	0	0	0
5. Perry	04/08/2007	Frost/freeze	N/A	0	0	0	0
6. Perry	01/19/2008	Heavy Snow	N/A	0	0	0	0
7. Perry	02/12/2010	Winter Weather	N/A	0	0	0	0
8. Perry	01/06/2011	Ice Storm	N/A	0	0	0	0
9. Perry	01/28/2014	Winter Storm	N/A	0	0	0	0
Totals				0	0	\$22,000	\$1,000

1. A winter storm brought a mixture of freezing rain, sleet, and snow to the northern two-thirds of Alabama. Precipitation began as freezing rain and sleet but quickly changed to snow. The precipitation coated roads and caused serious travel problems across the northern sections of the state that lasted into Monday morning (the 8th). Some higher elevations of the northeast corner of Alabama had travel problems into Tuesday. Amounts were generally light with the highest snowfall reported at Huntsville International Airport with 2 inches. Most other locations across North Alabama reported one-quarter of an inch to an inch and a half. On Sunday the 7th, one fatality occurred in an automobile/train collision in Calhoun County that was attributed to icy roads. The teenage driver of the car was not wearing a seat belt and was thrown from the vehicle.

2. A strong low pressure system brought heavy snow to west-central Alabama, with accumulations up to five inches. It began in the western counties around 900 a.m. and moved through the central counties around noon. It finally began to taper off around 230 p.m. Many roads across the area became icy and there were numerous accidents due to the icy roads. Here are some snowfall totals: 5" in Pickens and Sumter; 4" in Greene and Marengo; 3" in Hale; 2" in Tuscaloosa, Bibb, Perry, and Shelby; and 1" in Jefferson and Chilton.

3. A mixture of sleet and snow started falling during the early morning hours on the 28th. Total average snow accumulations were 2 to 3 inches. The snow changed to mainly rain during daylight hours on the 28th but was occasionally mixed with freezing rain or sleet. The higher elevations of St. Clair, Blount, Cullman, Morgan, and Tallapoosa counties received some light accumulations of freezing rain during the overnight hours on the 29th. Accumulation was mainly confined to tree tops and elevated surfaces. Most area schools were closed on the 28th and roads were briefly hazardous. Several minor auto accidents occurred across the area.

4. An unusually cold spring time air mass settled across Central Alabama, bringing record cold temperatures to the entire region. Sub-freezing temperatures were recorded as far south as Wetumpka, and mid to upper 20s were recorded as far south as Clanton. Fruit crops, especially those in Blount and Chilton Counties, suffered heavy damage, although dollar loss estimates were not known.

5. An unusually cold spring time air mass settled across Central Alabama, bringing record cold temperatures to the entire region. Sub-freezing temperatures were recorded as far south as Wetumpka, and mid to upper 20s were recorded as far south as Clanton. Fruit crops, especially those in Blount and Chilton Counties, suffered heavy damage, although dollar loss estimates were not known.

6. A winter storm brought a swath of heavy snow to parts of central Alabama during the morning hours of January 19. The main band of snow accumulation was roughly bounded on the north side by Interstate 20, and on the south side by Interstate 85. The heaviest snow, accumulating from 2 to 5 inches, fell in a band from Marengo and southern Sumter Counties, northeastward into Coosa County. Because ground temperatures were just above freezing, much of the snow outside of the highest snow band melted within an hour or two after the snow ended. Area streets saw only minor impacts from the snow, and most roads were free from snow before nightfall. Accumulations were generally around 2 inches, with the highest amounts in the eastern portion of the county.

7. A low pressure system moving across the northern Gulf of Mexico brought a swath of snow to a large portion of Central Alabama. The highest snowfall amounts were in the eastern and southern sections of Central Alabama, with 3 to as much as 7 inches of snow reported in these areas. The snow caused numerous businesses and schools to close, and created hazardous travel across a large portion of the area. A period of snow accumulated to between 1 and 1.5 inches across Perry County, causing hazardous travel conditions.

8. As a low pressure system moved across the northern Gulf of Mexico on Sunday January 9th, 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. Snowfall totals ranged from 4 to 7 inches across far north Central Alabama to 2 to 4 inches across locations from Vernon to Birmingham to Anniston. South of these locations, ice and sleet were the predominant precipitation type with around .50 inch of ice and between 1 to 3 inches of sleet reported across southern portions of the area.

Light wintry precipitation began to spread into the area during the early afternoon hours on January 9. Even though amounts were light, accumulations were increasing travel concerns and the risk for vehicle accidents. As the strong storm system neared the area, several bands of wintry precipitation moved northward across the area, sometimes becoming quite heavy, with estimated precipitations rates over 1 inch an hour. As snow and ice began to accumulate, travel conditions quickly became hazardous. Several reports of thundersnow were also noted. One quarter inch of ice reported coating most surfaces across the county. Also, one inch of sleet accumulation reported near Marion.

9. On Monday, January 27, a very strong arctic front moved through Central Alabama, bringing extremely cold and dry air to the area. Across the north, temperatures dropped through the day and into the 30's shortly after sunset. Temperatures across the entire area continued to plummet overnight and Tuesday morning, bottoming out in the teens across the north and 20's across the south. Within the arctic air behind the front, moisture spread northward ahead of an upper level disturbance. A mixture of winter precipitation fell across the area beginning Tuesday morning, January 28th. With low level cold advection and precipitation falling, surface temperatures did not warm through the morning. Travel conditions quickly deteriorated as snow, sleet and ice began to accumulate. Brief periods of freezing rain resulted in a light glaze of ice on area roadways and bridges Tuesday morning at the onset of precipitation. As precipitation transitioned to all snow, it melted and refroze quickly on area roadways, further deteriorating travel conditions. In many locations across Central Alabama, snow accumulated on top of a layer of ice. Hundreds of wrecks and hazardous road conditions left thousands of people stranded in their vehicles on area roadways for hours; many remained there overnight Tuesday night. Many others abandoned their vehicles in favor of walking to warm nearby shelters. As temperatures remained below freezing through Thursday, January 30th, there was only slight improvement in icy road conditions. Seven fatalities (indirect) were attributed to vehicle accidents on icy roads in Central Alabama. One fatality (indirect) resulted from a male slipping on ice outside his home. One fatality (direct) resulted from severe hypothermia. Due to the high number of vehicle accidents and vehicles abandoned in favor of walking to shelters, there were likely unreported indirect injuries numbering in the dozens across the affected area. A mix of winter precipitation resulted in hazardous travel conditions across Perry County. Snow accumulations of two to three inches were reported. One fatality occurred at approximately 11:00 CST (Indirect, Female, 64) on Highway 5, due to a vehicle accident on the icy road.

PAST OCCURRENCES BY JURISDICTION MARION

Marion Past Occurrences - Hail

Location	Date	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Marion	05/03/1998	Hail	1.75 in.	0	0	\$10,000	\$4,000
2. Marion	05/06/1998	Hail	2.00 in.	0	0	\$10,000	\$20,000
3. Marion	03/29/2000	Hail	1.00 in.	0	0	\$3,000	0
4. Marion	12/16/2000	Hail	0.75 in.	0	0	0	0
5. Marion	02/21/2001	Hail	1.00 in.	0	0	0	0
6. Marion	04/25/2003	Hail	1.50 in.	0	0	\$8,000	0
7. Marion	05/02/2003	Hail	1.50 in.	0	0	\$25,000	0
8. Marion	04/10/2004	Hail	1.00 in.	0	0	0	0
9. Marion	03/31/2005	Hail	0.75 in.	0	0	0	0
10. Marion	04/21/2005	Hail	1.75 in.	0	0	\$2,000	0
11. Marion	04/22/2005	Hail	1.00 in.	0	0	\$1,000	0
12. Marion	02/13/2007	Hail	1.00 in.	0	0	0	0
13. Marion	02/18/2009	Hail	1.00 in.	0	0	0	0
14. Marion	03/23/2013	Hail	1.75 in.	0	0	0	0
15. Marion	05/17/2013	Hail	1.00 in.	0	0	0	0
Total				0	0	\$59,000	\$24,000

1. Golf ball size hail was reported in Radford.
2. Four to five trailers had their windows knocked out by Hen Egg sized hail along SR 219. Twenty-three acres of timber was damaged due to the hail. The hail damage continued into Perry County along SR 219 where mostly tree damage occurred.
3. One inch diameter size hail fell in Marion.
4. Dime size hail was observed in the city of Marion.
5. Quarter size hail was reported near Marion.
6. Supercell 3 formed over extreme southern Greene County just east of Forkland. The storm started off by producing a weak tornado that moved through by Greene County Steam Plant and crossed the Black Warrior River ending just inside Hale County. The supercell continued strengthening and produced a swath of wind and hail damage along its path. Hail sizes ranged from penny to softball size. Significant wind and hail damage occurred from Autaugaville to Prattville to Montgomery. Several funnel cloud reports were received with the storm. The supercell moved across Russell County and eventually moved into Georgia. A swath of hail fell across central Perry County associated with supercell 3. Hail was reported from penny size to ping pong ball size. A few locations observed minor accumulations of the hail. The hail may have been larger in the rural areas and was therefore not observed.
7. A swath of large hail occurred from west central Perry County near Scotts Station to near the Vaiden Airport. The hail may have been much larger in surrounding rural areas. A few trees were also blown down and one outbuilding was destroyed.
8. A supercell thunderstorm moved across Greene, Hale, and Perry Counties and produced significant wind damage along with very large hail. The supercell produced minor tree damage in extreme northwest Greene County north of Boligee and then became stronger. The most extensive damage started just northeast of

Eutaw, in Greene County, along US 11 and ended just north of the Wedgewood community, in Hale County, along SR 60. The swath of damage was 1.5 miles wide at the beginning point and 3 miles wide at the ending point. The path length was approximately 6.5 miles long. Inside this extensive damage area, thousands of trees were snapped off or uprooted, numerous power lines were snapped off or blown down, and many structures were damaged by falling trees. The storm continued across eastern Hale and into Perry County past Marion, where numerous trees continued to be knocked down. Very large hail also fell during the storm. The largest hail observed was 2.50 inches in diameter and drifted to over one foot deep in many places. The hail damaged a few homes and several automobiles. Some locations reporting hail and wind damage include Eutaw, Boligee, Sawyerville, Akron, Greensboro, and Marion.

9. Penny size hail was reported near the Perry Municipal Airport along CR 45.

10. Quarter to golf ball size hail was observed in and around the city of Marion.

11. Quarter size hail briefly fell near the Coleman community.

12. No description available.

13. A powerful low pressure system and associated cold front pushed through the area, and helped trigger numerous thunderstorms. Some became supercells that produced long swaths of large hail, areas of damaging winds, and at least one tornado.

14. On the morning of Saturday, March 23, an upper trough began digging into the center of the country. That evening, within the resultant southwesterly flow aloft that was streaming through the southeastern United States, a surface low began to develop near New Orleans. Because of the lack of any real upper level feature to drag it or the warm front northward, the surface low never really amounted to much. North of the warm front, which was draped across the Gulf Coast, elevated storms began to develop. Steep mid-level lapse rates (evident in the 12z/March 23 BMX and 00z/March 24 JAN upper air soundings below), along with sufficient hail growth zone CAPE values of 1000-1500 J/kg and 0-3km Storm Relative Helicity values of 400-600 m^2/s^2 , these elevated storm became well-organized. Starting in south-central Mississippi and moving into central Alabama, one of these storms traversed Sumter, Hale, Perry, Bibb, Chilton, Coosa and Tallapoosa Counties, dropped hail stones of 1 to 1.75 inches in diameter and created damaging wind gusts.

15. On Friday, May 17th, a slow-moving upper level low was rotating across the mid-Mississippi River Valley with an associated surface low over Arkansas and surface trough extending southeastward into Alabama. Warm, moist airflow resulted in widespread showers and thunderstorms across northwest Central Alabama during the day, while stronger thunderstorms developed south of the rain area in a more unstable air mass. Some of these storms produced large hail. As this area of rain shifted east through the evening hours on Friday, May 17th, additional thunderstorms developed upstream and tracked across east Central Alabama. A mid-level short wave rotating around the upper level low interacted with a low level convergent zone and continued moisture transport into the area to focus developing thunderstorms, which then tracked over the same areas for many hours, resulting in flash flooding during the early morning hours on Saturday, May 18th. Precipitable water values were around 1.70 inches, the 99th percentile for normal precipitable water values for that day. Rainfall estimates of three to five inches with localized amounts over eight inches occurred.

Marion Past Occurrences – Thunderstorms

Location	Date	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Marion	04/20/1995	Thunderstorm Winds	0 knots	0	0	0	0
2. Marion	05/27/1996	Thunderstorm Winds	50 knots	0	0	\$10,000	0
3. Marion	11/01/1997	Thunderstorm Winds	55 knots	0	0	\$6,000	0
4. Marion	07/20/1998	Thunderstorm Winds	60 knots	0	0	\$10,000	0
5. Marion	08/10/2000	Thunderstorm Winds	50 knots	0	0	\$3,000	0
6. Marion	04/10/2004	Thunderstorm Winds	60 knots	0	0	\$150,000	0
7. Marion	03/07/2005	Thunderstorm Winds	50 knots	0	0	\$4,000	0
8. Marion	01/05/2007	Thunderstorm Winds	40 knots	0	0	\$10,000	0
9. Marion	02/13/2007	Thunderstorm Winds	50 knots	0	0	\$3,000	0
10. Marion	10/22/2007	Thunderstorm Winds	50 knots	0	0	\$10,000	0
11. Marion	10/22/2007	Thunderstorm Winds	50 knots	0	0	\$5,000	0
12. Marion	05/03/2009	Thunderstorm Winds	60 knots	0	0	\$100,000	0
13. Marion	05/21/2010	Thunderstorm Winds	50 knots	0	0	\$2,000	0
14. Marion	03/26/2011	Thunderstorm Winds	50 knots	0	0	\$2,000	0
15. Marion	04/15/2011	Thunderstorm Winds	50 knots	0	0	\$1,000	0
16. Marion	07/02/2012	Thunderstorm Winds	50 knots	0	0	0	0
17. Marion	06/28/2013	Thunderstorm Winds	50 knots	0	0	0	0
Total				0	0	\$316,000	0

1. Several trees were down and at least one power line in the city of Marion according to the police department there.
2. Several trees were blown down along Highway 14.
3. Thunderstorm wind snapped trees north of Marion. There were also reports of structural damage north of Marion.

4. A roof of a downtown building was damaged, blowing debris over the area. Several large trees were also uprooted as well.
5. A few trees were knocked down throughout the county. Several outbuildings sustained damage.
6. A supercell thunderstorm moved across Greene, Hale, and Perry Counties and produced significant wind damage along with very large hail. The supercell produced minor tree damage in extreme northwest Greene County north of Boligee and then became stronger. The most extensive damage started just northeast of Eutaw, in Greene County, along US 11 and ended just north of the Wedgewood community, in Hale County, along SR 60. The swath of damage was 1.5 miles wide at the beginning point and 3 miles wide at the ending point. The path length was approximately 6.5 miles long. Inside this extensive damage area, thousands of trees were snapped off or uprooted, numerous power lines were snapped off or blown down, and many structures were damaged by falling trees. The storm continued across eastern Hale and into Perry County past Marion, where numerous trees continued to be knocked down. Very large hail also fell during the storm. The largest hail observed was 2.50 inches in diameter and drifted to over one foot deep in many places. The hail damaged a few homes and several automobiles. Some locations reporting hail and wind damage include Eutaw, Boligee, Sawyerville, Akron, Greensboro, and Marion.
7. A few trees were blown down across the county.
8. Thunderstorms ahead of a passing cold front produced several areas of wind damage across Central Alabama. A deteriorating car repair garage was destroyed due to wind getting into the old building and blowing it out.
9. An intense winter storm and passing cold front caused several tornadoes and numerous severe thunderstorms across Central Alabama. Several trees were blown down near the intersection of of SR 5 and CR 38.
10. A very strong upper level disturbance caused several severe thunderstorms to move from the Gulf Coast northward into parts of Central Alabama. A few of these storms produced tornadoes. Numerous trees and several power lines were blown down on the western side of the city of Marion.
11. A very strong upper level disturbance caused several severe thunderstorms to move from the Gulf Coast northward into parts of Central Alabama. A few of these storms produced tornadoes. Several trees and power lines were blown down on the eastern side of Marion.
12. A cold front dipping into the Tennessee Valley helped spark strong to severe thunderstorms for several days, with large hail, damaging winds, and several tornadoes. Thousands of trees were blown down across Perry County.
13. An upper level disturbance and associated surface frontal system, moving across the Ohio and Tennessee Valleys, caused numerous thunderstorms across Central Alabama over a two day period. Many of the storms produced damaging winds, large hail, and locally heavy rainfall. Several trees were blown down on CR-7, north of Marion.
14. A stalled boundary sagged southward into North Central Alabama on Saturday, March 26, and became a focus for convection ahead of an approaching storm system. Through the day, as the air mass south of the boundary became increasingly unstable, thunderstorms developed across much of the area. This activity continued into the overnight hours. With the approach of a surface low and cold front, activity reintensified early Sunday morning, March 27, and continued through the pre-dawn hours on Monday as the cold front slowly moved through the area. Several trees were blown down northeast of Marion.
15. A potent storm system, which wreaked havoc across the eastern half of the United States on April 14-16, produced a significant and historic tornado outbreak across Central Alabama on April 15. Forty tornadoes, 30 of which touched down in Central Alabama, occurred in the state. At the time, this set a new record for number of tornadoes within the state from one event. This record was broken on April 27, 2011. A surface low developed across the Central Plains on Thursday, April 14, and strengthened as it moved into the mid-Mississippi River Valley. In response, surface dew points in the middle to upper 60s surged northward into Central Alabama and deep vertical wind shear increased, providing support for tornadic supercell development. A weakening line of thunderstorms moved into northwest Central Alabama early Friday morning. The southern end of this line intensified by mid day as it encountered a more unstable airmass. South of the line, supercells formed in Mississippi and tracked eastward into west Central Alabama. The entire system pushed east across the area over the course of about twelve hours, exiting east Central Alabama in the early morning hours on Saturday, April 16. In addition to the thirty tornadoes, the storm system produced widespread straight line wind damage and numerous large hail reports. A tree was blown down and it blocked a road in Marion County.

16. On Monday, July 2, outflow boundaries from convection in Georgia moved into east central Alabama during the early morning hours and triggered thunderstorms and isolated wind damage. Two homes along Oakcrest Drive sustained minor roof damage due to fallen trees.

17. A series of decaying mesoscale convective system boundaries pushed southeastward into Central Alabama on Thursday and Friday, June 27 and 28th. Thunderstorms developed as these outflow boundaries interacted with an unstable airmass characterized by dewpoints in the 70's and CAPE values up to 3000J/kg. These storms produced scattered wind damage across central and south Central Alabama. A few homes sustained minor roof damage in Marion.

Marion Past Occurrences -Tornado

Location	Date	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Marion	03/06/1996	F1	0	0	\$95,000	\$25,000
2. Marion	04/19/2009	F1	0	0	\$30,000	0
3. Marion	04/27/2011	F1	0	0	\$1,300,000	0
Total			0	0	\$1,452,000	\$25,000

1. A tornado struck a farm on Highway 183 west-southwest of Marion destroying several farm buildings and downing a number of trees.

2. A powerful spring storm system and associated cold front brought numerous thunderstorms to central Alabama. Many of the storms produced large hail, damaging winds, and tornadoes. The tornado touched down in a wooded ravine, between Nichols Lane and CR-7. It then traveled east-northeast for just over a mile, and lifted near the intersection of Coles Truck Stop Road and AL-5. Along the path, approximately 100 hardwood trees were snapped, and near the end of the path, several hardwoods were uprooted. A home sustained minor damage to shingles and siding. The occupant of the home took refuge in a closet, and was unharmed, after her brother called to inform her of the tornado warning.

3. 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 states 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 (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 hardest hit areas included Shottsville and Hackleburg, both in Marion County, where winds of 160 mph and 210 mph respectively, caused unimagineable damage. Cordova, in Walker County, was hit twice; by a tornado along the Quasi-Linear Convective System during the early morning hours and again in the afternoon by a long-track EF4 tornado. A long track tornado moved across the city of Tuscaloosa and the western suburbs of Birmingham, resulting in the complete destruction of whole neighborhoods and numerous injuries and fatalities in those heavily populated areas. The same parent supercell produced another violent tornado in east Central Alabama as it tracked across St. Clair and Calhoun Counties, resulting in additional fatalities and incredible damage to a number of neighborhoods. Another violent EF4 tornado tracked across portions of Elmore and Tallapoosa Counties, including Lake Martin, destroying numerous homes and a large section of a mobile home park.

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. A tornado touched down 5.5 miles south of Marion, 1 mile west of CR 35 and tracked northeastward. The tornado destroyed an outbuilding and damaged the roof of a single family home along CR 38. The tornado strengthened to EF1 with winds of 90 mph as it crossed CR 45, north of Vilula. Many trees were knocked down near the Faith Chapel Baptist Church. The tornado damaged a couple barns along Kynard Rd and quickly dissipated just east of CR 4.

**PAST OCCURRENCES BY JURISDICTION
CITY OF UNIONTOWN**

Uniontown Past Occurrences - Hail

Location	Date	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Uniontown	12/16/2000	Hail	1.75 in.	0	0	\$4,000	0
2. Uniontown	04/25/2003	Hail	0.88 in.	0	0	0	0
3. Uniontown	05/02/2003	Hail	1.75 in.	0	0	\$250,000	0
4. Uniontown	04/22/2005	Hail	0.75 in.	0	0	\$1,000	0
5. Uniontown	04/22/2005	Hail	1.00 in.	0	0	\$1,000	0
6. Uniontown	04/11/2007	Hail	0.75 in.	0	0	0	0
Total				0	0	\$256,000	0

1. Golf ball size was reported by the Uniontown Police Department.
22. Supercell 5 developed across extreme northwest Marengo County and quickly became severe in the vicinity of the Hale, Marengo, and Perry county lines. Supercell 5 was similar to Supercell 4 in the fact that it, too, was a right member of a splitting thunderstorm. The storm only produced hail up to the size of nickels, although the hail may have been larger in surrounding rural areas. The storm became outflow dominated over northern Dallas County and weakened considerably. No more severe weather was reported with this storm. Nickel size hail was reported in and around Uniontown. The hail may have been much larger in surrounding rural areas.
3. Golf ball size hail pelted areas in and around Uniontown. Several automobiles were damaged. Numerous trees were also blown down in extreme southern Perry County.
4. Penny size hail fell in and around Uniontown.
5. Quarter size hail was reported in and near Uniontown.
6. Supercell thunderstorms developed in the afternoon and evening hours, producing severe weather that included tornadoes and very large hail.

Uniontown Past Occurrences - Thunderstorms

Location	Date	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Uniontown	08/10/2000	Thunderstorm Winds	50 knots	0	0	\$3,000	0
2. Uniontown	12/16/2000	Thunderstorm Winds	55 knots	0	0	\$15,000	0
3. Uniontown	05/02/2003	Thunderstorm Winds	50 knots	0	0	\$5,000	0
4. Uniontown	03/07/2005	Thunderstorm Winds	50 knots	0	0	\$4,000	0
5. Uniontown	02/27/2009	Thunderstorm Winds	50 knots	0	0	\$2,000	0
6. Uniontown	03/09/2011	Thunderstorm Winds	75 knots	0	0	\$10,000	0
7. Uniontown	04/05/2012	Thunderstorm Winds	50 knots	0	0	0	0

Total				0	0	\$39,000	0
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1. A few trees were knocked down throughout the county. Several outbuildings sustained damage.
2. A few trees were knocked down in Uniontown. One of the trees fell onto a carport and smashed a car.
3. Golf ball size hail pelted areas in and around Uniontown. Several automobiles were damaged. Numerous trees were also blown down in extreme southern Perry County.
4. A few trees were blown down across the county.
5. A slow moving cold front brought an extended period of severe weather and heavy rain, that lasted about 24 hours. The storms produced damaging winds, large hail, flooding rains, and at least 4 tornadoes. Several trees were blown down across roadways in Uniontown.
6. A line of thunderstorms moved through the state of Alabama on the morning of March 9th. Along with heavy rainfall that caused flash flooding in areas, these storms produced strong winds causing tree and structure damage. Scattered trees and powerlines were downed in Uniontown.
7. An upper level closed low moved across the Mississippi Valley region on Thursday, April 5th. Ahead of this feature, storms along an outflow boundary moved across Mississippi and into west central Alabama by mid morning, producing large hail and wind damage across southwest portions of central Alabama. As the upper low crossed the area during peak daytime heating, a second round of severe thunderstorms developed. These storms brought large hail and wind damage to a significant portion of the area. Several trees were blown down near the intersection of Buster Sealy Road and Alabama Highway 183.

Uniontown Past Occurrences -Tornado

Location	Date	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Uniontown	10/13/2001	F1	0	0	\$110,000	0
2. Uniontown	04/27/2011	F2	0	0	\$645,000	0
Totals			0	0	\$755,000	0

1. A small tornado touched down just southwest of Uniontown in an open area and traveled north-northeast across the western portions of Uniontown. The tornado ended just north-northwest of Uniontown in an open area. The tornado tore shingles off several houses in the southwest section of Uniontown in addition to downing trees and power lines. The tornado did similar damage to residential structures in the northwest portion of Uniontown. A one-story apartment complex lost a portion of its roof. Several trees fell on homes and blocked residential streets. Beginning: 32 26.587/87 31.219 End: 32 27.857/87 30.951
2. 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 states 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 (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 hardest hit areas included Shottsville and Hackleburg, both in Marion County, where winds of 160 mph and 210 mph respectively, caused unimaginable damage. Cordova, in Walker County, was hit twice; by a tornado along the Quasi-Linear Convective System during the early morning hours and again in the afternoon by a long-track EF4 tornado. A long track tornado moved across the city of Tuscaloosa and the western suburbs of Birmingham, resulting in the complete destruction of whole neighborhoods and numerous injuries and fatalities in those heavily populated areas. The same parent supercell produced another violent tornado in east Central Alabama as it tracked across St. Clair and Calhoun Counties, resulting in additional fatalities and incredible damage to a number of neighborhoods. Another violent EF4 tornado tracked across portions of Elmore and Tallapoosa Counties, including Lake Martin, destroying numerous homes and a large section of a mobile home park. 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. A tornado touched down in Smith County, Mississippi and tracked through Jasper and Clarke

Counties (See Storm Data Jackson), where it caused EF4 rated damage. The tornado then crossed into Choctaw County (See Storm Data Mobile) Alabama, where it caused EF3 rated damage. The tornado tracked across portions of Sumter, Marengo and western Perry Counties, before it dissipated. The tornado crossed into Perry County north of Uniontown and produced significant tree damage. The tornado crossed AL Hwy 183, where it damaged two outbuildings and destroyed a grain silo. The tornado lifted east of AL Hwy 183, northeast of Uniontown.