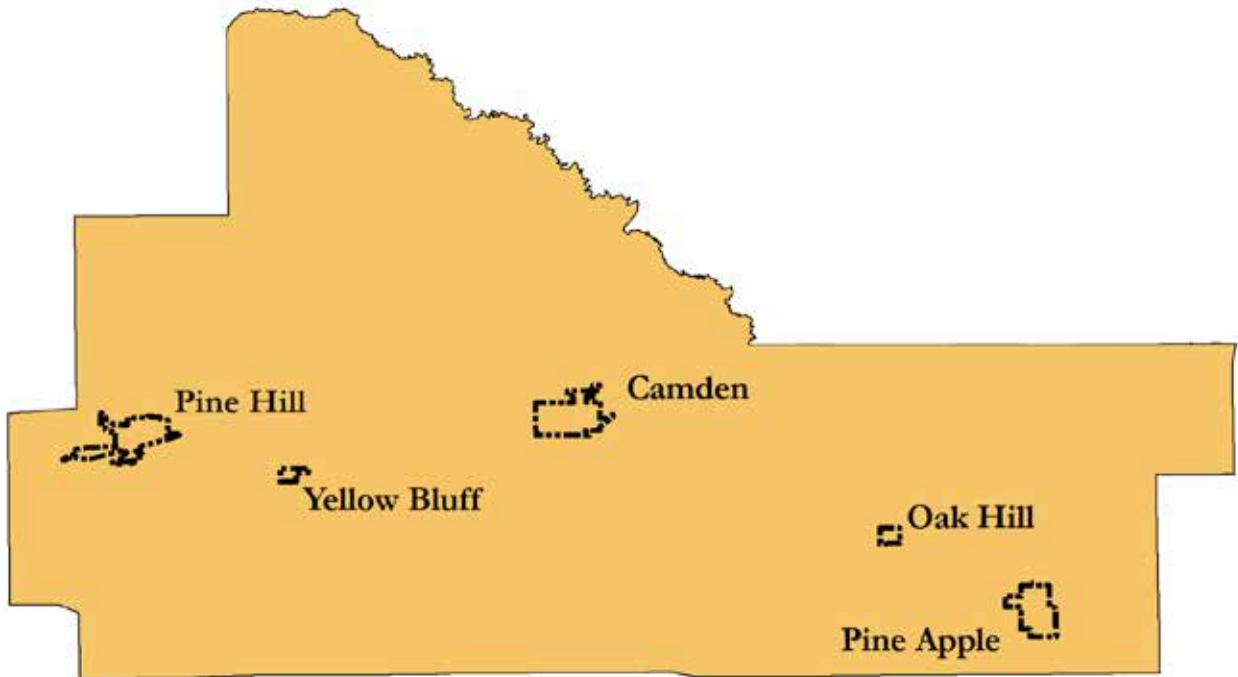
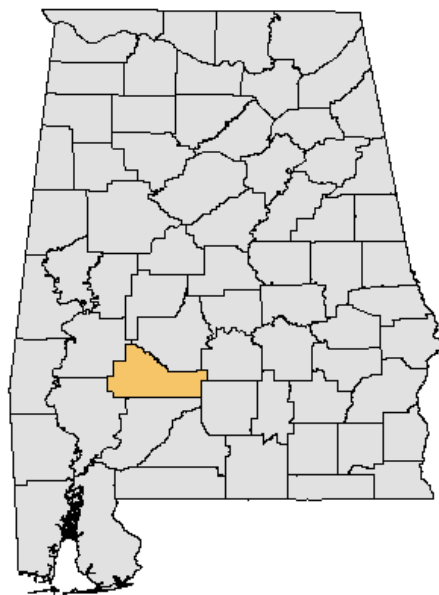


Hazard Mitigation Plan

Wilcox County, Alabama



OCTOBER 2014



The Natural Hazards Mitigation Plan for Wilcox County was developed by the Alabama Tombigbee Regional Commission in conjunction with the Wilcox County EMA. Additional copies can be requested by contacting the agencies listed below.

Wilcox County EMA
P.O. Box 31
Camden, AL 36726
334-682-4843

Alabama Tombigbee Regional Commission
107 Broad Street
Camden, AL 36726
334-682-4234

October 2014

OVERVIEW OF SECTION UPDATE

The Hazard Mitigation Plan section of the plan underwent only minor changes during the update process.

I. THE HAZARD MITIGATION PLAN

A. WILCOX COUNTY HAZARD MITIGATION PLAN

The Natural Hazards Mitigation Plan for Wilcox 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 and the municipalities of Camden, Oak Hill, Pine Apple, Pine Hill, and Yellow Bluff.

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 Part 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.

C. FUNDING

The Wilcox County Commission received grant monies from the Hazard Mitigation Grant Program to update the Natural Hazards Mitigation Plan for Wilcox County, Alabama. The Wilcox County Commission contracted with the Alabama Tombigbee Regional Commission to facilitate the planning process.

D. SCOPE

The Natural Hazards Mitigation Plan for Wilcox County, Alabama includes all incorporated and unincorporated areas in Wilcox County. The plan addresses all natural hazards identified by the Federal Emergency Management Agency. All hazards that may affect Wilcox 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 Wilcox County, Alabama is an effort to evaluate and identify all natural hazards, which may affect Wilcox County. It presents mitigation strategies that address each hazard identified. This plan is only one of many steps Wilcox County will take to achieve a safer, more hazard resistant environment for its residents.

F. MULTIJURISDICTIONAL PLANNING PARTICIPATION

All six jurisdictions in Wilcox County participated in the planning process. These jurisdictions are Wilcox County, City of Camden, Town of Oak Hill, Town of Pine Hill, Town of Pine Apple, and Town of Yellow Bluff. Participation included completing hazard questionnaires, supplying information on critical facilities, and providing project lists. Each jurisdiction will also formally adopt the plan. The Wilcox County School Board also participated and will formally adopt the plan. The school system participated in the previous planning process, but did not formally adopt the plan.

OVERVIEW OF SECTION UPDATE

The Planning Process section of the plan was updated to reflect the entities that participated in the update process. The EMA director elected to leave all participation requirements the same from the last update. Committee activities and public involvement activities were updated. The agencies that were contacted with regards to the plan were revised to reflect any additions/subtractions. Plans and other documents referred to for the update were also updated.

II. THE PLANNING PROCESS

A. THE HAZARD MITIGATION STEERING COMMITTEE

The Wilcox County Natural Hazards Mitigation Plan was updated during the summer of 2014. The Alabama Tombigbee Regional Commission worked with the Wilcox County Emergency Management Agency to develop 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 the committee was to ensure the interests and concerns of everyone in Wilcox County were addressed. The committee was re-evaluated for the update and new appointees were chosen for the entire five-year planning cycle.

The following entities chose to appoint a representative to the Committee:

- ✓ Wilcox EMA, Director
- ✓ City of Camden, Mayor
- ✓ Town of Pine Hill, Mayor
- ✓ Town of Pine Apple, Mayor
- ✓ Town of Oak Hill, Mayor
- ✓ Town Yellow Bluff, Mayor
- ✓ Wilcox County Commission, County Administrator
- ✓ Wilcox County Board of Education, Superintendent
- ✓ Wilcox County Road and Bridge Department, County Engineer

The committee was charged with the following task:

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

The majority of correspondence regarding the Natural Hazards Steering Committee took place via phone, fax, and mail. Each jurisdiction reviewed and updated the information contained in the plan. The new information they provided that tailored the plan to Wilcox County's needs. The committee met on September 17, 2014 at the Camden City Hall to discuss the county's plan. Invitations were mailed to stakeholders and committee meetings, also a reminder email was sent. This meeting was used as a forum for all in attendance to ask any questions, make any suggestions, and review information contained in the original plan.

Committee members were asked to provide any revised or new information the following topics:

- ✓ identification of hazards,
- ✓ identification of existing plans,
- ✓ identification of critical facilities,
- ✓ values of critical facilities

- ✓ identification of goals, objectives, and possible projects;
- ✓ modification of plan maintenance guidelines.

The Wilcox County EMA Director chose to use the participation requirements for the Natural Hazards Steering Committee that were already in place. Each member had to fulfill these requirements. Each member of the committee was notified of these requirements verbally and by email. 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, Wilcox County EMA, and Alabama Tombigbee Regional Commission throughout the entire planning process.

B. PUBLIC INVOLVEMENT

An important aspect of the planning process is involving the public at every step. Wilcox County EMA and ATRC took steps to involve the public at every juncture. The committee meeting held September 17, 2014 was also announced in the local newspaper as a public meeting. Meeting notices were posted throughout the county. The purpose of the meeting was to introduce the mitigation planning process and give the public an opportunity to participate in the update of the plan. A draft of the plan was posted to the Alabama Tombigbee Regional Commission's website for review and comments.

Each jurisdiction also held a public hearing prior to their adoption of the plan. These meetings were held in conjunction with the council/commission meetings where the plan is adopted. These meetings occurred on the following dates:

- ✓ Wilcox County Commission (Date to be inserted once meeting is held)
- ✓ City of Camden (Date to be inserted once meeting is held)
- ✓ Town of Oak Hill (Date to be inserted once meeting is held)
- ✓ Town of Pine Apple (Date to be inserted once meeting is held)
- ✓ Town of Pine Hill (Date to be inserted once meeting is held)
- ✓ Town of Yellow Bluff (Date to be inserted once meeting is held)
- ✓ Wilcox County School System (Date to be inserted once meeting is held)

Participating jurisdictions will adopt the plan once an approvable letter is received from FEMA.

C. INTERAGENCY AND INTERGOVERNMENTAL COORDINATION

The following state, regional, county, and local entities were contacted regarding the update process. Information was requested from many. Many were contacted as stakeholders. The following table lists each participating entity and how they participated. In addition all surrounding jurisdictions were contacted and invited to review the draft and provide comments.

Entities Serving on Natural Hazards Steering Committee & Providing Information
Wilcox County EMA
City of Camden
Town of Oak Hill
Town of Pine Apple
Town of Pine Hill
Town of Yellow Bluff
Wilcox County Commission
Wilcox County Board of Education

The following list contains all entities that were notified of the meetings and the update. Entities were notified via a letter of the meeting.

Entities Invited that Chose Not to Participate	
Alabama Department of Environmental Management	Monroe County
Alabama National Guard	Clarke County
Alabama Natural Resource Conservation Council	Dallas County
Alabama State Forestry Commission	Marengo County
Department of the Army-Corps of Engineers	Lowndes County
Economic Development Administration	Butler County
Wilcox County Sheriff's Department	
Wilcox County Chamber of Commerce	
National Weather Service	
Natural Resource and Conservation Service	
Wilcox County Extension Service	
American Red Cross-Wilcox County	

By inviting a wide range of entities to participate, the plan was more effective in representing the county as a whole. All information, suggestions, and comments from all who participated were reviewed and integrated making Wilcox County's updated plan a collaborative effort.

D.PARTICIPATING JURISDICTIONS

All jurisdictions within Wilcox County have participated in the planning process and will adopt the final plan by formal resolution. These jurisdictions are as follows:

- ✓ City of Camden
- ✓ Town of Oak Hill
- ✓ Town of Pine Apple
- ✓ Town of Pine Hill
- ✓ Town of Yellow Bluff
- ✓ Wilcox County
- ✓ Wilcox County School System.

All of these entities adopted the 2009 plan update, except the Wilcox County School Board.

E. 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 in the original plan, 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 Wilcox 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
- ✓ 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
- ✓ Wilcox County, Alabama Soil Survey: Soils Information
- ✓ American Community Survey, U.S. Department of Commerce: socioeconomic information.
- ✓ 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
- ✓ Geological Society of Alabama: Earthquake, Landslide, and Sinkhole information
- ✓ Tropical Cyclone Track Probability: Historical probability of a tropical cyclone crossing various locations around the world – Florida State University
- ✓ US Corps of Engineers National Inventory of Dams

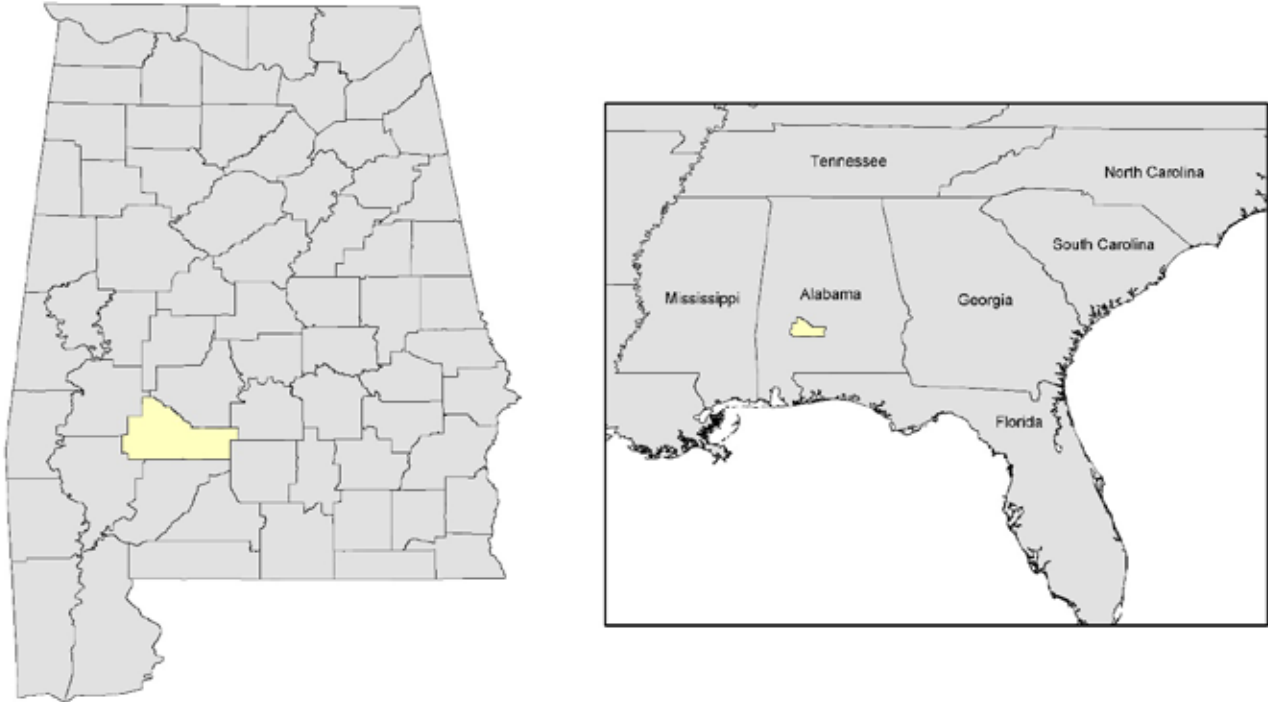
OVERVIEW OF SECTION UPDATE

The County Profile section of the plan had only minimal changes.

III. County Profile

Wilcox County (Figure 3.1) was established on December 13, 1819. It was named in honor of Lt. Joseph M. Wilcox. Dallas, Marengo, Clarke, Monroe, Butler, and Lowndes Counties border the county. The county covers an area of 883 square miles. It is the seventeenth largest county, with regards to area, in Alabama.

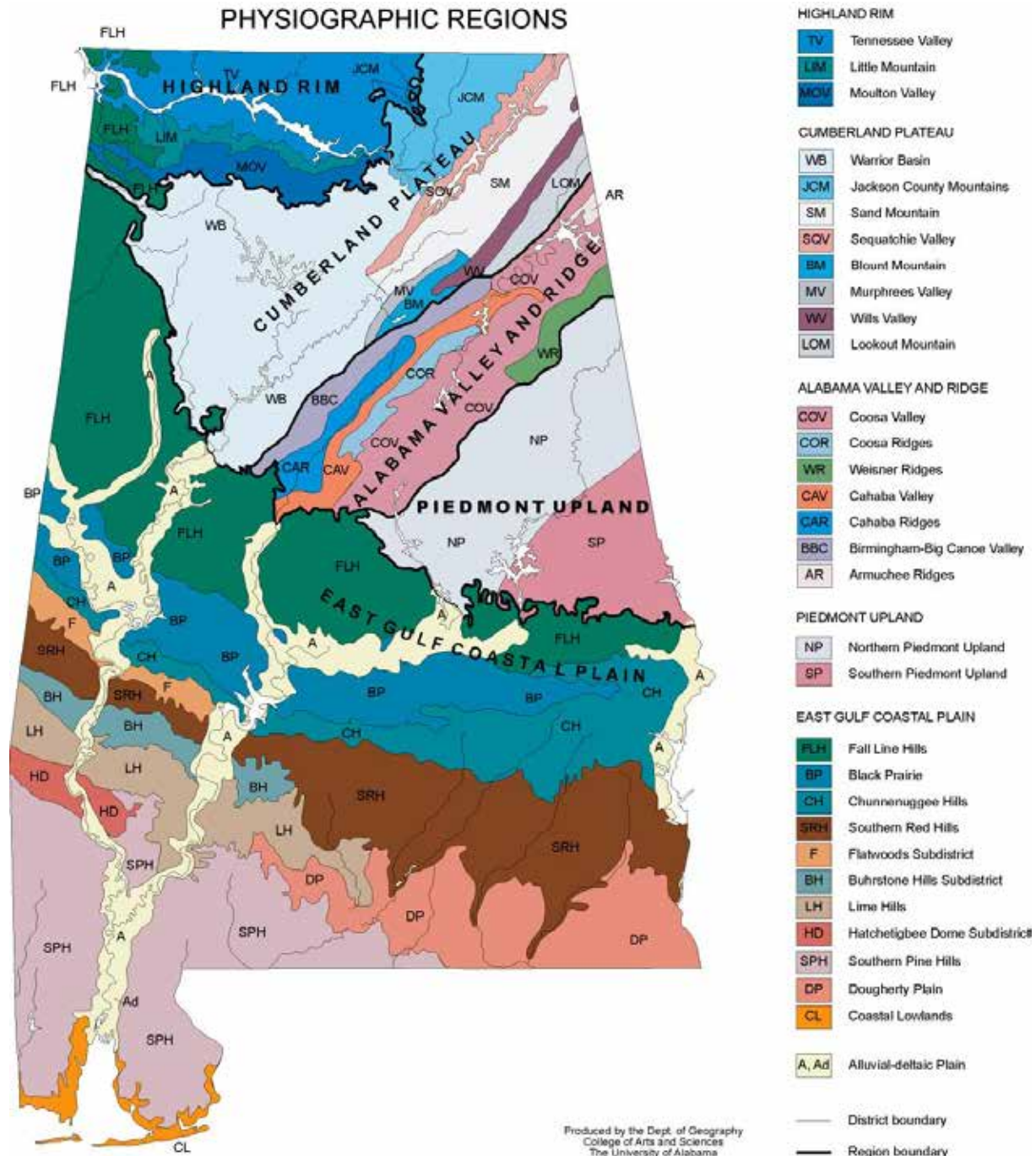
Figure 3.1 Wilcox County in Relation to the State of Alabama and the Southeast United States



A. GEOLOGY

Wilcox County lies in the East Gulf Coastal Plain (Figure 3.2). There are four physiographic regions in the county: the Blackland Prairie, Coastal Uplands, low terraces and flood plains, and high terraces. Elevations range from 50 feet above sea level along the Alabama River to 450 feet above sea level at Fatama.

Figure 3.2 Alabama Physiographic Regions

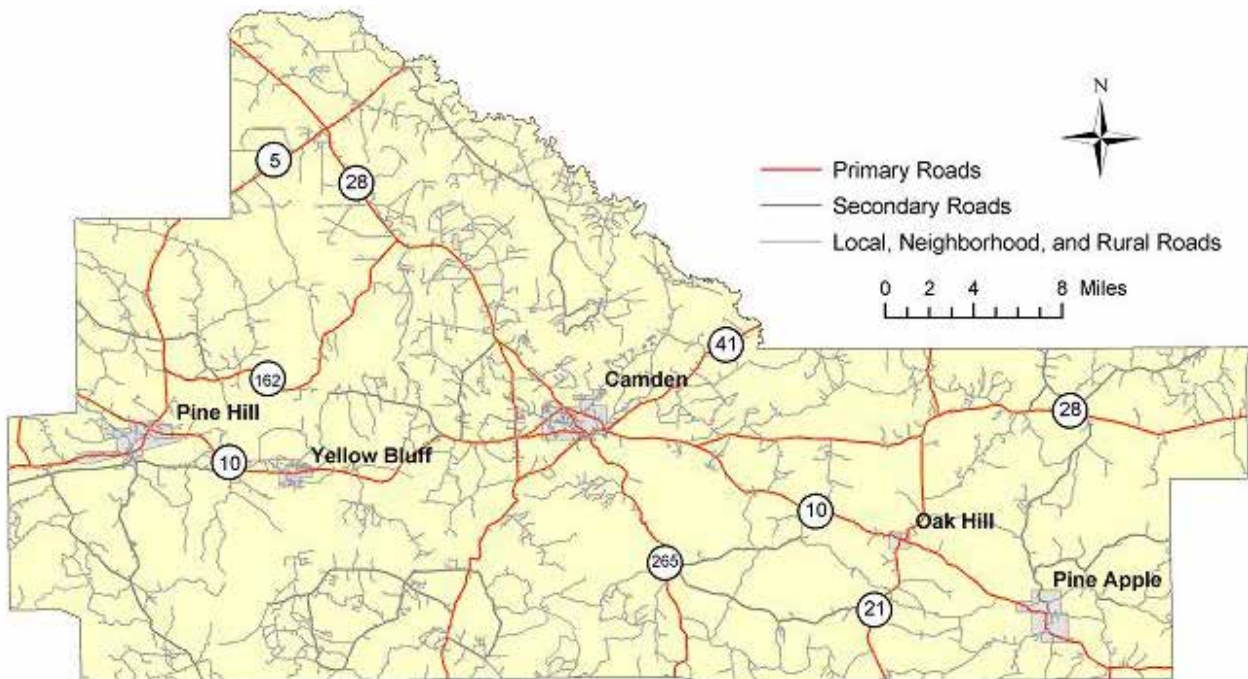


B. TRANSPORTATION

Roads

Wilcox County has many state highways that bisect the county (Figure 3.3). No federal highways pass through the county. The county has 214 miles of state highways. There is also an extensive system of county roads.

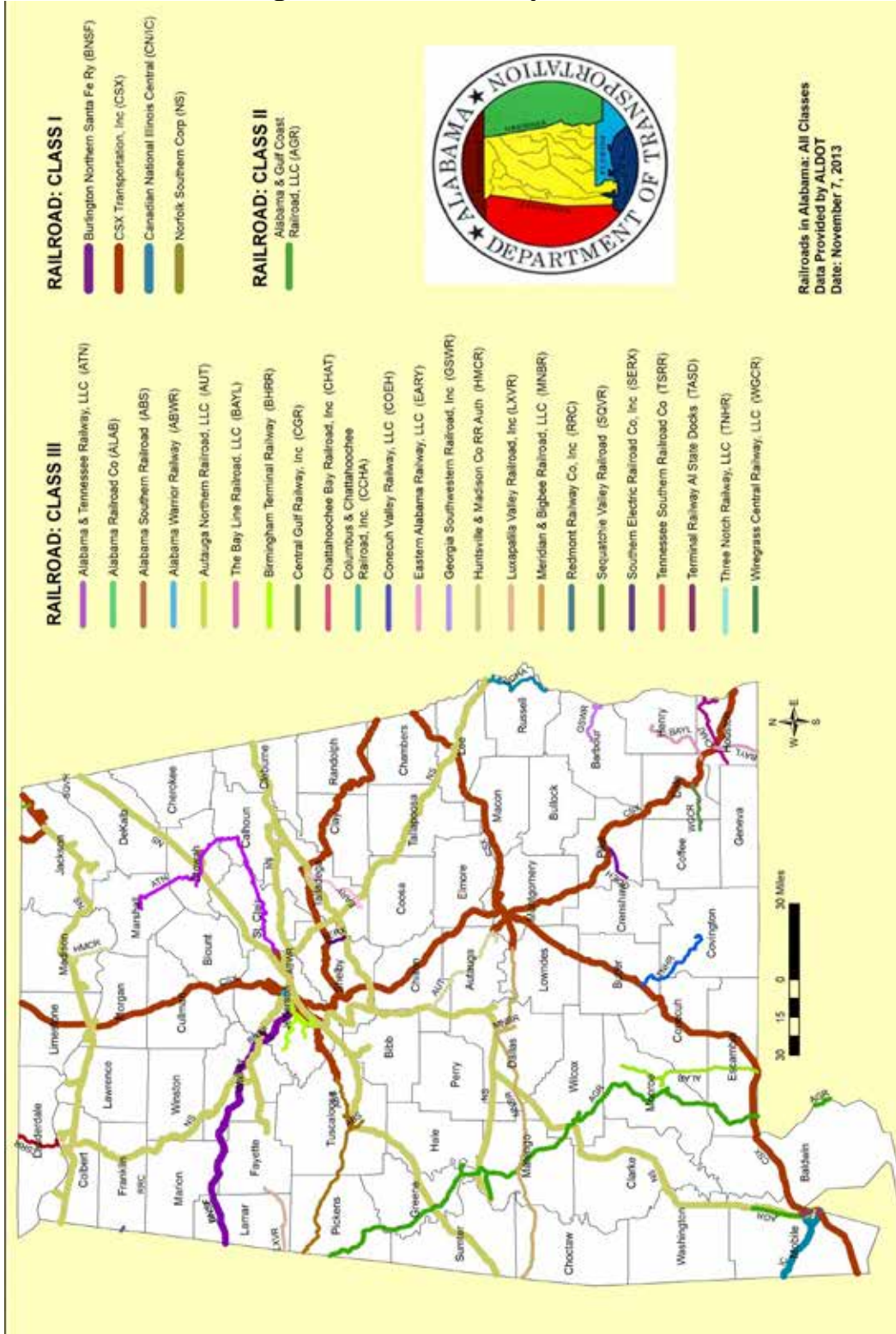
Figure 3.3 Wilcox County Road Network



Railroads

There are two companies that operate railroads within Wilcox County (Figure 3.4): Norfolk Southern and Alabama Gulf Coast Railroad. The major commodities shipped are wood products and steel.

Figure 3.4 Wilcox County Railroads



Navigable Waterways

The Alabama River flows through central Wilcox County (Figure 3.5). This river is suitable for both domestic and recreational use.

Figure 3.5 Navigable Waterways



Source: Cartographic Research Laboratory, The University of Alabama

Airports

There is one operational airport in Wilcox County in the City of Camden.

C.ECONOMY

Wilcox County is located in the heart of the black belt of Alabama. The county is historically a poor county. The county is considered one of the poorest counties in the United States. The economy has been dependent on the wood products industry and agriculture for decades. There are signs of progress since GD Copper USA constructed a facility in Sunny South. The copper tubing manufacturer will employ over 300 persons when full production is met.

D.UTILITIES

Electricity: Alabama Power, Clarke Washington Electric Co-Op, Pioneer Electric

Water: City of Camden, Town of Pine Apple, Town of Pine Hill, Wilcox County, CWM Water Authority, Southwest Alabama Water Authority, Butler County Water Authority, Millers Ferry Water Authority, Town of Oak Hill

Natural Gas: Southern Natural Gas, Wilcox County Gas District, Southeast Alabama Gas District

Telecommunications: Pinebelt Telephone Company, CenturyTel, Frontier Communications

E.MEDIA

Newspapers:

✓ *Wilcox Progressive Era*

F. SOCIAL AND ECONOMIC CHARACTERISTICS

Wilcox County is a rural county with a relatively small population, over half of the county lives in unincorporated areas. The 2012 American Community Survey is the best data available for the county. The ACS gives the reader an idea how just how poor the county is. The median household income of the county is just 56% of the state average and 46% of the national average. There are three times more families and individuals living below the poverty level per capita in the county than statewide or nationally. Table 3.1 gives basic characteristics of Wilcox County.

Table 3.1 Wilcox County Demographic Profile

	Wilcox County	Alabama	United States
Population	11,706		
Male	5,595		
Female	6,111		
White	3,132		
Black	8,555		
Other	19		
Median Age	38.8		
Total Housing Units	5,680		
Occupied Housing Units	3,624		
Population 3 and Over Enrolled in School	2,912		
Percent high school graduate or better	71.3%	82.6%	85.7%
Percent bachelor's degree or higher	3.9%	22.3%	28.5%
Median Household Income	\$24,212	\$43,160	\$53,046
Per Capita Income	\$13,163	\$23,587	\$28,051
Percent of families below the poverty level	32.4%	13.9%	10.9%
Percent of individuals below the poverty level	39.4%	18.1%	14.9%

There are five municipalities in the county. These municipalities are Camden, Oak Hill, Pine Apple, Pine Hill, and Yellow Bluff. Camden is the county seat and largest municipality. Table 3.2 gives basic social, economic, and housing characteristics of each municipality. Camden has a significantly larger population than all other municipalities. All other municipalities, except Pine Hill, have populations under two hundred persons. All municipalities have significant minority populations.

Table 3.2 Characteristics by Municipality

Place	Camden	Oak Hill	Pine Apple	Pine Hill	Yellow Bluff
Population	2,261	43	91	1,032	157
Minority Percent	61.3%	79.1%	15.4%	44.5%	100%
Percent 65 Years and Older	17%	79.1%	40.7%	15.9%	7%
Percent Under Age 18	25.3%	14%	20.9%	31.6%	24.8%
Per Capita Income	\$17,594	\$11,330	\$25,787	\$16,172	\$8,199
Median Household Income	\$25,948	\$26,333	\$43,750	\$30,379	\$16,964
Housing Units	1,008	36	95	527	86
Mobile Homes	131	20	18	119	58
Percent 10 Units or More	<1%	0	0	2.5%	0

Camden covers the largest area (Table 3.3). It covers only four-tenths of a square mile more than Pine Hill. The municipalities of Oak Hill and Yellow Bluff both cover under a square mile of area. Camden has both the highest population and housing density. Yellow Bluff has the second highest housing and population densities.

Table 3.3 Population and Housing Density by Municipality

Municipality	Land Area*	Water Area*	Total Area*	Housing Units	Housing Density**	Population	Population Density**
Camden	4.23	0.01	4.24	1,008	237.7	2,261	533.3
Oak Hill	0.56	0	0.56	36	64.3	43	76.8
Pine Apple	3.10	0	3.10	95	30.6	91	29.4
Pine Hill	3.88	0	3.88	527	135.8	1,032	266
Yellow Bluff	0.54	0	0.54	86	159	157	291

*Square miles

**Density per square mile of land

OVERVIEW OF SECTION UPDATE

The *Risk Assessment* portion of the plan was reviewed with the Steering Committee. Each hazard was reviewed and the committee decided to provide more detail on many of the hazards. These changes are outlined below. There were a number of hazards with no changes made due to their nature.

- ✓ Dam Failure: Information regard Miller's Ferry Lock and Dam updated.
- ✓ Hurricanes and Coastal Storms: More information was given regarding probability.
- ✓ Tornadoes: Updated information concerning tornadoes and past occurrences were given.
- ✓ Severe Storms: More detail regarding hail and lightning was given.
- ✓ The Extent of Each Identified Hazard s table was updated.
- ✓ All previous occurrences were updated and moved to Appendix 1.
- ✓ 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 Wilcox County. This process not only used empirical data, but also information given by members of the Wilcox County Hazard Mitigation Steering Committee. Table 4.1 designates which hazards were identified as possibly affecting each jurisdiction. The following section analyzes each hazard to determine if further profiling needed to be done. Profiling includes researching past occurrences, vulnerability, losses, and mitigation strategies.

Table 4.1 Hazard Identification

Hazard	Unincorporated	Camden	Oak Hill	Pine Hill	Yellow Bluff
Avalanche	--	--	--	--	--
Coastal Erosion	--	--	--	--	--
Coastal Storm and Hurricane	X	X	X	X	X
Dam Failure	X	X	X	X	X
Earthquake	--	--	--	--	--
Expansive Soils	X	X	X	X	X
Extreme Heat and Drought	X	X	X	X	X
Flood	X	X	X	X	X
Hailstorm	X	X	X	X	X
Land Subsidence	--	--	--	--	--
Landslide	--	--	--	--	--
Severe Winter Storm	X	X	X	X	X
Tornado	X	X	X	X	X
Tsunami	--	--	--	--	--
Volcano	--	--	--	--	--
Wildfire	X	X	X	X	X
Windstorm	X	X	X	X	X

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. Wilcox County has neither steep slopes nor any regular snowfall; therefore, there is no further profiling needed for this hazard.

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 moving forces in this process. Wilcox County has no risk of coastal erosion; therefore, no further profiling is needed.

Dam Failure

The National Inventory of Dams lists twenty dams as being located in Wilcox County. Of the twenty dams, fifteen are considered low hazard and five are considered significant hazard. 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.

The Miller's Ferry Lock & Dam is operated by the United States Army Corps of Engineers. The NID rates this dam as a significant risk. A significant risk means the dam's 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 Corps of Engineers has an action plan and emergency procedures in place. The last action plan for the dam was updated in November 2011. Additionally, there are four other dams in the county ranked as a significant hazard. These dams are all earthen dams which are associated with livestock and farming operations.

The remaining fifteen dams in the county are all classified as low hazard. These dams are owned by individuals and are all earthen dams.

At this time the Natural Hazards Steering Committee feels that although dam failure is a hazard, no further profiling will be done. This decision was made due to the extensive planning the Corps of Engineers has undertaken at the Miller's Ferry Lock & Dam.

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 of these plates overcome 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.

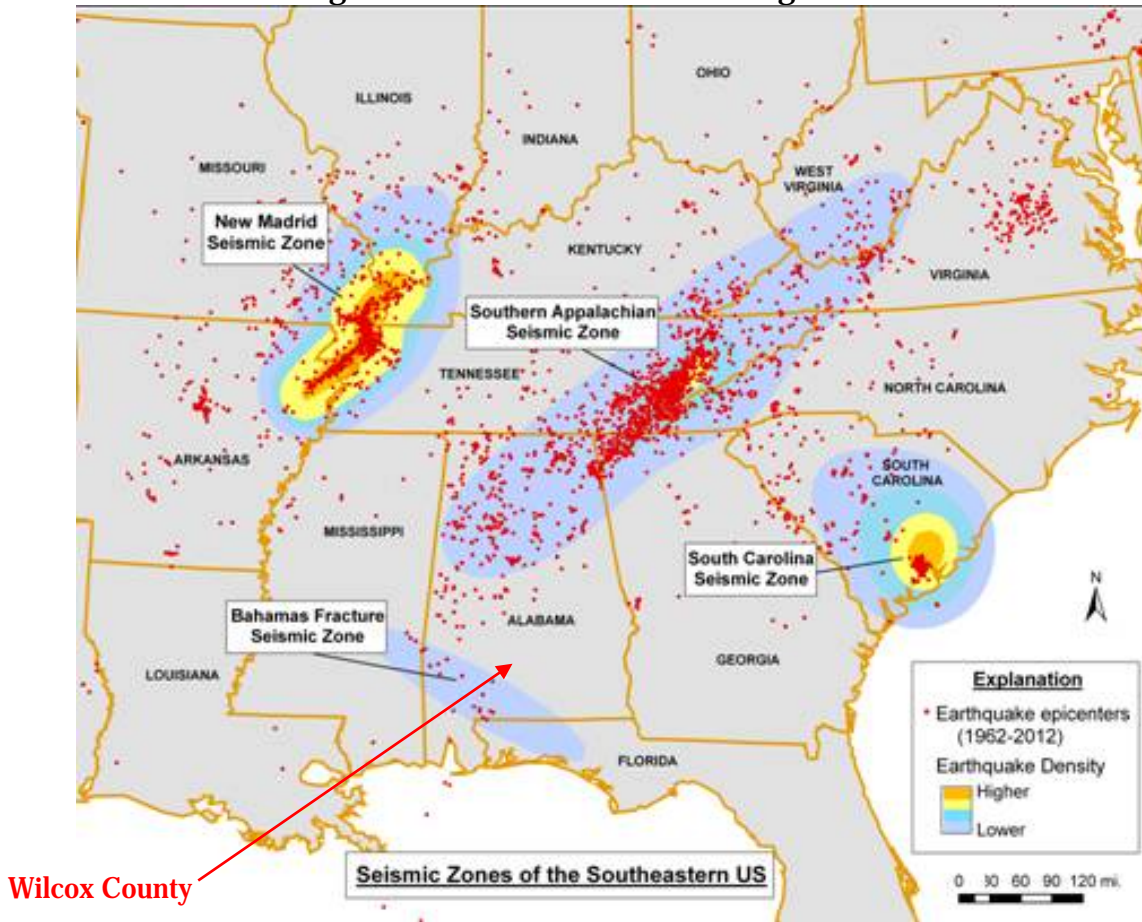
Table 4.2 Mercalli Earthquake Measurement Scale

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.
>124	7.0 and higher	VIII or Higher	X. Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent. XI. Few, if any (masonry) structures remain standing. Bridges destroyed. Rails bent greatly. XII. Damage total. Lines of sight and level are distorted. Objects thrown into the air.

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

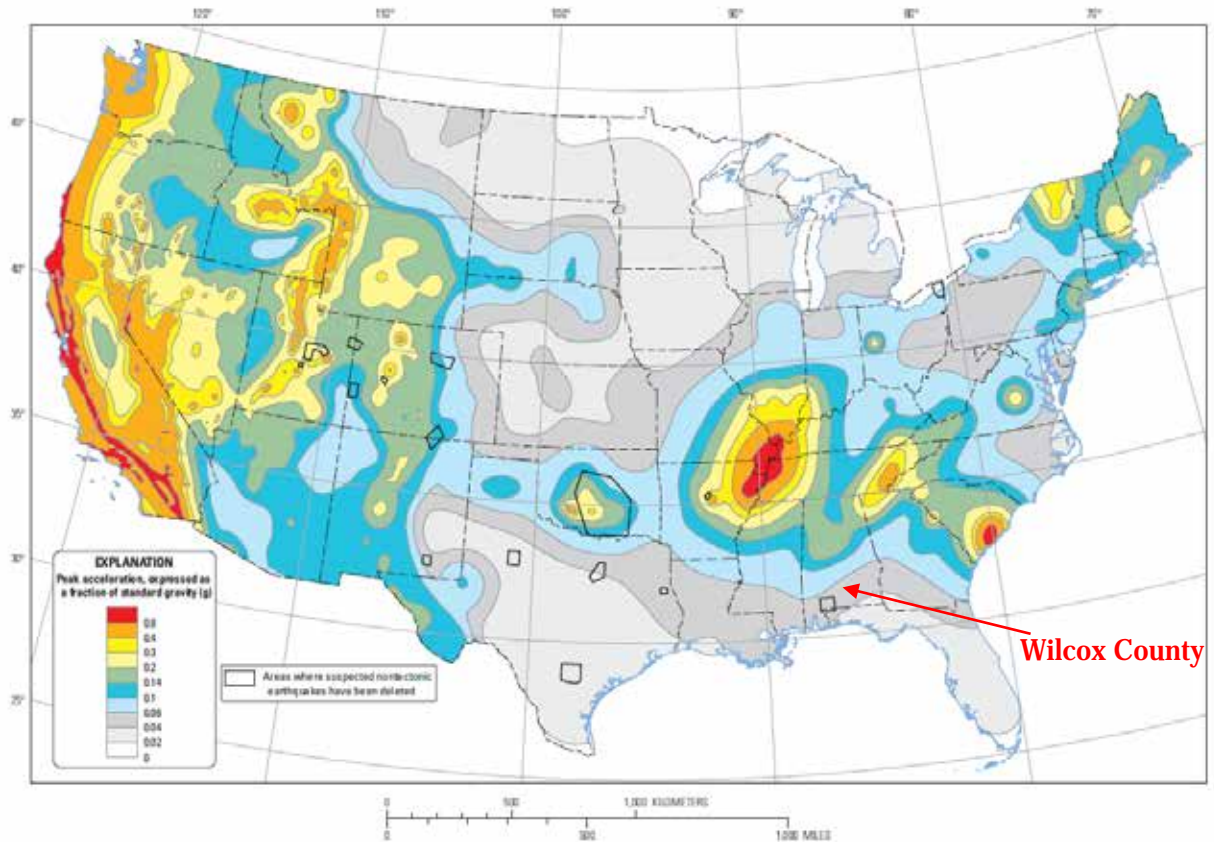
Although many areas of the United States are better known for their susceptibility, earthquakes do occur in Alabama. There are four seismic zones that affect the state; these zones are the New Madrid Seismic Zone, Southern Appalachian Seismic Zone, Bahamas Fracture Seismic Zone, and the South Carolina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

Figure 4.1 Seismic Zones Affecting Alabama



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. Figure 4.2 depicts probabilistic ground motions with a 2 percent probability of exceedance. The peak acceleration value for Wilcox County is 0.06 (Figure 4.2). This value translates into a low risk.

Figure 4.2 Peak Acceleration Values (2014)



Two-percent probability of exceedance in 50 years map of peak ground acceleration

Source:

http://earthquake.usgs.gov/hazards/products/conterminous/2014/2014_pga2pct50yrs.pdf

There are no earthquakes on record in Wilcox County. Based on this information along with no fault zones in the county and a relatively low peak acceleration this hazard is considered a low risk.

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 4.3 shows the general soil areas for the state. Approximately sixty five percent of Wilcox County is covered by soil with shrink/swell potential. These soils are not suited for urban or residential construction. They are however suitable for crop cultivation, pasture land, and woodland.

Figure 4.4 and Table 4.3 give detailed information on Wilcox County soils. The City of Camden consists mainly of Bama-Malbis-Luverne, Mantachie-Kinston-Izagora, and Searcy-Freest soil types. Of these, the Searcy-Freest has shrink-swell potential. Both of the predominant soil types (Luverne-Halso, Oktibbeha-Brantley) in the Town of Oak Hill have shrink swell properties. The Towns of Pine Hill and Pine Apple both have the predominant soil type of the expansive Luverne-Halso. The Town of Yellow Bluff is the only municipality that does not have a shrink-swell soil as the main soil type.

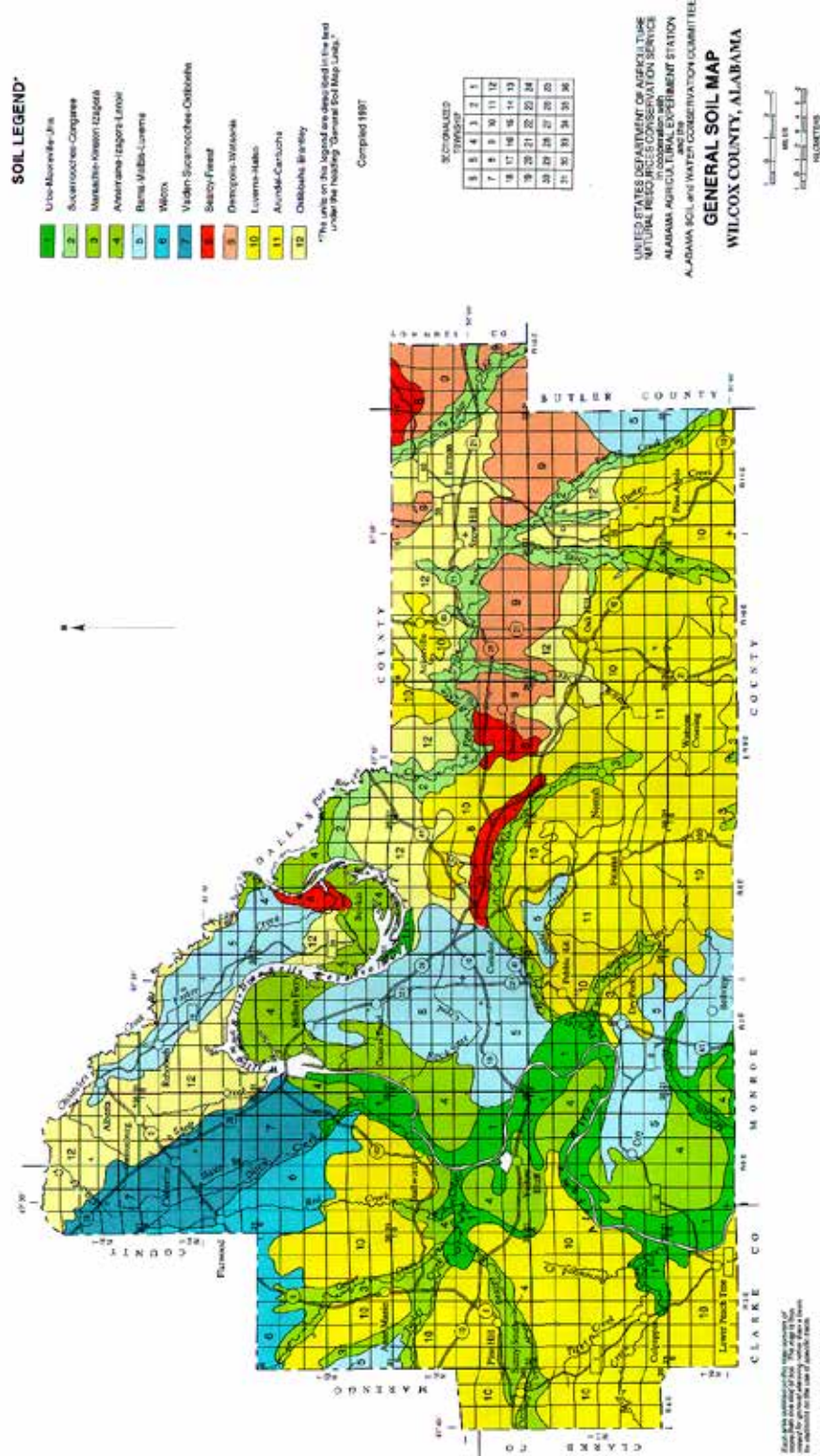
Due to the widespread presence of expansive soils, the committee feels that this is an important hazard; however, the committee has ranked the hazard as a low risk due to the nature of the hazard. No further profiling will be done.

Figure 4.3 General Soils of Alabama



Source: Cartographic Research Lab, University of Alabama

Figure 4.4 Generalized Wilcox County Soil Map



Source: Soil Survey of Wilcox County, Alabama (USDA, NRCS)

Table 4.3 Suitability and Limitations of General Soil Units in Wilcox County

Map unit	Extent of area	Cultivated crops	Pasture and hay	Woodland	Urban uses
	<u>Pct</u>				
1. Urbo-Mooreville-Una-----	5	Poorly suited: wetness, flooding, poor tilth.	Poorly suited: wetness, flooding.	Suited: restricted use of equipment, seedling mortality.	Not suited: wetness, flooding.
2. Sucamoochee-Congaree-----	4	Poorly suited: wetness, flooding, poor tilth.	Suited: wetness, flooding.	Suited: restricted use of equipment, seedling mortality.	Not suited: wetness, flooding.
3. Mantachie-Kinston-Izagora-	4	Poorly suited: wetness, flooding.	Poorly suited: wetness, flooding.	Suited: restricted use of equipment, seedling mortality.	Not suited: wetness, flooding.
4. Annemaine-Izagora-Lenoir--	10	Suited: wetness, flooding.	Well suited-----	Well suited---	Poorly suited: flooding, wetness, moderately slow and slow permeability.
5. Bama-Malbis-Luverne-----	12	Suited: low fertility, hazard of erosion, slope.	Well suited-----	Well suited---	Suited: moderate and moderately slow permeability.
6. Wilcox-----	2	Suited: wetness, poor tilth, hazard of erosion.	Suited: wetness.	Suited: restricted use of equipment, seedling mortality.	Poorly suited: wetness, shrink-swell potential, very slow permeability.
7. Vaiden-Sucamoochee-Oktibbeha-----	3	Suited: wetness, poor tilth, flooding, hazard of erosion.	Suited: wetness.	Suited: restricted use of equipment, seedling mortality.	Poorly suited: wetness, flooding, shrink-swell potential, very slow permeability.
8. Searcy-Freest-----	2	Suited: hazard of erosion, poor tilth.	Well suited-----	Well suited---	Suited: wetness, shrink-swell potential, moderately slow and slow permeability.

Map unit	Extent of area	Cultivated crops	Pasture and hay	Woodland	Urban uses
	Pct				
9. Demopolis-Watscna-----	6	Poorly suited: slope, hazard of erosion, droughtiness, poor tilth.	Poorly suited: slope, droughtiness.	Poorly suited: restricted use of equipment, hazard of erosion, seedling mortality.	Poorly suited: depth to rock, shrink-swell potential, very slow permeability.
10. Luverne-Halso-----	31	Suited: slope, low fertility, hazard of erosion.	Well suited----	Suited: restricted use of equipment, hazard of erosion.	Poorly suited: slope, shrink-swell potential, very slow and moderately slow permeability.
11. Arundel-Cantuche-----	5	Not suited: slope, hazard of erosion.	Poorly suited: slope, droughtiness, hazard of erosion.	Suited: restricted use of equipment, hazard of erosion, seedling mortality.	Poorly suited: depth to rock, shrink-swell potential, slope, very slow permeability.
12. Oktibbeha-Brantley-----	16	Poorly suited: slope, hazard of erosion, poor tilth.	Suited: slope, hazard of erosion.	Suited: restricted use of equipment, hazard of erosion, seedling mortality.	Poorly suited: slope, shrink-swell potential, very slow and moderately slow permeability.

Source: Soil Survey of Wilcox County, Alabama (USDA, NRCS)

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. Drought conditions are prevalent in much of the United States during the summer months.

Drought can be measured numerous ways. Wilcox County used local information along with information provided by the Drought Mitigation Center's Drought Monitor to assess risk. Table 4.4 provides a description of the monitor's classification scheme.

Table 4.4 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

High, subtropical temperatures are common in southern Alabama. 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, Wilcox County has experienced some degree of drought conditions. Due to this information, the Steering Committee feels this hazard is a high priority.

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 (Table 4.5). The heat index is a measure of how hot it feels outside. Humidity is factored into this calculation. In Wilcox County, high temperatures and high humidity occur on a regular basis during the summer months making heat a high risk hazard.

Table 4.5
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

<http://www.nws.noaa.gov/os/heat/index.shtml#heatindex>

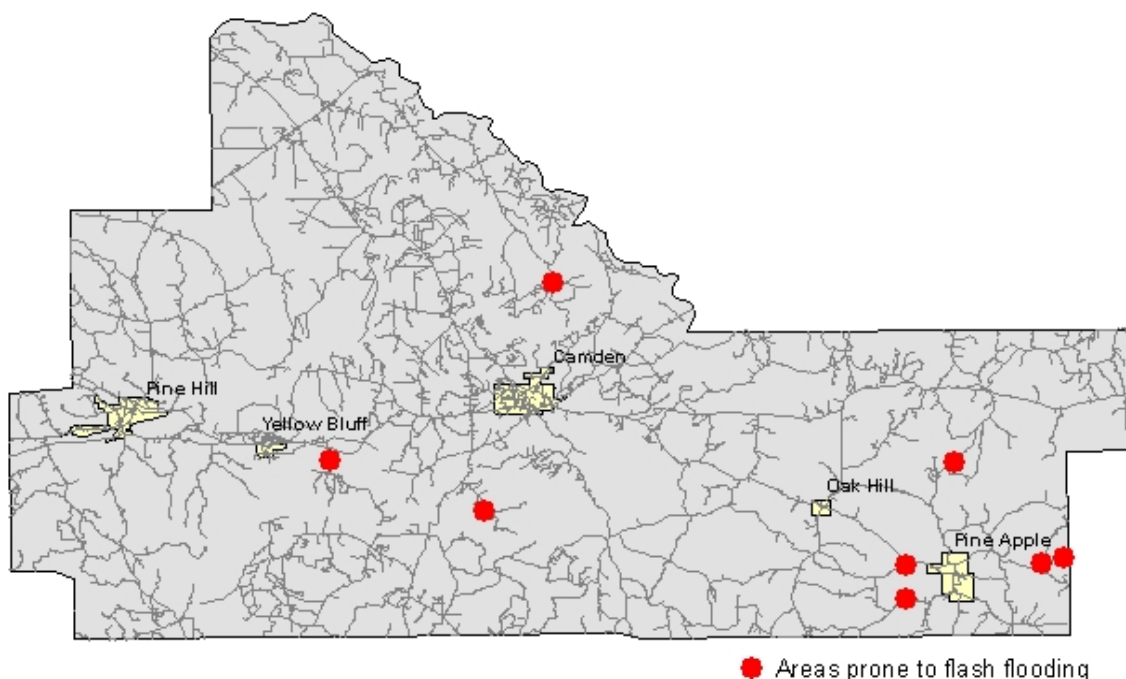
Flood

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. 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; due to this the entire county is at risk for flash flooding.

Figure 4.5 shows areas the county engineer feels are prone to flash flooding. This map was reexamined during this update to ensure no areas needed to be added or deleted. All of the areas identified lied in the unincorporated areas of the county. In the northern part of the County, an area along County Road 29 in the Gee's Bend community was identified. In the western section of the County, an area just west of the Town of Yellow Bluff was identified along with an area near the Pebble Hill community. In the eastern part of the County, a number of areas were identified around the Towns of Oak Hill and Pine Apple.

Figure 4.5 Areas Prone to Flash Flooding



After consulting with the National Flood Insurance Program's Flood Insurance Rate Maps it is apparent that there are significant portions of Wilcox County that lie in the floodplain. These areas are largely uninhabited and undeveloped. The Town of Pine Hill, in particular, has an identified flood boundary. The description of this boundary follows: Indian Creek between Enon Road and Broad Street (State Hwy 5) and around the Southern Railroad tracks. From the intersection of the creek and Hwy 5, the A-Zone extends northward about 2200 feet (about half a mile) on Indian Creek. Where Indian Creek joins Moccasin Creek, A-Zone extends west/northwest about 1200 feet along Moccasin Creek. The western and southern areas of town along cub Creek are A-Zone. The Town of Pine Hill is an active participant in the National Flood Insurance Program (NFIP).

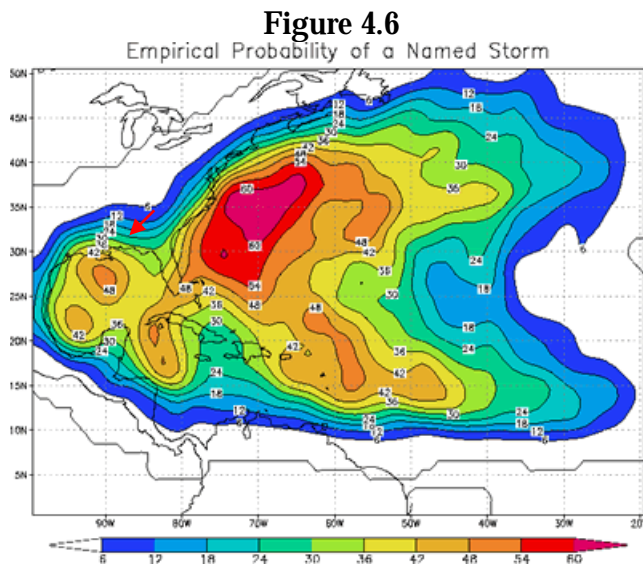
According to information contained in the *Alabama State Hazard Mitigation Plan*, there are 71 flood insurance properties in the county. There have been a total of 16 losses reported in the county, which equal \$53,421. Wilcox County has one repetitive loss property, which is a residence. The total loss on this property is \$12,473.

Wilcox County, Pine Hill, Camden, and Yellow Bluff are active members in the NFIP. The Towns of Oak Hill and Pine Apple are unmapped. There are no critical facilities in the floodplain in Wilcox County.

Based on the information provided here, the county considers flooding a high risk hazard.

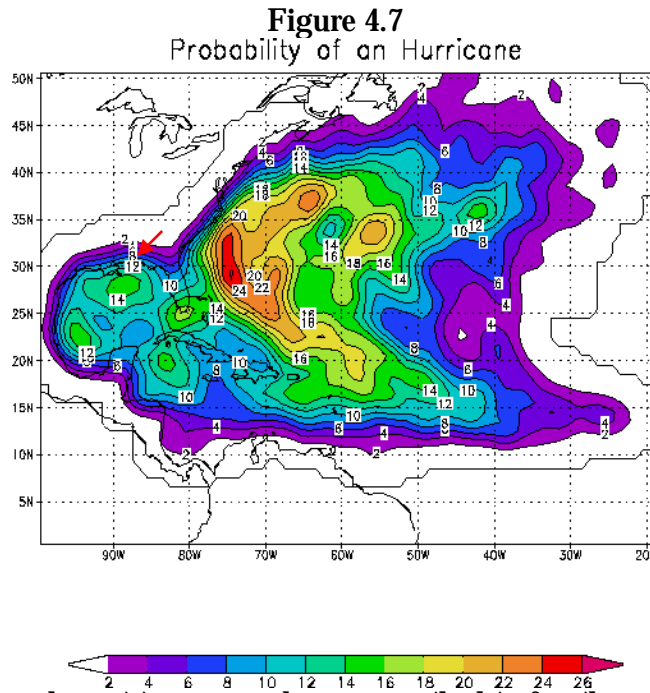
Hurricanes and Coastal Storms

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. Wilcox County lies within the 18% range.



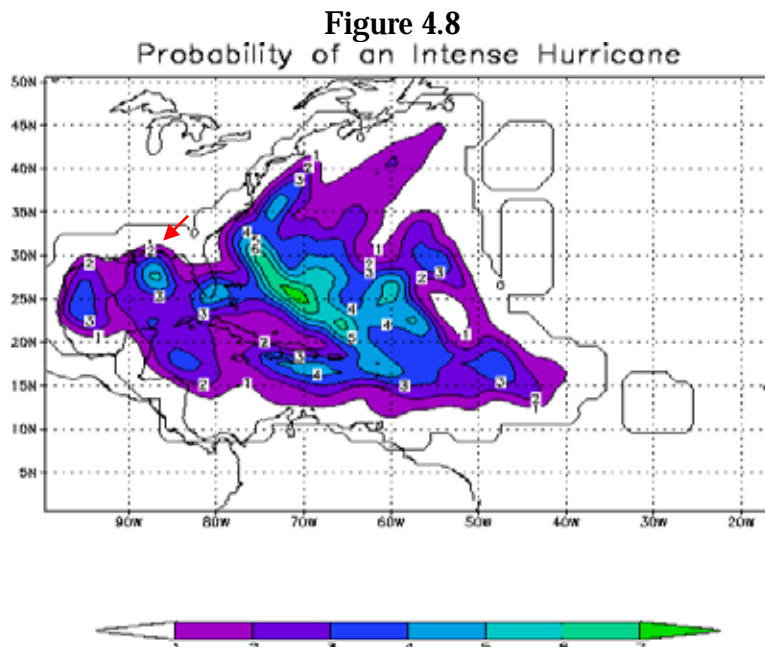
Source: <http://www.aoml.noaa.gov/hrd/tcfaq/G12.html>

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. Wilcox County lies within the 8% range.



Source: http://www.aoml.noaa.gov/hrd/tcfaq/h_prob.gif

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. Wilcox County lies within the 1% range.



Source: http://www.aoml.noaa.gov/hrd/tcfaq/ih_prob.gif

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

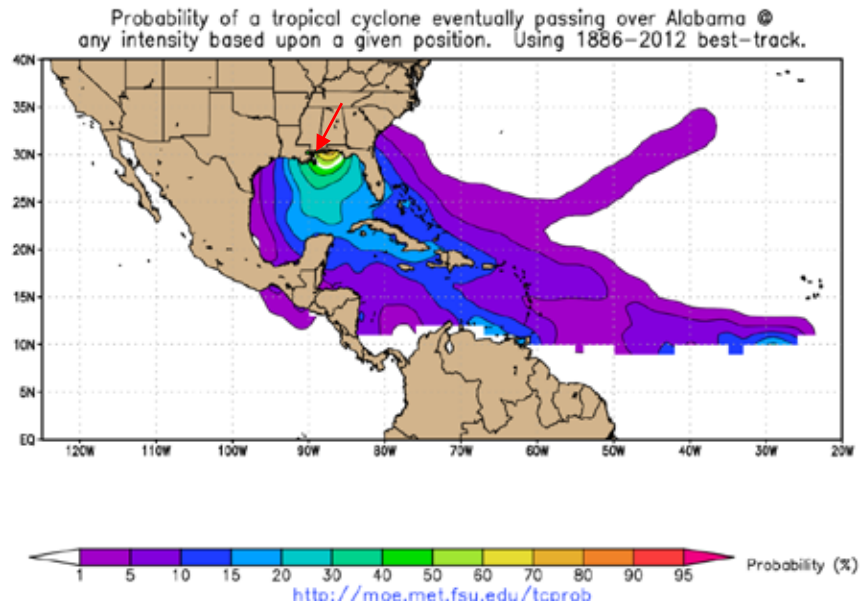


Figure 4.10 shows that the probability of a storm passing over Alabama with winds exceeding 64 knots (74 miles per hour) is between 15% and 20%.

Figure 4.10

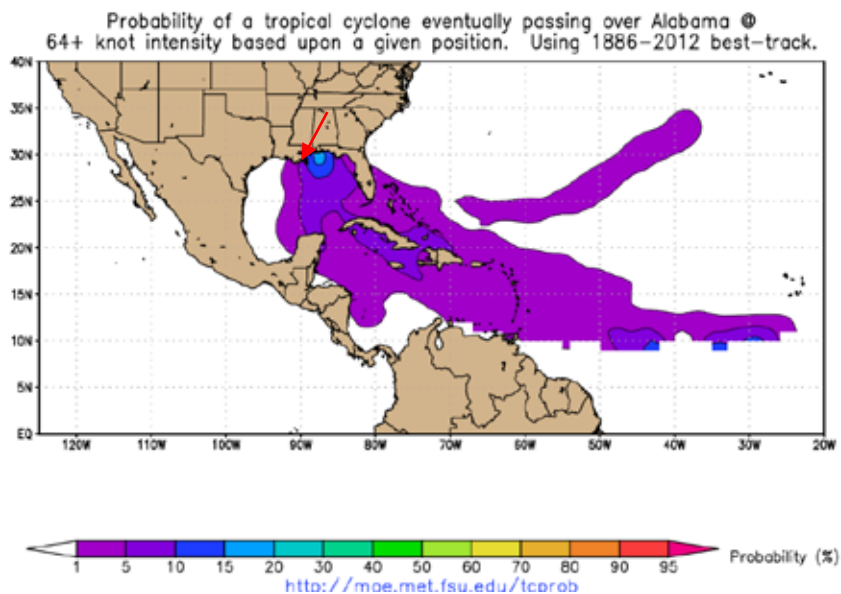
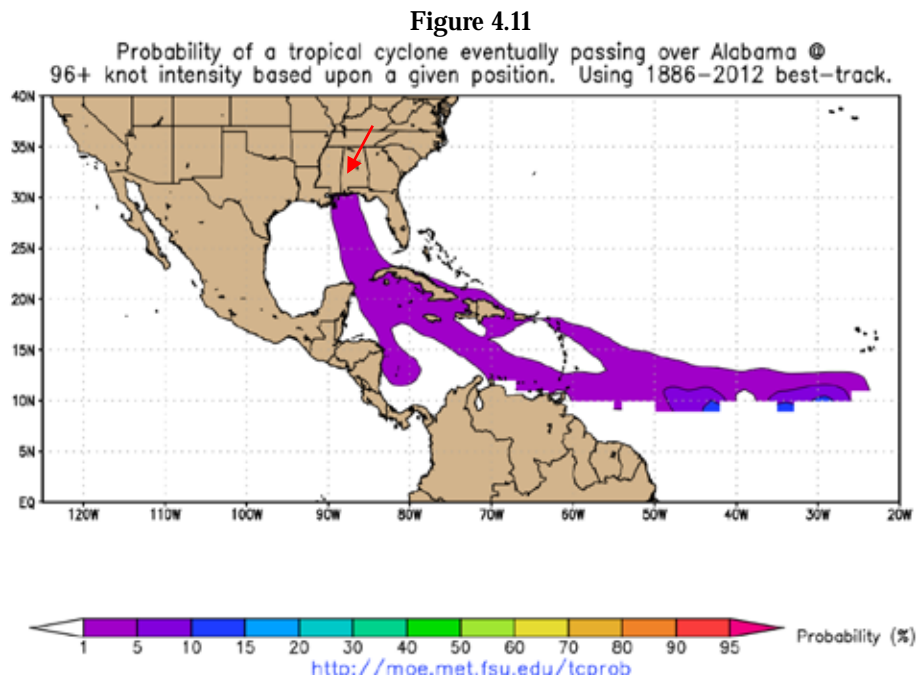


Figure 4.11 shows the probability of a cyclone passing over Alabama with winds greater than 96 knots (110 miles per hour) is between 1% and 5%.



In Wilcox County the greatest threat from hurricanes and tropical storms is damage received from high winds, heavy rains, and spin off tornadoes. The landscape of Wilcox 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 National Climatic Data Center records, five tropical systems have affected the county over the last 50 years.

- Ø In 1995 Hurricane Opal brought high winds to Wilcox County. Opal blew many trees down and left hundreds without power.
- Ø In 2001, Tropical Storm Barry caused damage in Wilcox County. The bulk of the damage was downed trees.
- Ø In September 2004, Hurricane Ivan made landfall in Orange Beach, Alabama as a strong Category 3 hurricane. The storm was still a Category 1 hurricane as it moved through Wilcox County. Property damage, due predominantly to high winds was widespread throughout the County. A significant amount of damage to the County's timber also occurred.
- Ø In 2005 Tropical Storm Arlene brought heavy rains and gusting winds to Wilcox County. Trees were blown down causing damage to many roofs. Flash flooding was widespread, especially in the western portions of the county.
- Ø In August 2005 Wilcox County felt the after effects of Hurricane Katrina as trees and powerlines were damaged.

In Wilcox County, the risk of damage from a hurricane occurring is the same countywide. The county is far enough south that it feels the effects of many of the Gulf Coast hurricanes. Wilcox

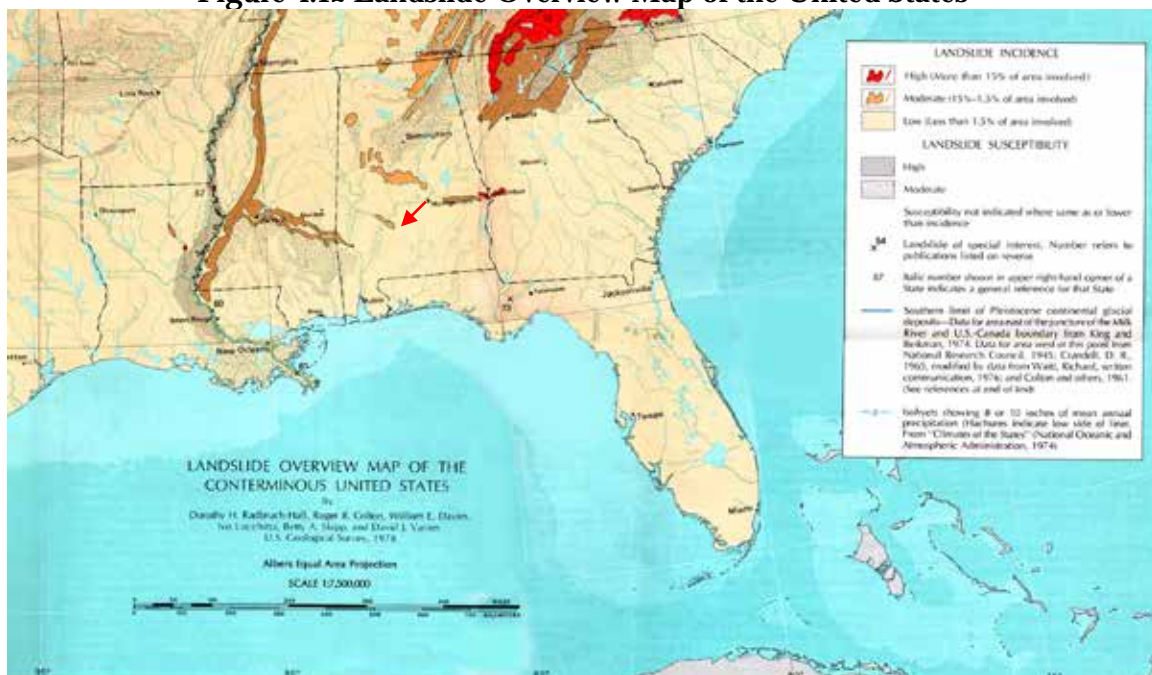
County had never experienced the extent or amount of damage that occurred during Hurricane Ivan. Ivan changed the way the county viewed hazards and more specifically hazard mitigation.

After reviewing the information presented here, the Hazard Mitigation Steering Committee feels that hurricanes are a high 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 4.12 is a landslide map of the conterminous United States illustrating susceptibility to landslides. By examining the map, one can see that Wilcox County is classified as having low landslide incidence meaning that less than 1.5% of the county's area is affected by landslides. It can also be seen that the county has a low susceptibility to landslides.

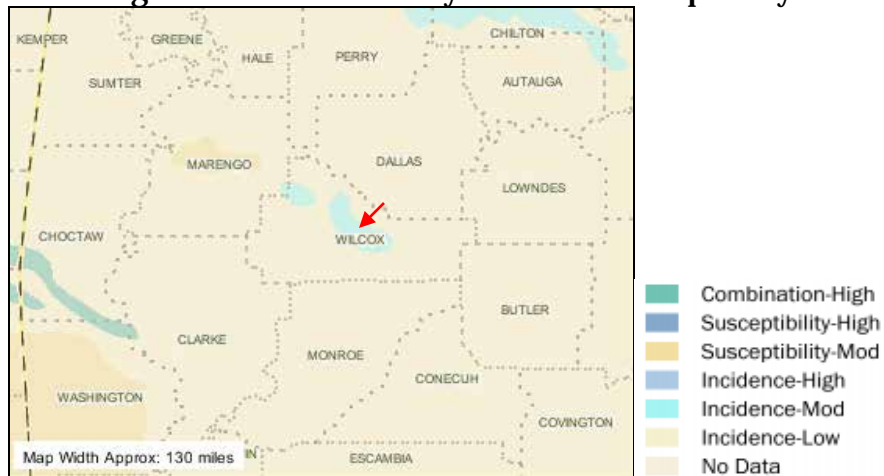
Figure 4.12 Landslide Overview Map of the United States



Source: <http://pubs.usgs.gov/pp/p1183/plate1.html>

Figure 4.13 gives a closer look at Wilcox County. According to this source, there are two main areas of moderate incidence in the county. In the western part of the county there is an area of moderate incidence in the Flatwoods community. In the central portion of the county there is a larger area of moderate incidence that extends north up the State Highway 28 Corridor. The slides in these areas are mainly along roadways and occur during heavy rains. Due to the low number and nature of occurrences, the committee has decided no further profiling will be done.

Figure 4.13 Wilcox County Landslide Susceptibility



Source: www.hazardmaps.gov

Land Subsidence

Land subsidence is the collapse of the ground generally in areas with carbonate bedrock or underlying abandoned mines. Wilcox County has a large area in the northern portion of the county, which is underlain by carbonate rocks (Figure 4.14). The area lies to the north of both Highway 10 and Highway 28. Even though there is a large area of carbonate rocks, there are no active areas of subsidence in Wilcox County (Figure 4.15). The committee has decided that due to no active areas of subsidence this is a low risk hazard, further profiling will not be needed.

Figure 4.14 Outcrops of Carbonate Rocks



Figure 4.15 Areas of Active Sink Holes and Subsidence



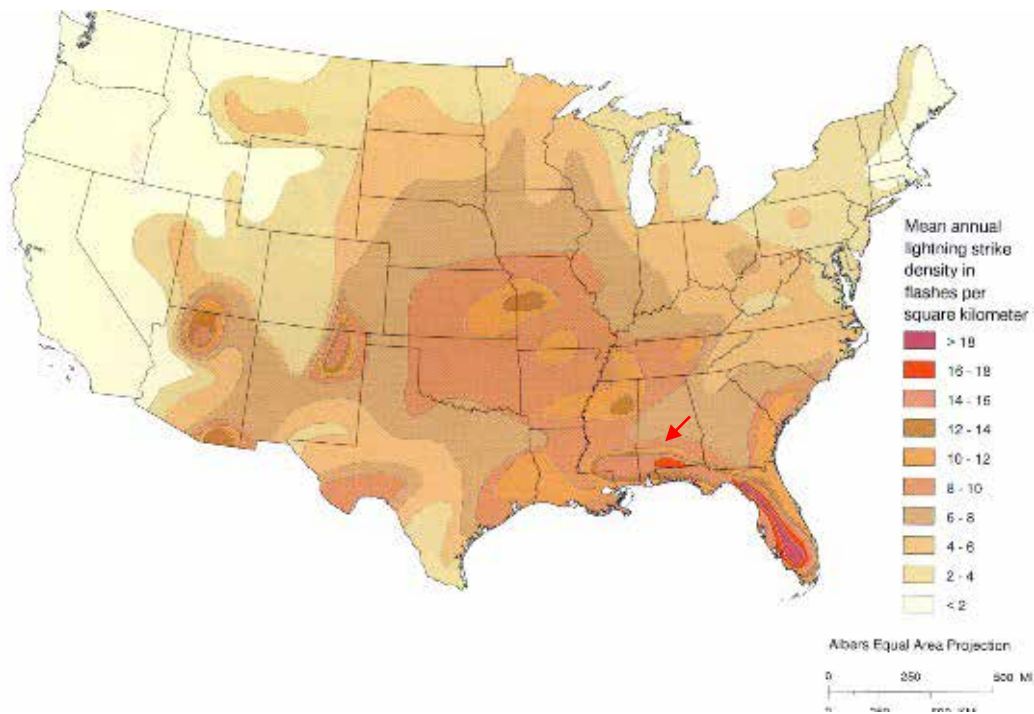
Source: <http://www.gsa.al.state>

Severe Storms (Hail, High Winds, Lightning, Thunderstorms)

“A thunderstorm is a rain shower during which you hear thunder. Since thunder comes from lightning, all thunderstorms have lightning (<http://www.nssl.noaa.gov/>).” Thunderstorms, lightning, hail, and high winds will be grouped into the category of severe storms. These type of storm events occur often especially during the spring and summer in Wilcox County.

Figure 4.16 illustrates the mean annual lightning strike density for the United States. Wilcox County lies within the 8-10 and 10-12 annual strikes per square kilometer.

Figure 4.16 Mean Average Lightning Strikes per Square Kilometer



Source: <http://www.nhoem.state.nh.us/mitigation/fig%203-17.htm>

Figure 4.17 shows the worldwide distribution of lightning strikes. Wilcox County lies within the 20 flashes/km²/year range, which is a significant figure.

Figure 4. 17 Distribution of Worldwide Lightning Strikes
Units: flashes/km²/yr.

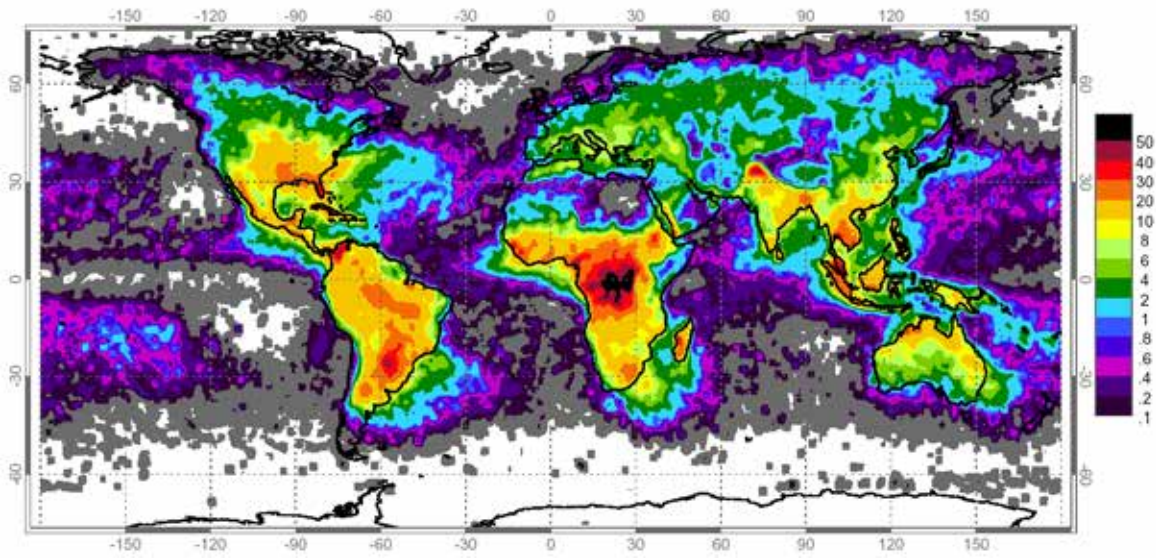
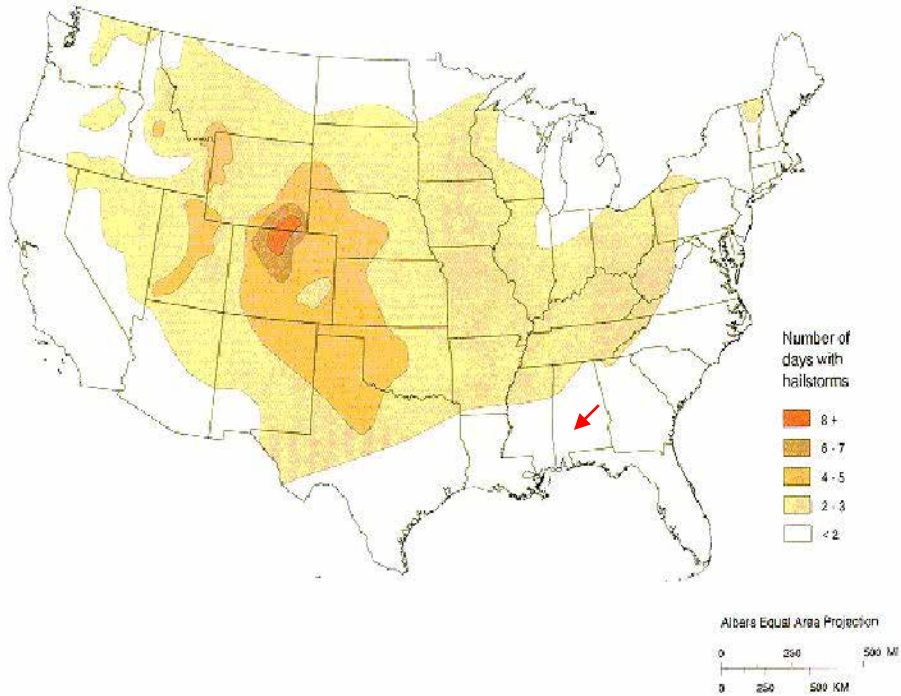


Image credit: NSSTC Lightning Team.

Figure 4.18 illustrates the average number of days per year with hailstorms. Wilcox County lies in the less than two days a year with hailstorm range. Tables 4.6 and 4.7 provide information on the Torro Hail Intensity Scale. In the past Wilcox County has experienced hail up to H5 or golfball size.

Figure 4.18 Number of Days with Hailstorms



Source: <http://www.nhoem.state.nh.us/mitigation/fig%203-17.htm>

Table 4.6

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: <http://www.torro.org.uk/site/hscale.php>

Table 4.7

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: <http://www.torro.org.uk/site/hscale.php>

All of the events associated with severe storms have occurred historically in Wilcox County. These events have resulted not only in property and crop damage, but also injuries have been reported on numerous occasions. These events are expected to occur in the future; therefore, the committee feels this is a high risk hazard.

Snow and Ice (Severe Winter Storms)

Severe winter storms are associated with strong winds, extreme cold, ice, and snow. These storms are uncommon in Wilcox 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 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 feels the county is at a low risk of this hazard due to the probability of occurrence.

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.)” The occurrence of tornadoes cannot be predicted, but past occurrences and basic weather patterns can be used to identify areas more susceptible.

Table 4.8 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 4.8 Fujita- Pearson Tornado Scale

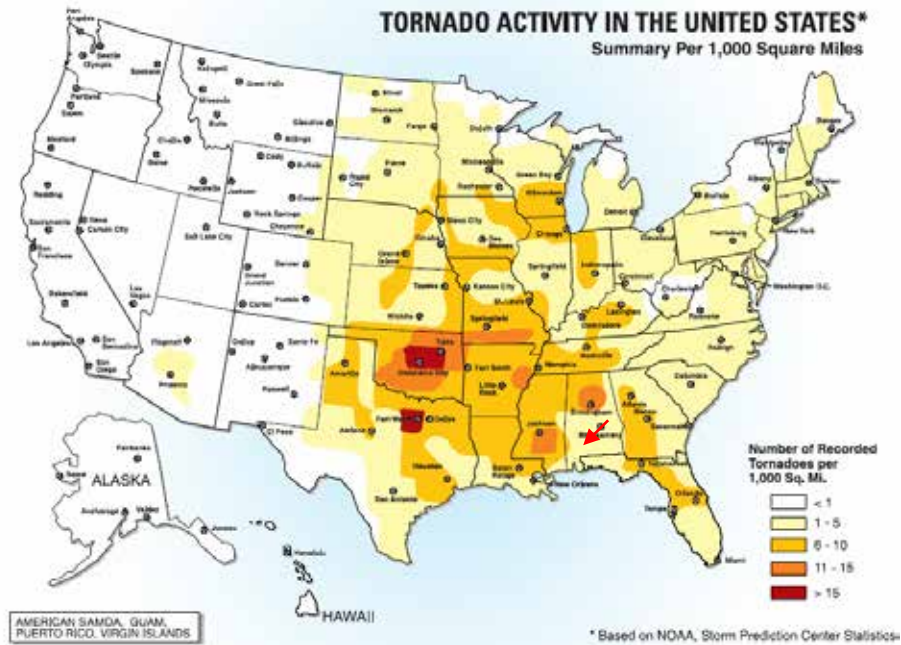
FUJITA SCALE			DERIVED EF SCALE		OPERATIONAL EF SCALE	
F Number	Fastest 1/4-mile (mph)	3 Second Gust (mph)	EF Number	3 Second Gust (mph)	EF Number	3 Second Gust (mph)
0	40-72	45-78	0	65-85	0	65-85
1	73-112	79-117	1	86-109	1	86-110
2	113-157	118-161	2	110-137	2	111-135
3	158-207	162-209	3	138-167	3	136-165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

Source: <http://www.spc.noaa.gov/faq/tornado/ef-scale.html>

Figure 4.19 shows tornado activity per 1,000 square miles, the entire county falls in the one to five tornados per square mile range. The United States Wind Zone map (Figure 4.20) shows how intense and frequent strong winds occur across the United States. All of Wilcox County lies in Wind

Zone III, which has design wind speed of 200 miles per hour. Locations within Zone III have experienced significant tornado events.

Figure 4.19 Tornadoes per 1,000 Square Miles



Source: <http://www.fema.gov/pdf/library/2ismsec1.pdf>

Figure 4.20 Wind Zones in the United States

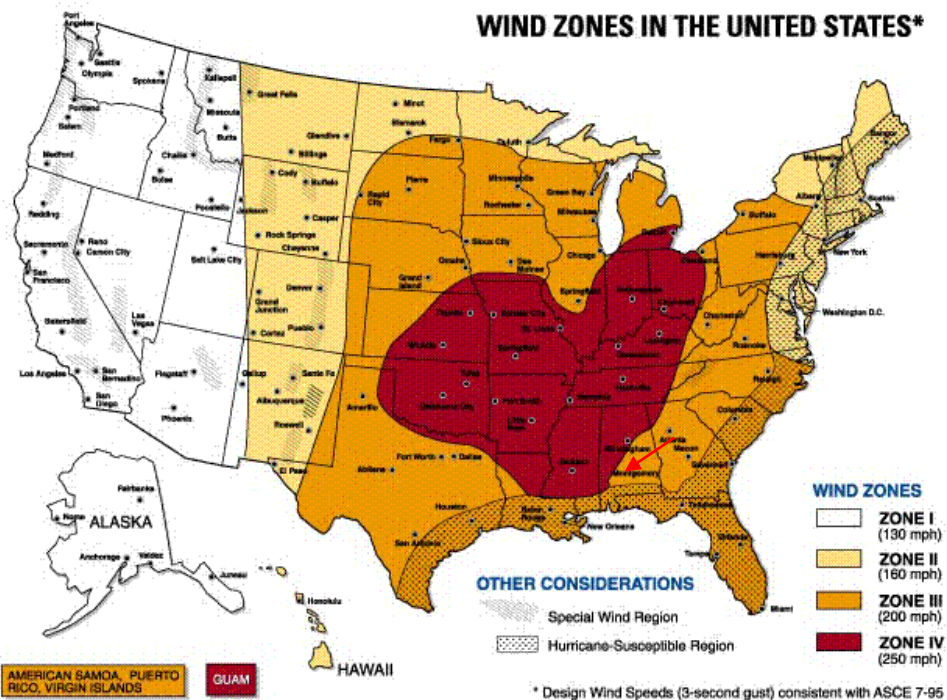


Figure I.2 Wind zones in the United States

Source: <http://www.fema.gov/graphics/fima/tsfsm01.gif>

Wilcox County has thirteen tornado touchdowns on record. Details of the most recent events are given below:

- On March 1, 2007 an EF4 touched down in Miller's Ferry. One resident was killed and two were injured. Around 40 homes (four of these were slab homes) were damaged or destroyed along Sand Island Drive with some of the debris scattered up to two miles downstream. The tornado continued quickly to the northeast through sparsely populated areas.
- On December 25, 2012 an EF2 tornado moved into southwest Wilcox County from Clarke County. The tornado uprooted trees along the way before dissipating 12 miles southwest of Camden.

Due to the number and severity of past occurrences, the Steering Committee has elected to classify tornadoes as a high risk 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. Wilcox County is not located in an area at risk for tsunamis; therefore no further hazard profiling will be done.

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; therefore no further profiling will be done.

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.

Wilcox County has a history of wildfires. The State of Alabama provides wildfire data for the period of 1997-2012. There have been 574 wildfires in the county during this fifteen year period. These fires burned a total of 3,660 acres.

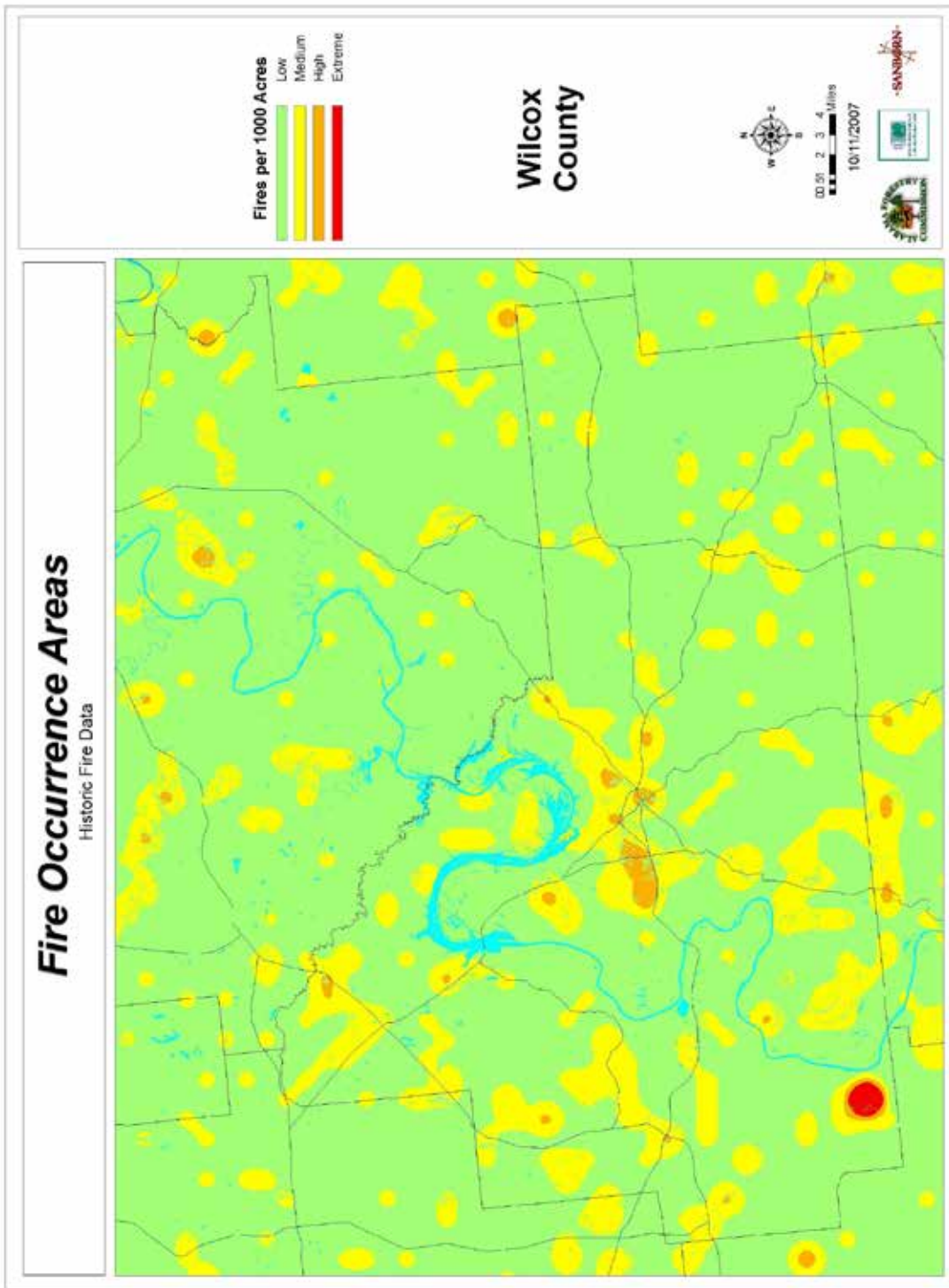
The Alabama State Forestry Commission has produced a series of maps for each county detailing fire related statistics. These maps are provided as Figures 4.21-4.23. Figure 4.21 shows data relating to the occurrence of fires per 1,000 acres. One can see that the only area that is ranked in the extreme category is the Lower Peachtree Community located in the southwest corner of the County. There are also a significant amount of areas classified as having a high number of occurrences. These areas are Alberta in the northern section of the county, Prairie and Canton Bend along State Route 28, and areas in and surrounding the City of Camden. There are also many areas in the

county classified as having a medium number of occurrences. Unincorporated areas along with portions of Camden, Pine Hill, Yellow Bluff, Pine Apple, and Oak Hill are all in the medium category. It is obvious that based on past occurrences, the county and all municipalities are vulnerable to wildfires.

Figure 4.22 depicts the risk of a wildfire on any given acre in the county. There are only two areas in the county classified with extreme risk. These areas are in the Lower Peachtree Community and two smaller areas in the Possum Bend Community. It is interesting to note that the same area in Lower Peachtree was classified as having an extreme number of occurrences also. There are many areas in the unincorporated areas of the county classified as having a medium or a high risk of wildfire. There are areas within Pine Hill, Oak, Hill, and Camden classified as having high risk. All municipalities have areas classified as having a medium risk. It is apparent based on risk by acre that the entire county has some degree of risk.

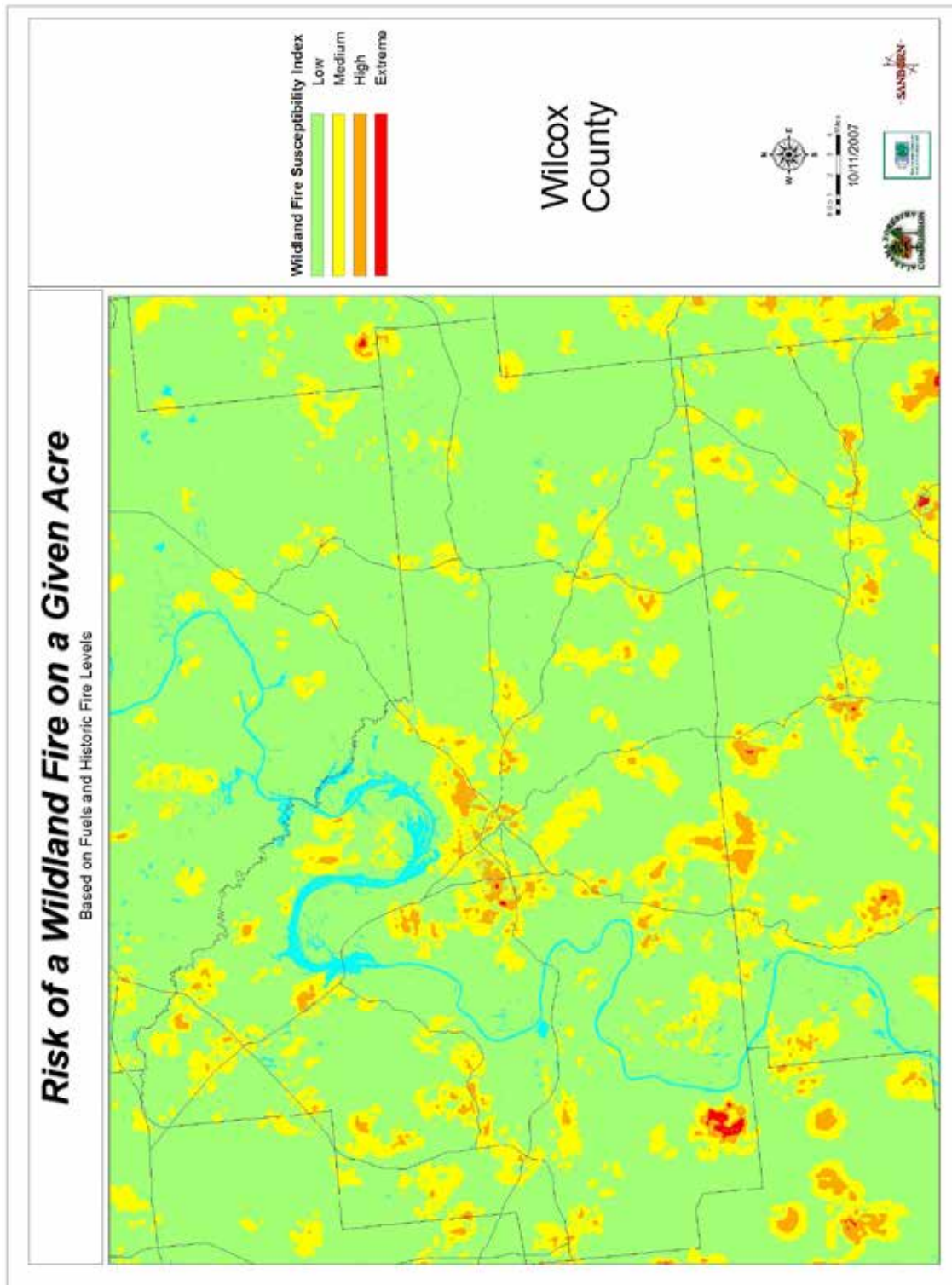
Figure 4.23 shows wildfire risk by community. There are no communities at critical or high risk in Wilcox County. The City of Camden is at moderate risk, while all other municipalities are at low risk. Based on the information from the Alabama Forestry Commission, Wilcox County and all municipalities have some degree of risk. Based on this information, the committee has elected to do a profile on wildfires.

Figure 4.21



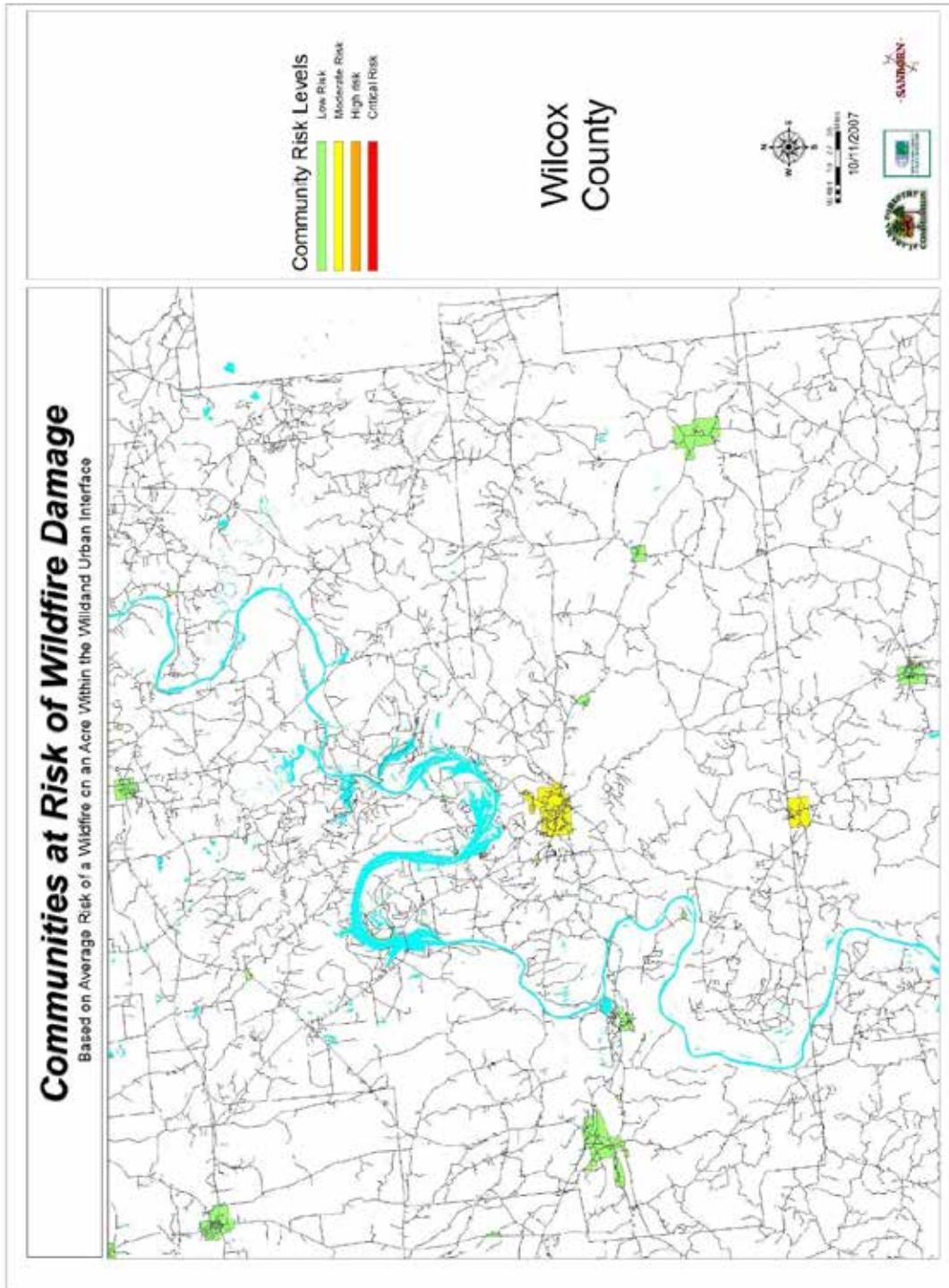
Source: Alabama Forestry Commission

Figure 4.22



Source: Alabama Forestry Commission

Figure 4.23



Source: Alabama Forestry Commission

Table 4.9 Hazard Summary for Wilcox County

Hazard	Where Identified	How Identified	Why Identified	Why Not Identified
Avalanche				*Location
Coastal Erosion				*Location
Dam Failure	Miller's Ferry Lock & Dam is a significant risk dam	*National Inventory of Dams * Local Leaders		* Corp of Engineers responsible for dam safety procedures at Miller's Ferry
Earthquake				*Low Seismic Risk
Expansive Soils	Some Unincorporated areas; sections of Camden, Pine Hill, Oak Hill, & Pine Apple	*Review of Wilcox County soil survey		*nature of hazard
Extreme Heat & Drought	Entire County and all jurisdictions	*Local input *FEMA Extreme Heat & Drought Backgrounder	*Local concern *occurrences over past four years	
Flood	*unincorporated areas along Alabama River *areas in the Town of Pine Hill	*FIRM maps *Local officials	*Pine Hill flood zones *Flash flooding: local concern, probability of occurrence *River flooding: along Alabama River	
Hurricane	*entire county including all jurisdictions	*Past occurrences *Local input *Risk assessment	*past effects and damage	

Landslide	*moderate incidence in Flatwoods & Highway 28 Corridor	*Geologic Survey of Alabama		*No reported incidences other than minor slides along roads during heavy rains
Land Subsidence	*carbonate outcrops in northern portion of the county – north of Highways 10 & 28	*Geologic Survey of Alabama		* No active areas of subsidence
Severe Storms (hail, high winds, lightning, & thunderstorms)	*Entire County and all jurisdictions	*Local input *Past occurrences	*Frequency *Local concern*past damages	
Snow and Ice (Severe Winter Storms)	*Entire County and all jurisdictions	*Local input		*low probability of occurrence
Tornado	*Entire County and all jurisdictions	*Local input *Past occurrences *Risk assessment	*Frequency *Local concern *Deadliness *Wind zone designation	
Tsunami				*Location
Volcano				*Location
Wildfire	*Entire County and all jurisdictions	*Local input *Risk assessment by Alabama Forestry Commission	*Amount of forested land *Risk Factors	

B. AREA AFFECTED BY EACH HAZARD

Table 4.10 illustrates the geographic areas susceptible to each hazard identified in the risk assessment. Although all 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. Areas also may have different susceptibility to flooding. Areas of lower elevation or poor drainage are more susceptible than higher better-drained areas.

Tables 4.13-4.45 give 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 4.10 Locations Susceptible to Each Identified Hazard

Hazard	Unincorporated	Camden	Oak Hill	Pine Apple	Pine Hill	Yellow Bluff
Avalanche						
Coastal Erosion						
Dam Failure	X					
Earthquakes						
Expansive Soils	X	X	X	X	X	
Extreme Heat and Drought*	X	X	X	X	X	X
Flood (including flash)*	X	X	X	X	X	X
Coastal Storm and Hurricane*	X	X	X	X	X	X
Landslides	X	X				
Land Subsidence						
Severe Storms (Hail, High Winds, Lightning, Thunderstorms)*	X	X	X	X	X	X
Snow and Ice	X	X	X	X	X	X
Tornado*	X	X	X	X	X	X
Tsunamis						
Volcanoes						
Wildfire*	X	X	X	X	X	X

*HAZARDS THAT WILL BE PROFILED

C. EXTENT AND IMPACT OF EACH IDENTIFIED HAZARD

The extent and impact of each hazard is addressed in Table 4.11.

Table 4.11 Extent of Identified Hazards

Hazard	Unincorporated	Camden	Oak Hill	Pine Apple	Pine Hill	Yellow Bluff
Avalanche						
Coastal Erosion						
Dam Failure	Miller’s Ferry Dam failure would cause extensive damage, loss of life, crop loss, environmental damages	Flooding in pastureland and timberland, crop loss, environmental damages	Flooding in pastureland and timberland, crop loss, environmental damages	Flooding in pastureland and timberland, crop loss, environmental damages	Flooding in pastureland and timberland, crop loss, environmental damages	Flooding in pastureland and timberland, crop loss, environmental damages
Earthquakes						
Expansive Soils	Structural Damage to structures built on soil	Structural Damage to structures built on soil	Structural Damage to structures built on soil	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	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 (including flash)*	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	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
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	Category 5 hurricane leading to catastrophic damage. Sustained winds greater than 155mph. Heavy flood and wind damage, loss of life, injuries, temporary loss of	Category 5 hurricane leading to catastrophic damage. Sustained winds greater than 155mph. Heavy flood and wind damage, loss of life, injuries, temporary loss of	Category 5 hurricane leading to catastrophic damage. Sustained winds greater than 155mph. Heavy flood and wind damage, loss of life, injuries, temporary loss of	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	utilities, timber loss	utilities, timber loss	utilities, timber loss	utilities, timber loss
Landslides						
Land Subsidence						
Severe Storms (Hail, High Winds, Lightning, 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	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
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	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	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 883 square miles of land charred by wildfire leading to property loss, timber destruction, revenue losses, deaths, and injury.	All 883 square miles of land charred by wildfire leading to property loss, timber destruction, revenue losses, deaths, and injury.	All 883 square miles of land charred by wildfire leading to property loss, timber destruction, revenue losses, deaths, and injury.	All 883 square miles of land charred by wildfire leading to property loss, timber destruction, revenue losses, deaths, and injury.	All 883 square miles of land charred by wildfire leading to property loss, timber destruction, revenue losses, deaths, and injury.	All 883 square miles of land charred by wildfire leading to property loss, timber destruction, revenue losses, deaths, and injury.

*HAZARDS THAT WILL BE PROFILED

D. PREVIOUS OCCURRENCES

There are previous occurrences on record for each type of hazard identified in this risk assessment. The Wilcox County EMA does not keep records of storm events. The best available data was taken from the National Weather Service and is included as Appendix 1. Once a total review of all National Weather Service records was completed, it was evident that all occurrence numbers were low (Table 4.12). The lack of historical records of storm events has not been addressed due to staffing at the EMA, but will be addressed in the mitigation strategies section of this plan.

Table 4.12 illustrates that the number of reported occurrences vary greatly between jurisdictions. By far the unincorporated areas have more incidences in every category, but this is of course due to these areas encompassing a greater area.

Table 4.12 Past Occurrences by Jurisdiction for Profiled Hazards

Hazard	Unincorporated/ Countywide	Camden	Oak Hill	Pine Apple	Pine Hill	Yellow Bluff
Extreme Heat and Drought	2	2	2	2	2	2
Flood (including flash)	7	2	2	2	2	2
Coastal Storm and Hurricane	8	5	5	5	5	5
Severe Storms (Hail, High Winds, Lightning, Thunderstorms)	86	26	0	2	11	2
Tornado	13	4	1	0	0	0
Wildfire	N/A	N/A	N/A	N/A	N/A	N/A

F. PROBABILITY OF FUTURE OCCURENCES

Probability can be calculated by dividing the number of occurrences by the time frame in which they occurred. Expected Damages can be calculated by dividing the total historic damages by the number of occurrences. Due to the insufficient amount of past occurrence data available, Wilcox County has elected not to use these methods. The county has decided to provide alternate probabilities that were determined by local area knowledge and historical occurrences.

Table 4.46 Probabilities by Type of Event (Countywide)

Hazard	Probability of Occurrence (per year)	Average Damages (per event)
Avalanche	-	-
Coastal Erosion	-	-
Dam Failure	>5%	\$50,000
Earthquakes	-	-
Expansive Soils	-	-
Extreme Heat and Drought	75%	\$2,500
Flood (Including flash)	60%	\$5,000
Coastal Storm and Hurricane	10%	\$1,000,000
Landslides	0	-
Land Subsidence	0	-
Severe Storms (Hail, High Winds, Lightning, Thunderstorms)	100%	\$5,000
Snow and Ice	10%	\$5,000
Tornado	30%	\$250,000
Tsunamis	-	-
Volcanoes	-	-
Wildfire	100%	\$7,500

OVERVIEW OF SECTION UPDATE

Changes to this section are outlined below.

- ✓ Updated population number were provided.
- ✓ The Identification of Socially Vulnerable Populations section was redone using the most recent American Community Survey data. Descriptions were both community and census tract based.
- ✓ Overview of County Building Stock numbers were updated with HAZUS-MH
- ✓ Total Exposure by Census Tract numbers were updated with HAZUS-MH.
- ✓ Each jurisdiction reviewed their critical facilities and provided information when available
- ✓ Critical Facilities by Hazard table was updated.
- ✓ Analyzing Development Trends section was updated.

V. ASSESSING VULNERABILITY

The Wilcox County Hazard Steering Committee reviewed the risk assessment analysis. Upon review, the committee felt the following hazards posed the greatest threats: extreme heat and drought, floods (including flash floods), hurricanes, severe storms (hail, high winds, lightning, and thunderstorms), tornadoes, and wildfire.

A. OVERVIEW OF HAZARD VULNERABILITY AND IMPACT

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 and emergency rooms 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 11,706 residents of Wilcox County are at risk to the effects of extreme heat and drought.

Floods (including 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.

The Wilcox County Engineer identified areas within the county where flash flooding is a problem. These areas were Gee's Bend, Pebble Hill, areas just west of the Town of Yellow Bluff, and areas outlying the towns of Oak Hill and Pine Apple. This does not mean these are the only areas in the county where flash flooding occurs, but these areas are identified as experiencing flash flooding on a regular basis. It is estimated that around 200 residents of the county are affected in the frequently flooded areas.

With regards to river flooding, there are many areas in Wilcox County in the flood plain. Areas along the Alabama River are designated as flood plain as well as areas along some creeks and streams. The majority of the structures in the flood plains are hunting camps or vacation homes. In the Town of Pine Hill, the NFIP has identified a flood boundary also. It is estimated that fewer than 25 residents have permanent homes in the floodplain. There are no critical facilities in Wilcox County located within the flood plain. There is one repetitive loss property in Wilcox County.

Hurricanes

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>). Over the past fifty years Wilcox County has been affected by hurricanes. Severe storms, tornadoes, high winds, hail, torrential rains, river flooding, and flash flooding are all associated with hurricanes. Potentially all of Wilcox 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. Wilcox 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. 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 the same risk.

Severe Storms

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, Wilcox County has experienced these storms every year with varying frequency and intensity. Winds of 60 knots have been recorded during these events within the county. Hailstorms as large as 1.75 inches have occurred. Generally severe storms follow no common track or an exact pathway; therefore, the whole county is at risk.

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 Wilcox 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 tornadoes strength. Injury and death can occur as a result of even the weakest tornado. In Wilcox County, historically there have been F0, F1, and F2 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 post-traumatic syndrome, depression, anxiety, and grief for lost loved ones. Also another concern in rural areas, such as Wilcox 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. As reviewed in the County Profile section of this report, the area that is the most densely populated is Camden. The occurrence of dense housing also increases the probability of not only death or injury, but also property damage. Camden also has the highest housing density 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 Wilcox County there are high percentages of mobile homes in the northern and southeast portions of the county.

Wildfire

Due to the large areas of forest-covered land in Wilcox County, wildfires are a real threat to all residents of Wilcox County. These fires can ignite and spread quickly, charring everything in their path. In Wilcox 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. Smoke from these fires may lead to limited visibility along roadways increasing the probability of accidents. In addition to these effects,

wildfires in Wilcox County threaten the economic livelihood of the county. The economy has a large timber component that could be damaged by wildfire.

Although the entire county is at risk of wildfires, the Alabama Forestry Commission has identified areas at a higher risk of the hazard. There are two areas designated as having extreme risk, one in Lower Peachtree and two small areas in Possum Bend. There are also areas in Camden, Oak Hill, and Pine Hill classified as having a high risk. All municipalities and large portions of the county are at medium risk.

B. OVERVIEW OF AFFECTED POPULATIONS BY HAZARD

The population affected by natural disasters varies by hazard type. Table 5.1 gives a broad overview of the estimated populations that are at risk from each designated hazard. These estimates include the entire populations, but information given in the previous section gives more detailed estimates for flooding.

Table 5.1 Population Affected by Profiled Hazards

HAZARD	UNINCORPORATED	CAMDEN	OAK HILL	PINE APPLE	PINE HILL	YELLOW BLUFF
EXTREME HEAT AND DROUGHT	8,122	2,261	43	91	1,032	157
FLOODS (INCLUDING FLASH FLOODS)	8,122	2,261	43	91	1,032	157
COASTAL STORM AND HURRICANE	8,122	2,261	43	91	1,032	157
SEVERE STORMS (HAIL, HIGH WINDS, LIGHTNING, THUNDERSTORMS)	8,122	2,261	43	91	1,032	157
TORNADO	8,122	2,261	43	91	1,032	157
WILDFIRE	8,122	2,261	43	91	1,032	157

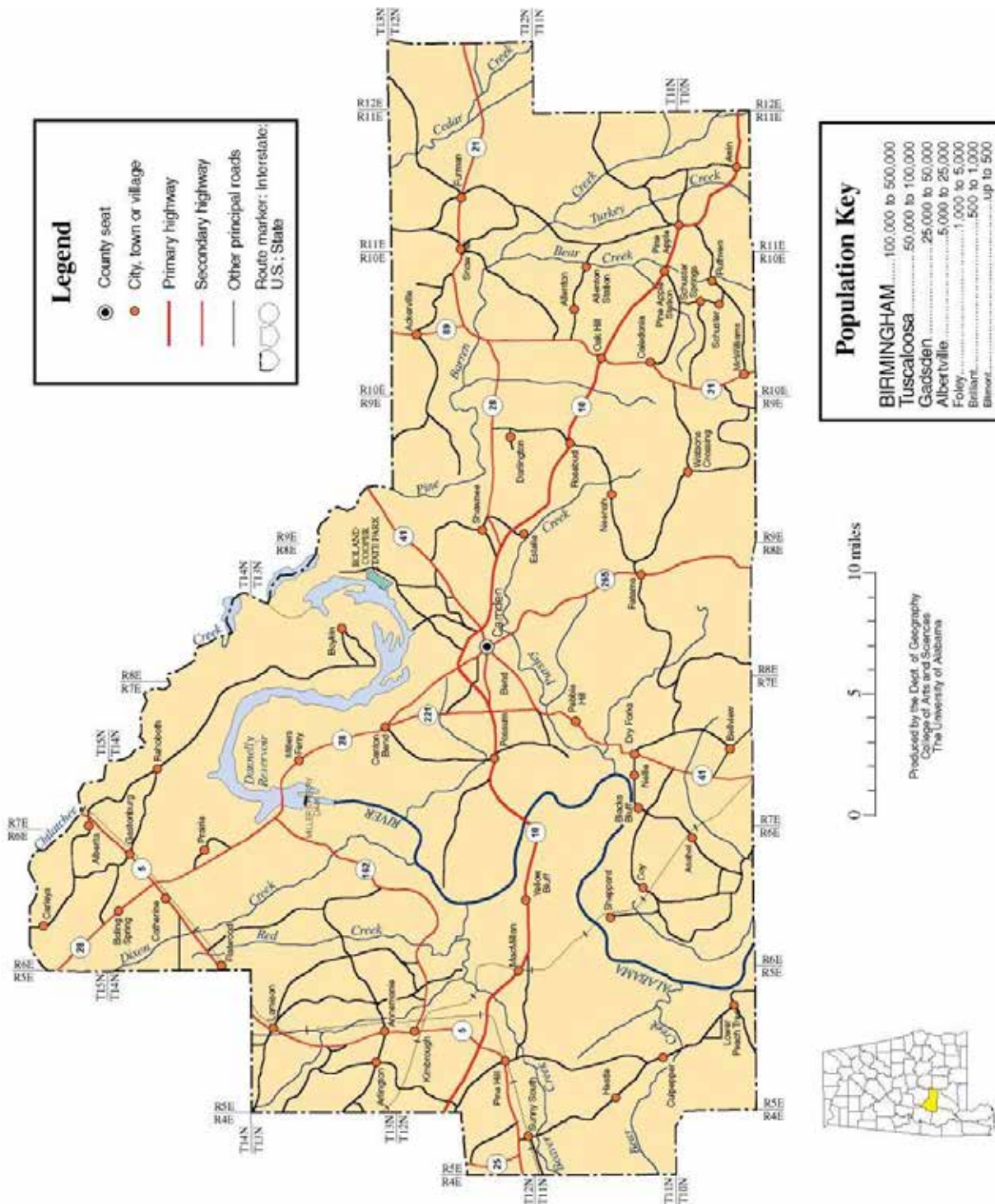
C. IDENTIFICATION OF SOCIALLY VULNERABLE POPUALTIONS

Table 5.1 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 Wilcox County's socially vulnerable populations by jurisdiction. Figure 5.1 is a Wilcox County map produced by the University of Alabama's Cartographic Research Lab, it is provided for the reader to better understand the geographies noted in the following discussion.

Figure 5.2 shows the census tracts in the county. These tracts will be referred to in the discussion below. Table 5.2 shows basic demographic, economic, and housing information for the county. State and national averages are given to illustrate the poverty that exists in the county.

Figure 5.1 Wilcox County Map

WILCOX COUNTY



Source: Cartographic Research Lab, University of Alabama

Figure 5.2 Wilcox County Census Tract Map

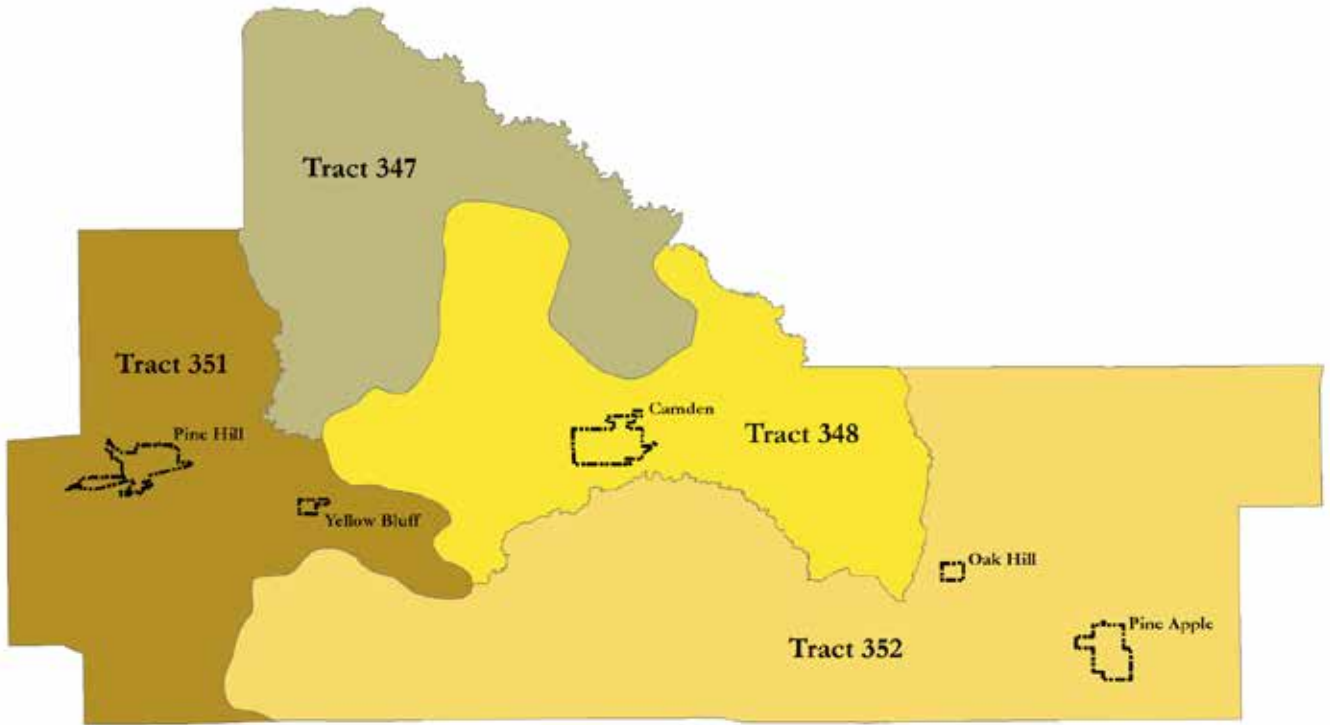


Table 5.2 Wilcox County Profile

	Census Tract				Alabama Average	US Average
	347	348	351	352		
Population	1,438	5,014	3,526	1,728		
% Minority of Population	97.4%	70.3%	62.9%	81.6%	30.5%	25.8%
% Over 65 Years (Total Population)	5.6%	15.5%	16.6%	19.4%	13.9%	13.2%
% Under 18 Years (Total Population)	28.2%	29.6%	25.3%	20.8%	23.7%	23.9%
Housing Units	739	2,234	1,573	1,134		
% Mobile Homes of Housing Units	57.6%	27.4%	37.4%	45.7%	14.1%	6.5%
Median Value of Housing Units	\$24,900	\$76,600	\$53,800	\$43,300	\$122,300	\$181,400
% Individuals below Poverty Level	74.1%	49.1%	47.8%	24.5%	18.1%	14.9%
Median Household Income	\$14,516	\$22,772	\$28,789	\$36,528	\$43,160	\$53,046

Population

The 2012 population estimates (Table 5.3) show that Wilcox County's population is declining.

Table 5.3 2012 Population Estimates for Wilcox County

Wilcox County (Entire County)	11,706
Camden city	2,261
Oak Hill town	43
Pine Apple town	91
Pine Hill town	1,032
Yellow Bluff town	157
Unincorporated Wilcox County	8,122

Source: 2008-2012 American Community Survey Five Year Estimates

In terms of vulnerability, the larger the population of an area the more people and structures that could possibly be damaged or destroyed. Camden is by far the most populated municipality and also has the highest population and housing density. In the unincorporated areas of the county there are large population clusters in Coy-Fatama in the southern part of the county, and Alberta in the northwestern section of the county.

The population over sixty-five years of age and under eighteen years of age is also especially vulnerable to natural hazards 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 often need evacuating and special shelter. An area in the southeast part of the county, which includes the towns of Oak Hill and Pine Apple has the largest percent of its population over the age of 65. With regards to the population under 18, tracts 347 and 348 have almost one third of their populations under the age of 18.

Housing

The 2008-2012 American Community Survey (ACS) estimates that there are 5,680 housing units in Wilcox County. Tract 348 has the most units by far, the City of Camden is located in this tract. The tract containing the Town of Pine Hill (Tract 351) contains the second most units. There are smaller concentrations of housing in communities such as Flatwood, Lamison, Catherine, Alberta, Boykin, and Coy.

Not only are concentrations of units important, but also type of unit is important. Within Wilcox County there are a significant number of mobile homes. The ACS estimates that 37.8% of all housing units in the county are mobile homes. These homes are more vulnerable to damage from natural hazards. Tracts 347, 351, and 352 all have over a third of the housing stock being mobile homes. Almost sixty-percent of the housing stock in the northern part of the county is mobile homes.

The county estimates that at least one-third of all housing units in the county are substandard or deteriorated. Virtually all of the substandard and deteriorating housing units in Wilcox County are in areas of low or moderate income. There are concentrations of substandard and deteriorated housing throughout the county. The median value of housing unit in the county is just \$58,300; the State of Alabama's average is \$122,300.

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 income divides the income distribution into two equal groups, one having incomes above the median, and other having incomes below the median. The 2008-2012 American Community Survey's Median Household Income figure for Wilcox County is \$24,212. Compared to the Alabama figure of \$43,160 and

the United States figure of \$53,046 it is apparent that Wilcox County is a distressed county. To further illustrate the poverty that exists in the County, the ACS estimated that 39.4% of all individuals in the county lived in poverty.

D. OVERVIEW OF COUNTY BUILDING STOCK

In addition to population, 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.

Table 5.4 Building Count by General Occupancy

Tract	Residential	Commercial	Industrial	Agricultural	Religious	Government	Education	Total Count
9947	784	17	6	3	5	3	1	819
9948	2,715	104	34	7	14	12	7	2,893
9949	741	13	9	2	2	2	1	770
9950	577	7	1	1	3	1	0	590
9951	2,176	54	16	4	12	5	4	2,271

Source: HAZUS-MH

Table 5.5 gives dollar exposure figures broken down by general occupancy. These estimates include structure and contents. Residential values exceed all other categories. Tracts 9948 and 9951 have the largest dollar exposure in both residential and commercial categories. These tracts include the cities of Camden and Pine Hill.

Table 5.5 Total Exposure by Census Tract (in thousands of dollars)

Tract	Residential	Commercial	Industrial	Agricultural	Religious	Government	Education	Total Exposure
9947	42,716	3,520	1,514	283	1,938	336	789	51,096
9948	149,138	42,492	8,494	571	6,740	5,696	7,668	220,799
9949	39,428	5,102	1,497	116	966	976	841	48,926
9950	29,086	1,649	64	55	918	84	0	31,856
9951	96,388	15,102	12,867	486	4,531	2,876	1,665	133,915

Source: HAZUS-MH

E. IDENTIFICATION OF CRITICAL FACILITIES

The Wilcox 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 those in which potential losses, both human and economic, are high.

F. CRITICAL FACILITIES BY JURISDICTION

Tables 5.6-5.11 break down critical facilities by location. Cost estimates are given for the facility, when they were available. Local governments provided estimates for their facilities, other values were provided by the individual entities. These values are not to be thought of as replacement costs, just estimates based on value at time of purchase. All deficiencies in estimated values and potential losses will be corrected at the next update.

With regards to critical roadways and bridges, there are two hundred fifty five miles of paved county roads and three hundred forty six miles of unpaved county roads in Wilcox County. The county maintains eighty-eight bridges on these routes. Estimates on potential losses of this infrastructure are impossible to present due to the nature of the structures.

Table 5.6 Wilcox County Critical Facilities-Unincorporated Areas

Facility	Location	Estimated Value
Snow Hill Institute	Snow Hill	\$1,444,218
ABC Elementary	Alberta	\$4,580,293
Boykin Nutrition Center	Boykin	\$450,000
Ferry Terminal	Gee's Bend	\$1,500,000
Ferry Terminal	Camden Side	\$1,500,000
Water Tank	Coy	\$104,750
Water System	Annie Maine/Arlington	\$546,187
Water System	Boiling Springs	\$40,734
Water System	Coy	\$1,327,774
Water System	Furman/Snow Hill	\$262,607
Water System	New Virgin	\$15,374
Water System	Shawnee/Red Creek	\$539,015
Well	Rosebud	\$115,409
Water tank	Gees Bend	\$133,220
Water Tank	Rehoboth	\$145,848
Water System	Darlington	\$11,824
Well	Gee's Bend	\$66,110
TOTAL		\$12,783,363

Table 5.7 Wilcox County Critical Facilities-Camden

Facility	Estimated Value
City Hall	\$750,000
New Fire Station	\$350,000
Volunteer Fire Department	\$450,000
County Courthouse	\$1,500,000
Courthouse Annex	\$3,000,000
County Jail	\$4,000,000

Wilcox County EMA/ Road and Bridge Department	\$3,000,000
Wilcox County Health Center	\$1,500,000
J.E. Hobbs Elementary	\$10,013,692
Wilcox Central High School	\$27,063,458
Camden School of Arts and Technology	\$6,948,189
John Paul Jones Hospital	
Camden Nursing Facility	
TOTAL	\$58,575,339

Table 5.8 Wilcox County Critical Facilities-Oak Hill

Facility	Estimated Value
Town Hall	\$250,000
Oak Hill VFD	\$500,000
Water System including Tank and Well	\$2,000,000
TOTAL	\$2,750,000

Table 5.9 Wilcox County Critical Facilities-Pine Apple

Facility	Estimated Value
Town Hall	\$250,000
Pine Apple VFD	\$250,000
Pine Apple Waterworks	\$500,000
George W. Watts Elementary	\$3,461,066
TOTAL	\$4,461,066

Table 5.10 Wilcox County Critical Facilities-Pine Hill

Facility	Estimated Value
F.S. Ervin Elementary School	\$7,806,590
Town Hall	\$415,000
Fire Department	\$1,200,000
Police Department	\$450,000
CenturyTel Telephone Company	
Pump Station/ Lagoon (Highway 5 W)	*
Pump Station (Highway 10 E)	*
Water Tank (Broad Street)	*
Water Treatment Plant (Highway 10)	*
Pump Station (Highway 10)	*
Lift Pump (Enon Drive)	*
Lift Pump #1 (Highway 5)	*
Lift Pump #2 (Church Street)	*
Lift Pump #3 (Moccasin Creek Road)	*
Lift Pump #4 (County Rd 18 & 27)	*

Lift Pump #5 Moccasin Creek Road)	*
TOTAL	\$19,871,590

* Pine Hill Water System \$10,000,000

Table 5.11 Wilcox County Critical Facilities-Yellow Bluff

Facility	Estimated Value
Town Hall	\$75,000
Volunteer Fire Department	\$75,000
International Paper	
TOTAL	\$150,000

Table 5.11 gives a list of planned future critical facilities. This list gives a descriptive title, the jurisdiction responsible, and estimated cost.

Table 5.11 Future Critical Facilities

Facility	Location	Estimated Cost
Wilcox County Emergency Operations Center	Camden	\$1,500,000
Wilcox County Library	Camden	\$750,000
Totals		\$2,250,000

G. CRITICAL FACILITIES BY HAZARD

Table 5.12 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. Due to the nature of the hurricane, severe storm, tornado, and wildfire hazards identified by Wilcox County the threat to critical facilities is the same for these hazards. At this time all critical facility data remains incomplete, it will be updated when all data becomes available.

Example: Town of Pine Apple Critical Facilities

Facility	Estimated Value
Town Hall	\$250,000
Pine Apple VFD	\$250,000
Pine Apple Waterworks	\$500,000
George W. Watts Elementary	\$3,461,066
TOTAL	\$4,461,066

Table 5.12 Dollar Exposure of Critical Facilities by Hazard

Hazard	Unincorporated	Camden	Oak Hill	Pine Apple	Pine Hill	Yellow Bluff
Extreme Heat and Drought	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Floods (inc. flash)	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
Coastal Storm and Hurricane	\$12,783,363	\$58,575,339	\$2,750,000	\$4,461,066	\$19,871,590	\$150,000
Severe Storms (Hail, High Winds, Lightning, Thunderstorms)	\$12,783,363	\$58,575,339	\$2,750,000	\$4,461,066	\$19,871,590	\$150,000
Tornado	\$12,783,363	\$58,575,339	\$2,750,000	\$4,461,066	\$19,871,590	\$150,000
Wildfire	\$12,783,363	\$58,575,339	\$2,750,000	\$4,461,066	\$19,871,590	\$150,000

H. ANALYZING DEVELOPMENT TRENDS

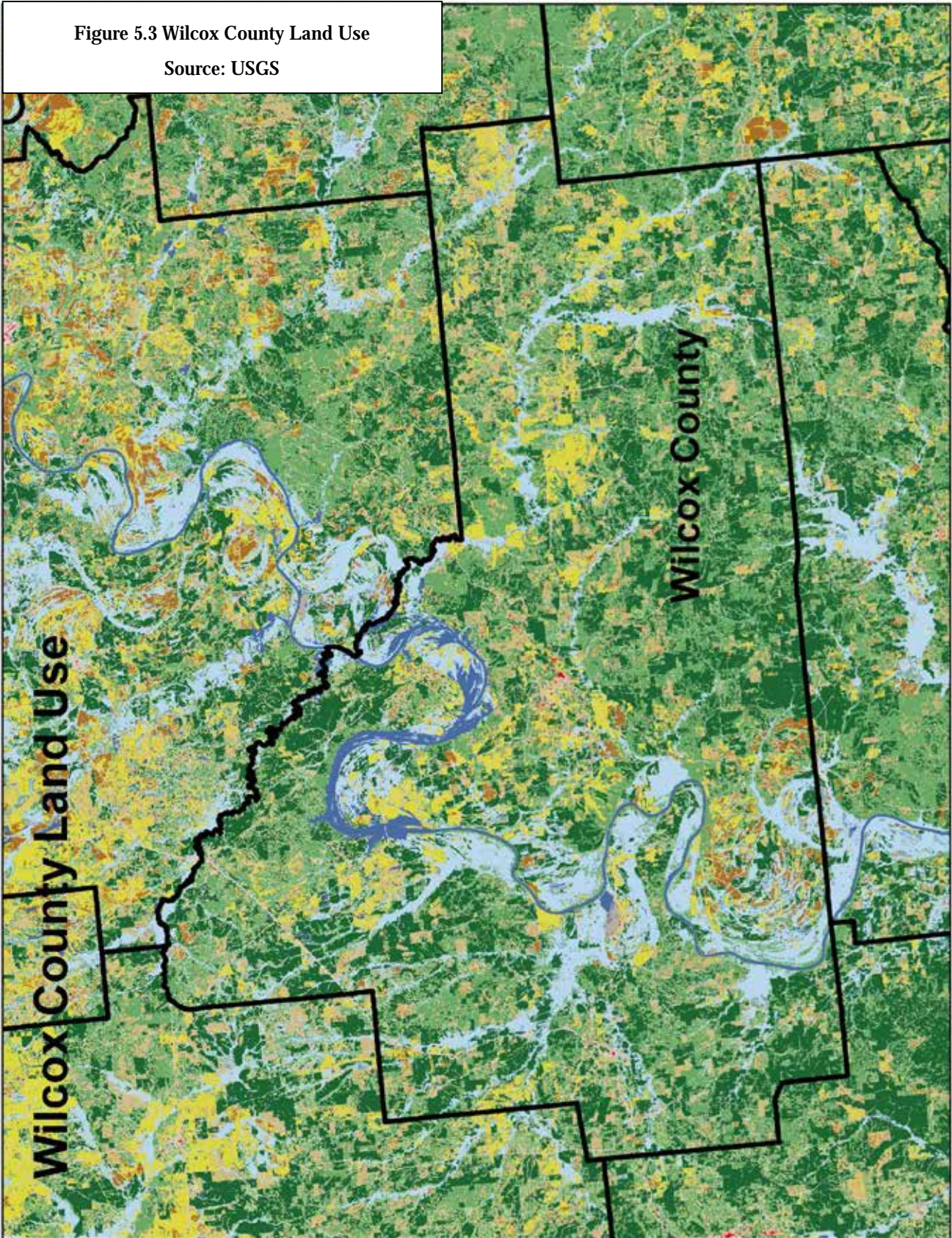
Figure 5.3 is a land use map for Wilcox County. Green, brown, and yellow shades represent forest, pastureland, and shrubs. The majority of Wilcox County is forested land. There are also significant areas of pastureland and flood plains of the Alabama River. Red indicates developed land. Portions of Camden and Pine Hill are indicated by the red tones on the map. This map has not significantly changes since the last plan; this is due to the fact that Wilcox County is a rural county with a declining population. Table 5.13 gives population estimates for the county based on the 2010 Census. The population is projected to steadily decline over the next twenty five years. Based on the supplied information, there will be no major land use changes in the county in the foreseeable future.

Table 5.13 Population Projections 2015-2040

Wilcox County Population 2000-2010 and Projections 2015-2040										
	Census 2000	Census 2010	2015	2020	2025	2030	2035	2040	Change 2010- 2040 Number	Percent
Wilcox	13,183	11,670	11,095	10,602	10,166	9,765	9,406	9,083	-2,587	-22.2
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 county.										
Source: U.S. Census Bureau and Center for Business and Economic Research, The University of Alabama, Fall 2012.										

Figure 5.3 Wilcox County Land Use

Source: USGS



OVERVIEW OF SECTION UPDATE

The information in the *Capability Assessment* was reviewed and no changes were made.

VI. CAPABILITY ASSESSMENT

A brief capability assessment was conducted before goals, objectives, and strategies were discussed.

County Resources:

Law Enforcement Agencies: 3

Fire Departments: 14

Hospitals: 1

Hazardous Materials Teams: 1

Search and Rescue Team: 0

The Wilcox County EMA Director is a full time position. The EMA office is located in the City of Camden. The EMA does not have an Emergency Operations Center. The county is a rural county with limited personnel to respond to natural disasters.

OVERVIEW OF SECTION UPDATE

The *Mitigation Goals, Objectives, and Actions* section of the plan underwent extensive changes also. Each jurisdiction reviewed their goals, objectives, and actions. Each jurisdiction reviewed projects to ensure all hazards were addressed. Some jurisdictions modified projects and estimates. A brief description as to why certain projects remained and a discussion on projects that have been completed was also included.

VII. MITIGATION GOALS, OBJECTIVES, AND STRATEGIES

After the risk assessment for the county was updated, each jurisdiction was asked to reevaluate and reprioritize the list of hazards which they felt should be profiled. Prioritization was based on information from the risk assessment and personal knowledge of their jurisdiction. They were also asked to review and update 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.”

The committee members along with everyone attending the committee meetings were asked to review the current goals, objectives, and strategies and provide any suggestions they might have. Objectives were also reviewed and modified to help each jurisdiction achieve its stated goals.

Participating jurisdictions were asked to review all the projects listed in the plan. If projects had been completed they were identified as such. Projects the jurisdictions no longer wanted to pursue were deleted. Finally, if jurisdictions identified new mitigation strategies they were added.

In the selection of mitigation strategies, each jurisdiction was asked to consider the following: funding options, political support, public support, legality, preservation of the environment, and staff capability. Each strategy was looked at 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 identified based on these criteria, each jurisdiction was asked to prioritize them. Prioritization was also based on the before mentioned considerations. A scale of one through ten was used to do this ranking. Strategies with Low priority have a time frame of 8-10 years, Medium priority strategies have timeframes of 5-8 years, and High priority strategies are expected to be undertaken within 1-5 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 updated mitigation goals, objectives, and strategies of each jurisdiction.

A. Wilcox County

PRIORITIZED THREAT (1= HIGHEST PRIORITY)

1. Tornado
2. Severe Storms (including hail, high wind, lightning, and thunderstorms)
3. Wildfire
4. Hurricanes
5. Extreme Heat and Drought
6. Flooding (including Flash Floods)

GOALS

- ❖ Minimize losses due to natural disasters in Wilcox County.
- ❖ Minimize injury and death due to natural disasters in Wilcox 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 storm water management throughout the County.
 - ❖ Improve early warning systems throughout the County.
 - ❖ Provide storm shelters for citizens.
 - ❖ Retrofit critical facilities.

The following pages detail projects that the Wilcox County Commission has identified as being priorities to the county. Many of the projects included in the current plan are also included here due to the fact the project is considered ongoing or has not been completed. Many of the original projects have not been completed due to funding limitations.

***No mitigation actions have been deleted**

Priority	Mitigation Action	Hazards Addressed	Estimated Cost	Responsible Agency	Funding	Reason project has not been pursued
Completed/Continuing	Continue to clear debris from roads and drainage ways	All	--	County Road and Bridge Department	Wilcox County	

Completed/Continuing	Continue to improve and maintain county road system	All	--	County Road and Bridge Department	Wilcox County	
Ongoing	Contact utilities in the event of natural hazard so they can inspect their infrastructure for damage	All	--	Wilcox County Emergency Management	Wilcox County	
Ongoing	Continue to offer shelter to individuals and families affected by natural hazards	All	--	Wilcox County Emergency Management	Wilcox County	
Ongoing	Continue to enforce the County's Flood Damage Prevention Ordinance	Flooding	--	Flood Plain Manager	Wilcox County	

Ongoing	Provide the public information on actions to take during severe weather through newspaper and radio announcements	All	--	Wilcox County Emergency Management	Wilcox County	
Completed/Continuing	Encourage jurisdictions to commit matches for grants dealing with mitigation	All	--	Wilcox County Emergency Management	Wilcox County	
Completed/Continuing	Open buildings to the public during extreme heat	Extreme Heat	---	Wilcox County EMA/Commission	Wilcox County EMA/Commission	
Completed/Continuing	Keep public informed of drought conditions and water conservation efforts	Drought	---	Wilcox County EMA/Commission	Wilcox County EMA/Commission	

Completed/Continuing	Seek weatherization funding for low income residents	All	----	Wilcox County EMA/Commission	Wilcox County EMA/Commission	
Completed/Continuing	Work closely with Wilcox Forester to mitigate wildfire dangers	Wildfire	---	Wilcox County EMA/Commission	Wilcox County EMA/Commission	
Completed/Continuing	Promotion of safe rooms in new residences.	Tornado, Severe Storms	--	Wilcox County Emergency Management	Wilcox County	
High	Drainage Projects in areas identified as being prone to flooding	Flood, Severe Storms	12,000,000	Wilcox County	Grants	Lack of funding, One drainage project completed in Meadowbrook subdivision, various small scale projects completed in county

High	Storm water Management Projects throughout county	Flood, Severe Storms	12,500,000	Wilcox County	Grants	Lack of funding
High	Retrofitting of critical facilities	Severe Storms, Hurricanes	3,500,000	Wilcox County	Grants	Lack of funding
High	Apply for funding to update mitigation plan as needed	All	--	Wilcox County EMA/Commission	Wilcox EMA/Commission, HMGP, PDM	Plan update funded by HMGP grant to Wilcox County Commission
High	Purchase generators for critical facilities and fire stations*	All	\$275,000	Wilcox County, VFDs	Grants	Lack of funding, County received HMGP grant to purchase generators for County water system

High	Construct new Emergency Operations Center in Camden	All	\$1,000,000	Wilcox County EMA/Commission	Grants, Loans	Lack of Funding
COMPLETED	Purchase tornado sirens	Tornado	\$150,000	Wilcox County Commission	Grants, Local Money	Action completed. County received HMGP funding to purchase 6 tornado sirens.
Medium	Community Storm Shelters	Severe Storms, Tornadoes, Hurricanes	\$1,000,000	Wilcox County Emergency Management	Grants, HMGP	Lack of funding
Medium	Individual Storm Shelters	Severe Storms, Tornadoes, Hurricanes	--	Wilcox County Emergency Management	Grants, HMGP	Lack of funding; county did receive grant funds for a number of these units
Medium	Public information system to call all residents in emergencies	All	\$275,000	Wilcox County Emergency Management	Wilcox County	In Process

Low	Research procedures for keeping historical storm data with location, magnitude, and loss values for each event	All	--	Wilcox County Emergency Management	Wilcox County	Lack of funding/time
Low	Begin maintaining an inventory of critical facilities with value and contact information	All	--	Wilcox County Emergency Management	Wilcox County	Lack of funding/time

GENERATOR LOCATIONS

Location Name	Address
Wilcox County EMA/County Engineer's Building	119 Hawthorne Avenue
Wilcox County Courthouse	Highway 10
Wilcox County Jail	Alabama Highway 265

B. City of Camden

PRIORITIZED THREAT (1= HIGHEST PRIORITY)

1. Tornado
 2. Severe Storms
 3. Wildfire
 4. Drought and Extreme Heat
 5. Hurricanes
 6. Flooding
-

GOALS

- ❖ Minimize losses due to natural disasters in Camden.
- ❖ Minimize injury and death due to natural disasters in Camden.
- ❖ Achieve a plan that will insure the continuity of government will not be significantly disrupted by disasters.
 - ❖ Enhance training equipment and availability of first responders to emergencies.
 - ❖ Increase the number of residents covered by severe weather sirens.
 - ❖ Increase availability of storm shelters and weather radios.

OBJECTIVES

- ❖ Research and identify funding opportunities for mitigation related activities.
 - ❖ Research and identify funding opportunities for local first responders.
- ❖ Prepare plans and identify resources to facilitate establishing city operations after a disaster.
 - ❖ Increase the number of residents covered by severe weather sirens.
 - ❖ Increase availability of storm shelters and weather radios.
 - ❖ Improve drainage throughout the City.
 - ❖ Improve storm water management throughout the City.
 - ❖ Retrofit critical facilities.

The following pages detail projects that the City of Camden has identified as being priorities to the city. Since the last update, the city has begun making upgrades to its sewer and drainage systems. Many of the projects included in the current plan are also included here due to the fact the project is considered ongoing or has not been completed. Many of the projects have not been completed due to funding limitations.

***No mitigation actions have been deleted**

Priority	Mitigation Action	Hazards Addressed	Estimated Cost	Responsible Agency	Funding	Reason project has not been pursued
Completed/Ongoing	Continue to clear debris from roads and drainage ways	All	-----	City of Camden	City of Camden	

Completed/Ongoing	Research possible grants for first responder training and equipment	All	----	City of Camden	City of Camden	
Completed/Ongoing	Open buildings to the public during extreme heat	Extreme Heat	-----	City of Camden	City of Camden	
Completed/Ongoing	Keep public informed of drought conditions and water conservation efforts	Drought	-----	City of Camden	City of Camden	
Completed/Ongoing	Continue to improve and maintain city road system	All	-----	City of Camden	City of Camden	
Completed/Ongoing	Work closely with Wilcox Forester to mitigate wildfire dangers	Wildfires	-----	City of Camden	City of Camden	

Completed/Ongoing	Enforce flood ordinance	Flooding	-----	City of Camden	City of Camden	
High	Drainage Projects in areas identified as being prone to flooding	Flood	750,000	City of Camden	Grants	
High	Storm water Management Projects throughout city	Flood, Rain	500,000	City of Camden	Grants	
High	Retrofitting of critical facilities	Severe Storms, Hurricanes	1,000,000	City of Camden	1,000,000	
Medium	Seek weatherization funding for low income residents	All	-----	City of Camden	City of Camden	

Medium	Community storm shelters in highly populated and mobile home communities	Severe Storms, Tornadoes	750,000	City of Camden, Wilcox EMA	Grants	Lack of funding
Medium	Tornado Sirens	Severe Storms, Tornadoes	50,000	City of Camden, Wilcox EMA	Grants	Lack of funding
Low	Prepare a Emergency Response Plan for the City of Camden	All	--	City of Camden	City of Camden, Grants	Lack of funding

C. Town of Oak Hill

PRIORITIZED THREAT (1= HIGHEST PRIORITY)

1. Tornado
 2. Severe Storms
 3. Drought and Extreme Heat
 4. Wildfire
 5. Hurricanes
 6. Flooding
-

GOALS

- ❖ Minimize losses due to natural disasters in Oak Hill.
- ❖ Minimize injury and death due to natural disasters in Oak Hill.
- ❖ Achieve a plan that will insure the continuity of government will not be significantly disrupted by disasters.
 - ❖ Enhance training equipment and availability of first responders to emergencies.
 - ❖ Increase the number of residents covered by severe weather sirens.
 - ❖ Increase availability of storm shelters and weather radios.

OBJECTIVES

- ❖ Research and identify funding opportunities for mitigation related activities.
- ❖ Research and identify funding opportunities for local first responders.
 - ❖ Increase the number of residents covered by severe weather sirens.
 - ❖ Increase availability of storm shelters and weather radios.

The following pages detail projects that the Town of Oak Hill has identified as being priorities to the town. Many of the projects included in the current plan are also included here due to the fact the project is considered ongoing or has not been completed. The town has not completed any mitigation actions since the last update.

***No mitigation actions have been deleted**

Priority	Mitigation Action	Hazards Addressed	Estimated Cost	Responsible Agency	Funding	Reason project has not been pursued
Completed/Ongoing	Research possible grants for first responder training and equipment	All	--	Oak Hill	Grants	
Completed/Ongoing	Work closely with Wilcox Forester to mitigate wildfire dangers	Wildfires	-----	Oak Hill	Oak Hill	

Completed/Ongoing	Open buildings to the public during extreme heat	Extreme Heat	-----	Oak Hill	Oak Hill	
Completed/Ongoing	Keep public informed of drought conditions and water conservation efforts	Drought	-----	Oak Hill	Oak Hill	
High	Drainage Projects in areas identified as being prone to flooding	Flood	350,000	Oak Hill	Grants	Lack of Funding
High	Storm water Management Projects throughout Town	Flood, Rain	250,000	Oak Hill	Grants	Lack of Funding
High	Retrofitting of critical facilities	Severe Storms, Hurricanes	300,000	Oak Hill	Grants	Lack of Funding

Medium	Seek weatherization funding for low income residents	All	-----	Oak Hill	Oak Hill	Lack of Funding
Medium	Community storm shelters in highly populated and mobile home communities	Severe Storms, Tornadoes	250,000	Oak Hill, Wilcox EMA	Grants	Lack of funding
Medium	Tornado Sirens	Severe Storms, Tornadoes	45,000	Oak Hill, Wilcox EMA	Grants	Lack of funding
Medium	NOAA Weather Radios	Severe Storms, Tornadoes	\$2,500	Oak Hill, Wilcox EMA	Grants	Lack of funding

D. Town of Pine Apple

PRIORITIZED THREAT (1= HIGHEST PRIORITY)

1. Tornado
2. Severe Storms
3. Drought and Extreme Heat
4. Hurricanes
5. Wildfire
6. Flooding

GOALS

- ❖ Minimize losses due to natural disasters in Pine Apple.
- ❖ Minimize injury and death due to natural disasters in Pine Apple.
- ❖ Achieve a plan that will insure the continuity of government will not be significantly disrupted by disasters.
 - ❖ Enhance training equipment and availability of first responders to emergencies.
 - ❖ Increase the number of residents covered by severe weather sirens.
 - ❖ Increase availability of storm shelters and weather radios.

OBJECTIVES

- ❖ Research and identify funding opportunities for mitigation related activities.
- ❖ Research and identify funding opportunities for local first responders.
 - ❖ Increase the number of residents covered by severe weather sirens.
 - ❖ Increase availability of storm shelters and weather radios.

The following pages detail projects that the Town of Pine Apple has identified as being priorities to the town. Many of the projects included in the current plan are also included here due to the fact the project is considered ongoing or has not been completed. Many of the projects have not been completed due to funding limitations.

***No mitigation actions have been deleted**

Priority	Mitigation Action	Hazards Addressed	Estimated Cost	Responsible Agency	Funding	Reason project has not been pursued
Completed/Ongoing	Research possible grants for first responder training and equipment	All	--	Pine Apple	Grants	
High	Drainage Projects in areas identified as being prone to flooding	Flood	150,000	Pine Apple	Grants	

High	Storm water Management Projects throughout Town	Flood, Rain	150,000	Pine Apple	Grants	Lack of Funding
High	Retrofitting of critical facilities	Severe Storms, Hurricanes	300,000	Pine Apple	Pine Apple	Lack of Funding
High	Open buildings to the public during extreme heat	Extreme Heat	-----	Pine Apple	Pine Apple	Lack of Funding
High	Keep public informed of drought conditions and water conservation efforts	Drought	-----	Pine Apple	Pine Apple	Lack of Funding
Completed	Generators for water well	All	-----	Pine Apple	HMGP	Town received grant to purchase generators, action complete

High	Generators for Town Hall and volunteer fire department	All	-----	Pine Apple	Pine Apple, Grants	Lack of Funding
Medium	Seek weatherization funding for low income residents	All	-----	Pine Apple	Pine Apple	Lack of Funding
Medium	Work closely with Wilcox Forester to mitigate wildfire dangers	Wildfires	-----	Pine Apple	Pine Apple	Lack of Funding
Medium	Community storm shelters in highly populated and mobile home communities	Severe Storms, Tornadoes	250,000	Pine Apple, Wilcox EMA	Grants	Lack of funding
Medium	Tornado Sirens	Severe Storms, Tornadoes	50,000	Pine Apple, Wilcox EMA	Grants	Lack of funding

Medium	NOAA Weather Radios	Severe Storms, Tornadoes	\$2,500	Pine Apple, Wilcox EMA	Grants	Lack of funding
Low	Prepare an emergency response plan for the Town of Pine Apple	All	\$10,000	Pine Apple	Grants	Lack of funding

E. Town of Pine Hill

PRIORITIZED THREAT (1= HIGHEST PRIORITY)

1. Tornado
2. Hurricane
3. Severe Storms
4. Extreme Heat and Drought
5. Wildfire
6. Flood

GOALS

- ❖ Minimize losses due to natural disasters in Pine Hill.
- ❖ Minimize injury and death due to natural disasters in Pine Hill.
- ❖ Improve public awareness of safety issues concerning natural hazards.
 - ❖ Minimize flood damage.
- ❖ Achieve a plan that will insure the continuity of government will not be significantly disrupted by disasters.
 - ❖ Enhance training equipment and availability of first responders to emergencies.

OBJECTIVES

- ❖ Educate citizens on safety issues related to natural hazards.
- ❖ Increase the number of residents covered by severe weather sirens.
 - ❖ Increase availability of storm shelters and weather radios.
 - ❖ Improve drainage throughout the City.
 - ❖ Improve storm water management throughout the City.

The following pages detail projects that the Town of Pine Hill has identified as being priorities to the town. Many of the projects included in the current plan are also included here due to the fact the project is considered ongoing or has not been completed. Many of the projects have not been completed due to funding limitations.

*No mitigation actions have been deleted

Priority	Mitigation Action	Hazards Addressed	Responsible Agency	Estimated Cost	Funding	Reason project has not been pursued
Completed/Ongoing	Open buildings to the public during extreme heat	Extreme Heat	Town of Pine Hill	---	Town of Pine Hill	

Completed/Ongoing	Keep public informed of drought conditions and water conservation efforts	Drought	Town of Pine Hill	----	Town of Pine Hill	
Completed/Ongoing	Continued to enforce flood ordinance	Flood	Town of Pine Hill	--	Town of Pine Hill	
Completed/Ongoing	Work closely with Wilcox Forester to mitigate wildfire dangers	Wildfire	Town of Pine Hill, Wilcox EMA	250,000	Grants	
Completed/Ongoing	Educate public on actions to take during severe weather	Severe Storms, Flash Floods, Tornadoes	Town of Pine Hill, Wilcox EMA	----	-----	
Completed	Join the National Flood Insurance Program	Flood	Town of Pine Hill	-----	-----	Completed

Completed	Purchase back up power generators for water system	All	Town of Pine Hill	----	----	Completed
High	Purchase back up power generators for Pine Hill Sewer System	All	Town of Pine Hill	500,000	Town of Pine Hill, Pine Hill Water System, HMGP Grants	Lack of Funding
High	Purchase Generator for City Hall	All	Town of Pine Hill	125,000	Town of Pine Hill, Grants	Lack of Funding
High	Purchase portable generators for Fire Department	All	Town of Pine Hill	75,000	Town of Pine Hill, Grants	Lack of Funding
Medium	Drainage Projects in areas identified as being prone to flooding	Floods, Severe Storms	Town of Pine Hill	500,000	Grants	Lack of Funding

Medium	Storm water Management Projects throughout Town	Floods, Severe Storms	Town of Pine Hill	275,000	Grants	Lack of Funding
Medium	Retrofitting of critical facilities	Hurricanes, Severe Storms	Town of Pine Hill	450,000	Grants	Lack of Funding
Medium	Seek weatherization funding for low income residents	All	Town of Pine Hill, Wilcox EMA	----	Grants	Lack of Funding
Medium	Tornado Sirens	Tornadoes	Town of Pine Hill, Wilcox EMA	40,000	Grants	Lack of funding
Medium	Community Storm Shelter	All	Town of Pine Hill, Wilcox EMA	375,000	Grants	Lack of funding

Medium	NOAA Weather Radios	All	Town of Pine Hill, Wilcox EMA	7,500	Grants	Lack of funding
Medium	Training and Equipment for First Responders	All	Town of Pine Hill, Wilcox EMA	250,000	Grants	Lack of Funding
Medium	Tree management and maintenance program	Severe storms, Tornadoes, Hurricanes, High Winds	Town of Pine Hill	-----	Town of Pine Hill	Lack of Funding

F. Town of Yellow Bluff

PRIORITIZED THREAT (1= HIGHEST PRIORITY)

1. Tornado
2. Severe Storms
3. Drought and Extreme Heat
4. Hurricanes
5. Wildfire
6. Flooding

GOALS

- ❖ Minimize losses due to natural disasters in Yellow Bluff.
- ❖ Minimize injury and death due to natural disasters in Yellow Bluff.
- ❖ Achieve a plan that will insure the continuity of government will not be significantly disrupted by disasters.
 - ❖ Increase the number of residents covered by severe weather sirens.
 - ❖ Increase availability of storm shelters and weather radios.

OBJECTIVES

- ❖ Research and identify funding opportunities for mitigation related activities.
- ❖ Research and identify funding opportunities for local first responders.
 - ❖ Increase the number of residents covered by severe weather sirens.
 - ❖ Increase availability of storm shelters and weather radios.

The following pages detail projects that the Town of Yellow Bluff has identified as being priorities to the town. Many of the projects included in the current plan are also included here due to the fact the project is considered ongoing or has not been completed. The town has not completed any mitigation actions since the last update.

***No mitigation actions have been deleted**

Priority	Mitigation Action	Hazards Addressed	Estimated Cost	Responsible Agency	Funding	Reason project has not been pursued
Medium	Drainage projects throughout Town	Flood, Severe Storms	350,000	Town of Yellow Bluff	Grants	Lack of funding
Medium	Community storm shelters in highly populated and mobile home communities	Severe Storms, Tornadoes, Hurricanes	550,000	Yellow Bluff, Wilcox EMA	Grants	Lack of funding

Medium	Tornado Sirens	Tornadoes	150,000	Yellow Bluff, Wilcox EMA	Grants	Lack of funding
Completed/Ongoing	Open buildings to the public during extreme heat	Extreme Heat	Town of Yellow Bluff	----	Yellow Bluff	
Completed/Ongoing	Keep public informed of drought conditions and water conservation efforts	Drought	Town of Yellow Bluff	----	Yellow Bluff	
Completed/Ongoing	Seek weatherization funding for low income residents	All	Town of Yellow Bluff, Wilcox EMA	----	Grants	
Completed/Ongoing	Work closely with Wilcox Forester to mitigate wildfire dangers	Wildfire	Town of Yellow Bluff, Wilcox EMA	----	Grants	

Medium	NOAA Weather Radios	Severe Storms, Tornadoes	Town of Yellow Bluff, Wilcox EMA	\$1,000	Grants	Lack of funding
Completed/Ongoing	Continue to enforce flood ordinance	Flooding	Town of Yellow Bluff, Wilcox EMA	-----	-----	

G. Wilcox County School Board

PRIORITIZED THREAT (1= HIGHEST PRIORITY)

1. Tornado
2. Severe Storms
3. Drought and Extreme Heat
4. Hurricanes
5. Wildfire
6. Flooding

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/storm water management issues on campuses.

The following pages detail projects that the Wilcox County School Board feels are priorities.

Priority	Mitigation Action	Hazards Addressed	Responsible Agency	Funding	Reason project has not been pursued
High	Provide storm shelters at schools	Tornado, Severe Storms	Wilcox County School Board, Wilcox County	Grants	Lack of Funding
High	Purchase generators for schools	All	Wilcox County School Board	Grants	Lack of Funding

High	Retrofitting of schools	Severe Storms, Hurricanes	Wilcox County School Board	Grants	Lack of Funding
Medium	Correct storm water management/drainage issues on school grounds	Flood	Wilcox County School Board	Wilcox County School Board	Lack of Funding
Completed/Ongoing	Work with County to provide information to students regarding extreme heat and drought conditions	Extreme Heat & Drought	Wilcox County School Board	Wilcox County School Board	
Completed/Ongoing	Work with forestry commission to disseminate information regarding wildfire prevention	Wildfires	Wilcox County School Board	Wilcox County School Board	

OVERVIEW OF SECTION UPDATE

The *Plan Maintenance* section of the plan was reviewed by the Committee. Minimal changes were made to this section.

VIII. PLAN MAINTENANCE

The planning cycle for the Wilcox 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 both the Natural Hazards Steering Committee and the Local Government Subcommittee.

Hazard Mitigation Committee Structures

The structure of the committee will be kept as it was for the development of this plan. 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:

- ✓ Wilcox EMA, Director
- ✓ City of Camden, Mayor
- ✓ Town of Pine Hill, Mayor
- ✓ Town of Pine Apple, Mayor
- ✓ Town of Oak Hill, Mayor
- ✓ Town Yellow Bluff, Mayor
- ✓ Wilcox County Commission, County Administrator
- ✓ Wilcox County Board of Education, Superintendent
- ✓ Wilcox County Road and Bridge Department, County Engineer

The officials in these positions may appoint a representative to serve in their place.

Monitoring and Evaluation of the Plan

The County's EMA director will be in charge of monitoring and evaluating the plan. Annually, the EMA will contact each jurisdiction and agency by letter or telephone to monitor the implementation of the mitigation plan. After the EMA has monitored the progress of all jurisdictions and or agencies involved in implementing mitigation strategies, the information gathered will be used in the evaluation of the mitigation plan. The following criteria will be used will be 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?

After this evaluation if the EMA director feels that the plan is not satisfying the above criteria, he/she will call a meeting of the Natural Hazards Steering Committee. A public meeting will also be advertised to receive public input.

Updating the Plan

The Wilcox 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 the plan. The Natural Hazards Mitigation Steering Committee will help in the updating of the plan. The public participation component will also be included. At least two public meetings will be held to involve the public in the update process. 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.

Incorporation into Existing Planning Mechanisms

The Wilcox County Hazard Mitigation Plan will be incorporated into existing planning mechanisms in all participating jurisdictions. Those jurisdictions with building codes or zoning ordinances will incorporate hazard mitigation strategies into existing codes. These updates will occur as budgets and time allow. Those jurisdictions without building codes or zoning ordinances, that decide to adopt new ordinances, will be required to reflect the goals and objectives they set forth in the plan. Those jurisdictions updating comprehensive plans will also have to reflect their hazard mitigation goals and objectives in their plan.

Since the last update, the Wilcox County Commission has updated its comprehensive plan. The county took hazard mitigation principles and strategies into consideration during the development of the plan. The mitigation plan was consulted on many issues. There have been no other updates to comprehensive plans, zoning ordinances, or building codes in any participating jurisdiction. Participating jurisdictions will incorporate the mitigation plan into their planning efforts and code/zoning changes. 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.

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. There will also be a public participation component during the update. At least two public meetings will be held to involve the public in the update process. Drafts of the updated plan will also be available for public comment.

APPENDIX 1

Past Occurrences by Jurisdiction Wilcox County

It is evident from this data that the county has experienced a variety of hazards. It is also evident that the county has suffered significant damage as a result of certain hazards, in particular tornadoes and thunderstorms.

Wilcox County Past Occurrences – Extreme Heat & Drought

Location	Date	Time	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Wilcox	07/01/2000	12:01 AM	Excessive Heat	N/A	0	0	0	0
2. Wilcox	08/08/2007	08:00 AM	Excessive Heat	N/A	0	0	0	0
TOTALS:					0	0	0	0

1. In Camden the temperature was 100 degrees or higher thirteen days during the month with the hottest being 105 degrees.
2. The heat index was between 110 and 115 degrees, leading many public places to allow the public to come in and cool off.

Wilcox County Past Occurrences – Flash Floods

Location	Date	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Coy	08/30/1996	Flash Flood	N/A	0	0	\$15,000	0
2. Southwest Portion	06/27/1999	Flash Flood	N/A	0	0	\$2,000	0
3. Wilcox	03/03/2001	Flash Flood	N/A	0	0	\$10,000	0
4. Wilcox	03/31/2005	Flash Flood	N/A	0	0	0	0
5. Countywide	07/10/2005	Flash Flood	N/A	0	0	0	0
6. Countywide	08/29/2005	Flash Flood	N/A	0	0	0	0
7. North Portion	05/10/2006	Flash Flood	N/A	0	0	0	0
8. Wilcox	09/04/2012	Flash Flood	N/A	0	0	0	0
TOTALS:						\$27,000	0

1. Heavy rains of around eight inches caused several roads in the southwest part of the county to be closed. The rains started around 7:30 am and by 9:00 am many of the roads were becoming impassable. Most of the roads remained closed into the afternoon hours. The hardest hit were the Coy and Dry Forks areas.
2. Heavy rainfall in the southwest part of the county caused several roads to become flooded. These roads had to be closed for more than an hour, until the heavy rainfall moved out of the area. Weather radars estimated that four to

six hours of rain fell across the area in a four hour period. Most of the rain fell near the Alabama River and the rainfall quickly ran into the basin.

3. Heavy rains across the area caused secondary roads to washout in many areas. The water slowly drained from the roads after the rain ended, and most were able to be reopened after sunset. Radar estimated that four to six inches of rainfall fell across the area.

4. Heavy rains caused several streets to flood in the north and central parts of the county. Radar estimated that three to four inches of rain fell across the area. The streets had to be closed for about an hour due to the high water.

5. Heavy rains from Hurricane Dennis caused street flooding across most of the county. Radar estimated that 3-5 inches of rain fell across most of the county, with isolated amounts of 8-10 inches across the central part.

6. Heavy rains from Hurricane Katrina caused flooding across most of the county. Several streets had to be closed off and on throughout the day. Radar estimated that 3-5 inches of rain fell across the county with the heaviest being across the west half of the county.

7. Several slow moving thunderstorms dropped four to seven inches of rainfall across the north part of the county. Several roads had to be closed for a few hours until the water had drained. An observer in Alberta reported over six inches of rain while five inches was recorded at Millers Ferry. Other than closed roads, no other problems were reported.

8. Heavy rains caused flooding across parts of southwest Alabama. State road 21 closed due to water over the road.

Wilcox County Past Occurrences – Hurricanes

Location or County	Date	Time	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Wilcox	10/03/1995	12:00 P.M.	Hurricane Opal	N/A	0	0	N/A	N/A
2. Wilcox	08/06/2001	04:00 AM	Tropical Storm Barry	N/A	0	0	N/A	N/A
3. Wilcox	09/13/2004	09:00 PM	Hurricane Ivan	N/A	0	0	substantial	substantial
4. Wilcox	06/10/2005	03:00 AM	Tropical Storm Arlene	N/A	0	0	N/A	N/A
5. Wilcox	07/09/2005	03:00 AM	Hurricane Dennis	N/A	0	0	N/A	N/A
Totals					0	0	N/A	N/A

1. No description available.

2. Minor damage occurred in Conecuh, Monroe and Wilcox counties, with most of that being trees blown down.

3. Hurricane Ivan caused substantial damage in Wilcox County. Flooding was extensive. Wind damage was reported throughout the County. Millions of dollars of property damage was reported countywide. Water and sewer systems lost power for days. A significant amount of timber was destroyed.

4. Tropical Storm Arlene brought flash flooding to Wilcox County.

5. Hurricane Dennis brought flash flooding and high winds to Wilcox County.

Wilcox County Past Occurrences – Hail (Severe Storms)

Location or County	Date	Time	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Wilcox	04/15/1985	02:15 PM	Hail	0.75 in.	0	0	0	0
2. Wilcox	04/15/1985	03:15 PM	Hail	0.75 in.	0	0	0	0
3. Wilcox	02/10/1986	01:35 PM	Hail	1.00 in.	0	0	0	0
4. Wilcox	05/21/1990	12:00 PM	Hail	1.75 in.	0	0	0	0
5. Pine Hill	03/18/1996	06:30 PM	Hail	1.75 in.	0	0	0	0

6. Mc Williams	03/29/1997	04:50 PM	Hail	0.75 in.	0	0	0	0
7. Camden	03/30/1997	04:15 PM	Hail	0.88 in.	0	0	0	0
8. Camden	04/22/1997	02:15 PM	Hail	1.75 in.	0	0	0	0
9. Pine Hill	04/22/1997	05:15 PM	Hail	1.75 in.	0	0	0	0
10. Millers Ferry	05/28/1997	02:35 PM	Hail	0.75 in.	0	0	0	0
11. Lower Peach Tree	11/01/1997	02:55 PM	Hail	1.75 in.	0	0	0	0
12. Pine Hill	03/03/1999	12:45 AM	Hail	0.75 in.	0	0	0	0
13. Pine Apple	06/04/1999	06:30 PM	Hail	0.75 in.	0	0	0	0
14. Camden	02/13/2000	04:20 PM	Hail	0.75 in.	0	0	0	0
15. Alberta	04/02/2000	03:45 PM	Hail	0.88 in.	0	0	0	0
16. Camden	03/09/2003	07:11 AM	Hail	0.75 in.	0	0	0	0
17. Camden	03/09/2003	09:25 AM	Hail	0.88 in.	0	0	0	0
18. Snow Hill	05/02/2003	05:25 PM	Hail	0.75 in.	0	0	0	0
19. Furman	05/02/2003	10:20 PM	Hail	0.75 in.	0	0	0	0
20. Camden	04/07/2004	06:10 PM	Hail	0.75 in.	0	0	0	0
21. Camden	10/19/2004	04:30 PM	Hail	0.75 in.	0	0	0	0
22. Camden	03/30/2005	09:40 PM	Hail	1.75 in.	0	0	\$3,000	0
23. Alberta	04/22/2005	06:20 PM	Hail	1.00 in.	0	0	0	0
24. Camden	05/10/2006	05:00 PM	Hail	1.00 in.	0	0	0	0
25. Camden	04/11/2007	03:25 PM	Hail	0.88 in.	0	0	0	0
26. Camden	04/11/2007	03:41 PM	Hail	1.25 in.	0	0	0	0
27. Camden	04/11/2007	03:56 PM	Hail	0.88 in.	0	0	0	0
28. Pine Hill	05/26/2011	01:45 PM	Hail	0.75 in.	0	0	0	0
29. Yellow Bluff	03/02/2012	04:40 PM	Hail	1.50 in.	0	0	0	0
Totals					0	0	\$3,000	0

1. No description available.
2. No description available.
3. No description available.
4. No description available.
5. Golf ball size hail was reported near Pine Hill.
6. Dime size hail was reported in the southeast part of the county near McWilliams.
7. Quarter size hail was reported near Camden.
8. Golf ball size hail fell just south of Camden.
9. Golf ball size hail was reported along State Highway 10 between Pine Hill and Yellow Bluff. This same area also experienced high winds.
10. Dime size hail was reported in Millers Ferry.
11. Golf ball size hail was reported near Lower Peach Tree.
12. Dime size hail was reported near Pine Hill.
13. Dime size hail was reported by the public.
14. Dime size hail was reported near Camden.

15. Nickel size hail was reported in the community.
16. No description available.
17. No description available.
18. No description available.
19. No description available.
20. None Reported
21. None reported.
22. Golf ball size hail fell in Camden. Some residents reported roof and vehicle damage.
23. None reported.
24. None reported.
25. None reported.
26. None reported.
27. None reported.
28. Thunderstorms produced large hail across portions of southwest Alabama.
29. Severe thunderstorms produced large hail and a funnel cloud across portions of southwest Alabama.

Wilcox County Past Occurrences – Thunderstorms (Severe Storms)

Location	Date	Time	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Wilcox	02/26/1971	12:00 PM	Thunderstorm Winds	N/A	0	0	0	0
2. Wilcox	03/02/1972	03:45 AM	Thunderstorm Winds	N/A	0	0	0	0
3. Wilcox	04/22/1974	12:30 PM	Thunderstorm Winds	N/A	0	0	0	0
4. Wilcox	04/18/1978	06:50 AM	Thunderstorm Winds	N/A	0	0	0	0
5. Wilcox	11/25/1979	11:20 AM	Thunderstorm Winds	N/A	0	0	0	0
6. Wilcox	09/05/1983	02:30 PM	Thunderstorm Winds	N/A	0	0	0	0
7. Wilcox	12/03/1983	05:30 PM	Thunderstorm Winds	N/A	0	0	0	0
8. Wilcox	04/05/1985	05:40 PM	Thunderstorm Winds	N/A	0	0	0	0
9. Wilcox	04/04/1989	04:40 PM	Thunderstorm Winds	N/A	0	0	0	0
10. Wilcox	02/10/1990	02:30 AM	Thunderstorm Winds	N/A	0	0	0	0
11. Wilcox	02/10/1990	03:00 AM	Thunderstorm Winds	N/A	0	0	0	0
12. Wilcox	02/16/1990	07:45 AM	Thunderstorm Winds	N/A	0	0	0	0
13. Wilcox	04/01/1990	03:45 PM	Thunderstorm Winds	N/A	0	0	0	0
14. Wilcox	04/10/1990	03:00 PM	Thunderstorm Winds	N/A	0	0	0	0

15. Wilcox	03/01/1991	001:00 PM	Thunderstorm Winds	N/A	0	0	0	0
16. Wilcox	03/18/1992	06:00 PM	Thunderstorm Winds	N/A	0	0	0	0
17. Wilcox	04/20/1992	01:25 PM	Thunderstorm Winds	N/A	0	0	0	0
18. Wilcox	06/18/1992	03:30 PM	Thunderstorm Winds	N/A	0	0	0	0
19. Camden	04/11/1995	08:25 AM	Thunderstorm Winds	N/A	0	0	\$8,000	0
20. Camden	07/08/1995	02:05 PM	Thunderstorm Winds	N/A	0	0	\$1,000	0
21. Coy	07/09/1995	12:05 PM	Thunderstorm Winds	N/A	0	0	\$1,000	0
22. Camden	07/18/1995	07:30 PM	Thunderstorm Winds	N/A	0	0	\$5,000	0
23. Pine Hill	08/12/1995	07:00 PM	Thunderstorm Winds	N/A	0	0	\$2,000	0
24. Hybart	10/27/1995	02:30 PM	Thunderstorm Winds	N/A	0	0	\$2,000	0
25. Camden	01/26/1996	06:05 PM	Thunderstorm Winds	50 knots	0	0	\$2,000	0
26. Yellow Bluff	03/18/1996	06:00 PM	Thunderstorm Winds	60 knots	0	0	\$8,000	0
27. Camden	01/24/1997	07:00 AM	Thunderstorm Winds	50 knots	0	0	\$2,000	0
28. Camden	04/05/1997	02:30 PM	Thunderstorm Winds	50 knots	0	0	0	0
29. Pine Hill	04/22/1997	05:15 PM	Thunderstorm Winds	50 knots	0	0	\$2,000	0
30. Alberta	05/28/1997	03:00 AM	Thunderstorm Winds	50 knots	0	0	\$1,000	0
31. Fatama	01/07/1998	09:10 AM	Thunderstorm Winds	50 knots	0	0	\$3,000	0
32. Camden	05/03/1998	02:40 PM	Thunderstorm Winds	50 knots	0	0	\$3,000	0
33. Countywide	06/05/1998	11:30 PM	Thunderstorm Winds	60 knots	0	0	\$50,000	0
34. Camden	04/06/1999	04:10 PM	Thunderstorm Winds	55 knots	0	0	\$3,000	0
35. Pine Apple	06/04/1999	06:30 PM	Thunderstorm Winds	50 knots	0	0	\$4,000	0

36. Camden	06/04/1999	06:45 PM	Thunderstorm Winds	50 knots	0	0	\$4,000	0
37. Boykin	08/25/1999	04:00 PM	Thunderstorm Winds	50 knots	0	0	\$3,000	0
38. Millers Ferry	01/09/2000	04:45 PM	Thunderstorm Winds	50 knots	0	0	\$5,000	0
39. Pine Hill	03/19/2000	02:55 PM	Thunderstorm Winds	60 knots	0	0	\$5,000	0
40. Camden	12/16/2000	03:15 PM	Thunderstorm Winds	50 knots	0	0	\$5,000	0
41. Pine Hill	01/19/2001	08:05 AM	Thunderstorm Winds	50 knots	0	0	\$5,000	0
42. Alberta	03/12/2001	10:55 AM	Thunderstorm Winds	55 knots	0	0	\$10,000	0
43. Annemanie	03/12/2001	11:45 AM	Thunderstorm Winds	50 knots	0	0	\$10,000	0
44 Pine Hill	06/14/2001	01:25 PM	Thunderstorm Winds	55 knots	0	0	\$5,000	0
45. Sunny South	06/14/2001	02:05 PM	Thunderstorm Winds	55 knots	0	0	\$5,000	0
46. Camden	06/19/2001	03:00 PM	Thunderstorm Winds	60 knots	0	0	\$30,000	0
47. Boykin	01/19/2002	11:45 AM	Thunderstorm Winds	55 knots	0	0	\$10,000	0
48. Camden	07/11/2002	02:15 PM	Thunderstorm Winds	50 knots	0	0	\$8,000	0
49. Camden	07/15/2002	05:45 PM	Thunderstorm Winds	50 knots	0	0	\$8,000	0
50. Catherine	04/25/2003	04:55 PM	Thunderstorm Winds	50 knots	0	0	\$5,000	0
51. Pine Hill	07/16/2004	01:50 PM	Thunderstorm Wind	50 knots	0	0	\$8,000	0
52. Camden	04/30/2005	05:15 AM	Thunderstorm Wind	50 knots	0	0	\$8,000	0
53. Pine Hill	03/20/2006	05:30 PM	Thunderstorm Wind	50 knots	0	0	\$10,000	0
54. Fatama	04/14/2007	12:41 PM	Thunderstorm Winds	60 knots	0	0	\$200,000	0
55. Boykin	02/26/2008	05:55 AM	Thunderstorm Wind	55 knots	0	0	\$15,000	0
56. Wilcox	06/17/2013	01:48 PM	Thunderstorm Winds	52 knots	0	0	\$3,000	0

57. Wilcox	07/23/2013	02:17 PM	Thunderstorm Winds	52 knots	0	0	\$2,000	0
Totals					0	0	\$461,000	0

1-18. No description available.

19. Alabama Power Company reported power lines and trees down in Camden and in the Millers Ferry areas.
20. Several trees were blown down in and around Camden.
21. Several trees were blown down across the highway near Coy.
22. Numerous trees up to a foot in diameter were downed along Highway 162 in the western part of Wilcox County.
23. Trees and power lines were blown down along State Highway 5 in Pine Hill.
24. Trees and power lines were blown down along Highway 41 between Hybart and Dry Forks.
25. Several trees and power lines were blown down near the City of Camden.
26. High winds blew siding off a fast food restaurant near Yellow Bluff.
27. Several trees were blown down along State Highway 265 between Fatama and Camden.
28. A SKYWARN spotter reported wind gusts of 60 mph just northwest of Camden. No damage was observed.
29. Several trees were blown down along State Highway 10 between Pine Hill and Yellow Bluff.
30. Several trees were blown down near Alberta.
31. Several trees were blown down along State Highway 265 just north of the Fatama community.
32. Several trees were blown down near Camden.
33. Trees and power lines were blown down throughout the county. No major injuries were reported.
34. High winds blew several trees down 6 miles east of Camden.
35. High winds blew several trees down.
36. High winds blew several trees down.
37. Several trees were blown down just south of Boykin.
38. Trees and power lines were blown down near Millers Ferry.
39. High thunderstorm winds blew trees and power lines down at the intersection of State Highway 29 and County Road 21.
40. Trees were blown down near Camden by high thunderstorm winds.
41. Trees were reported downed by strong thunderstorm winds just south of the community.
42. High thunderstorm winds blew trees down just south of Alberta.
43. Trees and power lines were blown down by high thunderstorm winds.
44. Strong thunderstorm winds downed several trees around the community.
45. Several trees were reported down along State Road 5 after strong thunderstorms moved through the area.
46. Trees were blown down and some roofs of houses were damaged, mainly due to falling trees, as strong thunderstorms moved through the area. A roof was also peeled off a larger building in the downtown area.
47. High winds from a line of thunderstorms blew down trees and power lines along County Road 29 between Boykin and Rehoboth.
48. Trees were blown down by high winds from a thunderstorm near Camden.
49. High winds from a thunderstorm blew down several trees near Camden.
50. Several trees were blown down by high winds from a thunderstorm near Catherine.
51. High winds from a thunderstorm blew down several trees near Pine Hill.
52. Trees and power lines were blown down by high winds from a thunderstorm just southeast of Camden.
53. High winds from a thunderstorm blew down several trees and power lines in Pine Hill. A tin roof was also blown off a building.
54. The Vredenburgh storm took on a bow-shaped appearance again as it entered Wilcox County and did sporadic damage to trees for another five to six miles. The storm continued northeast and crossed State Highway 265. The storm damaged some out buildings on County Road 45. The storm lost its intensity near County Road 45 and no other damage was found north of County Road 45. Large bow echo continued moving east across Alabama producing significant damage along its path.
55. Severe thunderstorms produced large hail and caused tree damage in the Boykin Community.
56. Thunderstorms developed across southwest Alabama and produced high winds that caused damage. Winds estimated at 60 mph downed a tree and several limbs.
57. Severe thunderstorms developed across southwest Alabama and produced wind damage and some isolated flooding. Winds estimated at 60 mph downed trees.

Wilcox County Past Occurrences – Tornadoes

Location	Date	Time	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Coy, Camden, Snow Hill	2/12/1894	04:00 AM	F2	0	5	N/A	N/A
2. Wilcox	4/15/1910	11:30 AM	F2	1	20	N/A	N/A
3. Lower Peach Tree	3/21/1913	04:30 AM	F4	27	60	N/A	N/A
4. Wilcox	3/15/1928	11:00 PM	F2	3	20	N/A	N/A
5. Camden	5/4/1931	05:30 PM	F2	0	0	N/A	N/A
6. Wilcox	12/23/1956	12:50 AM	F2	0	N/A	N/A	N/A
7. Oak Hill	06/28/1957	08:50 AM	F2	0	0	\$25,000	0
8. Wilcox	03/30/1976	01:25 AM	F0	0	0	\$25,000	0
9. Wilcox	09/06/1977	10:05 AM	F1	0	0	\$3,000	0
10. Wilcox	11/23/1983	11:48 AM	F2	0	2	\$250,000	0
11. Millers Ferry	04/07/2003	12:10 AM	F0	0	0	\$10,000	0
12. Prairie	03/01/2007	12:27 PM	F4	1	2	\$2,000,000	0
13. Wilcox	12/25/2012	06:36 PM	F1	0	0	N/A	0
Totals				31	111	\$2,313,000	0

1. Several small homes were destroyed along the path.
2. No description available.
3. At least 100 homes were splintered.
4. No description available.
5. One new home was destroyed. Four other homes were also damaged.
6. No description available.
7. A church was demolished in Oak Hill.
8. No description available.
9. No description available.
10. Two people were injured as a wall of a business collapsed. Three businesses were destroyed and one was damaged. Several vehicles were damaged.
11. A weak tornado briefly touched down near Millers Ferry. The tornado blew down several trees and damaged a large storage building.
12. A significant tornado first touched down around 1227 pm at State Highway 28 near Miller's Ferry Dam. The tornado then tracked northeast across William "Bill" Dannelly Reservoir moving ashore on Sand Island Drive. This is where most of the severe damage occurred with numerous homes damaged or destroyed. One resident had arrived at his home on the lake to eat lunch when the tornado hit and he was killed when his newer model manufactured home was destroyed. The straps holding the home down all snapped in the same place. He was thrown out of his home and later found in the debris. Neighbors next door had sought shelter in an underground storm shelter outside their house seconds before the tornado hit. When they safely emerged from the shelter, they found their home destroyed. Most of the homes on Sand Island are vacation homes with part-time residents. If the tornado had struck on the weekend when more people are present, the loss of life would likely have been greater. Around 40 homes (four of these were slab homes) were damaged or destroyed along Sand Island Drive with some of the debris scattered up to two miles downstream. The tornado continued quickly to the northeast through sparsely populated areas. Damage did occur to homes and hunting camps along this path. However, the damage here was only rated as EF-0 and EF-1 on the Enhanced Fujita Scale. The tornado crossed into Dallas County. In all, one person died and two people were slightly injured by the tornado. The injuries occurred along Sand Island Drive when a single wide trailer was destroyed with the occupants being thrown from the trailer. They were protected from flying debris by part of the trailer that had fallen on top of them. The highest wind speed of the tornado was estimated at 185 mph. M48MH

Isolated thunderstorms developed ahead of a strong spring cold front. One of these thunderstorms produced a significant tornado in Wilcox County.

13. A powerful storm system moved out of the plains on Christmas, producing numerous strong storms across southeast Mississippi, southwest Alabama, and the western Florida panhandle out ahead of a strong cold front and accompanying squall line. Multiple tornadoes, some long track, were observed along the central gulf coast region. The tornado moved northeast out of the Dickinson area of Clarke County, crossing the Wilcox county line a few miles southeast of County Road 1, snapping numerous pine trees along an 80 yard wide path. The tornado lifted just south of the railroad tracks west of the Coy community.

Wilcox County Past Occurrence Summary-Snow and Ice

Location or County	Date	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Wilcox	01/19/2009	Heavy Snow	N/A	0	N/A	N/A	N/A
2. Wilcox	02/12/2010	Winter Storm	N/A	0	N/A	N/A	N/A
3. Wilcox	02/12/2010	Winter Storm	N/A	0	N/A	N/A	N/A
4. Wilcox	02/12/2010	Winter Storm	N/A	0	N/A	N/A	N/A
TOTALS:				0	N/A	N/A	N/A

1. A low pressure system moved northeast across the northern Gulf of Mexico and into northern Florida during the morning. This produced a large shield of moderate to heavy rain that changed to snow during the morning across portions of southwest Alabama. The heaviest snow fell across Choctaw County where amounts near 4 inches were observed over the west central part of the county. Snowfall amounts of 2 to 3 inches fell across the remainder of Choctaw...northern Washington...northern Clarke and northwestern Wilcox counties.

2-4. An area of low pressure moved across the northern Gulf of Mexico and passed to the south of the Mobile area. Heavy rain changed over to snow across portions of the central gulf coast as the low moved to the east. Snowfall accumulations ranged from a dusting along the I-10 corridor to as much as 5 inches across portions of interior southwest Alabama.

2. Sheriff's department estimated 1.5 inches of snow in Pine Hill.

3. COOP observer reported 4.5 inches of snow in Pine Apple.

4. Wilcox 911 reported 4 inches of snow in Camden.

Past Occurrences by Jurisdiction Camden

The hurricane, flash flood, and extreme temperature occurrences were all countywide, so jurisdiction specific information was unavailable. Historically, the data shows that Camden has received damage from flooding, flash flooding, hail, thunderstorm winds and tornadoes. The data shows deaths occurring from flash flooding, lightning, and tornadoes.

Camden Past Occurrences – Extreme Heat & Drought

Location	Date	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1.Camden	07/01/2000	Excessive Heat	N/A	0	0	0	N/A
2.Camden	08/08/2007	Excessive Heat	N/A	0	0	0	N/A
TOTALS:				0	0	0	N/A

1. In Camden the temperature was 100 degrees or higher thirteen days during the month with the hottest being 105 degrees.
2. The heat index was between 110 and 115 degrees, leading many public places to allow the public to come in and cool off.

Camden Past Occurrences –Flash Flood

Location	Date	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1.Camden	07/10/2005	Flash Flood	N/A	0	0	0	0
2.Camden	08/29/2005	Flash Flood	N/A	0	0	0	0
TOTALS:				0	0	N/A	N/A

1. Heavy rains from Hurricane Dennis caused street flooding across most of the county. Radar estimated that 3-5 inches of rain fell across most of the county, with isolated amounts of 8-10 inches across the central part.
2. Heavy rains from Hurricane Katrina caused flooding across most of the county. Several streets had to be closed off and on throughout the day. Radar estimated that 3-5 inches of rain fell across the county with the heaviest being across the west half of the county.

Wilcox County Past Occurrences – Hurricanes

Location	Date	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Camden	10/03/1995	Hurricane Opal	N/A	0	0	N/A	N/A
2. Camden	08/06/2001	Tropical Storm Barry	N/A	0	0	N/A	N/A
3.Camden	09/13/2004	Hurricane Ivan	N/A	0	0	substantial	substantial
4.Camden	06/10/2005	Tropical Storm Arlene	N/A	0	0	N/A	N/A
5.Camden	07/09/2005	Hurricane Dennis	N/A	0	0	N/A	N/A

TOTALS:	N/A	0	0	N/A	N/A
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1. No description available.
2. Minor damage occurred in Conecuh, Monroe and Wilcox counties, with most of that being trees blown down.
3. Hurricane Ivan caused substantial damage in Wilcox County. Flooding was extensive. Wind damage was reported throughout the County. Millions of dollars of property damage was reported countywide. Water and sewer systems lost power for days. A significant amount of timber was destroyed.
4. Tropical Storm Arlene brought flash flooding to Wilcox County.
5. Hurricane Dennis brought flash flooding and high winds to Wilcox County.

Camden Past Occurrences - Hail (Severe Storms)

Location	Date	Time	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Camden	03/30/1997	04:15 PM	Hail	0.88 in.	0	0	0	0
2. Camden	04/22/1997	02:15 PM	Hail	1.75 in.	0	0	0	0
3. Camden	02/13/2000	04:20 PM	Hail	0.75 in.	0	0	0	0
4. Camden	03/09/2003	07:11 AM	Hail	0.75 in.	0	0	0	0
5. Camden	03/09/2003	09:25 AM	Hail	0.88 in.	0	0	0	0
6. Camden	04/07/2004	6:10 PM	Hail	0.75 in.	0	0	0	0
7. Camden	10/19/2004	04:30 PM	Hail	0.75 in.	0	0	0	0
8. Camden	03/30/2005	09:40 PM	Hail	1.75 in.	0	0	\$3,000	0
9. Camden	05/10/2006	05:00 PM	Hail	1.00 in.	0	0	0	0
10. Camden	04/11/2007	15:25 PM	Hail	0.88 in.	0	0	0	0
11. Camden	04/11/2007	15:41 PM	Hail	1.25 in.	0	0	0	0
12. Camden	04/11/2007	15:56 PM	Hail	0.88in.	0	0	0	0
TOTALS:					0	0	\$3,000	0

1. Quarter size hail was reported near Camden.
2. Golf ball size hail fell just south of Camden.
3. Dime size hail was reported near Camden.
4. No description available.
5. No description available.
6. None Reported
7. None Reported
8. Golfball size hail fell just south of Camden. Some residences suffered roof damage and a few vehicles were damaged by the large hail.
9. None Reported
10. Severe thunderstorms produced hail and wind damage in southwest Alabama.
11. Severe thunderstorms produced hail and wind damage in southwest Alabama.
12. Severe thunderstorms produced hail and wind damage in southwest Alabama.

Camden Past Occurrences - Thunderstorms (Severe Storms)

Location	Date	Time	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1.Camden	04/11/1995	08:25 AM	Thunderstorm Winds	N/A	0	0	\$8,000	0
2.Camden	07/08/1995	04:05 PM	Thunderstorm Winds	N/A	0	0	\$1,000	0
3.Camden	07/18/1995	7:30 PM	Thunderstorm Winds	N/A	0	0	\$5,000	0
4.Camden	01/26/1996	06:05 PM	Thunderstorm Winds	50 knots	0	0	\$2,000	0
5.Camden	01/24/1997	07:00 AM	Thunderstorm Winds	50 knots	0	0	\$2,000	0
6.Camden	04/05/1997	02:30 PM	Thunderstorm Winds	50 knots	0	0	0	0
7.Camden	05/03/1998	02:40 PM	Thunderstorm Winds	50 knots	0	0	\$3,000	0
8.Camden	04/06/1999	04:10 PM	Thunderstorm Winds	55 knots	0	0	\$3,000	0
9.Camden	06/04/1999	06:45 PM	Thunderstorm Winds	50 knots	0	0	\$4,000	0
10.Camden	12/16/2000	03:15 PM	Thunderstorm Winds	50 knots	0	0	\$5,000	0
11.Camden	06/19/2001	03:00 PM	Thunderstorm Winds	60 knots	0	0	\$30,000	0
12.Camden	07/11/2002	02:15 PM	Thunderstorm Winds	50 knots	0	0	\$8,000	0
13.Camden	07/15/2002	05:45 PM	Thunderstorm Winds	50 knots	0	0	\$8,000	0
14.Camden	04/30/2005	05:15 AM	Thunderstorm Winds	50 knots	0	0	\$8,000	0
TOTALS:					0	0	\$87,000	0

1. Alabama Power Company reported power lines and trees down in Camden and in the Millers Ferry area.
2. Several trees were blown down in and around Camden.
3. Numerous trees up to a foot in diameter were downed along Highway 162 in the western part of Wilcox County.
4. Several trees and power lines were blown down near the City of Camden.
5. Several trees were blown down along State Highway 265 between Fatama and Camden.
6. A SKYWARN spotter reported wind gusts of 60 mph just northwest of Camden. No damage was observed.
7. Several trees were blown down near Camden.
8. High winds blew several trees down 6 miles east of Camden.
9. High winds blew several trees down.
10. Trees were blown down near Camden by high thunderstorm winds.
11. Trees were blown down and some roofs of houses were damaged, mainly due to falling trees, as strong thunderstorms moved through the area. A roof was also peeled off a larger building in the downtown area.
12. Trees were blown down by high winds from a thunderstorm near Camden.
13. High winds from a thunderstorm blew down several trees near Camden.

14. Trees and power lines were blown down by high winds from a thunderstorm just southeast of Camden.

Camden Past Occurrences -Tornado

Location	Date	Time	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Camden	02/12/1894	04:00 AM	Tornado	F2	0	N/A	N/A	N/A
2. Camden	03/21/1913	05:00 AM	Tornado	F2	N/A	N/A	N/A	N/A
3. Camden	05/04/1931	05:30 PM	Tornado	F2	0	0	N/A	N/A
4. Camden	11/23/1983	11:48 AM	Tornado	F2	0	2	\$250,000	0
TOTALS:					0	2	\$250,000	0

1. Several small homes were destroyed along the path.
2. No description available.
3. One new home was destroyed. Four homes were damaged.
4. Two people were injured as a wall collapsed in a business. Three businesses were destroyed and one was damaged. Several vehicles were damaged.

Past Occurrences by Jurisdiction Oak Hill

The hurricane, flash flooding, and extreme temperature occurrences were all countywide, so jurisdiction specific information was unavailable. There is no jurisdiction specific information available for Oak Hill other than information on one tornado occurrence.

Oak Hill Past Occurrences – Extreme Heat & Drought

Location	Date	Type	Deaths	Injuries	Property Damage	Crop Damage
1. Oak Hill	07/01/2000	Excessive Heat	0	0	0	0
2. Oak Hill	08/08/2007	Excessive Heat	0	0	0	0
TOTALS:			0	0	0	0

1. In Camden the temperature was 100 degrees or higher thirteen days during the month with the hottest being 105 degrees.
2. The heat index was between 110 and 115 degrees, leading many public places to allow the public to come in and cool off.

Oak Hill Past Occurrences –Flash Flood

Location	Date	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Oak Hill	07/10/2005	Flash Flood	N/A	0	0	0	0
2. Oak Hill	08/29/2005	Flash Flood	N/A	0	0	0	0

1. Heavy rains from Hurricane Dennis caused street flooding across most of the county. Radar estimated that 3-5 inches of rain fell across most of the county, with isolated amounts of 8-10 inches across the central part.
2. Heavy rains from Hurricane Katrina caused flooding across most of the county. Several streets had to be closed off and on throughout the day. Radar estimated that 3-5 inches of rain fell across the county with the heaviest being across the west half of the county.

Oak Hill Past Occurrences – Hurricanes

Location	Date	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Oak Hill	10/03/1995	Hurricane Opal	N/A	0	0	N/A	N/A
2. Oak Hill	08/06/2001	Tropical Storm Barry	N/A	0	0	N/A	N/A
3. Oak Hill	09/13/2004	Hurricane Ivan	N/A	0	0	substantial	substantial
4. Oak Hill	06/10/2005	Tropical Storm Arlene	N/A	0	0	N/A	N/A
5. Oak Hill	07/09/2005	Hurricane Dennis	N/A	0	0	N/A	N/A
TOTALS:				0	0	N/A	N/A

1. No description available.
2. Minor damage occurred in Conecuh, Monroe and Wilcox counties, with most of that being trees blown

down.

3. Hurricane Ivan caused substantial damage in Wilcox County. Flooding was extensive. Wind damage was reported throughout the County. Millions of dollars of property damage was reported countywide. Water and sewer systems lost power for days. A significant amount of timber was destroyed.

4. Tropical Storm Arlene brought flash flooding to Wilcox County.

5. Hurricane Dennis brought flash flooding and high winds to Wilcox County.

Oak Hill Past Occurrences -Tornadoes

Location	Date	Time	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Oak Hill	06/28/1957	8:50 AM	Tornado	F2	0	0	N/A	0
TOTALS:					0	0	N/A	0

1. A church was demolished.

Past Occurrences by Jurisdiction Pine Apple

The hurricane, flash flooding, and extreme temperature occurrences were all countywide, so jurisdiction specific information was unavailable. One thunderstorm and one hail event are all of the jurisdiction specific information available for Pine Apple.

Pine Apple Past Occurrences – Extreme Heat & Drought

Location	Date	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Pine Apple	07/01/2000	Excessive Heat	N/A	0	0	N/A	N/A
2. Pine Apple	08/08/2007	Excessive Heat	N/A	0	0	N/A	N/A
TOTALS:				0	0	N/A	N/A

1. In Camden the temperature was 100 degrees or higher thirteen days during the month with the hottest being 105 degrees.
2. The heat index was between 110 and 115 degrees, leading many public places to allow the public to come in and cool off.

Pine Apple Past Occurrences –Flash Flood

Location	Date	Time	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Pine Apple	07/10/2005	05:30 PM	Flash Flood	N/A	0	0	0	0
2. Pine Apple	08/29/2005	02:30 PM	Flash Flood	N/A	0	0	0	0

1. Heavy rains from Hurricane Dennis caused street flooding across most of the county. Radar estimated that 3-5 inches of rain fell across most of the county, with isolated amounts of 8-10 inches across the central part.
2. Heavy rains from Hurricane Katrina caused flooding across most of the county. Several streets had to be closed off and on throughout the day. Radar estimated that 3-5 inches of rain fell across the county with the heaviest being across the west half of the county.

Pine Apple Past Occurrences – Hurricanes

Location	Date	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Pine Apple	10/03/1995	Hurricane Opal	N/A	0	0	N/A	N/A
2. Pine Apple	08/06/2001	Tropical Storm Barry	N/A	0	0	N/A	N/A
3. Pine Apple	09/13/2004	Hurricane Ivan	N/A	0	0	substantial	substantial
4. Pine Apple	06/10/2005	Tropical Storm Arlene	N/A	0	0	N/A	N/A
5. Pine Apple	07/09/2005	Hurricane Dennis	N/A	0	0	N/A	N/A
TOTALS:				0	0	N/A	N/A

1. No description available.
2. Minor damage occurred in Conecuh, Monroe and Wilcox counties, with most of that being trees blown down.
3. Hurricane Ivan caused substantial damage in Wilcox County. Flooding was extensive. Wind damage was reported throughout the County. Millions of dollars of property damage was reported countywide. Water and sewer systems lost power for days. A significant amount of timber was destroyed.
4. Tropical Storm Arlene brought flash flooding to Wilcox County.
5. Hurricane Dennis brought flash flooding and high winds to Wilcox County.

Pine Apple Past Occurrences – Hail (Severe Storms)

Location	Date	Time	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Pine Apple	06/04/1999	06:30 PM	Hail	0.75 in.	0	0	0	0
TOTALS:					0	0	0	0

1. Dime size hail was reported by the public.

Pine Apple Past Occurrences – Thunderstorms (Severe Storms)

Location	Date	Time	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Pine Apple	06/04/1999	06:30 PM	Thunderstorm Winds	50 knots	0	0	\$4,000	0
TOTALS:					0	0	\$4,000	0

1. High winds blew several trees down.

Past Occurrences by Jurisdiction Pine Hill

The hurricane, flash flooding, and extreme temperature occurrences were all countywide, so jurisdiction specific information was unavailable.

Pine Hill Past Occurrences – Extreme Heat & Drought

Location	Date	Time	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Pine Hill	07/01/2000	12:01 AM	Excessive Heat	N/A	0	0	0	0
2. Pine Hill	08/08/2007	08:00 AM	Excessive Heat	N/A	0	0	0	0
Totals					0	0	0	0

1. In Camden the temperature was 100 degrees or higher thirteen days during the month with the hottest being 105 degrees.
2. The heat index was between 110 and 115 degrees, leading many public places to allow the public to come in and cool off.

Pine Hill Past Occurrences –Flash Flood

Location	Date	Time	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Pine Hill	07/10/2005	05:30 PM	Flash Flood	N/A	0	0	0	0
2. Pine Hill	08/29/2005	02:30 PM	Flash Flood	N/A	0	0	0	0
Totals					0	0	0	0

1. Heavy rains from Hurricane Dennis caused street flooding across most of the county. Radar estimated that 3-5 inches of rain fell across most of the county, with isolated amounts of 8-10 inches across the central part.
2. Heavy rains from Hurricane Katrina caused flooding across most of the county. Several streets had to be closed off and on throughout the day. Radar estimated that 3-5 inches of rain fell across the county with the heaviest being across the west half of the county.

Pine Hill Past Occurrences – Hurricanes

Location	Date	Time	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Pine Hill	10/03/1995	12:00 P.M.	Hurricane Opal	N/A	0	0	N/A	N/A
2. Pine Hill	08/06/2001	04:00 AM	Tropical Storm Barry	N/A	0	0	N/A	N/A
3. Pine Hill	09/13/2004	09:00 PM	Hurricane Ivan	N/A	0	0	substantial	substantial
4. Pine Hill	06/10/2005	03:00 AM	Tropical Storm Arlene	N/A	0	0	N/A	N/A

5. Pine Hill	07/09/2005	03:00 AM	Hurricane Dennis	N/A	0	0	N/A	N/A
Totals					0	0	N/A	N/A

1. No description available.
2. Minor damage occurred in Conecuh, Monroe and Wilcox counties, with most of that being trees blown down.
3. Hurricane Ivan caused substantial damage in Wilcox County. Flooding was extensive. Wind damage was reported throughout the County. Millions of dollars of property damage was reported countywide. Water and sewer systems lost power for days. A significant amount of timber was destroyed.
4. Tropical Storm Arlene brought flash flooding to Wilcox County.
5. Hurricane Dennis brought flash flooding and high winds to Wilcox County.

Pine Hill Past Occurrences – Hail (Severe Storms)

Location	Date	Time	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Pine Hill	03/18/1996	06:30 PM	Hail	1.75 in.	0	0	0	0
2. Pine Hill	04/22/1997	05:15 PM	Hail	1.75 in.	0	0	0	0
3. Pine Hill	03/03/1999	12:45 AM	Hail	0.75 in.	0	0	0	0
4. Pine Hill	05/26/2011	12:45 PM	Hail	0.75 in.	0	0	0	0
Totals					0	0	0	0

1. Golf ball size hail was reported near Pine Hill.
2. Golf ball size hail was reported along State Highway 10 between Pine Hill and Yellow Bluff. This same area also experienced high winds.
3. Dime size hail was reported near Pine Hill.

Pine Hill Past Occurrences – Thunderstorms (Severe Storms)

Location	Date	Time	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Pine Hill	08/12/1995	07:00 PM	Thunderstorm Winds	N/A	0	0	\$2,000	0
2. Pine Hill	04/22/1997	05:15 PM	Thunderstorm Winds	50 knots	0	0	\$2,000	0
3. Pine Hill	03/19/2000	02:55 PM	Thunderstorm Winds	60 knots	0	0	\$5,000	0
4. Pine Hill	01/19/2001	08:05 AM	Thunderstorm Winds	50 knots	0	0	\$5,000	0
5. Pine Hill	06/14/2001	01:25 PM	Thunderstorm Winds	55 knots	0	0	\$5,000	0
6. Pine Hill	07/16/2004	01:50 PM	Thunderstorm Winds	50 knots	0	0	\$8,000	0
7. Pine Hill	03/20/2006	05:30PM	Thunderstorm Winds	50 knots	0	0	\$10,000	0
Totals					0	0	\$37,000	0

1. Trees and power lines were blown down along State Highway 5 in Pine Hill.
2. Several trees were blown down along State Highway 10 between Pine Hill and Yellow Bluff.

3. High thunderstorm winds blew trees and power lines down at the intersection of State Highway 29 and County Road 21.
4. Trees were reported downed by strong thunderstorm winds just south of the community.
5. Strong thunderstorm winds downed several trees around the community.
6. High winds from a thunderstorm blew down several trees near Pine Hill.
7. High winds from a thunderstorm blew down several trees and power lines in Pine Hill. A tin roof was also blown off a building.

Past Occurrences by Jurisdiction Yellow Bluff

The hurricane, flash flooding, and extreme temperature occurrences were all countywide, so jurisdiction specific information was unavailable. There is no jurisdiction specific information available for Yellow Bluff other than information on one thunderstorm occurrence.

Yellow Bluff Past Occurrences – Extreme Heat & Drought

Location	Date	Time	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Yellow Bluff	07/01/2000	12:01 AM	Excessive Heat	N/A	0	0	0	0
2. Yellow Bluff	08/08/2007	08:00 AM	Excessive Heat	N/A	0	0	0	0
Totals					0	0	0	0

1. In Camden the temperature was 100 degrees or higher thirteen days during the month with the hottest being 105 degrees.
2. The heat index was between 110 and 115 degrees, leading many public places to allow the public to come and cool off.

Yellow Bluff Past Occurrences –Flash Flood

Location	Date	Time	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Yellow Bluff	07/10/2005	05:30 PM	Flash Flood	N/A	0	0	0	0
2. Yellow Bluff	08/29/2005	02:30 PM	Flash Flood	N/A	0	0	0	0
Totals					0	0	0	0

1. Heavy rains from Hurricane Dennis caused street flooding across most of the county. Radar estimated that 3-5 inches of rain fell across most of the county, with isolated amounts of 8-10 inches across the central part.
2. Heavy rains from Hurricane Katrina caused flooding across most of the county. Several streets had to be closed off and on throughout the day. Radar estimated that 3-5 inches of rain fell across the county with the heaviest being across the west half of the county.

Yellow Bluff Past Occurrences – Hurricanes

Location	Date	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Yellow Bluff	10/03/1995	Hurricane Opal	N/A	0	0	N/A	N/A
2. Yellow Bluff	08/06/2001	Tropical Storm Barry	N/A	0	0	N/A	N/A
3. Yellow Bluff	09/13/2004	Hurricane Ivan	N/A	0	0	substantial	substantial

4. Yellow Bluff	06/10/2005	Tropical Storm Arlene	N/A	0	0	N/A	N/A
5. Yellow Bluff	07/09/2005	Hurricane Dennis	N/A	0	0	N/A	N/A
Totals				0	0	N/A	N/A

1. No description available.
2. Minor damage occurred in Conecuh, Monroe and Wilcox counties, with most of that being trees blow down.
3. Hurricane Ivan caused substantial damage in Wilcox County. Flooding was extensive. Wind damage was reported throughout the County. Millions of dollars of property damage was reported countywide. Water and sewer systems lost power for days. A significant amount of timber was destroyed.
4. Tropical Storm Arlene brought flash flooding to Wilcox County.
5. Hurricane Dennis brought flash flooding and high winds to Wilcox County.

Yellow Bluff Past Occurrences- Hail

Location	Date	Time	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Yellow Bluff	03/02/2012	1640	Hail	1.50 in.	0	0	0	0
Totals					0	0	0	0

1. Severe thunderstorms produced large hail and a funnel cloud across portions of southwest Alabama.

Yellow Bluff Past Occurrences -Thunderstorms

Location	Date	Time	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
1. Yellow Bluff	03/18/1996	06:00	Thunderstorm Winds	60 knots	0	0	\$8,000	0
Totals					0	0	\$8,000	0

1. High winds blew siding off a fast food restaurant near Yellow Bluff.