HOUSTON COUNTY, ALABAMA HAZARD MITIGATION PLAN

(2009 UPDATE DRAFT)

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Section 1 - Hazard Mitigation Plan Introduction

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1.x	• Changes in section numbering
1.1	• Incorporated former “Section I-A”
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1.1 Plan Scope

The Houston County Multi-Jurisdictional Hazard Mitigation Plan is a plan that details multiple hazards that threaten Houston County and the municipalities of Ashford, Avon, Columbia, Cottonwood, Cowarts, Dothan, Gordon, Kinsey, Madrid, Rehobeth, Taylor, and Webb. This plan also represents unincorporated areas in the county at-large, including Wicksburg, Lovetown, Pansey, Lucy, Bay Springs, Hodgesville, and Southern Junction. It fulfills the requirements set forth by the Disaster Mitigation Act of 2000 (DMA 2000). DMA 2000 requires counties to formulate a hazard mitigation plan in order to be eligible for mitigation grants made available by the Federal Emergency Management Agency (FEMA).

1.2 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. These plans should be approved by FEMA by November 1, 2004 and updated every five years.

1.3 Funding

Funding for the Houston County Multi-Jurisdictional Hazard Mitigation Plan was made available through the Hazard Mitigation Grant Program (HMGP) and the Houston County Commission. The Alabama Emergency Management Agency (AEMA) and Alabama Association of Regional Councils (AARC) entered into an agreement to update plans for many counties in Alabama. The Southeast Alabama Regional Planning and Development Commission (SEARP&DC) and Houston County subsequently entered into an additional agreement. The Dothan/Houston County Emergency Management Agency and the SEARP&DC facilitated the development of the plan.

1.4 Purpose

The Houston County Multi-Jurisdictional Hazard Mitigation Plan is an effort to evaluate and identify all prioritized hazards which may affect Houston County. It presents mitigation strategies that address the hazards identified. This plan is only one of many steps Houston County will take to protect the welfare of residents by achieving a safer environment for its residents.

Section 2 - Houston County Profile

Section Contents

Section	Section Updates
2.x	• Changes in section numbering
2.1	• Incorporated former "Section I-B"
2.2	• Incorporated former "Section I-C" • Added additional demographic information
2.3	• Incorporated former "Section I-D" • Changed table to reflect more current employer numbers
2.4	• Added information
2.5	• Incorporated former section "III-B-6" and added updated population estimates

2.1 Background

Houston County is located in the southeast corner of Alabama (Figure 2.1). Houston County, the youngest county in Alabama, was formed on February 9, 1903 from portions of Henry, Dale and Geneva counties. The County was named in honor of former Alabama Governor George Smith Houston. It is Alabama's twelfth most populated county. The County is bordered on the east by the state of Georgia at the Chattahoochee River and on the south by the state of Florida and covers 578 square miles. The Little Choctawhatchee River forms the boundary in the northwest part of the county with Dale County. Houston County lies on the coastal plain with an Elevation that ranges from 120 feet above sea level in the southeastern corner to above 345 feet above sea level at a point near Webb in the north central part of the County. The topography is mainly level to gently sloping, with scattered hilly sections found in the northern part of the County. Rainfall averages 53 inches annually. Two reservoirs formed by dams provide outdoor recreation.

Figure 2.1 Houston County Location

The county seat and largest city of Houston County is Dothan, which was known as Poplar Head prior to 1871. Dothan's population is estimated at 66,860. Houston County is part of the Dothan, AL metropolitan area. The county varies from urban areas to very rural settings.

The main waterway in Houston County is the Chattahoochee River, on the eastern border. There are subsidiary streams consisting of Omussee Creek and Little Choctawhatchee River. Numerous creeks and small ditches are subject to flooding. Many are located in urban areas such as Dothan and Ashford. There is approximately 1.29 square miles of surface covered by water.

Figure 2.2 displays major roads in Houston County.

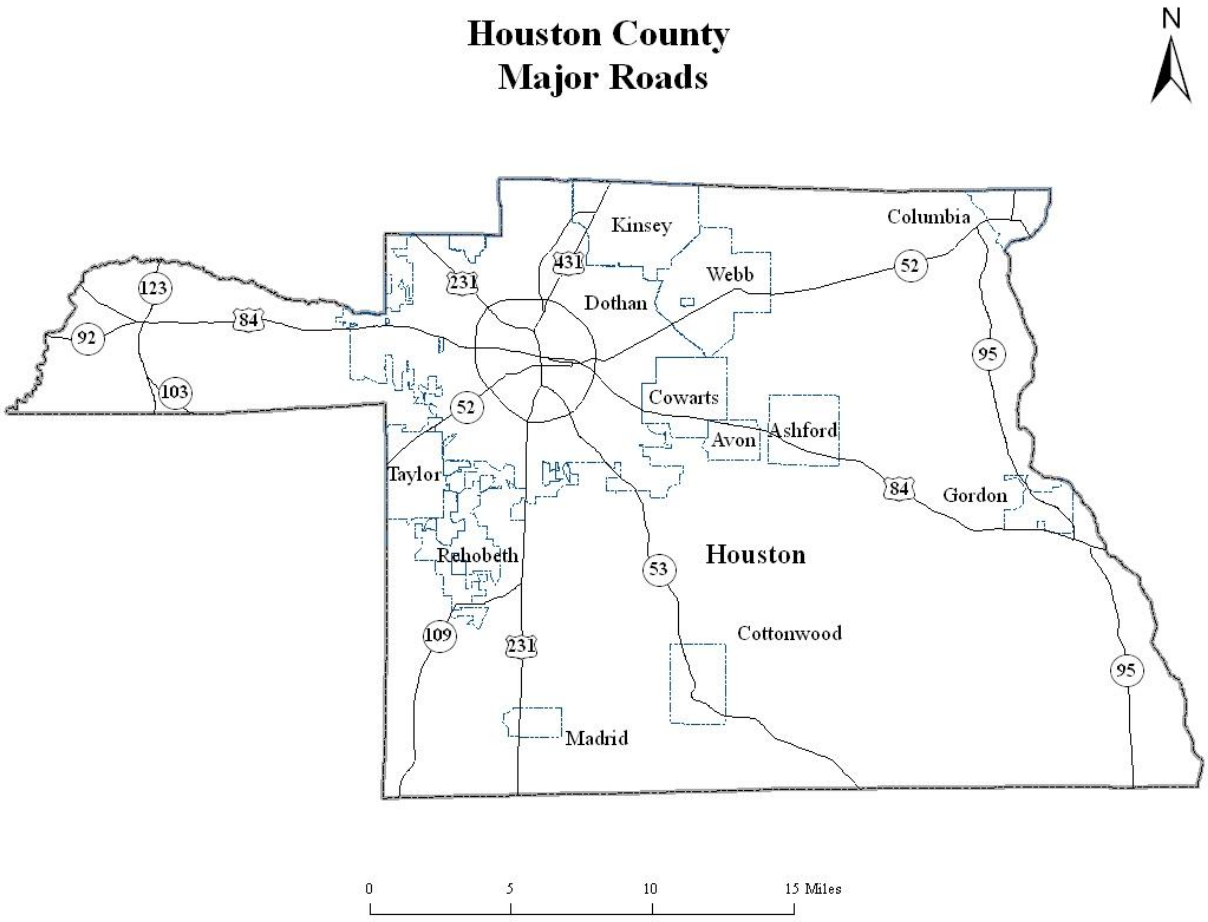


Figure 2.2 Major Roads in Houston County

2.2 Demographics

The 2008 Census estimated population of Houston County was 98,488 people. 19,437 people (19.74%) lives in unincorporated areas of the County, while 79,051 people (80.26%) live within incorporated municipalities. The County's median age is 38.1, which is older than the median age of the State of Alabama (35.8).

In 2000, the percent of the population in Houston County that has finished high school or better (76.5%) is greater than both the State of Alabama (75.3%) and lower than the national (80.4%) average. The County has below average median household income compared to state and national averages, but a slightly higher per capita income than the state. A higher percentage of families live below the poverty line when compared to the national average, but lower percentage than the state. Table 2.1 is a basic demographic profile of the county.

Table 2.1 Houston County Demographic Profile

Population (2008)	98,488
Male (2008)	46,894
Female (2008)	51,594
Total Housing Units (2007)	43,336

Percent high school graduate or better (2000)	76.5
Percent bachelor's degree or higher (2000)	18.4
Median Household Income (2007)	$40,461
Per Capita Income (2007)	$33,462
Percent below the poverty level (2007)	15.7%

There are 12 municipalities in Houston County. These municipalities are Ashford, Avon, Columbia, Cottonwood, Cowarts, Dothan, Gordon, Kinsey, Madrid, Rehobeth, Taylor, and Webb. Table 2.2 gives basic social characteristics of these municipalities.

Table 2.2 Municipal Demographic Data

Place	**Ashford**	**Avon**	**Columbia**	**Cottonwood**	**Cowarts**	**Dothan**
Population (2008)	2,062	475	841	1,202	1,630	65,515 *
Minority (%) (2000)	26.1	5.6	25.6	30.9	15.1	32.7
65+ (%) (2008)	18.1	13.1	22.7	17.0	12.9	15.3
Under 21 (%) (2008)	26.3	24.9	26.5	30.3	26.7	28.1
Median HH Income ($) (2008)	37,019	46,818	31,220	26,032	42,955	39,511

Place	**Gordon**	**Kinsey**	**Madrid**	**Rehobeth**	**Taylor**	**Webb**
Population (2008)	419	1,965	333	1,260	1,982 *	1,367
Minority (%) (2000)	77.0	41.9	17.2	3.3	7.0	20.8
65 + (%) (2008)	14.0	10.1	12.3	13.1	7.8	12.4
Under 21 (%) (2008)	34.2	32.8	27.1	26.4	33.8	28.2
Median HH Income($) (2008)	19,828	32,771	20,694	41,385	44,512	37,037

Sources: U.S. Census Bureau, Economic Development Partnership of Alabama

Dothan covers the largest area of all the municipalities in Houston County (Table 2.3). Dothan also has both the highest population and housing densities

Table 2.3 Housing and Population Densities by Municipality (2000)

Municipality	**Land Area***	**Water Area***	**Total Area***	**Housing Units**	**Housing Density****	**Population**	**Population Density****
Ashford	6.10	0.01	6.11	877	143.8	1,853	303.9
Avon	2.63	0.01	2.65	202	76.7	466	176.9
Columbia	3.93	0.07	3.99	462	117.7	804	204.8
Cottonwood	5.50	0.02	5.51	548	99.7	1,170	212.9

Cowarts	7.24	0.01	7.25	684	94.5	1,546	213.6
Dothan ^	80.24	0.20	80.44	25,632	319.4	57,082	711.4
Gordon	3.24	0.00	3.24	165	50.9	408	125.8
Kinsey	12.10	0.00	12.10	768	63.5	1,796	148.4
Madrid	1.94	0.00	1.94	134	69.0	303	156.1
Rehobeth	6.26	0.02	6.28	399	63.7	993	158.6
Taylor ^	6.63	0.08	6.71	745	112.3	1,888	284.7
Webb	11.74	0.00	11.74	523	44.6	1,298	110.6

***square miles**
****density per square mile of land**
^ areas of municipality inside Houston County
Source: U.S. Census Bureau

2.3 Business and Industry

Houston County supports a wide variety of industrial and commercial stakeholders. The county is a strategic geographic site that is served by three federal highways (U.S. 84, U.S. 231, U.S. 431), five state highways (AL 1, AL 12, AL 52, AL 53, AL 210), three railroads, 30 motor freight lines, an inland waterway system, and a regional airport. The combined counties population within a 50-mile radius is 515,000. The county is home to a large, widely diversified, and stable industrial base, as well as an expansive agricultural economic mainstay. A new regional mall, two local malls, and countless retail outlets more than serve the consumer needs of the people.

The development of the Chattahoochee River, 20 miles east of Dothan, on the east boundary of the county, and separating Alabama and Georgia is another asset to our area. Three dams provide navigation from the Gulf of Mexico at Apalachicola, Florida, north to Columbus Georgia and Phenix City, Alabama through nine-foot channels. The Alabama Power Company owns the $490 million Joseph M. Farley Nuclear Plant on the river, which furnishes electricity for distribution.

Some of the more significant business interests located in Houston County include farming, forestry, light industry, manufacturing, service industry, poultry growers and related industry, and retail. Peanuts are the major crop in Houston County. The peanuts now harvested within 75 miles of Dothan equal one-fourth of the entire U.S. peanut crop. With this acclaim, Dothan-Houston County prides itself in being the “Peanut Capital of the World”.

The aforementioned industries are susceptible to the same natural hazards as the remainder of the county, e.g. high wind events and potential flooding. The economic impact of losing any industry is directly related to the size/type of business and the duration/severity of the loss. Tables 2.4 depict the major businesses in the county.

Table 2.4 Houston County Largest Employers

Employer	Product	# Employees
Dothan City and Houston County School Systems	School Systems	2,022
Southeast Alabama Medical Center	Hospital	2,002
Flowers Hospital	Hospital	1,200
Perdue Farms	Poultry Processing	1,150
City Of Dothan	City Government	1,015
Southern Nuclear (Plant Farley)	Power Plant	860
Pemco World Air Services	Aircraft Servicing	600
Michelin North America, Inc.	Tire Manufacturer	542
Sony Electronics, Inc.	Magnetic Recording Media	470
AAA Cooper Transportation	Trucking – Motor Freight	467
Wal-Mart SuperCenter #604	Department Store	430
Houston County	County Government	402
Twitchell Corporation	Textile Manufacturing	387
Wal-Mart SuperCenter #2534	Department Store	370
APAC Southeast, Inc.	Paving Contractors	300
McLane Company, Inc.	Distribution Center	300

Source: Dothan Area Chamber of Commerce

2.4 Utilities

Electricity: Alabama Municipal Electric Authority, Alabama Power, City of Dothan, Wiregrass Electric Cooperative

Water: City of Ashford, Town of Avon, Town of Columbia, Town of Cottonwood, Town of Cowarts, City of Dothan, Town of Gordon, Houston County Water Authority, Town of Kinsey, Town of Taylor, Town of Webb

Sewer: City of Ashford, Town of Columbia, Town of Cottonwood, Town of Cowarts, City of Dothan, Town of Gordon, Town of Kinsey

Gas: Southeast Alabama Gas District

Internet / Telecommunications: CenturyTel, Knology, Arch Southeast Communication, Cingular Wireless, Comcast, Commtech Solutions, DeltaCom, Faith Cellular, Nextel, SouthernLINC, Sprint, Time Warner, Verizon

2.5 Land Use and Development Trends

Most of Houston County's population and developed areas are near Dothan in the northwest corner of the county. Dothan is a regional economic engine that attracts people from throughout Houston County and surrounding areas to engage in commercial and other activities. Houston County becomes more rural in the eastern and southern areas away from the Dothan Urbanized Area. Much of Houston County outside the Dothan Urbanized Area is a mixture of agricultural and forested land.

Houston County has grown by an estimated 10.9% from 2000 to 2008. Ashford, Dothan, and Rehobeth all grew by over 10%, with Rehobeth having a substantial growth of 26.9%. Population for the jurisdictions from 2000 and 2008 are shown in Table 2.5 below.

Table 2.5 Population Growth by Jurisdiction

Jurisdiction	2000 Population	2008 Population	% Growth
Houston County Unincorporated	19,180	19,437	1.3
Ashford	1,853	2,062	11.3
Avon	466	475	1.9
Columbia	804	841	4.6
Cottonwood	1,170	1,202	2.7
Cowarts	1,546	1,630	5.4
Dothan	57,082*	65,515*	14.8
Gordon	408	419	2.7
Kinsey	1,796	1,965	9.4
Madrid	303	333	9.9
Rehobeth	993	1,260	26.9
Taylor	1,888*	1,982*	5.0
Webb	1,298	1,367	5.3
Total	88,787	98,488	10.9

*** Areas inside Houston County**

The moderate population growth in Houston County presents an enhancement of risk and vulnerability to natural hazard events, as hazard events that occur have more opportunity to affect higher density areas and destroy larger exposure of structures.

A proposed entertainment resort development called Country Crossing is being constructed along U.S. Highway 231 between Dothan and the Florida State Line. Once this development is operational, Dothan, Rehobeth, Cottonwood, Madrid, and Taylor are projected to receive additional residential and commercial growth opportunities. Each community in Houston County should work to focus growth in compatible areas that are not susceptible to flooding and other location-specific hazards.

Section 3 – Planning Process

This section of the plan addresses requirements of Interim Final Rule (IFR) Section 201.6(d)(3).

Section Contents

Section	Section Updates
3.x	• Former "Section II" • Reflected update process

3.1 Multi-Jurisdictional Plan Adoption

Each jurisdiction will approve the plan when it is deemed "approvable pending adoption."

3.2 Multi-Jurisdictional Planning Participation

Houston County and all municipalities continued participation according to the standards set forth by the Planning Committee. The Houston County and Dothan City school systems were new participants. The current participating jurisdictions include:

- Houston County
- Town of Ashford
- Town of Avon
- Town of Columbia
- Town of Cottonwood
- Town of Cowarts
- City of Dothan
- Town of Gordon
- Town of Kinsey
- Town of Madrid
- Town of Rehobeth
- Town of Taylor
- Town of Webb
- Dothan City Schools
- Houston County Schools

3.3 Hazard Mitigation Planning Process

The Update to the Houston County Multi-Jurisdictional Hazard Mitigation Plan was developed through interaction between Dothan – Houston County Emergency Management Agency, the Houston County Commission, the municipalities and school districts of Houston County, the Southeast Alabama Regional Planning and Development Commission (SEARP&DC), and the Alabama Emergency Management Agency (AEMA).

As in the original plan, the initial review and scope of the updating process was developed by the Local Emergency Planning Committee (LEPC). The LEPC serves to address emergency preparedness, planning guidance, exercise facilitation, and other recommendations to the jurisdictions of Houston County and the Dothan/Houston County Emergency Management Agency.

The LEPC, during public meetings on February 20, 2007 and May 8, 2008 felt the best process would be to engage the Houston County Mitigation Planning Committee (HCMPC), which represents all of the jurisdictions, to assist SEARP&DC and the EMA in the updating of the Hazard Mitigation Plan.

Discussions with the HCMPC led to jurisdictional meetings with each jurisdiction to review the Risk, Vulnerability, and Mitigation components of the Hazard Mitigation Plan. During autumn of 2008, packets of information containing planning materials were sent to each jurisdiction for review prior to jurisdictional meetings that were held in 2008 and 2009. The scope of the meetings was to assess the progress of each jurisdiction's mitigation goals and objectives and to find out recent hazard events and how they affected each jurisdiction.

Each HCMPC member (Table 3.1) was expected to participate in the planning update process by:

- Attend all scheduled meetings, or ensure a representative attends
- Represent their jurisdiction's interests, including gathering information, providing feedback, and prepare for adoption of the updated plan
- Provide an assessment of prioritized projects that have been completed or are ongoing, or changes to prioritization

Table 3.1 HCMPC Committee

Jurisdiction	Member	Alternate
Houston County	Clark Matthews	Charles Finney / Martha Harrell
City of Ashford	Rusty Burgess	Gwen Hubbard
Town of Avon	Timothy Prevatt	Neda Womack
Town of Columbia	Sandra Lovett	Patricia Kindberg
Town of Cottonwood	Lomax Smith	Jim Smith
Town of Cowarts	Randy Roland	Roger Nall
City of Dothan	Mike West	Jerry Corbin
Town of Gordon	Charles Dismuke	Gwen Howard
Town of Kinsey	Jason Reneau	Faye Douglas
Town of Madrid	Elaine Williams	Luann Hill
Town of Rehobeth	Joe P. Collins	Barbara Hall
Town of Taylor	Joel Napier	Charles Douglas
Town of Webb	Vicky Hunter	Kim Brown
Dothan City Schools	Sam Nichols	Gary Buckley
Houston County Schools	Tim Pitchford	Kerry Bedsole

3.4 Public and Other Stakeholder Involvement

The two LEPC meetings that occurred on February 20, 2007 and May 8, 2008 were advertised in the *Dothan Eagle* and the *Dothan Progress*, the two local newspapers in the county.

An additional public meeting to review the final draft of the Houston County Hazard Mitigation Plan will occur prior to plan approval. The meeting will be advertised in the two aforementioned newspapers, as well as informing local area television stations WTVY and WDHN in Dothan. The meeting will be used to explain the updated Plan and to allow the public to view and ask questions regarding the Plan.

The Dothan/Houston County EMA consulted with the U.S. Army Corps of Engineers for information concerning dam failure and mitigation. Assistance was received from the Alabama Forestry Commission – Houston County Office for wildfire information. The Geological Survey of Alabama (GSA) was consulted for landslide hazard information. Concepts of the Plan update were discussed with regional county partners. Private sector entities, such as the Southeast Alabama Medical Center, Flowers Hospital, and the American Red Cross, were instrumental in supplying background data in the Plan.

3.5 Integration with Existing Plans

The existing plans that were consulted upon drafting of the Houston County Hazard Mitigation Plan include:

- **Alabama State Hazard Mitigation Plan (September 2007 Update)**
  The State Hazard Mitigation Plan was consulted to assist with background information for the Risk Assessment (Section 4) component of the Plan update.

- **City of Dothan Land Use Plan**
  The Land Use Plan was consulted to assist with background information on the City of Dothan.

- **Houston County Emergency Operations Plan**
  The Houston County Emergency Operations Plan was consulted to ensure consistency in the respective Action Plans for each jurisdiction within Houston County.

- **Alabama Forestry Commission Southeast Region, Houston Work Unit Fire Readiness Plan**
  The Fire Readiness Plan was consulted to research resources dedicated to wildfire response.

- **Alabama Drought Management Plan**
  The Alabama Drought Management Plan was studied to provide background information of drought impacts on Houston County.

- **Comprehensive Economic Development Strategy (CEDS) Annual Report October 2008**
  The Regional CEDS was consulted to ensure the Plan update is consistent with the region's and Covington County's economic development strategy.

- **International Building Codes**
- **National Fire Protection Association (NFPA) Standards**
- **ALDOT County Road Design Policy**
- **National Flood Insurance Program (NFIP) Guidance**
- **Houston County Subdivision Regulations**
- **Local Emergency All-Hazard (Siren) Warning Plan**
  These resources were consulted to assist with the formation of the mitigation strategies for each jurisdiction in Houston County.

Section 4 – Risk Assessment

This section of the plan addresses requirements of Interim Final Rule (IFR) Section 201.6 (c) (2).

Section Contents

Section	Section Updates
4.x	• Changes in numbering and organization • Incorporated former "Section III" within this Section • Added tables for summarization • Updated values and figures where possible

4.1 Hazard Profile

Houston County and its municipalities are affected by multiple hazards that are addressed below. These hazards were identified and evaluated through a process that included studying historical events, empirical data, susceptibility of location to hazards, and input from local jurisdictions. For each hazard addressed in the risk assessment, general descriptions of the hazards and its extent of effects on Houston County are included.

Due to its geographical location, Houston County is vulnerable to many hazards that potentially disrupt life and property during any time of the year. Hazard types that have no applicability to Houston County are: avalanche, coastal erosion, tsunami, and volcano. These hazards will not be mentioned any further. The hazards that may potentially affect Houston County (at varying levels) include:

- Dam Failure
- Drought / Extreme Heat
- Earthquake
- Flooding
- Hurricanes
- Landslides
- Tornadoes
- Wildfire
- Winter Storm

Effects from hurricanes, flooding, and tornadoes are regarded as the most significant natural hazards affecting Houston County.

Many of the hazards are multi-faceted and may produce a variety of negative impacts. An example is a tornado may produce direct damage to structures but also may render roadways impassible due to debris. Flash flooding and loss of power also routinely accompany tornadoes such that these issues may be addressed as well. The most common impact of severe weather is loss of power with resultant loss of communications and traffic related problems. Many critical structures may become temporarily uninhabitable due to a loss of power or loss of emergency generator power.

Houston County has been included in several Federal Disaster Declarations, as shown in Table 4.1.

Table 4.1 Houston County Federally-Declared Disasters

Date	Type of Incident
October 2, 1975	Severe Storms/Tornado
July 20, 1977	Drought
April 18, 1979	Storms/Wind/Flooding
March 21, 1990	Severe Storms/Tornado
March 15, 1993	Severe Snowfall and Winter Storm

July 8, 1994	Severe Storms/Flooding
October 4, 1995	Hurricane Opal
March 9, 1998	Severe Storms/Flooding
December 18, 2000	Tornadoes
November 14, 2002	Severe Storms / Tornadoes
September 15, 2004	Hurricane Ivan
July 10, 2005	Hurricane Dennis
April 28, 2009	Severe Storms / Flooding / Tornadoes / Straight-line Winds

Dam Failure

Dam failures are extremely rare events. The Walter F. George and the George W. Andrews Dam are located on the Chattahoochee River. The Walter F. George Dam is located upstream of Houston County, near Fort Gaines, Georgia and the George W. Andrews Dam is located near Columbia. The Chattahoochee River is the natural boundary between Georgia and Alabama from Lanett, Alabama and West Point, Georgia to the Alabama/Florida State Line. The possibility of an incident involving the dams that would release large amounts of water below the dam and along the Chattahoochee River, causing major flooding and damage is extremely remote and highly unlikely. However, the possibility of dam failure does exist. The release of water would constitute a major hazard of life, general health, and property from the point of release all the way to the Alabama/Florida State Line as identified in the Corps of Engineers' Inundation Maps. A map showing the inundation map indices are presented in Figure 4.1. This would affect the municipalities of Ashford, Columbia, and Gordon.

There are approximately 15 private dams located in Houston County, and many more that are suspected to exist, that are unknown to the County Engineer. No state or county ordinance exists that requires people in the rural areas of Houston County to report or construct IAW code requirements. Figure 4.2 displays general locations of private maps within Houston County.

Timely warning of a potential incident is necessary. The type of incident determines the elapsed time. Classification of the incidents is as follows:

Type 1 Slowly developing condition.
Type 2 Rapidly developing condition.
Type 3 Practically instantaneous failures.

In a Type 3 condition, the allowable time for evacuation along the river throughout the area affected in Houston County would be from approximately 0.2 hours at the dam to approximately 1.5 hours at the Alabama/Florida State Line (the estimated time that it would take flood water to arrive as is identified by the Corps of Engineers' Inundation Map). The Houston County Evacuation Map gives the arrival time and the peak time of the water.

A Type 3 condition would require the immediate response of the people living in the threatened area. Immediate evacuation would be essential due to the nature of the incident and the short time lapse before the water started to rise.

Types 1 and 2 conditions may allow for additional time, depending on when the dam's condition becomes serious enough to warrant evacuation.

Dam safety, especially involving small dams that are privately owned and poorly maintained, has been an ongoing hazard mitigation issue in the State of Alabama for the past two decades. No state law exists to regulate any existing private dams or the construction of new private dams that do not require federal licenses or inspections. There have been at least four attempts to pass legislation, which would require inspection of dams on bodies of water over 50 acre-feet or dams higher than 25 feet. Approximately 1,700 privately owned dams in the State of Alabama would fit into the category proposed by the law.

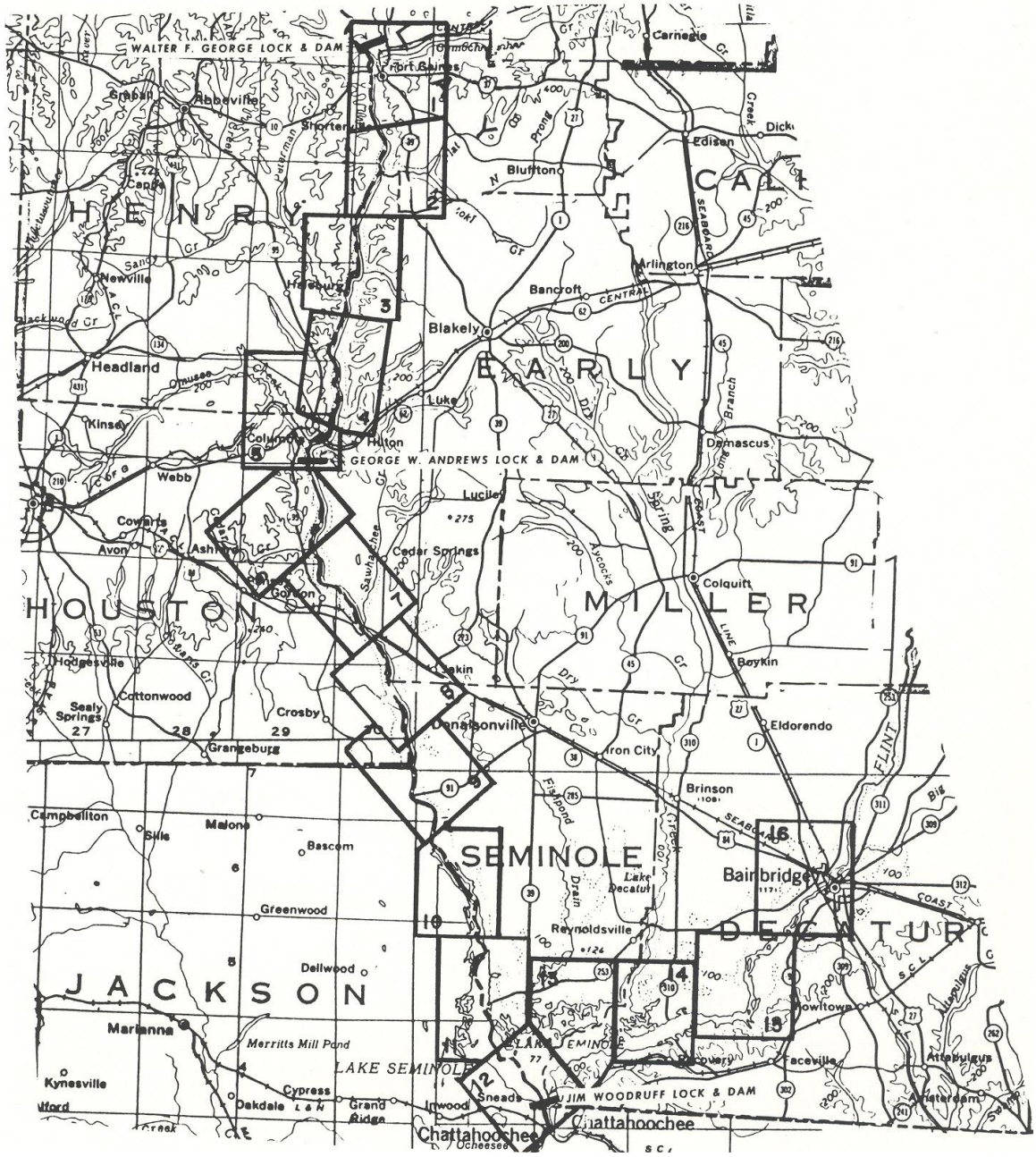


Figure 4.1 Dam Failure Inundation Map Index

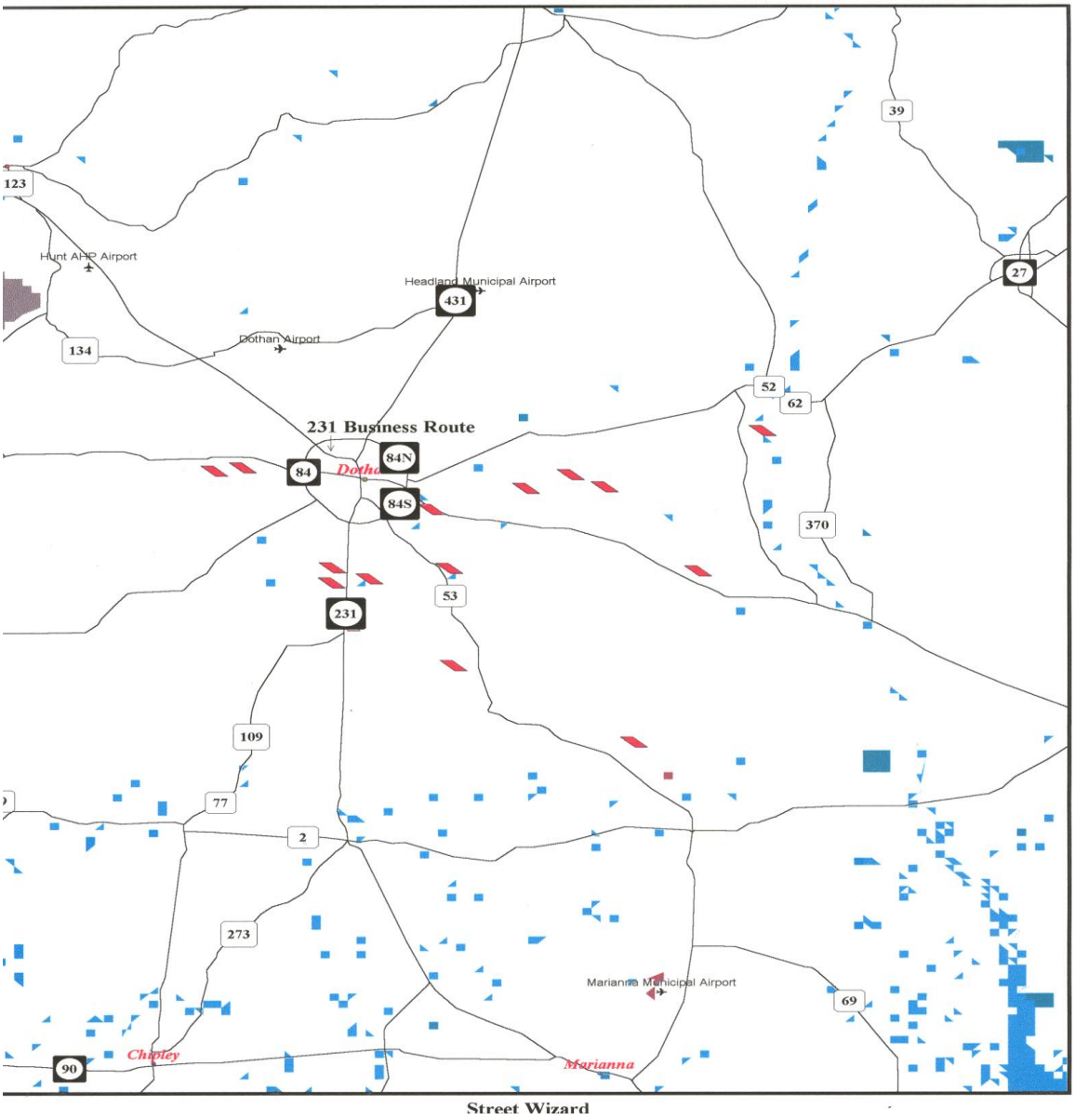


Figure 4.2 General Location of Private Dams in Houston County

Drought / Extreme Heat

Drought occurs when there is below-average precipitation over an extended period of time, affecting hydrological and agricultural concerns. Meteorological drought is the departure of precipitation from normal that causes two other drought types that negatively affect areas. Hydrological drought occurs when a below average amount of precipitation affects the water table, potentially affecting drinking water supply. Agricultural drought occurs when there is not enough soil moisture to support crop growth or good pasture conditions.

The entire area of Houston County is susceptible to drought due to its location in extreme southeastern Alabama, which is prone to unpredictable precipitation patterns including extended periods of below-average rainfall. Houston County's public water supply is drawn from groundwater sources, so extended periods of exceptional drought would potentially limit water supply.

Summer in Houston County is hot and humid. Temperatures of 100 degrees or more are possible. The heat index is generally several degrees higher because of the humidity off of the Gulf Coast. When rainfall has fallen below normal levels, as has occurred frequently in the area, drought conditions have resulted. Since the area has significant agricultural uses that are adversely affected by drought conditions, drought is a potentially serious economic threat to the area. Drought has also been a contributing factor to wildfires that have occurred in the forested areas of the County. Similarly, since high temperatures and humidity are possible and occur frequently during the summer months, heat wave conditions are possible in the area.

Drought and heat-related emergencies normally entail sustained hot weather. The facilitation of cooling centers and the ability to deliver water for potable purposes and for firefighting is critical. The economic loss due to crop failures can be mitigated to some extent by crop insurance. Loss of commercial power may be a factor as brown outs and power overloads can become common. The facilitation for transport of the elderly and ill to cooling centers is important.

According to the U.S. Drought Monitor, in 2006, Houston County experienced drought conditions from late spring through early autumn that were up to extreme (D3) conditions. From May 2007 through January 2008, drought conditions returned to Houston County, including exceptional (D4) conditions in the summer.

The conditions that cause drought are very unpredictable and the effects of extensive droughts are not easily quantified. Houston County has had several instances of drought with varying consequences. Extensive drought conditions occurred in periods from 2006 through 2008 negatively affecting agricultural production and are probably linked to the number of wildfires increasing for both years.

Earthquake

An earthquake is a sudden movement of the earth, caused by a release of energy from the crust. Most earthquakes occur along faults, which are cracks in the earth's crust. Little or no warning precedes earthquakes and they can cause property damage on the surface and subsurface by destroying buildings, utility lines, communications, and other infrastructure.

According to the Alabama State Hazard Mitigation Plan, four seismic zones affect the state. These are the New Madrid Seismic Zone (NMSZ), the Southern Appalachian Seismic Zone (SASZ) (also known as the Eastern Tennessee Seismic Zone), the South Carolina Seismic Zone (SCSZ), and the Bahamas Seismic Zone (BSZ), which all mostly affect areas of Alabama away from Houston County. Houston County is not especially at risk from an earthquake, though minor effects from the four aforementioned seismic zones are not out of the question.

Earthquakes are commonly measured in two ways. The Richter Magnitude Scale measures the earthquake's magnitude, or size, and the Modified Mercalli Intensity Scale measures the earthquake's intensity or the damage caused. The Richter Scale has magnitude measurements from 1 to 9, with a measure of 1 being recorded but not felt, and a measure of 9 being a great earthquake that causes damage over a large area. The Modified Mercalli Intensity Scale has measurements from I to XII, with I being hardly felt, if at all, and XII being total destruction of the surface.

According to the United States Geological Survey (USGS), the maximum peak acceleration for Houston County is a very low seismic risk (Figure 4.3). There are no recorded events in Houston County; therefore no further profiling or mitigation measures will be taken for earthquakes.

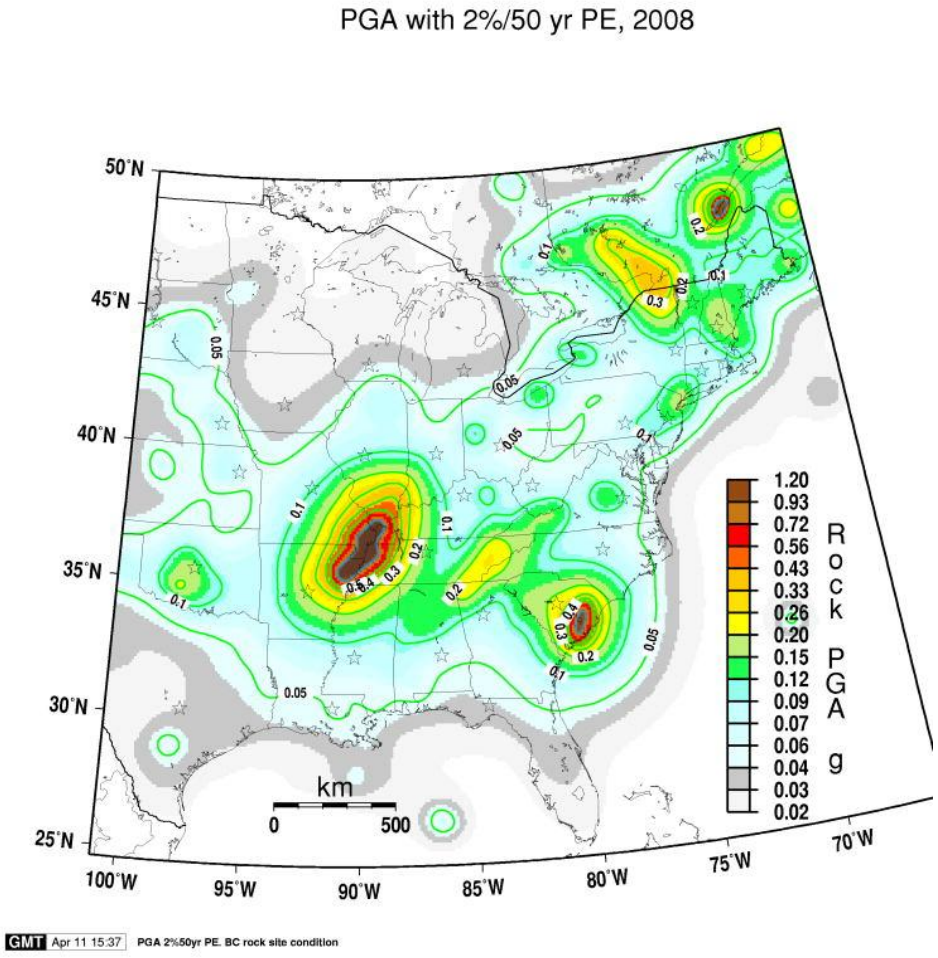


Figure 4.3 United States Geological Survey (USGS), 2008 National Seismic Hazard Maps

Flooding

Flooding is considered the most frequent and costly natural hazard in the United States. Flooding normally occurs due to excessive precipitation and is dependent on many factors, including drainage basin characteristics, antecedent soil moisture conditions, weather patterns, land cover, and many others. During sustained rainfall events, known flood areas should be evacuated. There is normally sufficient warning to provide an orderly evacuation.

Historically, more flooding events occur between November and April with a peak from February through April. However, flooding can and does occur at any time of year, such as

flooding experienced from Tropical Storm Alberto in July 1994. All jurisdictions in Houston County are subject to flooding, which has affected each jurisdiction.

In 1990, flooding in southern Alabama along the Choctawhatchee River and other southern Alabama streams heavily damaged 33 counties that were included in a March 21, 1990 disaster declaration, which resulted from a series of strong thunderstorms continuously forming and moving over the same area. With rain falling nearly parallel to the affected river basins, flooding was more severe than in past flood events in 1929, 1960, and 1970. The USGS reported a greater than 100-year flood event on the Choctawhatchee River in Newton, a few miles upstream from Houston County.

Tropical Storm Alberto made landfall near Destin, Florida on July 3, 1994. Lack of upper air movement caused the storm to stall over Alabama and Georgia until July 8, 1994. Since the storm did not move far from the Gulf or the Atlantic, it continued to bring moisture from both of these sources into the system and caused major inland riverine and flash flooding. The flooding from Alberto even exceeded the March 1990 flood on the lower Choctawhatchee River.

In 1998, Houston County was affected by a low pressure system from the Gulf of Mexico that poured over a foot of rain in sections. Approximately 60 roads were heavily damaged and almost 200 homes had flood damage. The Choctawhatchee River at Newton, a few miles north of Houston County, recorded its third highest crest to that date. The County was part of a federal disaster declaration.

Most recently, Houston County was greatly affected by flooding from intense rain systems in late March and early April 2009 that caused several millions of dollars of damage to streets, utilities, and buildings throughout the county.

According to the State Hazard Mitigation Plan, from 1978 to 2007, Houston County had 78 NFIP claims out of 334 total flood insurance policies.

The jurisdictional sections below provide a general description of the National Flood Insurance Program status and flood prone areas of each. The updated Flood Insurance Rate Maps (FIRM) are able to be viewed at the FEMA Map Service Center (http://msc.fema.gov).

Houston County: Houston County is mapped for Special Flood Hazard Areas. The current maps were effective in December 2005. The county is participating in the National Flood Insurance Program. The main areas affected by flooding in Houston County are along the Chattahoochee River, Choctawhatchee River, Little Choctawhatchee River, Newton Creek, Beaver Creek, Chipola Creek, Cowarts Creek, and Limestone Creek.

Ashford: The City of Ashford is mapped for Special Flood Hazard Areas. These maps were effective in December 2005. The city is participating in the National Flood Insurance Program. Primary areas affected by flooding in Ashford are along Mill Creek, Rocky Creek, and their tributaries.

Avon: The Town of Avon is mapped for Special Flood Hazard Areas. These maps were effective in December 2005. The town is participating in the National Flood Insurance Program. Primary areas affected by flooding in Avon are along Cowarts Creek on the northwestern periphery and Webb Creek on the eastern periphery.

Columbia: The Town of Columbia is mapped for Special Flood Hazard Areas. These maps were effective in December 2005. The town is participating in the National Flood Insurance Program. Primary areas affected by flooding are along Omusee Creek, the town's western boundary, and the Chattahoochee River, the town's eastern boundary.

Cottonwood: The Town of Cottonwood is mapped for Special Flood Hazard Areas. These maps were effective in December 2005. The town is participating in the National Flood Insurance Program. The primary areas affected by flooding are along Boggy Creek (eastern areas), Buck Creek (western areas), and their tributaries.

Cowarts: The Town of Cowarts is mapped for Special Flood Hazard Areas. These maps were effective in December 2005. The town is participating in the National Flood Insurance Program. Primary areas affected by flooding in Cowarts are along Cowarts Creek in the southeastern sections of town and Crawford Creek in the northwestern sections.

Dothan: The City of Dothan is mapped for Special Flood Hazard Areas. These maps were effective in December 2005. The city is participating in the National Flood Insurance Program. Primary areas affected by flooding include areas along Rock Creek near Westgate Parkway and Brookside Drive; areas along Cherokee Street and Girard Street in the Garden District; areas along Headland Avenue; areas east of Downtown along Third Avenue, Columbia Highway, and Plant Street; areas near Omusee Creek; the Aberdeen / Shamrock Road area and Third Avenue railroad crossing by Cypress Creek; Cottonwood Road / Mimosa Drive by a tributary of Cypress Creek; and subdivisions south and southwest of Flowers Hospital, including Chapelwood, Grove Park, and Spann Farm.

Gordon: The Town of Gordon is mapped for Special Flood Hazard Areas. These maps were effective in December 2005. The town is participating in the National Flood Insurance Program. Primary areas affected by flooding are along Howards Mill Creek in southeastern areas, Woods Creek near the Philadelphia community, and the Chattahoochee River in the northeastern corner.

Kinsey: The Town of Kinsey is mapped for Special Flood Hazard Areas. These maps were effective in December 2005. The town is participating in the National Flood Insurance Program. Primary areas affected by flooding are along Burdeshaw Mill Creek to the west, Omusee Creek to the south, and Long Branch and White Branch in the northeast.

Madrid: The Town of Madrid is mapped for Special Flood Hazard Areas. These maps were effective in December 2005. The town is participating in the National Flood Insurance Program. Primary areas affected by flooding are along a tributary to Big Creek in the southern and eastern areas of town.

Rehobeth: The Town of Rehobeth is mapped for Special Flood Hazard Areas. These maps were effective in December 2005. The town is participating in the National Flood Insurance Program. Primary areas affected by flooding are along Chipola Creek, Limestone Creek, and Harkin Branch.

Taylor: The Town of Taylor is mapped for Special Flood Hazard Areas. These maps were effective in February 2008. The town is participating in the National Flood Insurance Program.

Taylor has minor areas of flooding along Chipola Creek on Fuller Road and along Pinhook Creek north of Highway 52.

Webb: The Town of Webb is mapped, but has no Special Flood Hazard Areas. The town is participating in the National Flood Insurance Program. Areas along Omusee Creek and Crawford Creek on the western edges of town may flood.

Floods are Houston County's most dangerous hazard in terms of number and property damage. Repeated events may occur on a short cycle and present a tremendous potential for further damage in areas near streams and waterways.

Hurricanes

Hurricanes provide a wide spectrum of issues and effects. The intensity and path of a hurricane varies, making the impact of the storm difficult to predict. Flooding from hurricanes and other tropical events may affect an extensive area and is the primary threat to Houston County, while high winds and tornadoes that occur from these systems will normally provide lesser impacts. Tornadoes associated with hurricanes are usually weak F0 to F1 on the Fujita scale. Sustained winds from hurricanes may cause structural damage. High winds may also cause widespread damage to power lines due to trees falling. The mitigation for damage to power lines is to have commercial power companies cut trees back from power lines. Debris in roadways such as trees and structural components is also a potential impact. The ability to clear roadways for emergency response and evacuation is critical.

Hurricane intensity is classified using the Saffir-Simpson Scale, which categorizes hurricane events primarily using maximum sustained winds, but also examining barometric pressure readings and potential storm surge. This gives an estimate of the potential damage that will occur from a hurricane. The Saffir-Simpson Scale is shown in Table 4.2.

Table 4.2

SAFFIR-SIMPSON SCALE		
Category	**Maximum Sustained Wind Speed (MPH)**	**Damage Description**
1	74-95	MINIMAL: No real damage to building structures. Damage primarily to unanchored mobile homes, shrubbery, and trees. Some damage to poorly constructed signs.
2	96-110	MODERATE: Some roofing material, door, and window damage of buildings. Considerable damage to shrubbery and trees with some trees blown down. Considerable damage to mobile homes, poorly constructed signs, and piers. Coastal and low-lying escape routes flood 2-4 hours before arrival of the hurricane center.
3	111-130	EXTENSIVE: Some structural damage to small residences and utility buildings with a minor amount of curtainwall failures. Damage to shrubbery and trees with foliage blown off trees and large trees blown down. Mobile homes and poorly constructed signs are destroyed. Low-lying escape routes are cut by rising water 3-5 hours before arrival of the center of the hurricane.
4	131-155	EXTREME: More extensive curtainwall failures with some complete roof structure failures on small residences. Shrubs, trees, and all signs are blown down. Complete destruction of mobile homes. Extensive damage to doors and windows. Low-lying escape routes may be cut by rising water 3-5 hours before

		arrival of the center of the hurricane.
5	>155	CATASTROPHIC: Complete roof failure on many residences and industrial buildings. Some complete building failures with small utility buildings blown over or away. All shrubs, trees, and signs blown down. Complete destruction of mobile homes. Severe and extensive window and door damage. Low-lying escape routes are cut by rising water 3-5 hours before arrival of the center of the hurricane.

Major hurricanes that affect Houston County may provide up to Category 2 impacts. Since 1990, Houston County has been impacted by Tropical Storm Alberto (1994), Hurricane Opal (1995), Tropical Storm Earl (1998), Tropical Storm Barry (2001), Hurricane Ivan (2004), Hurricane Dennis (2005), and Hurricane Katrina (2005), and Tropical Storm Fay (2008). Houston County received major wind damage from Hurricane Opal and Hurricane Ivan and minor wind damage and rain impacts from Tropical Storm Earl, Tropical Storm Barry, Hurricane Dennis, Hurricane Katrina, and Tropical Storm Fay. Tropical Storm Alberto created more flooding impact than high winds. Hurricane Katrina provided more indirect effects to Houston County by hosting evacuees from areas further west straining local resources. Houston County is positioned less than 100 miles from the Gulf of Mexico and is one of the counties the state identifies as a primary "Hurricane Risk Area", so it is in a prime location to be affected by tropical systems.

There is usually substantial advance warning for a hurricane. Recent events have displayed that in the event of a Category 3 event or less, Houston County can expect fifty thousand evacuees from the coast coming to seek shelter, Category 4 or 5 event evacuees will be asked to continue north because Houston County would have their own problems associated with the storm.

Evacuees utilize U.S. Highway 231, Florida Highway 79 / Alabama Highway 167, and Alabama Highway 53. Houston County has been expected to shelter evacuees in the past. There are over 2,000 hotel / motel rooms in Houston County, primarily in Dothan. Therefore, the majority of the people will be housed in temporary shelters. There is a substantial chance that flooded roadways and congestion would negatively contribute to getting the evacuees to shelters and meeting their needs. Dothan and Houston County has evaluated all routes entering Houston County and concluded that it would be highly unlikely that flooding would hamper evacuees escape routes. Special needs shelters are in the Dothan/Houston County Emergency Operations Plan and in place and are operationally tested annually.

Landslide

A landslide is a gravity-aided downward and outward movement of soil, rock, and vegetation that lies normally on a sloped surface. Landslides can occur from both natural and human-induced events. Common causes are composition changes on the surface, excessive rain, and construction practices.

The Geological Survey of Alabama (GSA) documents that Houston County has low incidence of landslides occurring. There has been no mention by the GSA, county jurisdictions, or the public dealing with concerns about landslides; therefore, there will be no further profile completed.

Severe Thunderstorm

Severe thunderstorms are defined by the National Weather Service as having wind speeds of 58 miles per hour or higher, producing hail at least three quarters inch (3/4") in diameter, or possessing tornadic capabilities. These storms may produce damage equivalent to tornadoes over a larger spatial area.

The effects of severe thunderstorms will have varying spatial effects throughout Houston County from widespread to localized impacts. Severe thunderstorms with straight line winds that affect Houston County can create wind gusts up to the equivalence of an EF1 tornado. Straight line wind events have caused at least 56 instances of documented damages in Houston County since 2000 causing approximately $1,078,000 worth of damage.

Tornadoes

A tornado is a rapidly rotating funnel of air that extends to the ground from clouds. Tornadoes are one of the least predictable weather events. Tornadoes do not cover a large spatial area, but may create moderate to extensive damage to structures and be deadly in the areas impacted. Debris may block streets and access to the damaged area may be an issue. Flat tires on emergency vehicles will be common due to this debris. The loss of power and communications to the affected areas will also be common.

Tornado intensity is classified using the Enhanced Fujita (EF) Scale, which is an update to the original Fujita Scale, implemented in February 2007 (Table 4.3). The EF Scale is still primarily a wind estimate indicator that is based on three-second gust derived by the levels of damage that occur during a tornado event.

Table 4.3

ENHANCED FUJITA SCALE				
F Number	**3 Second Gust (mph)**	**EF Number**	**3 Second Gust (mph)**	**Damage Description**
0	45-78	0	65-85	LIGHT DAMAGE: Some damage to chimneys; tree branches broken off; shallow-rooted trees pushed over; sign boards damaged.
1	79-117	1	86-110	MODERATE DAMAGE: The lower limit is the beginning of hurricane wind speed. Roof surfaces peeled off; mobile homes pushed off foundations or overturned; moving autos pushed off roads.
2	118-161	2	111-135	CONSIDERABLE DAMAGE: Roofs torn off from houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light-object missiles generated.
3	162-209	3	136-165	SEVERE DAMAGE: Roofs and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted; heavy cars lifted off ground and thrown.
4	210-261	4	166-200	DEVASTATING DAMAGE: Well-constructed houses leveled; structures with weak foundations blown off some distance; cars thrown; large missiles generated.
5	262-317	5	Over 200	INCREDIBLE DAMAGE: Strong framed houses lifted off foundations and carried considerable distances to disintegrate; automobile-sized missiles fly through air in excess of 100 yards; trees debarked.

Houston County is susceptible to tornadoes. Since 1990, Houston County has been affected by 12 tornadoes, four of which has caused injuries. None of these tornadoes have exceeded F/EF2, but Houston County has had multiple F3 tornadoes in the past and, as documented in Table 4.4

below, deaths and injuries have occurred with lower intensity tornadoes. Houston County can have tornado occurrences throughout the year, though there are two discernable seasons, spring and fall.

Table 4.4 Tornado Occurrences

Location	Date	Magnitude	Deaths	Injuries	Comments
Wicksburg area	03/15/1912	F3	N/A	N/A	Also in Geneva / Henry counties; 8 total fatalities
Dothan / Cowarts / Webb	01/11/1918	F3	10	120	Leveled school, destroyed Webb; around $100,000 damage
Near Cowarts	02/21/1932	F3	0	5	Several homes destroyed along with acres of timber
Cowarts	10/31/1932	F2	1	16	6 homes, 400 acres of timber destroyed; $30,000 damage
Hodgesville	03/06/1935	F2	0	22	Destroyed school and barn; $10,000 damage
Cottonwood / Grangeburg / Ashford	01/18/1936	F2	1	6	6 homes destroyed, 15 homes damaged
Dothan / Cottonwood	04/24/1937	F2	1	25	25 homes damaged or destroyed
SE Dothan / near Webb	12/27/1940	F2	0	2	Several homes, lumberyard, cotton compress destroyed; also in Henry County
S of Webb	04/11/1944	F2	0	0	5 homes and several barns damaged
N/A	02/01/1957	F1			$300 damage
N/A	06/02/1958	F1	0	0	9 buildings and corn crop damaged; $2,500 damage
SW Cowarts	06/20/1961	F2	0	0	Damaged 2 homes and several other buildings; $25,000 damage
Near Kinsey	01/05/1962	F2	0	0	4 homes, barns damaged; $25,000 damage; also in Henry County
Near Kinsey	07/20/1966	F1	0	0	Several barns destroyed; crop damage; $25,000 damage
Highway 431 (Dothan)	03/01/1971	F2	0	0	Furniture store damaged; cars overturned; $25,000 damage
N/A	01/28/1974	F2	0	0	Barn damaged; $300 damage
N/A	02/06/1974	F1	0	0	Tree and power line damage; $25,000 damage
N/A	04/04/1974	F1	0	0	1 home destroyed and 4 homes damaged; $25,000 damage
N/A	10/17/1975	F1	0	0	$25,000 damage
N/A	07/05/1979	F0	0	0	$250,000 damage
Wicksburg / Dothan	03/08/1980	F2	0	5	$250,000 damage; 1 injury in Wicksburg and 4 injuries in Laver Hills S/D of Dothan
Dothan (Pine Hill S/D)	09/10/1980	F1	0	0	5 homes major damage, 30 homes minor damage; radio tower toppled; $250,000 damage
N/A	02/10/1981	F1	0	5	1 mobile home, 2 unfinished homes destroyed; 3 homes, 40 autos damaged; $2,500,000 damage
N/A	01/07/1982	F1	0	0	15 homes and dairy building damaged; tractor-trailer overturned; also golf ball sized hail; $25,000 damage
N/A	03/20/1984	F1	0	0	Several mobile homes, other buildings, barn damaged; $25,000 damage

N/A	05/03/1984	F1	0	0	$25,000 damage
N/A	04/18/1988	F0	0	0	Affected pasture with little damage
N/A	10/01/1989	F1	0	0	N/A
N/A	11/08/1989	F1	0	0	2 homes destroyed, 3 businesses, 1 office complex, 50 cars damaged; $2,500,000 damage
N/A	11/08/1989	F0	0	0	1 home and 1 church damaged; $25,000 damage
N/A	11/12/1992	F0	0	0	2 homes damaged, 1 storage building destroyed; $25,000 damage
Dothan	10/27/1995	F1	0	2	2 businesses damaged; $90,000 damage
W of Dothan	11/11/1995	F0	0	0	Travel trailer damaged; $5,000 damage
Wicksburg	10/25/1997	F1	0	2	12 homes damaged; 2 injuries from van overturned; $250,000 damage
Ashford / Gordon	10/26/1997	F1	0	0	2 homes damaged; $150,000 damage
Wicksburg / SE of Ashford	12/24/1997	F2	0	5	1 home destroyed, mobile home park damaged; airplane overturned; $500,000 damage
Taylor (Landview S/D)	02/22/1998	F0	0	0	52 homes damaged; $75,000 damaged
E of Ashford	05/04/1998	F0	0	0	N/A
Near Wicksburg	12/16/2000	F0	0	0	5 homes damaged; $50,000 damage
Pansey / Gordon	03/22/2005	F2	0	4	Destroyed or damaged several homes; $750,000 damage
S of Gordon	08/25/2008	EF1	0	0	Mobile home destroyed; $75,000 damage
Near Wicksburg	10/08/2008	EF0	0	0	Destroyed barn and damaged auto dealership; $75,000 damage

Research by the National Oceanic and Atmospheric Administration (NOAA) revealed that in terms of probability, frequency of occurrence and potential for injury, the tornado ranks as the highest probability of natural disaster occurrence in Houston County.

Wildfire

Wildfires occur from debris burning and other incendiary causes, which can spread throughout forested areas and affect development within wildland urban interface (WUI) areas. Fuel sources, such as trees and grass, and weather, such as dry periods or lightning strikes, can contribute to wildfires in Houston County.

A Fire Occurrence Areas map produced by the Alabama Forestry Commission (Figure 4.4) illustrates that much of Houston County has a Low occurrence rating, with Medium occurrence ratings spread in several locations. There are no areas with High or Extreme occurrence ratings.

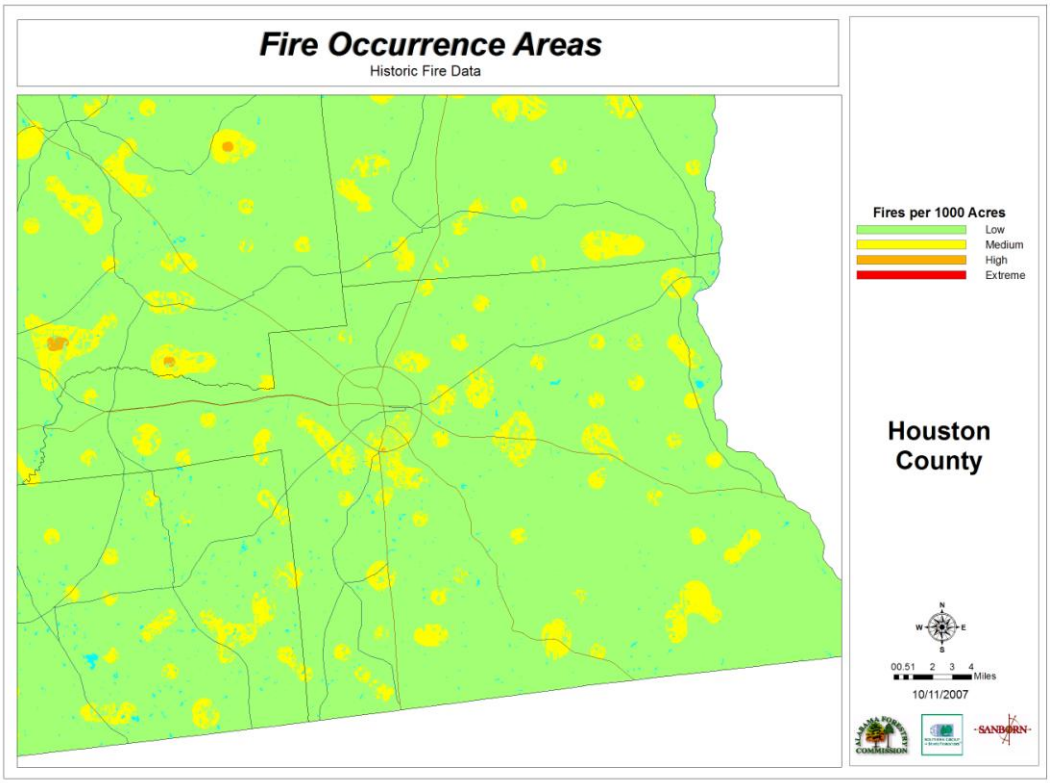


Figure 4.4 Houston County Fire Occurrence Map (Alabama Forestry Commission)

The number of fires and acreage burned is less than most other counties in Alabama, as Houston County tied for 60th out of 67 counties in number of wildfires (172) and 59th out of 67 counties in total acres burned (1,401) between 1999 and 2008 according to figures collected by the Alabama Forestry Commission. The areas where wildfires occur have been very rural areas of the County. Though Houston County has not had the extensive occurrences of wildfires as most other counties in Alabama, wildfires potentially create damage to the timber industry, property damage to businesses and homes, and, in extreme cases, casualties.

According to the Communities at Risk of Wildfire Risk map (Figure 4.5) produced by the Alabama Forestry Commission, all Houston County municipalities have Low risk of wildfire damage and there are only isolated areas in the unincorporated County with Medium risk. As population and development increases in Houston County, especially near Dothan, the wildland urban interface should be monitored for potential wildfire effects. The combination of cultivated fields, wide roadways, and streams serve as both manmade and natural firebreaks. There has not been a significant, damaging wildfire in this county in the collective memory of its citizens nor any reported in the media.

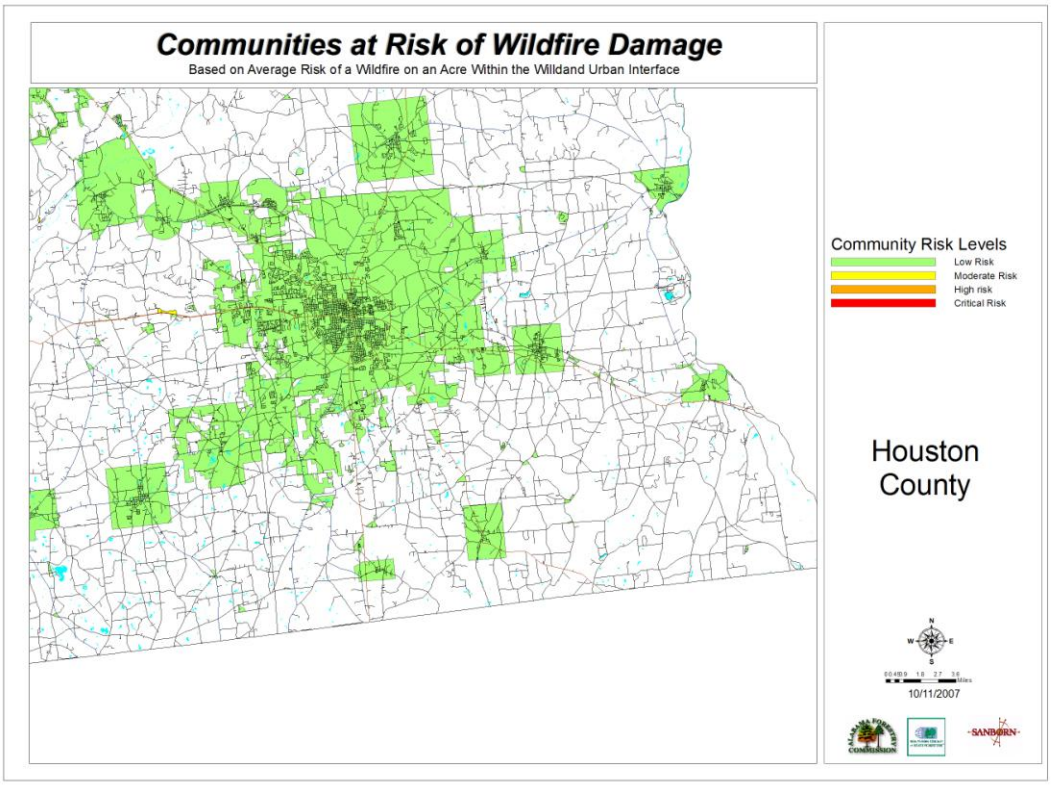


Figure 4.5 Houston County Community Risk Map (Alabama Forestry Commission)

Winter Storm

Winter storms normally cause heavy amounts of frozen precipitation (snow, freezing rain, and ice), windy conditions, and extreme cold. The effect of winter storms on a community depends on how equipped the community is to handle the storm, as winter storms can cause power outages, transportation problems, and collapsed roofs on structures. These events may make roads impassible and disrupt power. A snowfall of two inches or more is considered heavy snow for Alabama, especially in Houston County. Loss of communications is a common occurrence during a severe winter storm. The related emergencies include hypothermia and other cold-related maladies. Fires due to improvised heating apparatuses are common, as is carbon monoxide poisoning. There usually is sufficient warning for the public to take protective steps. The facilitation of emergency heating and food is critical. A 72- hour emergency kit is crucial in this emergency. Emergency heating centers will be essential and rescue of stranded motorists may be a priority. These events are typically short lived in this region. Damage to crops such as timber can be devastating. Emergency power and heating are essential for shelters and other critical facilities. The ability to remove debris such as trees with chain saws and heavy equipment is essential. The ability to apply sand or salt to maintain roads in a passable state is important to allow emergency vehicles and evacuation of affected areas. This type of emergency may affect a large segment of the population and strain shelter resources.

Houston County receives winter storms very infrequently and has had minor recorded damages. Houston County experienced moderate effects from the "Blizzard of 1993". In February 1973, Houston County experienced a severe snow and ice storm that left many areas without power and roads impassable. Local weather observers reported this was the most severe winter weather

in at least fifty years. Two or more inches of snow and ice were reported. According to the City of Dothan Fire and Rescue, fires due to improvised heating apparatuses were common. This gives the phenomenon a roughly twenty-year cycle.

Due to the infrequency of winter storm occurrences in Houston County and their short duration of effects, there is a very minor probability for major damage caused by a winter storm and there will be no further profiling of this hazard.

4.2 Susceptibility to Hazards

Table 4.5 displays Houston County's susceptibility to prioritized hazards as described in the profiles above. Most hazards will affect the entire area of Houston County. Dam failure is an example of a hazard that will not potentially affect every jurisdiction and wildfires are projected to affect unincorporated Houston County greater than other jurisdictions. These qualitative descriptions are from historical occurrences and other risk factors. Because of the lack of comprehensive quantitative data on many of the hazards, susceptibility to future damage will be noted by categories of High, Medium, Low, or None described below.

- **High:** Probable major damage in a 1-10 Year Period
- **Medium:** Probable major damage in a 10-50 Year Period
- **Low:** Probable major damage in a 100 Year Period
- **None:** No probable major damage

Table 4.5

Hazard	Ashford	Avon	Columbia	Cottonwood	Cowarts	Dothan
Dam Failure	**Low**	**Low**	**Low**	**None**	**Low**	**Low**
Drought / Extreme Heat	**Medium**	**Medium**	**Medium**	**Medium**	**Medium**	**Medium**
Flooding	**High**	**High**	**High**	**High**	**High**	**High**
Hurricanes	**High**	**High**	**High**	**High**	**High**	**High**
Severe Thunderstorms	**Medium**	**Medium**	**Medium**	**Medium**	**Medium**	**Medium**
Tornadoes	**High**	**High**	**High**	**High**	**High**	**High**
Wildfire	**Low**	**Low**	**Low**	**Low**	**Low**	**Low**

Hazard	Gordon	Kinsey	Madrid	Rehobeth	Taylor	Webb	County
Dam Failure	**Low**	**None**	**None**	**None**	**None**	**None**	**Low**
Drought / Extreme Heat	**Medium**	**Medium**	**Medium**	**Medium**	**Medium**	**Medium**	**Medium**
Flooding	**High**	**High**	**High**	**High**	**High**	**High**	**High**
Hurricanes	**High**	**High**	**High**	**High**	**High**	**High**	**High**
Severe Thunderstorms	**Medium**	**Medium**	**Medium**	**Medium**	**Medium**	**Medium**	**Medium**
Tornadoes	**High**	**High**	**High**	**High**	**High**	**High**	**High**
Wildfire	**Low**	**Low**	**Low**	**Low**	**Low**	**Low**	**Medium**

4.3 Extent of Hazards by Jurisdiction

Table 4.6 summarizes each jurisdiction's potential severity of hazard events as described in the profiles above. Most of these hazards will affect the entirety of Houston County similarly. These summary descriptions are from identified risk factors and settlement patterns.

Table 4.6

Hazard	Ashford	Avon	Columbia	Cottonwood
Dam Failure	Flooding isolated structures, agricultural land	Flooding isolated structures	Flooding structures along Chattahoochee River	No potential damage
Drought / Extreme Heat	D4 drought, loss of agricultural production, depleted groundwater resources	D4 drought, loss of agricultural production, depleted groundwater resources	D4 drought, loss of agricultural production, depleted groundwater resources	D4 drought, loss of agricultural production, depleted groundwater resources
Flooding	Street and property damage along streams and drainage areas	Street and property damage along streams and drainage areas	Street and property damage along streams and drainage areas	Street and property damage along streams and drainage areas
Hurricanes	Category 3 wind damage, flooding, casualties	Category 3 wind damage, flooding, casualties	Category 3 wind damage, flooding, casualties	Category 3 wind damage, flooding, casualties
Severe Thunderstorms	Widespread straight line wind damage	Widespread straight line wind damage	Widespread straight line wind damage	Widespread straight line wind damage
Tornadoes	EF-5 wind damage, casualties	EF-5 wind damage, casualties	EF-5 wind damage, casualties	EF-5 wind damage, casualties
Wildfire	Property and timber damage, environmental damage, casualties	Property and timber damage, environmental damage, casualties	Property and timber damage, environmental damage, casualties	Property and timber damage, environmental damage, casualties

Hazard	Cowarts	Dothan	Gordon	Kinsey
Dam Failure	Flooding isolated structures, agricultural land	Flooding structures near private dams	Flooding primarily undeveloped land	No potential damage
Drought / Extreme Heat	D4 drought, loss of agricultural production, depleted groundwater resources	D4 drought, loss of agricultural production, depleted groundwater resources	D4 drought, loss of agricultural production, depleted groundwater resources	D4 drought, loss of agricultural production, depleted groundwater resources
Flooding	Street and property damage along streams and drainage areas	Street and property damage along streams and drainage areas	Street and property damage along streams and drainage areas	Street and property damage along streams and drainage areas
Hurricanes	Category 3 wind damage, flooding, casualties	Category 3 wind damage, flooding, casualties	Category 3 wind damage, flooding, casualties	Category 3 wind damage, flooding, casualties
Severe Thunderstorms	Widespread straight line wind damage	Widespread straight line wind damage	Widespread straight line wind damage	Widespread straight line wind damage
Tornadoes	EF-5 wind damage, casualties	EF-5 wind damage, casualties	EF-5 wind damage, casualties	EF-5 wind damage, casualties
Wildfire	Property and timber damage, environmental damage, casualties	Property and timber damage, environmental damage, casualties	Property and timber damage, environmental damage, casualties	Property and timber damage, environmental damage, casualties

Hazard	Madrid	Rehobeth	Taylor	Webb	County
Dam Failure	No potential damage	No potential damage	No potential damage	No potential damage	Flooding structures along Chattahoochee River / some rural areas near private dams
Drought / Extreme Heat	D4 drought, loss of agricultural production, depleted groundwater resources	D4 drought, loss of agricultural production, depleted groundwater resources	D4 drought, loss of agricultural production, depleted groundwater resources	D4 drought, loss of agricultural production, depleted groundwater resources	D4 drought, loss of agricultural production, depleted groundwater resources
Flooding	Street and property damage along streams and drainage areas	Street and property damage along streams and drainage areas	Street and property damage along streams and drainage areas	Street and property damage along streams and drainage areas	Street and property damage along streams and drainage areas
Hurricanes	Category 3 wind damage, flooding, casualties	Category 3 wind damage, flooding, casualties	Category 3 wind damage, flooding, casualties	Category 3 wind damage, flooding, casualties	Category 3 wind damage, flooding, casualties
Severe Thunderstorms	Widespread straight line wind damage	Widespread straight line wind damage	Widespread straight line wind damage	Widespread straight line wind damage	Widespread straight line wind damage
Tornadoes	EF-5 wind damage, casualties	EF-5 wind damage, casualties	EF-5 wind damage, casualties	EF-5 wind damage, casualties	EF-5 wind damage, casualties
Wildfire	Property and timber damage, environmental damage, casualties	Property and timber damage, environmental damage, casualties	Property and timber damage, environmental damage, casualties	Property and timber damage, environmental damage, casualties	Property and timber damage, environmental damage, casualties

4.4 Repetitive Loss Properties

According to the State NFIP Coordinator, Houston County has seven (7) repetitive loss properties. Additional information is displayed in Table 4.7 below.

Table 4.7 Houston County Repetitive Loss Properties

Jurisdiction	Address	Type	Date of Loss	Date of 2nd Loss	Haz Mitigation Payment (Total)
Ashford	PO Box 278	Residential	2/3/1982	1/25/1976	$8,423.46
Columbia	Rt 1 PO Box 121	Residential	3/8/1998	7/5/1994	$10,192.96
Columbia	102 State Dock Rd.	Office	3/8/1998	7/5/1994	$36,362.00
Dothan	1304 Cornell Ave	Residential (Apt.)	7/5/1994	5/12/1991	$16,697.84
Dothan	2803 Rock Creek Rd.	Institutional	3/8/1998	6/3/1976	$25,658.22
Dothan	405 Daniel Circle	Residential	3/8/1998	11/8/1989	$20,471.61
Houston County	275 Jowers Rd.	Residential	3/8/1998	7/5/1994	$17,005.05

4.5 Vulnerability Overview

Information contained in the Alabama Emergency Management Agency (AEMA) paper, *Alabama Hazard Risk and Vulnerability Analysis,* was used to develop a qualitative analysis of vulnerability and risk from the three highest priority hazards. The output from this analysis is listed in Table 4.8 below.

Table 4.8 *Alabama Hazard Risk and Vulnerability Analysis* Rating for Houston County

Hazard	Rating
Flood Risk	Medium
Flood Vulnerability	Medium
Hurricane Risk	Very High
Hurricane Vulnerability	High
Tornado Risk	High
Tornado Vulnerability	High

This risk and vulnerability determination utilized historical data to determine the probability that a hazard could impact Houston County and demographic data from the 1990 and 2000 U.S. Census was used to determine a Social Vulnerability score. The two values were then combined to determine general vulnerability for Houston County to those primary hazards.

In the above assessment, risk is the probability that damage to life and property will occur due to impacts from a particular natural hazard. This included an analysis of the magnitude (intensity of the event), duration (the amount of time of the event), frequency (how often the event occurs), and the extent (how much of area is impacted by the event).

Also in the above assessment, vulnerability is the degree of exposure to a hazard, how susceptible an area is to a hazard and the losses likely to result from a disaster. This is usually described in terms of the number and characteristics of the people exposed to a hazard, and the value of the property exposed to the hazard. Since this is a countywide assessment, the vulnerability assessment focuses on demographic characteristics of the county. Analyses of property value exposure are most valuable when conducted at the local level.

This section provides a description of Houston County's vulnerability to the hazards prioritized earlier in the Risk Assessment. The description includes an overall summary of each hazard and its impact on the community. The plan describes vulnerability in terms of the types and numbers existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas.

Dam Failure

Dams of significance in Houston County or potentially affecting Houston County are the Walter F. George Dam near Fort Gaines, Georgia and George Andrews Lock and Dam between Columbia and Gordon. Both dams are on the Chattahoochee River and are operated by the Army Corps of Engineers. The Corps of Engineers utilize a regular maintenance program to ensure the safety of the dams. Dam failure of these two dams would present minimal threat to life and moderate threat to property damage along the Chattahoochee River and major tributaries that would affect unincorporated Houston County, Columbia, and Gordon. Instantaneous failure of the Walter F. George Dam would provide more than one hour for notification and almost 12 hours for peak flood conditions to allow for evacuations. Failure of the George W. Andrews Lock and Dam would provide short time for evacuations from near Gordon and surrounding areas of Houston County.

Dam failure involving privately-owned dams is an ongoing hazard mitigation issue in Houston County and the State of Alabama. Currently, there are no state laws to regulate existing private dams or the construction of new private dams that do not require federal licenses or inspections. There have been four attempts to pass legislation requiring inspection of dams on bodies of water over 50 acre-feet or dams higher than 25 feet. Opposition of agricultural interest groups and insurance companies has hampered enactment. Approximately 15 privately owned dams in Houston County would fit into the category proposed by the law. These privately-owned dams present a minor threat to property damage in Houston County, as effects would be localized, according to surveys conducted by the Dothan/Houston County EMA and the Houston County Engineer.

Drought / Extreme Heat

Drought and extreme heat can affect all residents of Houston County through depletion of groundwater resources that contribute to drinking water for the entire county, negative impact on the agricultural production in the county, and increasing susceptibility to wildfire occurrences. Residents that are very young or advanced in age are more susceptible to health effects from extreme heat. Extreme heat may stress electrical utility providers, due to increased air condition requirements. Need for health services may also increase due to extreme heat.

Flooding

The primary areas affected by riverine flooding in Houston County are along the Chattahoochee River, Choctawhatchee River, Little Choctawhatchee River, Newton Creek, Beaver Creek, Chipola Creek, Cowarts Creek, and Limestone Creek. Other areas inside the floodplains are streams and creeks throughout the county and the municipalities. The NFIP has identified flood zones in areas of each jurisdiction. According to the State Hazard Mitigation Plan, there are 334 flood insurance policies in Houston County. Areas within NFIP-identified flood zones are at a higher risk of property damage and potential casualties during flooding situations. The flooding in March 2009 caused damage to approximately 350 structures, mostly residential within the county.

Flash flooding may potentially affect all residents of Houston County and cause runoff that becomes fast-rising waters that can cause property and street damage as well as casualties. Unlike riverine flooding, which can be forecasted over a few days, flash flooding is normally a quick onset hazard with little warning.

Riverine and flash flooding may occur any time of year, though flooding associated with heavy rains during hurricanes will occur in summer and early autumn.

Hurricanes

All of Houston County is susceptible to hurricanes, especially high wind effects. Hurricanes create the most widespread impact of any hazard affecting Houston County. The projected effects of hurricanes on Houston County include flooding from torrential rains, especially in flood prone areas, sustained high winds causing property and utility damage, as well as debris creation, and a lesser threat of weak tornadoes spawned by the hurricane system.

Hurricanes will provide those widespread effects during the summer and early autumn portions of the year. Normally there are a few days of warnings before a hurricane impacts Houston County allowing for preparations.

Severe Thunderstorms
All of Houston County is susceptible to straight-line winds and other effects from severe thunderstorms. These events will produce similar effects to tornadoes and hurricanes. These effects will be more localized than hurricane events but more widespread than tornadoes.

Tornadoes
All of Houston County is susceptible to tornadoes. The most likely time for tornadoes is during the spring months from March through May, with a secondary peak of tornado activity in November, but tornadoes occur in every month of the year. Tornadoes present the most frequent hazard and most likely source of property damage and injury in Houston County from a natural hazard. Tornadoes are possibly more destructive than hurricanes, but impacts are far more localized. Even though favorable conditions for tornadoes can be forecasted in advance, the location of a tornado is unknown until a few moments before the storm occurs. The county has slightly less than 5,000 manufactured homes contributing to vulnerability to tornado effects.

Wildfires
The effects caused by wildfires damage timber land in Houston County. If factors such as winds and drought are present, wildfires may spread from forested areas to areas with residential structures. These fires may begin due to events, such as arson or lightning, and are often difficult to contain due to the lack of access to the fire and a lack of readily available water to control the fires and the rapid spread of these fires. In the event of wildfires, structures in less populated areas in the proximity of the forested areas could be at risk of fire damage. There are approximately 5,000 manufactured homes in Houston County that are put at risk each year by wildfires. Though all of Houston County's residents are at least somewhat vulnerable to wildfires, areas in isolated unincorporated areas are at a higher vulnerability according to the Alabama Forestry Commission. The municipalities of Houston County are regarded as having Low risk for wildfire occurrences.

4.6 Probability of Future Occurrence and Loss Estimation

Tables 4.9 through 4.21 estimate event frequency of occurrence for each jurisdiction, as well as general estimation of loss data. These estimates were still found to be mostly accurate during this update period with few changes and were taken from recorded and empirical data from media accounts, governmental records, and other entities. Winter storms were extracted from this update, as their rare occurrence does not constitute a high priority for mitigation actions. Impact levels are marked as High (H), Medium (M), or Low (L).

Houston County (At-Large)

Risks were assessed and all six events would affect Houston County. In the event of a Type 1-3 dam failure event, approximately 45 homes and six (6) manufactured homes would be affected at an estimated dollar value of $2.5 million and an estimated dollar loss of $500,000 (the estimated dollar loss includes manufactured homes). The Gordon boat landing and parking facility is at risk with an estimated dollar value of $900,000 with an estimated dollar loss of $250,000. One (1) public area, Omusee Park, is at risk with an estimated $200,000 dollar value with an estimated dollar loss of $50,000, as well as a loss of one (1) commercial business with an estimated dollar value of $50,000 with an estimated dollar loss of $40,000.

Table 4.9 Houston County

Event	Previous Occurrences	Future Probability	Impact Level H	M	L	Loss Expectations per Event
Tornadoes	1 event / 2 years	1 event / 2 years		X		$660,000
Drought	10 events / 15 years	1 event / 2 years		X		$1 million
Flooding	1 event / 8 years	1 event / 8 years		X		$8.5 million
Hurricanes	1 event / 10 years	1 event / 10 years	X			$240 million
Dam Failure	No recorded events	N/A	X			$1 million
Severe T-storms	8 events per year	8 events per year		X		$130,000

City of Ashford

Risks were assessed and five of the six events would affect Ashford. Dam failure is the exception.

Table 4.10 City of Ashford

Event	Previous Occurrences	Future Probability	Impact Level H	M	L	Loss Expectations per Event
Tornadoes	1 event / 2 years	1 event / 2 years		X		$47,500
Drought	10 events / 15 years	1 event / 2 years			X	$82,500
Flooding	1 event / 8 years	1 event / 8 years		X		$707,000
Hurricanes	1 event / 10 years	1 event / 10 years	X			$800,000
Dam Failure	None	None				N/A
Severe T-storms	8 events per year	8 events per year			X	$5,800

Town of Avon

Risks were assessed and five of the six events would affect Avon. Dam failure is the exception.

Table 4.11 Town of Avon

Event	Previous Occurrences	Future Probability	Impact Level H	M	L	Loss Expectations per Event
Tornadoes	2 events	1 event / 2 years		X		$47,000
Drought	10 events / 15 years	1 event / 2 years			X	$82,500
Flooding	1 event / 8 years	1 event / 8 years		X		$707,000
Hurricanes	1 event / 10 years	1 event / 10 years	X			$800,000
Dam Failure	None	None				N/A
Severe T-storms	8 events per year	8 events per year			X	$5,800

Town of Columbia

Risks were assessed and all six events would affect Columbia. In the event of a Type 1 - 3 dam failure event, approximately 25 houses, four (4) manufactured homes, one (1) public building, and two (2) warehouses at the Alabama State Docks are at risk of flooding with damages estimated at a dollar value of $2 million and an estimated dollar loss of $294,000.

Table 4.12 Town of Columbia

Event	Previous Occurrences	Future Probability	Impact Level H	M	L	Loss Expectations per Event
Tornadoes	1 event	1 event / 2 years		X		$90,000
Drought	10 events / 15 years	1 event / 2 years			X	$82,500
Flooding	1 event / 8 years	1 event / 8 years		X		$707,000
Hurricanes	1 event / 10 years	1 event / 10 years	X			$800,000
Dam Failure	No recorded events	N/A	X			$2 million
Severe T-storms	8 events per year	8 events per year			X	$5,800

Town of Cottonwood

Risks were assessed and five of the six events would affect Cottonwood. Dam failure is the exception.

Table 4.13 Town of Cottonwood

Event	Previous Occurrences	Future Probability	Impact Level H	M	L	Loss Expectations per Event
Tornadoes	0 events	1 event / 2 years		X		$47,000
Drought	10 events / 15 years	1 event / 2 years			X	$82,500
Flooding	1 event / 8 years	1 event / 8 years		X		$707,000
Hurricanes	1 event / 10 years	1 event / 10 years	X			$800,000
Dam Failure	None	None				N/A
Severe T-storms	8 events per year	8 events per year			X	$5,800

Town of Cowarts

Risks were assessed and five of the six events would affect Cowarts. Dam failure is the exception.

Table 4.14 Town of Cowarts

Event	Previous Occurrences	Future Probability	Impact Level H	M	L	Loss Expectations per Event
Tornadoes	1 event	1 event / 2 years		X		$47,000
Drought	10 events / 15 years	1 event / 2 years			X	$82,500
Flooding	1 event / 8 years	1 event / 8 years		X		$707,000
Hurricanes	1 event / 10 years	1 event / 10 years	X			$800,000
Dam Failure	None	None				N/A
Severe T-storms	8 events per year	8 events per year			X	$5,800

City of Dothan

Risks were assessed and five of the six events would affect Dothan. Dam failure would be the exception.

Table 4.15 City of Dothan

Event	Previous Occurrences	Future Probability	Impact Level H	M	L	Loss Expectations per Event
Tornadoes	1 event / 2 years	1 event / 2 years		X		$90,000
Drought	1 event / 2 years	1 event / 2 years			X	$10,000
Flooding	1 event / 8 years	1 event / 8 years		X		$20,000
Hurricanes	1 event / 10 years	1 event / 10 years	X			$144 million
Dam Failure	None	None				N/A
Severe T-storms	8 per year	8 per year			X	10k

Town of Gordon

Risks were assessed and all six events would affect Gordon. In the event of a Type 1 - 3 dam failure event, approximately 20 houses would be at risk of flooding at an estimated dollar value of $90,000 and an estimated dollar loss of $54,000. No commercial or public structures would be affected.

Table 4.16 Town of Gordon

Event	Previous Occurrences	Future Probability	Impact Level H	M	L	Loss Expectations per Event
Tornadoes	0 events	1 event / 2 years		X		$47,000
Drought	10 events / 15 years	1 event / 2 years			X	$82,500
Flooding	1 event / 8 years	1 event / 8 years		X		$707,000
Hurricanes	1 event / 10 years	1 event / 10 years	X			$800,000
Dam Failure	No recorded events	N/A		X		$54,000
Severe T-storms	8 events per year	8 events per year			X	$5,800

Town of Kinsey

Risks were assessed and five of the six events would affect Kinsey. Dam failure is the exception.

Table 4.17 Town of Kinsey

Event	Previous Occurrences	Future Probability	Impact Level H	M	L	Loss Expectations per Event
Tornadoes	0 events	1 event / 2 years		X		$47,000
Drought	10 events / 15 years	1 event / 2 years			X	$82,500
Flooding	1 event / 8 years	1 event / 8 years		X		$707,000
Hurricanes	1 event / 10 years	1 event / 10 years	X			$800,000
Dam Failure	None	None				N/A
Severe T-storms	8 events per year	8 events per year			X	$5,800

Town of Madrid

Risks were assessed and five of the six events would affect Madrid. Dam failure is the exception.

Table 4.18 Town of Madrid

Event	Previous Occurrences	Future Probability	Impact Level H	M	L	Loss Expectations per Event
Tornadoes	1 event	1 event / 2 years		X		$47,000
Drought	10 events / 15 years	1 event / 2 years			X	$82,500
Flooding	1 event / 8 years	1 event / 8 years		X		$707,000
Hurricanes	1 event / 10 years	1 event / 10 years	X			$800,000
Dam Failure	None	None				N/A
Severe T-storms	8 events per year	8 events per year			X	$5,800

Town of Rehobeth

Risks were assessed and five of the six events would affect Rehobeth. Dam failure is the exception.

Table 4.19 Town of Rehobeth

Event	Previous Occurrences	Future Probability	Impact Level H	M	L	Loss Expectations per Event
Tornadoes	4 events	1 event / 2 years		X		$47,000
Drought	10 events / 15 years	1 event / 2 years			X	$82,500
Flooding	1 event / 8 years	1 event / 8 years		X		$707,000
Hurricanes	1 event / 10 years	1 event / 10 years	X			$800,000
Dam Failure	None	None				N/A
Severe T-storms	8 events per year	8 events per year			X	$5,800

Town of Taylor

Risks were assessed and five of the six events would affect Taylor. Dam failure is the exception.

Table 4.20 Town of Taylor

Event	Previous Occurrences	Future Probability	Impact Level H	M	L	Loss Expectations per Event
Tornadoes	1 event / 1.5 years	1 event / 1.5 years		X		$47,000
Drought	10 events / 15 years	1 event / 2 years			X	$82,500
Flooding	1 event / 8 years	1 event / 8 years		X		$707,000
Hurricanes	1 event / 10 years	1 event / 10 years	X			$800,000
Dam Failure	None	None				N/A
Severe T-storms	8 events per year	8 events per year			X	$5,800

Town of Webb

Risks were assessed and five of the six events would affect Webb. Dam failure is the exception.

Table 4.21 Town of Webb

Event	Previous Occurrences	Future Probability	Impact Level H	M	L	Loss Expectations per Event
Tornadoes	2 events	1 event / 2 years		X		$47,000
Drought	10 events / 15 years	1 event / 2 years			X	$82,500
Flooding	1 event / 8 years	1 event / 8 years		X		$707,000
Hurricanes	1 event / 10 years	1 event / 10 years	X			$800,000
Dam Failure	None	None				N/A
Severe T-storms	8 events per year	8 events per year			X	$5,800

4.7 Manmade Hazards

Houston County has susceptibility to manmade hazards. General discussions of hazards that may affect the county are described in the subsections below.

Structure Fire

Prevention and control are requirements in the building codes and zoning ordinances in Dothan, Ashford, Cottonwood and Columbia. The most vulnerable structures to fire other than wildfires would likely be those in commercial districts of each jurisdiction. This is primarily due to the close proximity of the structures in these areas. The City of Dothan has a Class 2 rating through the Insurance Services Organization (ISO) fire rating schedule and is well-equipped to deal with fires that occur in the area. The other jurisdictions in Houston County are served by Volunteer Fire Departments that are continuing to improve the service to their community. Volunteer departments in Houston County have ISO rating between Class 4 and Class 9, utilizing funds provided by local legislation and FEMA grants.

Hazardous Materials

Houston County, especially the Dothan Metropolitan Area, is a moderately growing area with many industries and commercial businesses. Many of these businesses and industries handle various types and quantities of hazardous materials. Hazardous materials are an ongoing potential hazard due to the large amount of transporting the materials throughout the county. The municipalities of Ashford, Cowarts, and Gordon are particularly vulnerable to HM incidents because the CSX railroad ships hazardous materials through the commercial and residential districts. A rail accident with hazardous materials would be catastrophic in regards to loss of life and property damage. There would be no time to evacuate the endangered area. Houston County is expanding a warning siren network that quickly notifies the public and gives them time to evacuate or escape a rapidly developing incident. Hazardous materials incidents occur regularly. However, the Dothan Fire & Rescue Service has some of the best hazardous material personnel in the country who respond quickly and effectively to such emergencies. Earlier in the decade, the Dothan Fire Department was awarded a $1.1 million dollar grant to become a regional response team for the State Of Alabama. Additionally, the Fort Rucker Fire Department also has a outstanding HM Response Team that works closely with all jurisdictions in the region through mutual aid agreements. Information on responses by Dothan Fire and Rescue comparing 2003 and 2008 are presented in Table 4.22

Table 4.22 Dothan Fire/Rescue Events

Type	2003	2008
Structure Fires	186	159
Vehicle Fires	103	97
Vegetation	150	214
EMS/Rescue	5,514	6,419
Hazardous Materials	242	251
Service Calls	859	972
Good Intent	542	275
Others	1,112	1,214

Terrorism

According to the City of Dothan Police Department, the largest police department in Houston County, bomb threats are registered at an average rate of approximately five times per month in the Dothan/Houston and regional areas. Dothan PD bomb squad is the only unit in a 100 mile radius of Dothan and responds too, and safeties the sites. They handle all bombs threats in this

seven county region. These incidents have generally been false where no bombs have been found. Pipe bombs have been found and have been utilized as threats and destroyed by technicians. After the September 11, 2001 terrorist attacks on the United States, local emergency response personnel responded to dozens of calls for anthrax-related concerns. More recently, 11 March 2004, the General Electric Co. received anthrax hoax along with threat letters. All threats of suspicious powder were negative for anthrax.

Many of the government agencies and other entities within Houston County and the State of Alabama implemented enhanced security measures. The Houston County Commission placed security guards at the main courthouse entrance and changed the entrance to one way in, and one way out, unless emergency conditions exist, and then installed cameras and metal detectors. The Dothan/Houston County Emergency Management installed a security control pad to control entrance to the Emergency Operations Center, and the 9-1-1 Communications Center. The Dothan Fire and Police have an ongoing training initiative to train the responders on how to respond to WMD incidents. Alabama Radiation Control trained 150 Dothan Firefighters in proper response to radiation incidents and the proper utilization of portable and hand held radiation detectors, and the operating procedures for the Houston County Reception Center. The reception center at the Houston County Farm Center is used for a reception center for incidents at Plant Farley and other events i.e. dirty bombs, Strategic National Stock pile distribution for local and a 9 county area, and chemicals emergencies that require mass decontamination of the populace. On December 3, 2002, approximately 200 people participated in a drill where a disgruntled farmer that was affiliated with a domestic terrorist group, set off an explosive device containing organophosphate, at the Farm Center. On February 17, 2004 approximately 75 Volunteer Firefighters participated in a tabletop exercise simulating a domestic terrorist releasing 4, 150lb cylinders of liquid Chlorine at the Houston County Water Authority storage facility.

The State of Alabama Health Department along with Houston County EMA has conducted a tabletop exercise and drafted a plan for distributing the Strategic National Stockpile; Houston County is a ten county distribution site. The Dothan/Houston County EMA recently completed the new Houston County Emergency Operation Plan that incorporated Emergency Service Functions and to incorporate the State, Federal Emergency Response Plan, and the National Incident Command System. In addition the Radiological Emergency Plan was updated and distributed to the participating agencies. Public works at the City of Dothan and Houston County Water Authority are undertaking a risk assessment of their water system and sewer facilities to determine if any additional security measures are needed. In the case of the HC Water Authority, the assessment is complete. The assessment recommended motion detectors, intrusion detectors, and chlorine detectors as further security measures and funded by the board. Equipment is in the process of being installed.

Radiological

The Joseph M. Farley Nuclear Plant (FNPP) is located in Houston County just 18 miles east of Dothan near Gordon, AL. The plant began operation in December 1977. Nuclear power plants will occasionally experience incidents involving the possibility of releases of radioactive materials. These incidents may occur at any time with varying degrees of seriousness. The release of radioactive material from Plant Farley could affect the populace within a 10-mile radius and food ingestion within a 50-mile radius of FNPP. The most severe circumstances at Plant Farley could possible require selective or general evacuation out of the Plume Exposure Pathway. Houston County has approximately 7,924 people that live in the 10-mile Emergency Planning Zone (EPZ). Of that, 69 are special needs population. The jurisdictions that are in the

EPZ are Ashford, Gordon, Webb, Columbia, and a great portion of east side of the County at large. Each level of government (local, county, state, and federal) is responsible for the safety and welfare of the populace to the extent of its capabilities. Therefore, pre-disaster mitigation planning is an ongoing process by all government agencies, and Southern Nuclear Operating Co. Two exercises are conducted each year by all agencies, with a FEMA graded exercise every other year. Training sessions to meet objectives are conducted throughout the year for all agencies. Plant Farley is considered a high-risk target, and beyond the scope of the Dothan-Houston Mitigation Committee to mitigate a safety plan or provide protection for the plant. However, as discussed, planning and preparation is complete, and evaluated on a daily, monthly, and yearly basis. See Figure 4.6 for Emergency Planning Zones.

Table 4.23 displays a general assessment by the LEPC regarding the risks of Houston County jurisdictions to manmade hazards.

Table 4.23 Assessment of Manmade Hazards

Jurisdictions	Haz Mat	Terrorism	Radiological	Fire
County	Medium	Medium	High	Moderate
Dothan	High	Medium	Low	Low
Ashford *	High	Low	High	High
Columbia *	Low	Moderate	High	Low
Gordon *	High	High	High	Moderate
Webb *	Low	Low	High	Low
Kinsey	High	Low	Low	Low
Taylor	Moderate	Low	Low	Low
Rehobeth	Moderate	Low	Low	Low
Madrid	Moderate	Low	Low	Low
Cowarts	Moderate	Low	Low	Low

*** Cities located in the 10-mile Emergency Planning Zone for Farley Nuclear Plant**
Note: The Town of Gordon is located within three miles of Farley and a railroad hazardous materials corridor.

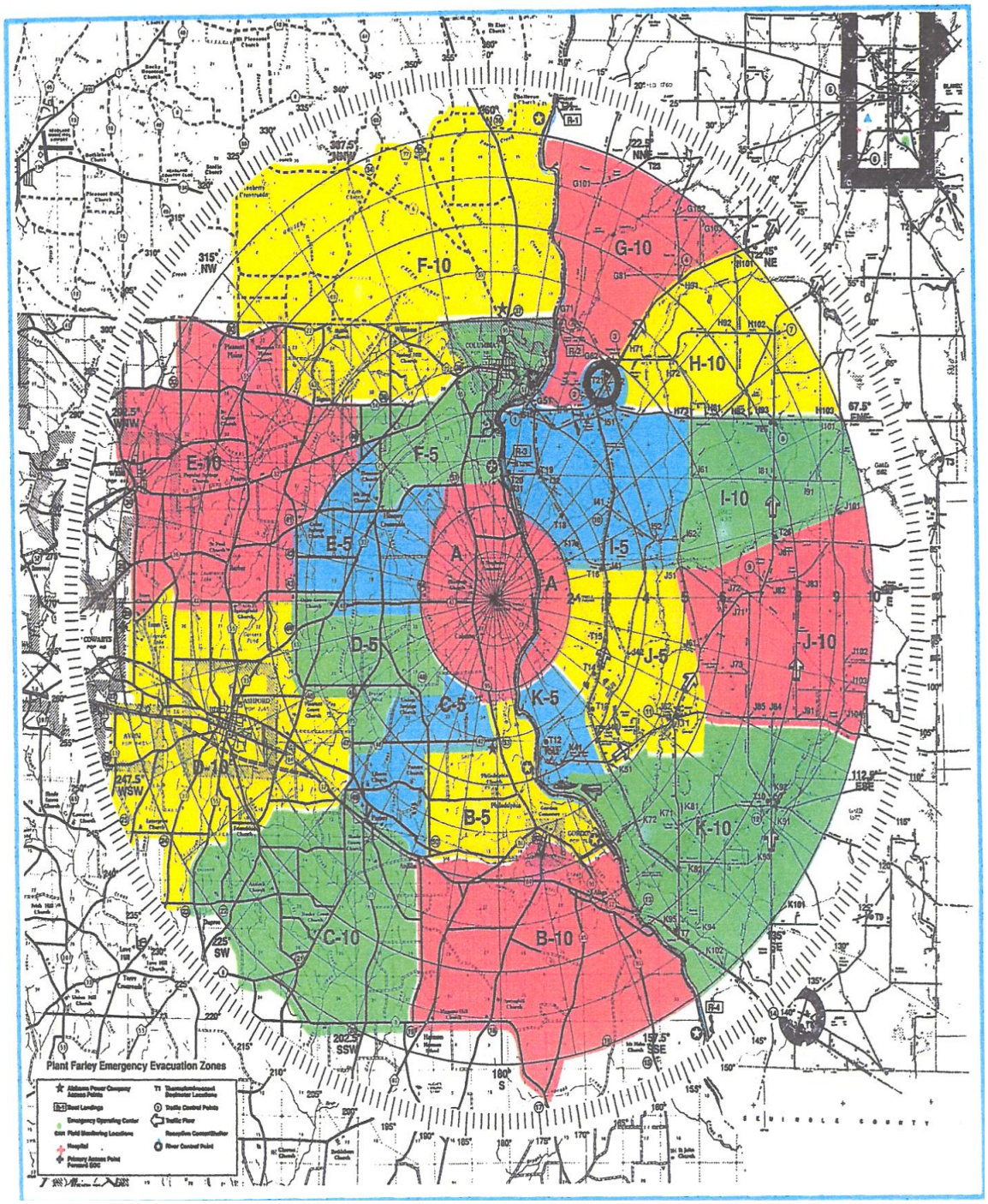


Figure 4.6 Emergency Planning Zones in Houston County

4.8 Critical Facilities/Infrastructure by Jurisdiction

Critical facilities are defined as facilities that are essential to the community, or may be crucial to the delivery of vital services, such as utilities and public safety. Critical facilities may also house or serve an at-risk population such as schools, hospitals, or nursing homes. Critical facilities would also likely result in catastrophic financial loss if severely damaged or destroyed, such as major industrial buildings, courthouses, and other government facilities. Critical facilities may vary from a transmission line that provides vital electricity to the community, to a hospital that provides medical care, or to the local public safety facilities that serve a community.

A concerted effort was made using information from the public, EMA, local government officials and industry stakeholders to identify the critical facilities. Such facilities were considered vital to transportation, energy, communication, health care, utility systems, food services, and the delivery of public safety. Structures that are occupied by at-risk populations such as schools are also included. They are listed with the most current estimated replacement cost, according to their insured values, in Tables 4.24 through 4.41. The information listed below was provided by the individual jurisdictions.

Other critical facilities locations are the facilities that store Extremely Hazardous Substances (EPCRA Section 302-Extremely Hazardous Substances, CERCLA Hazardous Substances, EPCRA, Section 313 Toxic Chemicals, CAA 122® Regulated Chemicals for Accidental Release Prevention and other facilities that are covered. Damage or compromise to these sites could be catastrophic should the EHS be released (list provided by LEPC). (Table 4.42) The Southeast Alabama Gas District transmission areas are shown in Figure 4.7.

The listing will be reviewed periodically and continually updated to reflect any changes in each of the jurisdictions and the county. More extensive identification and more detailed valuation of the identified critical facilities will be taken as the plan evolves. The City of Dothan Fire & Rescue Marshal's office strives to identify all EHS sites and reports EHS location to the LEPC at the EMA.

Table 4.24 Unincorporated Houston County Critical Facilities

Facility	Address	Value
Lucy Fire Station	501 Fire Dept Rd	$110,000
Pansey Fire Station	292 Dixon Dr	$110,000
Lovetown Fire Station	80 Hilltop Dr	$110,000
Hodgesville Fire Station	538 Flournoy Moore Rd	$110,000
Southern Junction Fire Station	7323 S State Hwy 109	$120,000
Bay Springs Fire Station	1500 S Bay Springs Rd	$200,000
Wicksburg Fire and Rescue Station	5340 Judge Logue Rd	$200,000
Wicksburg School (21 structures)	1172 S Hwy 123	$16,315,198
Harmon School (3 structures)	Rt. 1, Pansey	$1,397,646
Farley Nuclear Plant	5340 N Hwy 95	$2,000,000,000

Table 4.25 Ashford Critical Facilities

Facility	Address	Value
Ashford Fire and Rescue Station	102 5th Ave.	$142,000
Ashford Police Station	519 N Broadway	$257,500
Ashford Municipal Building	521 N Broadway	$455,000
Ashford Elementary School (18 structures)	100 Barfield St	$11,123,903
Ashford High School (28 structures)	607 Church St	$17,281,742

Houston County Area Voc. Center (2 structures)	8th Ave / Adams St	$3,312,383
Ashford Academy	1100 N Broadway	
Lift Station w/ Generator		$41,200
Lift Station (5 of this type)		$5,500 (each)
Lift Station		$31,000
Well/Tank		$220,000
Shop		$120,200
Library		$153,000
Depot		$386,250
Water Tank		$218,545
Water Tank		$110,000
Well		$110,000
Well Building and Equipment		$16,400
Lagoon		$1,000,000

Table 4.26 Avon Critical Facilities

Facility	Address	Value
Avon Municipal Building	462 Broadway Ave	$140,000

Table 4.27 Columbia Critical Facilities

Facility	Address	Value
Columbia Fire Station	113 S. Main St	$1,300,000
Columbia Rescue	202 S. Main St	$210,000
Columbia Police Station	202 S. Main St	$125,000
Columbia Municipal Building	203 S Washington St	$300,000
Houston County High School (18 structures)	202 Church St	$14,666,470
Lagoon	S Koonce St	$1,000,000

Table 4.28 Cottonwood Critical Facilities

Facility	Address	Value
Cottonwood Fire Station	1386 Metcalf, Suite 1	$240,000
Sewer Lift Station	635 Grove Street	$150,000
Sewer Lift Station	413 Joe Cook St	$150,000
Sewer Lift Station	201 Houston St	$150,000
Sewer Lift Station	2615 Dyras Rd	$150,000
Sewer Lift Station	12002 Cottonwood Rd	$150,000
Sewer Lift Station	14102 Cottonwood Rd	$150,000
Sewer Lift Station	Cathy Dr	$150,000
Sewer Lift Station	Sealy Wells Rd	$150,000
Well / Tank	91 Todd St	$1,000,000
Well / Tank	Water Tank Rd	$1,000,000
Well	325 Grove St	$1,000,000
Fire Dept. Tank	Metcalf St	$50,000
Cottonwood Rescue	57 Granger St	$150,000
Cottonwood Municipal Building	1424 Metcalf St	$240,000
Cottonwood Recreation Building	635 Grove St	$150,000
Cottonwood Industrial Board	75 Railroad Ave	$2,500,000
Cottonwood School (24 structures)	633 Houston St	$15,679,801
WWTP/Lagoon	14102 Cottonwood Rd	$1,000,000

Table 4.29 Cowarts Critical Facilities

Facility	Address	Value

Cowarts Fire Station	614 Broad St.	$350,000
Cowarts Municipal Building	800 Jester St	$400,000
Pump Stations (7)	Throughout Town	$150,000 (each)
Well		$41,000
Tank		$462,000
Communications Tower	Industrial Park Blvd	$20,000

Table 4.30 Dothan Critical Facilities

Facility	Address	Value
Dothan Administration		
Civic Center	126 N. St. Andrews	$22,700,000
Utility Payments Building	126 N. St. Andrews	$210,300
PW/Building Maintenance Bldg.	Public Works Complex	$462,700
W.W. Collection Warehouse	Public Works Complex	$147,900
W & E Dept. Chemical Bldg.	Kilgore Dr.	$30,700
W & E Dept. Maintenance Bldg.	Kilgore Dr.	$223,900
W & E Dept. Prod. Bldg.	Kilgore Dr.	$53,500
W & E Dept. Warehouse	Kilgore Dr.	$7,800
Fire Dept. Administrative Building	600 Columbia Hwy	$511,000
Storage Building	401 Westgate Parkway	$28,600
Dothan Utilities Service Station	175 Buford Lane	$85,300
Downtown Service Station	N. Cherry St.	$205,100
City Shop	Public Works Complex	$1,900,000
Horticulture & Maintenance Bldg.	911 Greentree	$399,300
PW-Service Station	Public Works Complex	$162,800
Rip Hewes Stadium	1701 Stadium St.	$8,900,000
Andrew Belle Community Center	1270 Lake St.	$2,400,000
Eastgate Park Barn: Stables	1949 Sanitary Dairy Rd.	$187,800
Doug Tew Recreation Center	1019 S. Alice St.	$2,200,000
Eastgate Park Barn	1949 Sanitary Dairy Rd.	$15,900
Rose Hill Senior Citizens Center	401 S. Appletree	$1,900,000
Westgate Park Recreation Center	Westgate Park	$4,000,000
Wiregrass Recreation Center	620 Third Ave.	$1,600,000
Opera House	113 N. St. Andrews St.	$3,300,000
Animal Kennel	Omussee Creek	$91,200
Animal Control Shelter	Omussee Creek	$456,900
Criminal Justice Building	210 N. St. Andrews	$12,600,000
Forensic Bldg.	N. Cherry St.	$316,700
Radio Repair Shop	Public Works Complex	$427,500
PW-Radio Tower Building	Public Works Complex	$213,100
Communications Center	207 N. Appletree	$1,200,000
Traffic Signal/Radio Repair Shop	Public Works Complex	$176,100
Landfill Bailing Scale House	Burkett Road	$69,700
Pw-Env.Svs./St. Warehouse	Public Works Complex	$185,900
Landfill Equipment Shed	Burkett Road	$13,900
Landfill Office	Burkett Road	$261,100
Fire Stations		
Lakewood Fire Station	175 Buford Lane	$980,000
Westgate Fire Station	401 Westgate Parkway	$910,000
Southside Fire Station	1751 Ross Clark Circle	$1,100,000
Northeast Fire Station	365 Technology Drive	$1,000,000

Main Fire Storage Building	500 Columbia Highway	$157,000
Central Fire Station	510 Columbia Highway	$1,900,000
Northside Fire Station	3239 Napier Field Road	$923,000
Fire Department Fitness Center	1301 S. St. Andrews St.	$267,000
Westside Fire Station	6055 West Main	$1,200,000
Eastside Fire Station	670 RCC N.E.	$737,000
Old Central Fire Station	281 E. Burdeshaw	$1,000,000
Fire Department Administrative Bldg.	600 Columbia Hwy.	$511,000
Storage Building	401 Westgate Parkway	$28,000
Dothan Airport	Airport Rd	$800,000
Houston County Buildings		
Sheriff's Department	144 N Oates St	$1,900,000
Sheriff's Communications Center	114 N Oates St	$750,000
Houston County Admin Building	462 N Oates St	$6,000,000
Houston County Courthouse	114 N Oates St	$7,000,000
Houston County School Board	404 W Washington St	$800,000
Houston County Farm Center (11 bldgs)	1701 E Cottonwood Rd	$3,400,000
Farm Extension Office	1699 Ross Clark Cir	$850,000
DHR Office	1605 Ross Clark Cir	$3,700,000
Community Corrections	164 N Oates St	$4,300,000
Juvenile Court	179 N Foster St	$263,000
County Road and Bridge (5 bldgs)	2400 Columbia Rd	$1,100,000
Health Department	1781 E Cottonwood Rd	$3,125,000
County Jail	901 E Main St	$11,000,000
Schools		
Landmark Elementary	410 Westgate Parkway	$4,500,000
Girard Middle	600 Girard Ave.	$7,600,000
Northview Multi-purpose	3327 Reeves St.	$3,100,000
Highlands Elementary	1400 S. Brannon Stand Rd.	$6,500,000
Hidden Lake Elementary	1475 Prevatt Road	$4,500,000
Honeysuckle Middle School	1665 Honeysuckle Rd.	$19,900,000
D.V.C. Cafeteria	3209 Reeves St.	$437,000
Central Office	500 Dusy St.	$9,200,000
Cloverdale Elementary	303 Rollins Ave.	$4,000,000
Girard Elementary	522 Girard Ave.	$4,200,000
Heard Elementary	201 Daniel Circle	$4,500,000
Highland Elementary	900 W. Powell St.	$4,100,000
Montana St. Elementary	1001 Montana St.	$3,900,000
Selma St. Elementary	1501 W. Selma St	$4,100,000
Southside Elementary	901 S. St. Andrews	$4,000,000
Southside Elementary House	901 S. St. Andrews	$93,000
Stringer St. Elementary	1901 Stringer St.	$4,000,000
Grandview Elementary	900 6th Ave.	$4,600,000
D.V.C. Administrative	3209 Reeves St.	$774,000
Carver Middle School	801 Webb Rd.	$8,700,000
D.V.C	3209 Reeves St.	$5,400,000
Dothan High School Gym	900 S Oates St.	$3,600,000
Dothan High School Field House	900 S Oates St.	$1,000,000
Dothan High School Main	900 S Oates St.	$13,700,000

Dothan High School Sci & Arts	900 S Oates St.	$3,500,000
Dothan High School Vocational	900 S Oates St.	$1,300,000
Northview High School Fine Art	3209 Reeves St.	$1,400,000
Northview High School-Gym	3209 Reeves St.	$5,700,000
Northview High School-Main	3209 Reeves St.	$16,700,000
Beverlye Middle School	1025 S. Beverlye Rd.	$20,000,000
Wilson St. Elementary	205 E. Wilson St.	$4,100,000
Houston County Alternative School	315 N Foster St	$1,101,647
Emmanuel Christian School	178 Earline Rd	
Providence Christian Academy	4847 Murphy Mill Rd	
Northside Methodist Academy	2610 Redmond Rd	
Houston Academy	901 Buena Vista Dr	
Westgate Christian School	617 Westgate Pkwy	$5,000,000
Crossroads Baptist Academy	2574 Westgate Pkwy	
Grace Bible Academy	344 Westgate Pkwy	
Troy University	500 University Dr	$16,000,000
Wallace Community College	100 Wallace Dr	
Sewer		
Beaver Creek Treatment Plant	384 Narcisse Dr.	$21,900,000
Little Choctawhatchee Compost Plant D,C,&R	412 Clear Water Dr.	$6,200,000
Omussee Creek Treatment Plant	457 Jerry Dr.	$22,100,000
Omussee Creek Chlorine Plant	457 Jerry Dr.	$246,000
Omussee Creek Storage Building	457 Jerry Dr.	$34,000
Omussee Creek Disinfection Elec. Building	457 Jerry Dr.	$97,000
Omussee Creek DAF Electrical Building	457 Jerry Dr.	$320,000
Omussee Creek Control Building	457 Jerry Dr.	$530,000
Little Choctawhatchee Laboratory & Control	412 Clear Water Dr.	$1,400,000
Little Choctawhatchee Chlorine Building	412 Clear Water Dr.	$177,000
Little Choctawhatchee Maintenance Building	412 Clear Water Dr.	$167,000
Beaver Creek Chlorine Building	384 Narcisse Dr.	$128,000
Little Choctawhatchee Compost Plant Bulk Str	412 Clear Water Dr.	$808,000
Beaver Creek Maintenance Building	384 Narcisse Dr.	$86,000
Little Choctawhatchee Compost Plant	412 Clear Water Dr.	$3,300,000
Cypress Creek Control Center & Maint	Helms Road	$365,000
Cypress Creek Pump House	Helms Road	$68,000
Cypress Creek Sludge Treatment Bldg	Helms Road	$146,000
Cypress Creek Treatment Plant	Helms Road	$7,300,000
Beaver Creek Dry Bed Storage Building#1	384 Narcisse Dr.	$4,000
Beaver Creek Office & Control Building	384 Narcisse Dr.	$47,000
Little Choctawhatchee Treatment Plant	412 Clear Water Dr.	$11,200,000
Electrical		
Electric Substation-115KV Switching Station	1650 Industrial Rd.	$602,000
Electric Substation Monument #3	515 Monument Dr.	$1,300,000
Electric Substation -Flynn Road #11	2705 Flynn Road	$1,100,000
Electric Substation Hodgesville Road #5	533 Hodgesville Rd.	$1,100,000
Electric Substation North Dothan #12	4011 RCC	$1,100,000
Electric Substation East Haven #4	716 E. Haven Rd.	$987,000
Electric Substation-Sony #7	4465 W. Main St	$1,700,000
Electric Substation- South Park # 6	2633 S. Park	$1,000,000

Electric Substation- Michelin	Michelin	$1,000,000
Electric Substation-East Dothan #1	664 RCC	$1,100,000
Electric Substation-Choctaw #8	3305 RCC	$2,000,000
Other		
Dothan Ambulance Service	923 S Oates St	$250,000
Care Ambulance Service	668 S Oates St	$200,000
Army National Guard	1842 Third Ave	$1,300,000
Air National Guard	Wallace Dr	
Southeast Alabama Medical Center	1108 Ross Clark Cir	$300,000,000
Flowers Hospital	4370 W Main St	$200,000,000

Table 4.31 Gordon Critical Facilities

Facility	Address	Value
Gordon Fire Station	722 Tifton Rd	$100,000
Gordon Municipal Building	692 Tifton Rd	$100,000
Gordon WWTP		$400,000
Lift Stations (2)		$150,000 (each)

Table 4.32 Kinsey Critical Facilities

Facility	Address	Value
Kinsey Fire Station	Walden Dr	$300,000
Kinsey Municipal Building	6947 Walden Dr	$300,000
Tank		$400,000
Well		$700,000

Table 4.33 Madrid Critical Facilities

Facility	Address	Value
Madrid Fire Station	805 Decatur Rd	$110,000
Madrid Municipal Building	790 Decatur Rd	$120,000

Table 4.34 Rehobeth Critical Facilities

Facility	Address	Value
Rehobeth Fire and Rescue Station	Malvern Rd	$500,000
Rehobeth Municipal Building	5449 CR 203	$150,000
Rehobeth Schools (44 structures)	5631 CR 203 and 373 Malvern Rd	$40,555,496

Table 4.35 Taylor Critical Facilities

Facility	Address	Value
Taylor Fire Station	1530 S CR 59	$300,000
Taylor Municipal Building	1469 S CR 59	$300,000

Table 4.36 Webb Critical Facilities

Facility	Address	Value
Webb Municipal Building	315 Webb to Kinsey Rd	$200,000
Webb Fire Station	1234 Enon Rd	$58,000
Webb Elementary School (19 structures)	178 Depot St	$9,088,789

Table 4.37 Shelter Facilities

Houston County Shelters	Address	Type
Houston County Farm Center	1689 Ross Clark Cir	Reception Center/FNP
Westgate Recreation Center	501 Recreation Rd.	Congregate Care FNP
Wiregrass Recreation	620 6th Ave	ARC Shelter

Walton Park	2310 Rocky Branch	ARC Shelter
Dothan Civic Center	126 N. St. Andrews Ave.	ARC Shelter
Doug Tew Recreation Center	300 Garland St.	ARC Shelter
Westgate Church of Christ	619 Westgate Pkwy	ARC Shelter
First Church of the Nazarene	1081 Honeysuckle Rd	ARC Shelter
Wicksburg (West)		
Wicksburg Fire/Rescue	5340 Judge Logue Rd	ARC Shelter
Goodwater Church	41 State Hwy 103	AEMA Surveyed
Wicksburg High School	1172 S. State 123	AEMA Surveyed
Rehobeth (South)		
Rehobeth High School	5631 S. County Rd. 203	AEMA Surveyed
Rehobeth 1st. Baptist Church	4444 S. County Rd. 59	ARC Shelter
Hodgesville (South)		
Memphis Baptist Church	4595 Eddins Rd.	AEMA Surveyed
Madrid		
Madrid Senior Center	760 Decatur St.	ARC Shelter
Cottonwood (Southeast)		
Cottonwood High School	663 Houston St.	AEMA Surveyed
Cottonwood Senior Center	1410 Metcalf St.	ARC Shelter
Cottonwood Municipal Building	1414 Metcalf St.	ARC Shelter
Cottonwood Methodist Church	1331 Metcalf St.	AEMA Surveyed
Ashford (East)		
Ashford High School	607 Church St.	AEMA Surveyed
Ashford Elementary	100 Barfield St	AEMA Surveyed
Ashford Senior Citizen	409 N. Co. Rd. 33	ARC Shelter
Old Harmon School	6334 E. Co. Rd. 8	
Gordon (East)		
St. Mary Church	161 St. Mary Rd.	AEMA Surveyed
Columbia (East)		
Houston County High School	200 W. Church St.	AEMA Surveyed
Columbia Senior Center	122 Main St.	AEMA Surveyed
Webb (East)		
Webb Jr. High School	178 Depot St.	AEMA Surveyed
Webb Senior Center	4095 Enon Rd.	ARC Surveyed
Kinsey		
Kinsey Baptist Church	6745 Walden Dr.	ARC Surveyed
Taylor		
Taylor Senior Center	1457 S. Co. Rd. 59	ARC Surveyed

Table 4.38 U.S. Post Office Facilities

Facility	Address	Estimated Value
Dothan Post Office Downtown	379 N Oates St.	$1,700,000
Dothan Post Office Northside	3741 Ross Clark Circle	$2,000,000
Ashford Post Office	603 N. Broadway	$150,000
Pansey Post Office	14021 East US 84	$90,000
Columbia Post Office	113 South Main St.	$250,000
Cottonwood Post Office	53 Joe Cook Rd.	$225,000
Cowarts Post Office	2935 Jordon Ave.	$165,000
Gordon Post Office	1950 North State Hwy 95	$160,000
Taylor Post Office *	1530 South County Rd. 59	no data available
Kinsey Post Office *	6947 Walden Dr.	no data available

*** Post Offices located in municipal facility**

Table 4.39 Media Facilities

Facility	Address
WKMX Radio	416 North Oates St. (Dothan)
WTVY TV	285 North Foster St. (Dothan)
WWNT Radio	940 South Oates St. (Dothan)
WDHN TV	5274 E Hwy 52 (Webb)
WAGF Radio	805 North Lena St. (Dothan)
WDJR Radio	3245 Montgomery Hwy (Dothan)
WOOF Radio	2518 Columbia Hwy (Dothan)
WBCD Radio	3245 Montgomery Hwy (Dothan)
WESP Radio	3245 Montgomery Hwy (Dothan)
WAQG Radio	285 North Foster St. (Dothan)
WGTF Radio	107 Walnut Court (Dothan)
WVOB Radio	Hodgesville Rd. (Dothan)
WDFX TV	2573 Ross Clark Circle (Dothan)

Table 4.40 Telecommunications Facilities

CenturyTel	Address	Type	Value ($)
	206 W. Try St.	Host office	10M
	Baptist Village	Building	750K
	Beverly Middle School	Cabinet	500K
	Brannon St.	Cabinet	500K
	Carmon	Cabinet	500K
	Chaplewood	Building	750K
	Kinsey (Chevy Country)	Building	750K
	Clark's Store	Building	500K
	Cottonwood Rd.	Cabinet	500K
	Cowarts	Building	750K
	Denton Rd.	Building	750K
	Dothan Main	Building	750K
	Dothan South	Building	750K
	Fortner	Building	500K
	Grandvilla	Cabinet	500K
	Grandvilla (not duplicate)	Cabinet	500K
	Hartford Hwy	Cabinet	500K
	Highlands	Cabinet	500K
	Hodgesville	Building	750K
	Houston	Cabinet	500K
	Kinsey (Chevy Country)	Building	750K
	Lakewood	Building	750K
	Midrid	Cabinet	500K
	Malvern	Building	750K
	Murphy Mill Rd.	Cabinet	500K
	Porter	Cabinet	500K
	Taylor	Cabinet	500K
	Trawick Rd.	Building	750K
	Warehouse	Building	750K
	Webb	Building	750K
	Westgate	Building	750K
	Wilson Mil	Cabinet	500K
	Wiregrass	Building	750K

	Technology Dr. (Leased Bldg.)	Building	2M
	Cable & Disb.	Outside Plant	111M
Knology			
	Main Office	Building	1.5 M
	Warehouse	Building	300K
	Warehouse	Equipment	6.71M
	Gordon	Building/Equip	150K
	Cottonwood	Building/Equip	150K
	Dothan	Equipment	260K
	Houston County	Distribution	12M

Table 4.41 Electrical Infrastructure

Alabama Power Infrastructure	**Address**	**Value**
Ashford DS	200 Block, West Main St.	936K
Columbia DS	Hwy 52	263K
Cottonwood DS	County Rd 55	280K
Cottonwood TS	County Rd 8	1M
Dothan DS	no address assigned	257K
Dothan TS	Murray Rd.	2.6M
Farley N.P. TS (County)	Hwy 95 N	38.4M
Sealy Springs DS (County)	Corner of Hwy 53 and Phillips Rd.	205K
Taylor DS	no address assigned	261K
Webb DS	Corner of Webb to Kinsey Rd.	393K
Webb TS	Hwy 52 E 5 miles out of Dothan	3M
Wicksburg (County)	no address assigned	94K
Wiregrass Electric Cooperative		
Wiregrass Electric Office	1099 Ashford Rd. (Ashford)	
Wiregrass Electric Office	6167 Fortner St (Dothan)	
Electric Substation	1966 Ashford Rd. (Ashford)	800K
Electric Substation	359 Peacock Rd. (Webb)	852K
Electric Substation	1701 Hunter Rd. (Columbia)	811K
Electric Substation	60 Oscar Goodwin Rd. (Dothan)	766K
Electric Substation	815 Battles Rd. (Dothan)	800K
Electric Substation	6171 Fortner St. (Dothan)	800K

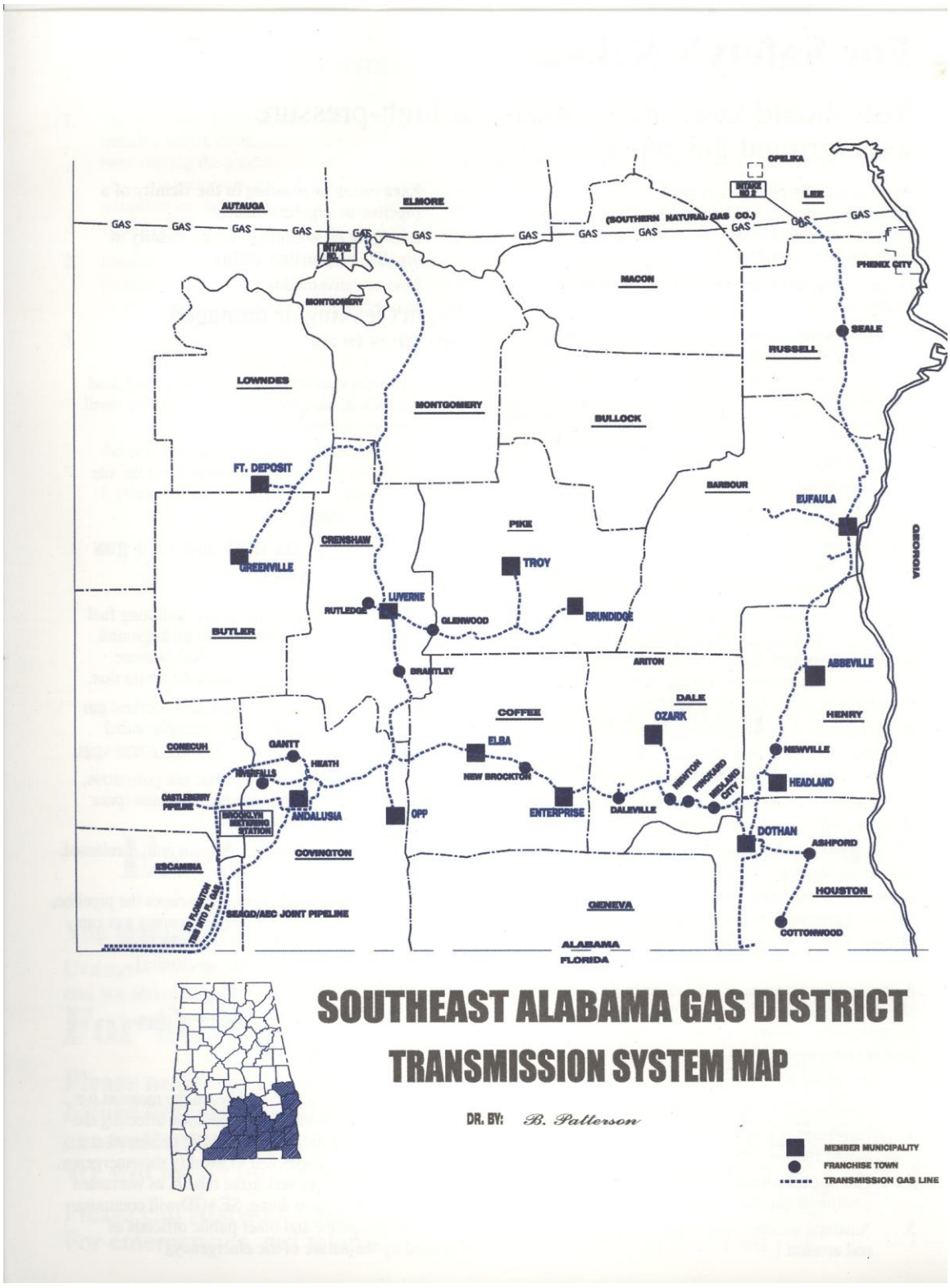
Table 4.42 Hazardous Materials Locations

Consolidated list of Chemicals Subject to the Emergency Planning and Community Right to Know		
Company	**Address**	**Hazardous Material**
Dothan		
Air Gas *	498 Ross Clark Circle	Multi-Chemicals
Argo Distribution *	251 Kelley Drive	Agra-Chemicals
City of Dothan Water Dept *	P. O. Box 2128	Chlorine
APAC	P. O. Box 888	Diesel Fuel
Dothan Country Club	200 South Cherokee St.	Multi-Chemicals
Averitt Express	2951 John D. Odom Rd.	Diesel Fuel
Version Communications *	206 W. Troy St.	Multi-Chemicals
City of Cottonwood	P. O. Box 447	Chlorine
City of Cowarts *	P. O. Box 69	Chlorine
Dairy Fresh Corp	P.O. Box 9	Multi-Chemicals
Davis Oil Co.	2983 Westgate parkway	Multi-Chemicals

City of Dothan Water Dept *	P.O. Box 301463	Chlorine (Bulk Storage)
Dothan Warehouse *	P. O. Box 2222	Anhydrous Ammonia/Multi-Chemicals
City of Dothan (Water World) *	401 Recreation Rd.	Chlorine/Pool Chemicals
Dumbarton	868 Murray Rd.	Multi-Chemicals
Earthgrains	1110 S. Bell St.	Multi-Chemicals
Flavor House	P.O. Box 8084	Multi-Chemicals
General Electric	1371 Hodgesville Rd.	Multi-Chemicals
Globe Motors	3887 Napier Field Rd.	Multi-Chemicals
Helena Chemicals	P.O. Box 66	Pesticides/Herbicides
Industrial Chemical	609 Rogers Rd.	Cleaning Chemicals
K-mart	Ross Clark Circle	Acids
Michelin	P.O. Box 40	Multi-Chemicals
Napier Air Service	300 Flight Line Dr.	Aviation Fuel
Perdue Farms *	P. O. Box 5909	Anhydrous Ammonia/Multi-Chemicals
Pemco Aviation	P.O. Box 929	Aviation Fuel
Roister Clark	2034 Taylor Rd.	Pesticides/Herbicides
Seed South	P.O. Box 1668	Pesticides/Herbicides
Southern Coaches	1751 Reeves St.	Diesel Fuel
Southeast Medical Center	1108 Ross Clark Circle	Diesel Fuel/medical
Sony Corp.	4275 West Main St.	Acids/Propane
Southern Nuclear/Power Plant *	P.O. Box 1295	Acids Multi-Chemicals
Tri-State Plant	P. O. Box 1785	Anhydrous Ammonia/Multi-Chemicals
Wal-mart (2-locations)	3430 West Clark Circle	Acids
Twitchell Inds.	4031 Ross Clark Circle	Multi-Chemicals
United parcel Service	2812 Montgomery Hwy	Diesel Fuel
W. W. Gregory Grocery	P.O. Box 400	Diesel Fuel
Flowers Hospital	P.O. Box 6907	Diesel Fuel/Medical
Schwans Foods	1728 Industrial Rd.	Diesel Fuel
Swedish Cigar	309 6th Ave.	Multi-Chemicals
Pipco Chemical *	5357 South Oates St.	Agra-Chemicals-Herbicides
AAA-Cooper Transportation	1751 Kinsey Rd.	Diesel Fuel
Dothan Eagle (Newspaper)	227 N. Oates St.	Nonheatset
Ryder Truck Line	2210 Kinsey Rd.	Diesel Fuel
Other Areas		
City of Ashford *	P.O. Box 428 Ashford Al.	Chlorine
Ashford Co-Op	P. O. Box 44 Ashford Al.	Pesticides/Herbicides
City Of Cottonwood *	P.O. Box 447 Cottonwood Al.	Chlorine
City of Cowarts *	P.O. Box 69	Chlorine
City of Kinsey *	6947 Walden Dr.	Chlorine
City of Taylor *	1469 South County Rd.	Chlorine
City of Webb *	Route One Webb Al.	Chlorine
McLane Industries	100 McLane Parkway	Diesel fuel, acids
City Of Columbia *	P.O. Box B-2 Columbia Al.	Chlorine
Bulk Storage LPG		
Empire Gas *	412 Inez Rd. Dothan Al.	Propane
Ferrell Gas *	P.O. Box 430 Dothan Al.	Propane
Home Oil Co.	5744 East U. S. Hwy 84 Cowarts Al.	Propane
Propane Gas & Appliance	5729 U. S. 231 South Dothan Al.	Propane

*** Extremely Hazardous Substance**

Figure 4.7 Southeast Alabama Gas District Service Area



4.9 Property Valuation Summary by Jurisdiction

This data in Table 4.43 is derived from local municipal government and tax valuation from the Houston County Revenue Commission. This data is for Tax Year 2009.

Table 4.43 Property Valuation by Jurisdiction

Jurisdiction	Class I (Public Utilities)	Class II (Commercial / Multifamily)	Class III (Single Family / Farm)	Total Assessment
County*	$1,070,939,733	$275,463,700	$892,567,200	$2,238,970,633
Ashford	$7,324,800	$46,765,400	$73,536,800	$127,627,000
Avon*	N/A	N/A	N/A	N/A
Columbia	$1,475,933	$11,834,300	$17,584,400	$30,894,633
Cottonwood	$1,372,467	$12,902,200	$25,188,800	$39,463,467
Cowarts*	N/A	N/A	N/A	N/A
Dothan	$70,092,267	$2,675,292,300	$2,463,928,400	$5,209,312,967
Gordon	$506,267	$2,974,700	$5,217,400	$8,698,367
Kinsey	$228,267	$23,732,900	$53,772,600	$77,733,767
Madrid	$223,600	$2,353,800	$7,535,600	$10,113,000
Rehobeth	$407,333	$10,943,500	$55,387,200	$66,738,033
Taylor	$1,879,667	$34,379,100	$54,780,400	$91,039,167
Webb	$2,321,133	$29,325,300	$33,623,000	$65,269,433
Total	**$1,156,771,467**	**$3,125,967,200**	**$3,683,121,800**	**$7,965,860,467**

Note: County total includes the municipalities of Avon and Cowarts

It is important to note that actual values may be somewhat higher than those values assigned for tax purposes. Also, these values do not include tax-exempt structures such as government buildings and churches.

Section 5 – Mitigation

This section of the plan addresses requirements of Interim Final Rule (IFR) Section 201.6(c)(3).

Section Contents

Section	Section Updates
5.x	• Changes in numbering and organization
5.1	• Incorporated former "Section IV-A" • Goals were retained
5.2	• Incorporated former "Section IV" • Strategies were retained
5.3	• Incorporated former "Section IV-B and IV-C" • Added subsections for each jurisdiction • Added "Completed/Deleted Actions" tables • Projects reflect updated process

5.1 Mitigation Goals

This section provides a description of mitigation goals to reduce or avoid long-term vulnerabilities to identified hazards. The mitigation goals expected to be achieved by development, adoption and continuation of this plan include:

- Prevention of loss of life and reduction in number and severity of injuries
- Reduction in severity and amount of property damages
- Identification and acquisition of funding for cost-effective mitigation efforts
- Implementation of a comprehensive hazard mitigation plan
- Implementation of hazard mitigation efforts prior to a natural hazard incident
- Incorporation of lessons learned during and after any incident recovery phase

5.2 Mitigation Strategies

This section provides the jurisdiction's blueprint for reducing the potential losses identified in the risk assessment based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools. A mitigation strategy is essential and includes the cited goals, identification and analysis of mitigation measures and implementation of mitigation measures as specified in 44 CFR 201.6. Some mitigation efforts are historical or ongoing and are discussed in this section. This section contains or addresses the following items:

- Upgrade and implementation of building codes and zoning restrictions
- Implementation of improved land use practices
- Identification of and retrofit, relocation or removal of at-risk structures
- Limitation of the adverse effects of natural hazards

Dam Mitigation Strategy (Countywide)

The HCMPC believes that the state should enact legislation to provide both the standards needed and the necessary enforcement tools, for effective monitoring and control of dams. Houston County does not have the expertise or the manpower to monitor dam construction or testing.

The HCMPC believes that the state should enact legislation to provide both the standards needed and the necessary enforcement tools, for effective monitoring and control of dams. Houston County does not have the expertise or the manpower to police dam construction or testing.

Historically, there have been no mitigation efforts made concerning dams. The plan proposes that Houston County propose legislation to the State that the following proposals are adopted. These proposals are as follows:

- Identify and survey all dams in Houston County and check the following factors.
  - Type of dam: simple, core, diaphragm or complex dam.
  - Locate the emergency spillway, emergency drain, foundation pipes, embankment, crest, and other associated structures.
  - Ensure adequate spillway that is clear, a functional and protected spillway trash rack and functional emergency drain.
  - Ensure a clean embankment and crest.
  - Ensure no vegetation, rodent burrows, sloughed areas, seepage or settlement.
  - Check for ruts, settlement and surface cracks on the crest.
  - Check for any downstream obstructions.
  - Check for seepage or springs on the downstream side of the dam.

- Determine what is downstream of the dam and what threat to life and property the dam presents. Determine the type of Dam Hazard presented.
  - Type I - Dams with the potential to injure or kill a large number of people and cause serious property damage.
  - Type II - Dams with only the potential to harm a small number of people but cause substantial property damage.
  - Type III - Dams with essentially no threat to life and minimal threat to property.

- Photograph and survey each dam following the United States Army Corps of Engineers recommendations.

- Map each dam and identify the owner.

- Obtain the plans of the dam if available.

a. Each dam will have an impact area identified and mapped.

b. Once the dam hazard is qualified, and the owner identified, any corrective actions concerning the dam's status will be identified to the owner.

Recommendations

Perhaps the most significant item is the need for the county to adopt a resolution to regulate land-use and establish and enforce building codes. Some of the municipalities in Houston County, such as Dothan, have adopted subdivision and zoning codes. Houston County is currently unable to legislate or enforce any land-use or building codes in unincorporated areas of the county. This issue has not been studied sufficiently to determine the associated implementation costs.

For true pre-disaster mitigation, it is necessary for any elected body to have the municipal powers to prescribe and regulate the use of land, manage the flood plain, determine the structural standards buildings must meet and have the necessary enforcement powers as well. As noted above, Houston County does not have all of these municipal functions.

The ability to achieve these functions is likely outside the scope of influence of this planning document to persuade the County Commission to affect a building code resolution. However, the HCMPC believes it is important to point out the need for such legislation.

Houston County lies within Wind Zone 3 and a Hurricane Susceptible area for Design Wind Speeds (three-second gust) consistent with ASCE 7-95. This makes the entire county a High-Risk area for structural damage due to severe thunderstorm, tornado or hurricane related winds. This makes Safe Rooms or Community Shelters, complying with standards recommended by FEMA (*Taking Shelter From the Storm: Building A Safe Room Inside Your House* or *Design and Construction Guidance for Community Shelters)*, very important. This may be the only refuge available for persons subjected to weather-related high winds.

It is recommended that subdivision standards, building codes and zoning ordinances require a safe room for all residences that are new construction or undergo major renovations. Trailer parks and other areas with wind susceptible structures should have community shelters constructed as mandated by the standards identified by FEMA. Major existing structures should have storm-safe locations identified within the structures and with appropriate signage. Care should be taken to ensure shelters are well clear of floodplains and avoid sites that may be subject to falling debris. These criteria if adopted would be a major deterrent to injuries resulting from wind-related phenomena at a reasonable expense.

It is also recommended that outdoor sirens be installed in all parts of the County, as an all hazard approach would be the best solution.

The goal of the HCMPC is to work with their respective governing bodies to effect these changes over time. The associated costs of implementing these changes are unknown at present.

5.3 Specific Mitigation Actions/Projects

This sub-section identifies and analyzes a range of mitigation actions and projects under consideration to reduce the effects of natural hazard events for the county at large as well as each of the jurisdictions within the county. Each project will have a complete risk analysis performed to include potential damage, requirements to strength to codes, cost analysis and plans for completion if applicable. Each project is prioritized based on High (Implementation in one to five years), Medium (Implementation in five to ten years) and Low (Implementation beyond ten years).

5.3.1 Houston County

Houston County Completed/Ongoing Actions

Project	Status	Comments
Installation of outdoor warning sirens	Ongoing	31 out of 59 planned outdoor warning sirens have been installed
Continue enforcing subdivision regulations that regulate the development of properties in flood prone areas.	Ongoing	These standards require compliance for many types of structures and prohibit or limit construction in vulnerable areas
Implemented most recent ALDOT design standards for county roads.	Completed	These standards address many construction issues that impact the ability of roads and bridges to withstand floods
Wiregrass Area Food Bank received generator to operate their freezer/cooler storage space in the event of a hurricane and lost power to their units.	Completed	A power outage would result in products for disaster assistance being unavailable for consumption
Dothan/Houston County Emergency Management received generator for the City of Dothan Water Well #13	Completed	Supplies water to the Southeast Alabama Medical Center (SAMC). Funded by HCEMA, DHS, and SAMC.
Implemented county-wide GIS parcel map viewer with a flood zone layer	Completed	Allows to see if properties are located within identified flood zones, also with aerial photography
Bridge replacement on E Cook Rd over Cedar Creek	Ongoing	Project was bid in May 2009
Bridge replacement on Baxter Rd over Mill Creek	Completed	Replaced unsafe bridge
Bridge Replacement on Brannon Stand Rd over Beaver Creek	Completed	Replaced unsafe bridge on critical street near Dothan
Bridge Replacement on Pilgrim Church Rd over Bryans Creek	Ongoing	Under construction in 2009
Bridge Replacement on Wallace Buie Rd over Hurricane Creek	Ongoing	Under construction in 2009
Bridge Replacement on Hopkins Rd over Cedar Springs Creek	Ongoing	Under construction in 2009
Bridge Replacement on Windmill Rd over Thomley Mill Creek	Ongoing	Under construction in 2009
Began implementing checking properties for flood zone status and partnering with Alabama Power and Wiregrass Electric	Ongoing	Monitor NFIP regulations and flood zone permits regarding building structures

Houston County Action Plan

Project	Agency	Funding Source	Hazards Addressed	Priority
Construct a combination joint Communication Center and Emergency Operation Center to serve the Houston County population of almost 100,000 citizens and 25,000 evacuees during hurricane events. Currently the communication equipment that serves all Houston County citizens is located in a non-standard building and is susceptible to being lost during any minor hurricane or tornado. During Hurricane Ivan, Dennis and Katrina, the building showed signs of deterioration during 50 mph winds. It is recommended that a joint City of Dothan / Houston County Communications Emergency Management Center be constructed utilizing construction codes consistent with ASCE 7-95. This should be completed keeping in mind that Houston County lays within Zone 3. This makes Houston County a "High-Risk" area for structural damage due to severe thunderstorms, tornado or hurricane related winds. A "hardened structure" can be built that will meet or surpass all current requirements and provide a level of security for emergency communications to the community of Houston County. It is recommended that the center house the City of Dothan Communications Center, Houston County Communications Center, Houston County Emergency Management and City of Dothan IT Department. The cost to construct a site to house this critical infrastructure is estimated at $300.00 per square foot.	HCEMA / City of Dothan	Grant Funding / Houston County / City of Dothan	All	High
Replacement of bridges and culverts as needed	Houston County Road and Bridge	Houston County / Grant Funding	Flooding	High
Backup generator for the Houston County Water Authority (HCWA) to supply water for approximately 3,670 customers	HCEMA / HCWA	Grant Funding / HCWA	All	High
Backup generator for Houston County Administration Building to carry out Continuity of Government (COG) / Continuity of Operations Plan (COOP)	HCEMA / Houston County	Grant Funding	All	High
Install 28 additional outdoor warning sirens throughout the County to complete second phase of siren location	HCEMA	Grant Funding	All	High
Cross-drain replacement on S CR 81 south of Bazemore Mill Rd	Houston County Road and Bridge	Houston County	Flooding	High
Retrofit SARCOA building for community shelter than can protect up to 270 people from hazards	HCEMA / SARCOA	Grant Funding	All	Medium
Work with the State of Alabama on private dam legislation	HCEMA/ Houston	State Funding	Dam Failure	Medium

	County Engineer			
Backup generator for Wicksburg School to keep food supplies in freezers from ruining during power outage	Houston County Schools	Grant Funding	All	Medium

5.3.2 City of Ashford

Ashford Completed/Ongoing Actions

Project	Status	Comments
Continue construction of wastewater treatment plant to replace lagoon	Ongoing	Project will be completed soon and will limit damage to sewer treatment facilities caused by flooding and greater protection to Mill Creek
Placement of outdoor warning siren	Completed	Warn residents of emergencies

Ashford Action Plan

Project	Agency	Funding Source	Hazards Addressed	Priority
Additional communications and control capability	Houston County E-911	Houston County E-911	All	High
Construct community shelter near manufactured home parks that could house approximately 400 residents and an emergency operations center	City of Ashford	Grant Funding / City of Ashford	All (Primarily High Winds)	High
Retrofit Police Department dispatch center with windows, doors, lockable metal shutters, and hurricane clips to rafters, as the building is subject to damage, especially flooding, during hazardous weather	City of Ashford / HCEMA	Grant Funding / City of Ashford	All	High
Generator and intrusion alarms for three water wells to supply power	City of Ashford	Grant Funding / City of Ashford	All	High
There are no current accurate base maps or surveys of structures within the floodplain of Ashford. This prevents the City of Ashford from properly managing the FIRM program. A survey of the town, GIS mapping with overhead imagery is needed. Map and Survey of Structures in Flood Plain and GIS	City of Ashford	Grant Funding / City of Ashford	Flooding	Medium
System for detecting, warning, and responding to chlorine leaks in the water system	City of Ashford	City of Ashford	All	Medium
Backup generators for Ashford Elementary and Ashford High schools to keep food supplies in freezers from ruining during power outage	Houston County Schools	Grant Funding	All	Medium

5.3.3 Town of Avon

Avon Completed/Ongoing Actions

Project	Status	Comments
Ditch cleaning at U.S. Hwy 84 / Broadway intersection to alleviate drainage problems	Completed	Project was completed three years ago to reduce flooding concerns by the drainage problem
Maintain open ditches	Ongoing	Work with Houston County Road and Bridge to prevent flooding problems

Avon Action Plan

Project	Agency	Funding Source	Hazards Addressed	Priority
Drainage improvements at the intersection of U.S. Highway 84 and Westbourne St requiring an easement	Town of Avon / ALDOT / Houston County Road and Bridge	Grant Funding / Town of Avon	Flooding	High
Installation of outdoor warning siren, as much of Avon is not covered by existing sirens	Town of Avon / HCEMA	Grant Funding	All	High
Construct community shelter to protect residents of the two manufactured home parks that have approximately 50 households with a backup generator	Town of Avon / HCEMA	Grant Funding	All (Primarily High Winds)	High
Wind retrofit for Town Hall	Town of Avon / HCEMA	Grant Funding	High Winds	Medium
Improvements to Cowarts Creek to reduce flooding occurrences from vegetation in waterway	Town of Avon	Town of Avon / Grant Funding	Flooding	Medium

5.3.4 Town of Columbia

Columbia Completed/Ongoing Actions

Project	Status	Comments
HMGP drainage project along Green St and Davis St near Downtown	Completed	Reduced drainage problems south of Church St (Hwy 52)

Columbia Action Plan

Project	Agency	Funding Source	Hazards Addressed	Priority
Interconnect water system with Henry County Water Authority for a secondary water supply, especially when the two wells and one tank are utilized to the limit	Town of Columbia / Henry County Water Authority	Grant Funding	All (esp. Drought / Wildfire)	High
Generators for two water wells to ensure supply during power outage	Town of Columbia	Grant Funding	All	High
Construct a community shelter to protect residents in vulnerable housing	Town of Columbia / Red Cross	Grant Funding	High Winds / Flooding	High
Construct drainage project affecting areas north of Church St (Hwy 52) between Houston County High School and N Main St (Hwy 95)	Town of Columbia / Houston County Road and Bridge	Grant Funding	Flooding	High
Installation of two outdoor warning sirens to cover areas not covered by the existing siren	Town of Columbia / HCEMA	Grant Funding	All	High
Acquisition of repetitively flooded properties	Town of Columbia	Grant Funding	Flooding	Medium
Backup generator for Houston County High School to keep food supplies in freezers from ruining during power outage	Houston County Schools	Grant Funding	All	Medium
Retrofit or relocate sewage lagoon to reduce impacts from flooding and reduce sewage overflows in surrounding areas	Town of Columbia	Grant Funding	Flooding	Low

5.3.5 Town of Cottonwood

Cottonwood Completed/Ongoing Actions

Project	Status	Comments
Continue review of Floodplain Ordinance	Ongoing	Reduce flood damage
Rehabilitated sewer collection lines that feed into the wastewater lagoon from Lift Station #2	Completed	Reduce inflow and infiltration into the sewer collection system from stormwater drainage
Rehabilitated wastewater lagoon	Completed	Improve capacity to effectively treat increasing flows during and after rain events
Installed outdoor warning siren at Cottonwood High School	Completed	Covers most populated areas of town
Cleaned areas along Boggy Creek near Woods St and Granger St	Completed	Houston County Road and Bridge did improvements to assist with drainage conditions

Cottonwood Action Plan

Project	Agency	Funding Source	Hazards Addressed	Priority
Trailer-mounted emergency generator to operate the three water wells that supplies drinking water to 20% of geographic area of Houston County, water for firefighting to more than 33% of Houston County, and the nine sewer lift stations that convey wastes to the treatment facility ($75,000 estimated)	Town of Columbia / HCEMA	Grant Funding	All	High
Provide erosion control to the 900 block of Houston Street that sustained major damage from the March 2009 flooding. Emergency repair and upgrade are needed, including drainage pipe, roadwork, and curbing ($450,000 estimated)	Town of Columbia / Houston County Road and Bridge	Grant Funding	Flooding	High
Drainage projects along Cottonwood Canal, which caused extensive flood damage in March 2009, by cleaning and improving flow and upgrading damaged bridge and culvert crossings over the canal. Cost is unknown until engineering study is conducted.	Town of Cottonwood	Grant Funding	Flooding	High
Improve currently unused 50,000 gallon water tank to use as emergency water source for firefighting activities by placing connectors, an air gap water filling source line, and other ADEM requirements ($15,000 estimated)	Town of Cottonwood / area VFDs	Grant Funding / Town of Cottonwood	Wildfires	High
Construction of new community shelter to replace outdated, undersized shelter for first responders and vulnerable populations ($900,000 estimated)	Town of Cottonwood / HCEMA	Grant Funding / Town of Cottonwood / Houston County	All (esp. High Winds and Flooding)	High
Water system improvements to replace failing asbestos pipe in several locations, most in Downtown area	Town of Cottonwood	Grant Funding / Town of Cottonwood	All (esp. Flooding)	High

Backup generator for Cottonwood School to keep food supplies in freezers from ruining during power outage	Houston County Schools	Grant Funding	All	Medium
Additional improvements to town's sewer system needed for continued operation during flooding conditions	Town of Cottonwood	Grant Funding	Flooding	Medium
Construct wastewater treatment plant outside of flood zone	Town of Cottonwood	Grant Funding / Town of Cottonwood	Flooding	Low
Implement GIS mapping system to manage NFIP program and utility services	Town of Cottonwood	Grant Funding / Town of Cottonwood	All (esp. Flooding)	Low

5.3.6 Town of Cowarts

Cowarts Completed/Ongoing Actions

Project	Status	Comments
Installed generator at Well #2	Completed	Can supply water during power outage
Installed generator at Lift Station #1	Completed	Lift station is operational during power outage
Installed outdoor warning siren at Fire Station	Completed	Much of town is covered by the warning device

Cowarts Action Plan

Project	Agency	Funding Source	Hazards Addressed	Priority
Several identified flood prone areas need to be repaired, reinforced, modified, and/or completely rebuilt to mitigate hazards	Town of Cowarts	Grant Funding / Town of Cowarts	Flooding	High
Two sewage lift stations need to be relocated out of flood prone areas or have installation of berm and pumps to extract water from the brim	Town of Cowarts	Grant Funding / Town of Cowarts	Flooding	High
Retrofit the remaining six lift stations to accommodate emergency power from at least a 50KW portable generator	Town of Cowarts	Grant Funding / Town of Cowarts	All	High
Construct emergency shelter meeting FEMA standards for refuge during natural hazard events	Town of Cowarts / HCEMA	Grant Funding	All (esp. High Winds)	Medium

5.3.7 City of Dothan

Dothan Completed/Ongoing Actions

Project	Status	Comments
Cypress Creek WWTP	Completed	Replaced old plant in new location for additional capacity and expansion of sewer services
Cypress Creek Sanitary Sewer Trunk Line	Completed	Installed new trunk line from old plant to new plant
Ardilla Sanitary Sewer Trunk Line	Completed	New trunk line for expanded services
Beulah Creek Sanitary Sewer Trunk Line	Completed	New trunk line for expanded services
Eastwood Sanitary Sewer Trunk Line	Completed	New trunk line for expanded services
Taylor Road Sanitary Sewer Trunk Line	Completed	New trunk line for expanded services
Increased monitoring and security measures at WWTPs ($5,000)	Completed	Personnel education, additional equipment, and additional security devices for protection and operation of facilities
Eastwood Ditch Improvements	Completed	Constructed new concrete ditch to relieve local flooding and erosion of existing earthen ditch
Girard Ditch Improvements	Completed	Constructed new concrete ditch and underground pipe system to relieve local flooding and erosion of existing earthen ditch
Westmont Ditch Improvements	Completed	Constructed new concrete ditch to relieve local flooding and erosion of existing earthen ditch
Rampart Ditch Improvements	Completed	Constructed new concrete ditch to relieve local flooding and erosion of existing earthen ditch
Bayshore Storm Drainage Improvements	Completed	Constructed underground pipe system to relieve local flooding and erosion of existing earthen ditch
Allen Road Ditch Improvements	Completed	Constructed new concrete ditch and underground pipe system to relieve local flooding and erosion of existing earthen ditch
John D. Odom Road Bridge Replacement	Completed	Replaced functionally and structurally inadequate bridge with longer, wider, higher bridge with additional flood mitigation
Hwy 52 E Tank Repair ($300,000)	Completed	Recoated tank, added support for SCADA security additions
Wells 27, 28, and 31 Rebuilding ($190,000)	Completed	Rebuilt, repaired, and lowered wells for increased dependability
Vulnerability Assessment and Emergency Response ($50,000)	Completed	Reviewed wells, tanks, treatment plants, lift stations, and all facilities for security and mitigation of potential acts against facilities, employees, and customers
Wells S1, S2, S3, S4, 7, 16, 19, and 25 ($348,119.50)	Completed	Rebuilt, repaired, and lowered wells for increased dependability
Well 33 with Generator Construction ($782,700)	Completed	1,800 GPM deep water well with emergency generator to meet demands and provide reliable supply during emergencies

Well 32 with Transmission Main Construction ($1,495,628)	Completed	1,800 GPM deep water well with transmission main to meet demands and provide reliable source of supply
Tank 13 Construction ($2,057,628)	Completed	1.5 MG elevated water storage tank with emergency generator to meet peak demands, equalize system, and provide water during power outages and emergencies
Tank 12 Construction ($1,495,850)	Completed	1.5 MG elevated water storage tank with emergency generator to meet peak demands, equalize system, and provide water during power outages and emergencies
2001 Long Range Plan Update ($90,000)	Completed	Developed projects to meet current and future demands for water, revise rate structure, and recommend conservation methods
Well 9 and S5 ($80,000)	Completed	Rebuilt, repaired, and lowered wells for increased dependability
Fence, door, window improvements at wells and tanks ($8,700)	Completed	Rebuilt, repaired, and replaced windows, doors, and fencing for increased security and operation conditions
Installing 35 miles of water mains ($4,400,000)	Ongoing	City of Dothan installing water mains with funding from Dothan and Houston County
Bracewell Avenue Bridge Replacement ($210,000)	Completed	Replaced functionally and structurally inadequate bridge with new bridge
Haisten Drive Bridge Replacement ($310,000)	Completed	Replaced functionally and structurally inadequate bridge with new bridge
South Park Avenue Bridge Replacement ($150,000)	Completed	Replaced functionally and structurally inadequate bridge with new bridge
Englewood Avenue Culvert Replacement ($150,000)	Completed	Replaced structurally inadequate box culverts with new box culverts
Connected dry sanitary sewer line on Eastland Drive to trunk line ($30,000)	Completed	Expansion of services
Improved Murphy Mill Road / John D. Odom Road intersection ($300,000)	Completed	Improved accessibility
Construction of new elevated water storage tank ($2,160,000)	Ongoing	1.5 MG elevated water storage tank to meet demands and provide a reliable storage supply
Small water main projects annually ($150,000/yr)	Ongoing	Meet current and future demands and providing reliable fire flows
Small water main replacements annually ($100,000/yr)	Ongoing	Water line replacement and loops required to replace existing antiquated lines, provide fire flows, meet demands
Tank repairs and recoats annually ($500,000/yr)	Ongoing	Repairing water tanks, recoating tanks, adding supports to SCADA equipment, tank security additions, extend life until fully complete
Installation of 14 outdoor warning sirens	Completed	Much of the densely populated areas of Dothan are covered by warning sirens

Dothan Action Plan

Project	Type	Funding Source	Hazards Addressed	Priority
Install pipe and construct detention ponds to relieve local flooding from Beaver Creek Tributary 3 in Spann Farm	Storm Drainage	City of Dothan	Flooding	High
Transmission line upgrade around Ross Clark Circle involving replacing rotten wood poles with concrete poles and replacing the wire with larger wire to increase the reliability of the lines and enable load switching. Repairs will repair wind and thunderstorm power outages.	Electrical	City of Dothan	High Winds	High
Increase watches/patrols at wells and tanks	Water	City of Dothan	All	High
Rehabilitation of Wells 17, 29, 33, and 24, high service pumps 1 and 4, and low service pumps 1,2, and 3 to rebuild, repair, and lower wells to provide increased dependability ($460,000)	Water	City of Dothan	All	High
Construct new west side water storage tank to help maintain water pressure during peak demand ($4,200,000)	Water	City of Dothan / DWSRF	All	High
Replace Denton Road bridge over Rock Creek that is functionally and structurally inadequate ($375,000)	Bridge	Not determined	All	High
Replace Denton Road bridge over Little Choctawhatchee River that is functionally and structurally inadequate ($415,000)	Bridge	Not determined	All	High
Repair bridges on East Coe Dairy Road, Buena Vista Drive, Rocky Branch Road, Continental Drive, and Ennis Road to prevent deterioration ($400,000)	Bridge	Not determined	All	High
Replace Brookside Drive bridge that is structurally inadequate ($300,000)	Bridge	Not determined	All	High
Replace Timbers Drive bridge that is structurally inadequate ($200,000)	Bridge	Not determined	All	High
Concrete pave the corroded bottom of the existing 96” diameter BCCMP under Horace Shepard Road ($150,000)	Storm Drainage	Not determined	Flooding	High
Construct concrete drainage ditch or install culverts in the E. Wilson Street/Cordova Drive area ($1,157,000)	Storm Drainage	Not determined	Flooding	High
Upgrade existing storm drainage system in the Girard drainage basin ($3,049,000)	Storm Drainage	Not determined	Flooding	High
Improve storm drainage through Dothan Industrial Park on the north side of Rock-Tenn Industries ($502,000)	Storm Drainage	Not determined	Flooding	High
Improve storm drainage in the tributary to Folkes Branch east of S. Edgewood Drive ($1,471,000)	Storm Drainage	City of Dothan	Flooding	High
Improve drainage near Dothan High School in block bounded by S. Oates Street, Kornegay Street, S. St. Andrews Street, and Garland Street ($167,000)	Storm Drainage	Not determined	Flooding	High
Improve south tributary of Limestone Creek starting from south side of Food World parking lot from Ross Clark Circle to S. Oates Street,	Storm Drainage	Not determined	Flooding	High

Hodgesville Road, Pinecrest Drive, Devaughn Street, Mayo Street to Mauldin Drive ($994,000)				
Improve W. Woodland ditch tributary from Agutha Drive under Tate Drive, Cynthia Drive, Stadium Street, to the Central of Georgia Railroad ($436,000)	Storm Drainage	Not determined	Flooding	High
Complete the bottom paving of the Folkes Branch ditch from W. Main Street (in front of Porter Square Mall) to Ross Clark Circle to prevent sink holes outside of the ditch walls ($3,000,000)	Storm Drainage	Not determined	Flooding	High
Improve the drainage ditch in the Colonial Baking Company area from the intersection of S. Oates Street and S. Alice to the Central of Georgia Railroad ($444,000)	Storm Drainage	Not determined	Flooding	High
Improve the West Woodland Ditch from Ross Clark Circle to end of improvements west of the West Woodland Bridge (including the tributary that intersects West Woodland south of Mendheim Drive) ($2,657,000)	Storm Drainage	Not determined	Flooding	High
Improve the drainage ditch starting from the existing dirt street dead end of Academy Street in a southwesterly direction to the intersection of Headland Avenue and Baxley St. ($370,000)	Storm Drainage	Not determined	Flooding	High
Install sanitary sewer in Halls Mill S/D due to existing problems with septic systems ($210,000)	Sewer	SRF	All	High
Install sanitary sewer in Stratford Place S/D due to existing problems with septic systems ($400,000)	Sewer	Not determined	All	High
Little Choctawhatchee WWTP Upgrade ($30,000,000)	Sewer	City of Dothan / CWSRF	All	High
Sanitary sewer trunk line from Beaver Creek Wastewater Treatment Plant to Little Choctawhatchee Wastewater Treatment Plant ($15,000,000)	Sewer	City of Dothan / CWSRF	All	High
Decommission Beaver Creek WWTP ($1,000,000)	Sewer	City of Dothan / CWSRF	All	High
Widen Westgate Parkway from U.S. 231 to Harrison Road (5-lane) ($6,700,000)	Street	MPO / City of Dothan	All	High
Improve Fortner Street / Honeysuckle Road intersection ($425,000)	Street	MPO / City of Dothan	All	High
Improve Cottonwood / Beverlye / Saunders / Forrester Roads ($1,250,000)	Street	Not determined	All	High
Improve U.S. 231 / Campbellton Hwy / Taylor Rd ($1,500,000)	Street	Not determined	All	High
Improve Flynn Substation by adding 2 more distribution circuits improving reliability in NW Dothan	Electrical	Not determined	All	High
Install West Side transmission mains to meet demands and fire flows ($11,000,000)	Water	Not determined	All	High
Long Range Plan (to year 2060) will be updated by consultant to meet current and future demands for water, ensure the correct path, review current revenues, and recommend future strategies ($130,000)	Water	City of Dothan	All	High

Install generator at Well #31 to have source of supply during emergencies and power outages	Water	Not determined	All	High
Improve security at wells, tanks, and grounds by installing new fences, gates, doors, and sensors to help security ($200,000)	Water	City of Dothan	All	High
Installation of 8 additional outdoor warning sirens to cover areas that have experienced population growth	HCEMA	Grant Funding / City of Dothan	All	High
Replace approximately 250 2-nozzle fire hydrants with 3-nozzle fire hydrants to accommodate the HUMAT valve in order to improve fire protection (estimated $1,250,000)	Water	Not determined	All	High
Update Vulnerability Assessment and Emergency Response to review wells, tanks, treatment plants, lift stations, and other facilities for security and mitigation of potential acts against the facilities, employees, and customers ($50,000)	Water / Sewer	City of Dothan	All	High
Construction of direct withdrawal point at the Chattahoochee River to include a 10 MGD surface water treatment plant, a river intake structure, water storage tank, and necessary transmission mains (estimated $60,000,000)	Water	Not determined	All	Medium

5.3.8 Town of Gordon

Gordon Completed/Ongoing Actions

Project	Status	Comments
Awarded new police car	Completed	More dependable patrolling of town and critical facilities

Gordon Action Plan

Project	Agency	Funding Source	Hazards Addressed	Priority
Procurement of portable 60KW generator to serve electrically-retrofitted water well and lift stations (estimated $42,402.00)	Town of Gordon / HCEMA / SEARPDC	Grant Funding	All	High
Construction of community shelter to house vulnerable populations in manufactured or wood constructed homes	Town of Gordon /HCEMA	Grant Funding	High Winds / Flooding	High
Improve drainage problem along Tifton Road by improving ditches and widening road	Town of Gordon / Houston County Road and Bridge	Grant Funding	Flooding	High
Improve drainage problem on Monroe Street, by replacing pipe under CSX Railway track with larger pipe to alleviate flooding of houses and property	Town of Gordon / Houston County Road and Bridge / CSX	Grant Funding	Flooding	High
Retrofit Town Hall windows and doors with lockable metal shutters and add hurricane clips to the rafters	Town of Gordon	Grant Funding	High Winds	Medium
Construction of new fire station to replace old station	Town of Gordon / Gordon VFD	Grant Funding	All	Medium

5.3.9 Town of Kinsey

Kinsey Completed/Ongoing Actions

Project	Status	Comments
Awarded new police car	Completed	More dependable patrolling of town and critical facilities
Installed a generator on water well	Completed	Can supply water during power outage
Constructed new fire station	Completed	Additional resources to assist in response to emergencies
Improved drainage problem along Bethel Road	Completed	Project assists 2 houses

Kinsey Action Plan

Project	Agency	Funding Source	Hazards Addressed	Priority
Construction of new well and elevated water storage tank with generator to have additional water for domestic needs and to furnish for firefighting	Town of Kinsey	Grant Funding / Town of Kinsey	All	High
Installation of additional outdoor warning siren	Town of Kinsey / HCEMA	Grant Funding	All	High
Install generator in Town Hall for support during emergency events	Town of Kinsey / HCEMA	Not determined	All	High
Install 50KW generator in Fire Station for functionality during hazard event (estimated $45,000)	Kinsey VFD / HCEMA	Grant Funding / Kinsey VFD	All	High
System for detecting, warning, and responding to chlorine leaks in the water system	Town of Kinsey	Town of Kinsey	All	High
Installation of telemetry system to detect intrusion and power outages in water and sewer infrastructure	Town of Kinsey	Not determined	All	High
Repair drainage problems and street damage caused by flooding	Town of Kinsey / Houston County Road and Bridge	Town of Kinsey / Houston County	Flooding	High
Construct new Town Hall that also serves as a community shelter for first responders and vulnerable populations	Town of Kinsey / HCEMA	Grant Funding	High Winds / Flooding	Medium
Implement GIS mapping system to manage NFIP program and utility services	Town of Kinsey	Town of Kinsey	All	Low

5.3.10 Town of Madrid

Madrid Completed/Ongoing Projects

Project	Status	Comments
Installation of outdoor warning siren at the Fire Station	Completed	Warn residents of emergencies
Continue working with Houston County to repair drainage problems and street damage when necessary	Ongoing	Houston County Road and Bridge is an important partner in this task

Madrid Action Plan

Project	Agency	Funding Source	Hazards Addressed	Priority
Retrofit senior center for sheltering purposes for the local area's manufactured home parks	Town of Madrid / HCEMA	Grant Funding	All (esp. High Winds)	High
Madrid currently has open ditches to convey drainage throughout town. Areas, such as Pine Street, have drainage problems. Implementation of drainage infrastructure through much of town to reduce drainage problems is needed.	Town of Madrid / Houston County Road and Bridge	Grant Funding	Flooding	High
Construction of elevated water tank for additional water supply needs from growth occurring from Country Crossing development	Houston County Water Authority / Town of Cottonwood Water	Grant Funding	All	High
Public sewer system in preparation for growth from Country Crossing development	Town of Madrid / Houston County	Grant Funding	All	High

5.3.11 Town of Rehobeth

Rehobeth Completed/Ongoing Projects

Project	Status	Comments
Installation of outdoor warning siren at Rehobeth Elemetary ballfields	Completed	Inform citizens in central Rehobeth of emergencies

Rehobeth Action Plan

Project	Agency	Funding Source	Hazards Addressed	Priority
Construction of a community shelter with generator for first responders and vulnerable populations because Rehobeth is subject to severe weather	Town of Rehobeth / HCEMA	Grant Funding	High Winds / Flooding	High
Install outdoor warning siren to cover north side of Rehobeth	Town of Rehobeth / HCEMA	Grant Funding	All	High
Implement program to repair drainage problems, especially along Leonard Drive, in order to prevent property damage and street deterioration	Town of Rehobeth / HCEMA	Not determined	Flooding	High
Backup generators for Rehobeth Elementary, Rehobeth Middle, and Rehobeth High schools to keep food supplies in freezers from ruining during power outage	Houston County Schools	Grant Funding	All	Medium
Implement GIS mapping system to assist the Town in emergency situations	Town of Rehobeth	Not determined	All	Medium

5.3.12 Town of Taylor

Taylor Completed/Ongoing Projects

Project	Status	Comments
Installation of one outdoor warning siren	Completed	Warn residents of emergencies
Installation of radio telemetry and SCADA system on water tanks and pumps	Completed	Protects water infrastructure from natural and manmade threats
Review NFIP Ordinance to ensure consistency with regulations	Ongoing	Ensuring ordinance is comprehensive and meets flood protection objectives

Taylor Action Plan

Project	Agency	Funding Source	Hazards Addressed	Priority
Install 150 KW generator at Well #1 to ensure supply of water to SE portion of water system	Town of Taylor / HCEMA	Grant Funding	All	High
Procurement of portable 175KW generator to power lift stations during outages and severe weather (estimated at $93,750.00)	Town of Taylor / HCEMA	Grant Funding	All	High
Drainage improvements to protect homes in Landview S/D from flooding damage after intense rainfall events	Town of Taylor / HCEMA / Houston County Engineer	Grant Funding	Flooding	High
Retrofit the Town Hall for police and water department emergency operations activities during a disaster event	Town of Taylor / HCEMA	Grant Funding	High Winds	High
Major drainage improvements from Parker Village S/D to Taylor Road area because of storm drainage overflow. The town sprays and clears the ditch but it is not a long-term solution.	Town of Taylor	Grant Funding	Flooding	High
Installation of additional outdoor warning sirens to cover the southern and western portion of Taylor	Town of Taylor / HCEMA	Grant Funding	All	High
Install radio telemetry and SCADA system on sewer lift stations to protect infrastructure from natural and manmade threats	Town of Taylor	Grant Funding / Town of Taylor	All	High
Elevate two lift stations (Windy Hill Rd and Hwy 52), due to repeated flooding occurrences	Town of Taylor	Grant Funding	Flooding	Medium
Development of a GIS mapping system for utilities and flood management purposes	Town of Taylor	Grant Funding	All	Medium
Construct community shelter near town's manufactured home parks for protection from hazard events	Town of Taylor / HCEMA	Grant Funding	All (esp. High Winds)	Medium
Development of municipal Emergency Operations Plan that complies with local, state, and federal regulations	Town of Taylor / HCEMA	Grant Funding / Town of Taylor	All	Medium

5.3.13 Town of Webb

Webb Completed/Ongoing Projects

Project	Status	Comments
Completed installation of communications system to be used in emergencies	Completed	Used by Police, Fire, Water, and Town Administration

Webb Action Plan

Project	Agency	Funding Source	Hazards Addressed	Priority
Upgrade Webb Senior Center by adding wind retrofits, generator, and storage facility to enhance its shelter status	Town of Webb	Grant Funding	All (esp. High Winds / Flooding	High
Install additional warning siren to cover areas south of Hwy 52	Town of Webb / HCEMA	Grant Funding	All	High
Install generators for two water wells with no backup power source	Town of Webb	Grant Funding	All	High
Renovate the housing for Well #1, remove Tank #1, and install SCADA system on wells	Town of Webb	Not determined	All	High
Have interconnections with neighboring water systems for backup water sources	Town of Webb	Not determined	All	Medium
Backup generators for Webb Elementary School to keep food supplies in freezers from ruining during power outage	Houston County Schools	Grant Funding	All	Medium
Implement GIS mapping system for town systems and flood mitigation planning	Town of Webb	Not determined	All	Medium

Section 6 - Plan Maintenance Process

This section of the plan addressed requirements of Interim Final Rule (IFR) Section 201.6(c)(4).

Section Contents

Section	Section Updates
6.x	• Formatting changes
6.1	• Incorporated former “Section V-A”
6.2	• Incorporated former “Section V-B”
6.3	• Incorporated former “Section V-C”

6.1 Hazard Mitigation Monitoring, Evaluation, and Update Process

The overall planning process falls under the supervision of the five-member Houston County Commission. The Commission designated the Houston County EMA Director to coordinate all aspects of the mitigation planning process and Clark Matthews to serve as the chairperson of the Mitigation Planning Committee.

The plan review process includes periodic reviews of the entire plan with revisions completed as necessary. As a minimum, a complete review of the plan will occur on a biennial basis and the HCMPC will conduct the review. It is understood that committee members may change over time; however, a committee member, appointed by the jurisdiction, which they represent, will always represent each of the eleven designated jurisdictions, with two county at large representatives.

Cost benefits review. Priority mitigation projects will only be implemented if the benefits are maximized and outweigh the associated costs of the proposed projects. The Planning Committee performed a general evaluation of each mitigation measure, which might require FEMA funds. The Committee weighed the estimated costs for each mitigation measure against the projected benefits to be derived. For example, a project to acquire properties within the flood plain would provide the following benefits: (1) the project eliminates flood damages to of acquired properties, (2) the project reduces flood response costs, (3) the project reduces flood insurance claims, and (4) the project could increase the Community Rating System (CRS) rating. A more detailed benefit-cost analysis will be required for each priority project to determine economic feasibility during the project planning phase... Projects will also require a more detailed evaluation for eligibility and feasibility including social impact, environmental impact, technical feasibility and other criteria that measure project effectiveness. This detailed evaluation of projects will be performed in the pre-application phase of a grant request. Further, project implementation will be subject to the availability of FEMA grants and other sources of funds from year-to-year.

The plan review process will also include the provision of a post-disaster review and the possible revision of the applicable portions of the plan as required/desired.

Houston County EMA will review any natural hazard incidents that occur on at least an annual basis and any relevant data from those incidents will be incorporated into the plan at least as often as the planned yearly update. As much data as possible will be obtained from all the involved jurisdictions throughout the county as well as public safety responders, and the media.

Critical infrastructure will be updated when mapping updates are performed. This period varies with the addition of roadways and structures within Houston County and the municipalities. This data is obtained through a variety of sources including the E-911 addressing database, EMA databases, the county/city engineers and information derived from public safety agencies.

Incomplete sections will be addressed on an annual basis for status updates. Any needed minor revisions will occur at this time.

There will be a complete review and revisions as necessary of the entire plan every five years.

6.2 Hazard Mitigation Plan Incorporation

This mitigation plan will remain pivotal in the development of the Houston County Emergency Operations Plan and applicable portions of the mitigation plan will be incorporated into the EOP. Emergency Support Function planning within the existing EOP was incorporated, in large part, from the Risk Assessment portion of the mitigation plan. Additionally, data from the mitigation plan was incorporated into the recently completed Emergency Management Accreditation Program (EMAP) and will be used in subsequent EMAP work plans. Both the EOP and the EMAP utilized multiple meetings with local and regional stakeholders, including local government partners. The EMA Director will continue incorporating information from this Plan into other required emergency management plans.

The plan will be provided to the Southeast Alabama Regional Planning and Development Commission and the Dothan Area Chamber of Commerce for use in future economic development activities.

Copies of this mitigation plan will also reside with each municipality and the Houston County Commission for use in city/town/county expansion projects as well as economic development and land use studies. Applicable data from this plan will also be incorporated into project summaries. All municipal and county plans must undergo a citizen participation process that includes residents and other local stakeholders, as well as adoption procedures in an advertised, public meeting.

6.3 Public Awareness/Participation

The County EMA Director, overall coordinator for the plan, will ensure all reviews are adequately publicized to promote public involvement.

Efforts will continue to involve local and state government agencies, businesses, academia and the general public in the ongoing mitigation planning process to the maximum extent possible.

The EMA Director will ensure that the public will be given at least two opportunities to participate in reviews of any plan updates as well as the five year review and any required revisions.