

# LAWRENCE COUNTY NATURAL HAZARDS MITIGATION PLAN



**“REVISED DRAFT”  
APRIL 2010**

## TABLE OF CONTENTS

<b>I.</b>	<b>PLAN BACKGROUND &amp; PURPOSES-----</b>	<b>1</b>
<b>II.</b>	<b>PLANNING PROCESS-----</b>	<b>7</b>
<b>III.</b>	<b>RISK &amp; VULNERABILITY ASSESSMENT-----</b>	<b>14</b>
<b>IV.</b>	<b>HAZARD MITIGATION STRATEGIES-----</b>	<b>70</b>
<b>V.</b>	<b>MITIGATION PLAN MAINTENANCE-----</b>	<b>95</b>
	<b>APPENDIX A (Meeting Agendas &amp; Sign-In Sheets)</b>	
	<b>APPENDIX B (Meeting Minutes)</b>	
	<b>APPENDIX C (Repetitive Loss Table)</b>	
	<b>APPENDIX D (Maps)</b>	
	<b>APPENDIX E (Resolutions)</b>	

# I. PLAN BACKGROUND & PURPOSES

## 1.1 About the Plan

The *Lawrence County Natural Hazards Mitigation Plan* was developed to protect the health, safety and economic interest of the residents of Lawrence County by reducing the impacts of natural hazards through hazard mitigation planning, awareness education, and plan implementation. Furthermore, the *Lawrence County Natural Hazards Mitigation Plan* includes Lawrence County and its five (5) municipalities of Courtland, Hillsboro, Moulton, North Courtland, and Town Creek. Each municipality has participated throughout the five-year implementation cycle, which began with the adoption and approval of the County's first multi-jurisdictional plan in 2004 and concluding with the first required plan update. The updated plan is a strategic planning guide, which fulfills the requirements of the Federal Disaster Mitigation Act of 2000 (DMA 2000), as administered by the Alabama EMA and FEMA Region IV in Atlanta. This act provides federal assistance to state and local governments to alleviate suffering and damage from disasters. It broadens existing relief programs to encourage disaster preparedness plans and programs, coordination and responsiveness, insurance coverage, and hazard mitigation measures.

Also, the *Lawrence County Natural Hazards Mitigation Plan* complies with all of the eligibility requirements for FEMA grant assistance to participating jurisdictions, including the Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation (PDM) Grant Program, and the Flood Mitigation Assistance Program (FMA). *A copy of the multi-jurisdictional plan adoption by each municipality can be found in Appendix E.*

## 1.2 Authority

Section 409 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law 93-228, as amended), Title 44 CFR, as amended by Section 102 of the DMA of 2000, provides the framework for state and local governments to evaluate and mitigate all hazards as a condition of receiving Federal disaster assistance. A major requirement of the law is the development of a local hazard mitigation plan.

## 1.3 Funding

The Alabama Emergency Management Agency (AEMA) awarded a grant to the Lawrence County Emergency management Agency through the Hazard Mitigation Grant Program (HMGP) for the preparation of this plan in 2008. The North-central Alabama Regional Council of Governments (NARCOG) then entered into an agreement with the EMA to prepare the *Lawrence County Natural Hazards Mitigation Plan* for \$27,612. The grant provided 75% of the funding from FEMA, through the AEMA. The 25% local match share was provided by in-kind services performed by the Lawrence County EMA and members of the Hazard Mitigation Planning Committee.

## **2.5 Scope**

The scope of the *Lawrence County Natural Hazards Mitigation Plan* includes all unincorporated and incorporated areas within the county and addresses all natural hazards identified that pose a threat to persons and property in Lawrence County. Both short and long-term hazard mitigation strategies are addressed and implementation tasks are assigned, with funding alternatives identified.

In addition to this chapter, the plan contains the following elements:

- A vision for disaster resistance, which drives local government policy decisions for hazard mitigation.
- A description of the planning process that opens the participation to all local governments, the public, academia, businesses, critical facilities, non-profit agencies, and regional, state, and federal governments.
- A general assessment of the County's past and predicted exposure to natural hazards and the risks that it faces, including impact on buildings, critical facilities, and infrastructure with loss estimates.
- An assessment of local governments' capabilities to implement hazard mitigation measures and goals, objectives, policies, and action program items set forth to effectively mitigate the county's natural hazard risks.
- Procedures for maintaining an active and effective, long-range hazard mitigation planning and implementation program.
- Full documentation of the planning process.

## **2.5 Purpose**

The purpose of the Hazard Mitigation plan is to identify and assess the possible hazards in Lawrence County and develop hazard mitigation strategies so that Lawrence County may protect the health, safety, and welfare of the residents of the County.

- To establish an ongoing continuous hazard mitigation planning program and process.
- To develop a local mitigation strategy we can use to build upon and establish priorities and activities to reduce our vulnerability to the effects and impact of natural hazards.
- Established procedures for monitoring the implementation of mitigation strategies.

## **2.5 Fostering Local Sustainability**

"Sustainability" means that a local government can tolerate and overcome damage, diminished productivity, and reduced quality of life from an extreme event without significant outside assistance. To achieve sustainability, local governments must take responsibility for choosing where and how development proceeds.

The following six (6) objectives must be simultaneously reached to mitigate hazards in a sustainable way:

1. **Maintain and enhance environmental quality.** Activities to mitigate hazards should not reduce the carrying capacity of the ecosystem. Doing so increases losses from hazards in the long term.
2. **Maintain and enhance quality of life.** This includes access to income education health care housing employment etc and protection from disaster. Local governments must consciously define the quality of life they want and select mitigation strategies that do not detract from that vision.
3. **Foster local resiliency and responsibility.** Resiliency to disasters means a local government can withstand an extreme natural event with a tolerable level of losses. A local government should determine its acceptable level of protection.
4. **Recognize that vibrant local economies are essential.** Take mitigation actions that foster (rather than depress) a strong local economy.
5. **Ensure inter and intra-generational equity.** Select mitigation activities that reduce hazards across all ethnic racial financial or gender characteristics. Ensure that the costs of today's advances are not shifted onto later generations or less powerful groups.
6. **Adopt local consensus building.** Select mitigation strategies that evolve from full participation among all public and private stakeholders.

*Source: Adapted from an article entitled "Disasters by Design" by Dennis S. Mileti, University of Colorado.*

## **2.5 Consistency with State and Federal Mitigation Policies**

The goals objectives and policies of this plan intend to implement the national and state directives of natural hazards through local strategies intended to:

- Substantially increase public awareness of natural hazard risks and the measures available to create safer more disaster resistant communities and
- Significantly reduce the risk of loss of life injuries economic cost and destruction of natural and cultural resources that result from natural hazards.

FEMA has developed ten (10) fundamental principles for the nation's mitigation strategies which likewise underlie the strategies of this plan:

1. Risk reduction measures must ensure long term economic successes for the community as a whole rather than short term benefits for special interest.
2. Risk reduction measures for one particular natural hazard must be compatible with risk reductions measures for other natural hazards.
3. Risk reduction measures must be evaluated to achieve the best possible combination for a given location.

4. Risk reduction measures for natural hazards must be compatible with risk reduction measures for technological hazards and vice versa.
5. All mitigation is local.
6. Emphasizing proactive mitigation before emergency response can reduce cost and impacts of natural hazards. Both pre-disaster (preventive) and post-disaster (corrective) mitigation is needed.
7. Hazard identification and risk assessment is the cornerstone of mitigation.
8. Building new federal-state-local partnership and public-private partnership is the most effective means of implementing measures to reduce the impacts of natural hazards.
9. Those who knowingly choose to assume greater risk must accept responsibility for that choice.
10. Risk reduction measures for natural hazards must be compatible with the protection of natural and cultural resources.

FEMA's National Mitigation Strategy advocates the following guidelines for local governments, the private sector, and individuals:

**Guidance for Local Governments:**

- Develop strategies mitigation plans and identify sources to support them.
- Adopted and enforce all hazard building codes.
- Adopt incentives and disincentives to encourage mitigation.
- Develop administrative structures to support implementation of mitigation programs and priorities.
- Incorporate mitigation of natural hazards into land use management plans and programs
- Develop support and conduct ongoing public information campaigns on natural hazard mitigation.

**Guidance for the Private Sector:**

- Develop business interruption plans and implement mitigation to minimize loss of jobs and business activity.
- Develop incentives for mitigation with insurance and banking institutions.
- Promote awareness of hazard risk and mitigation solutions among customers and public.

**Guidance for Individual Citizens:**

- Become aware of the natural hazard that may affect the area.
- Support adoption and enforcement of measures designed to reduce vulnerability.
- Take other appropriate actions to protect lives and property against the impacts of natural hazards.

## 2.5 Guiding Principles

The following guiding principles form the framework of this plan:

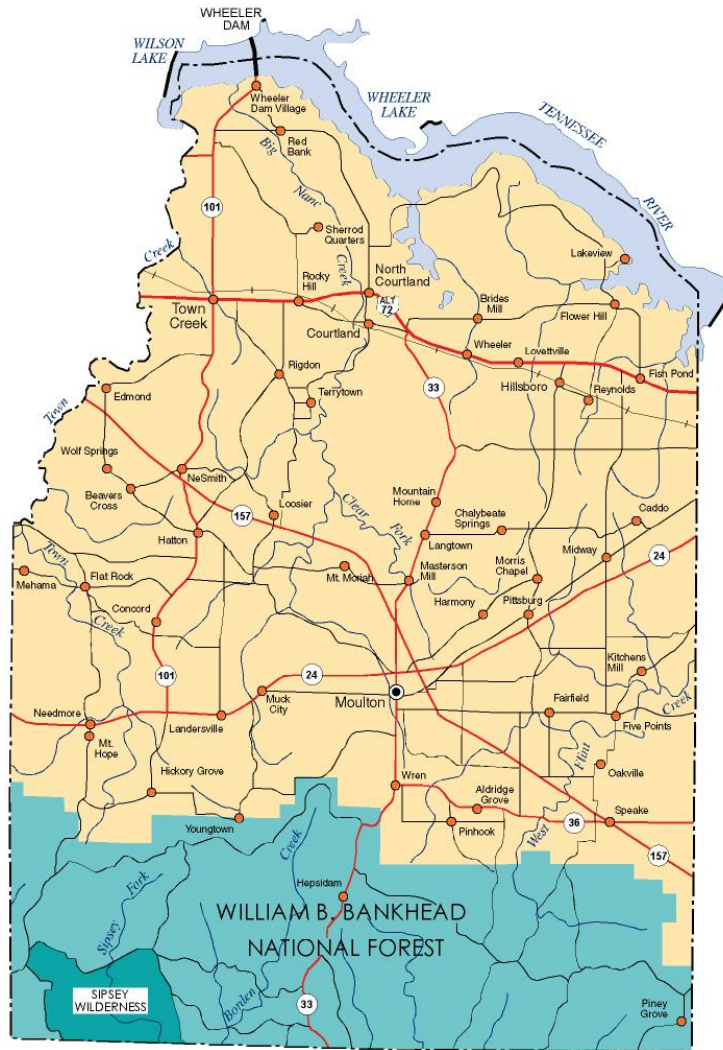
- To reduce the potential loss of life, property, and repetitive damage from the effects of natural hazards.
- To achieve safe fiscally sound and suitable communities through thoughtful long-range planning in both natural and man-made environments.
- To establish a program that facilitates orderly recovery and redevelopment and minimizes economic disruption following a disaster.
- To optimize the effective use of all available resources by establishing public/private partnership and encouraging intergovernmental coordination and cooperation.

## 2.5 Summary of Plan Updates

These sections of the 2004 Plan were reviewed by the Lawrence County Hazard Mitigation Planning Committee, Lawrence County EMA, and the NARCOG staff. While several of the sections remain unchanged and are still valid, revisions and organizational changes have been made as part of the update process. The table below provides more detail:

Section	Change
1.1	<b>This subsection has been revised. It was part of the “Introduction” in the 2004 Plan. All jurisdictions participating are the same as in the original plan. No new/added or deleted/eliminated jurisdictions.</b>
1.2	<b>This subsection is unchanged.</b>
1.3	<b>This subsection was revised.</b>
1.4	<b>This subsection is a new addition to the plan update.</b>
1.5	<b>This subsection is unchanged.</b>
1.6	<b>This subsection is unchanged.</b>
1.7	<b>This subsection is unchanged.</b>
1.8	<b>This subsection is unchanged but separated out from the 1.7 in the 2004 Plan.</b>

# LAWRENCE COUNTY



**Legend**

- County seat
- City, town or village
- Primary highway
- Secondary highway
- Other principal roads
- Route marker: Interstate; U.S.; State



**Population Key**

BIRMINGHAM.....	100,000 to 500,000
Tuscaloosa.....	50,000 to 100,000
Gadsden.....	25,000 to 50,000
Albertville.....	5,000 to 25,000
Foley.....	1,000 to 5,000
Brilliant.....	500 to 1,000
Elkmont.....	up to 500

Produced by the Dept. of Geography  
College of Arts and Sciences  
The University of Alabama



## II. PLANNING PROCESS

### 2.5 Hazard Mitigation Planning Committee & Planning Process

The Lawrence County Hazard Mitigation Planning Committee was appointed by the Lawrence County EMA to facilitate the development of this plan update and to serve for the entire five-year planning cycle of this plan. Their mission statement is as follows:

**Mission Statement**

**“The intent of the Lawrence County Natural Hazard Mitigation Plan is to foster, promote, and implement actions to eliminate or reduce the long-term risk to human life and property from the effects of natural hazards and remain eligible for federal funds through a team effort.”**

#### Lawrence County Hazard Mitigation Planning Committee

Name	Agency	Address	Phone	Email
Sondra Nassetta	ADPH-Area 2	201 Gordon Dr SE Decatur, AL 35601	340-2113	
Harold Lou Allen	Lawrence County Commission	PO Box 307 Moulton, AL 35650	974-0663 685-2529	
Michael Johnson	Joe Wheeler EMC	PO Box 460 Trinity, AL 35673	552-2366	
Jeff Britnell	Joe Wheeler EMC	PO Box 460 Trinity, AL 35673	552-2313	<a href="mailto:j.britnell@jwemc.org">j.britnell@jwemc.org</a>
Brenda Morgan	Lawrence County EMA	555 Walnut Street Moulton, AL 35650	974-7641	<a href="mailto:Brenda.morgan@charter.net">Brenda.morgan@charter.net</a>
Dan Isley	AEMA	11166 Dove Drive Madison, AL		
Ginger Grantham	Moulton Advertiser	Main Street Moulton, AL 35650	974-1114	
John Appleton	Lawrence County Exchange	PO Box 487 Moulton, AL 35650	974-9213	
Ted Letson	Courtland, Mayor	PO Box 160 Courtland, AL 35618	637-2701	<a href="mailto:T.H.Letson@aol.com">T.H.Letson@aol.com</a>
Roger Odell	Courtland PD	PO Box 160 Courtland, AL 35618	637-2701	
Brent White	Lawrence County DHR	PO Box 278 Moulton, AL 35650	905-3126	<a href="mailto:Brent.white@dhr.alabama.gov">Brent.white@dhr.alabama.gov</a>
Ryan Jolley	Moulton Fire Dept.	902 East Street Moulton, AL 35650	974-0279	
Doyle Dutton	USDA FSA	13075 Al Hwy 157 Suite 3 Moulton, AL 35650	974-1174	
Harold Knighten	Lawrence County Sherriff’s Dept.	242 Parker Road Moulton, AL 35650	974-2526	<a href="mailto:hknighten@lcso42@bellsouth.net">hknighten@lcso42@bellsouth.net</a>

Jerry Garrett	Town Creek PD	PO Box 190 Town Creek, AL 35672	685-3200	
Linda Robinson	Extension System	13075 Hwy 157 Suite 6 Moulton, AL 35650	974-2464	
Michael Taylor	Hillsboro PD	PO Box 644 Hillsboro, AL 35643	637-2070	
Alex Taylor	North Courtland PD	PO Box 93 Courtland, AL 35648	637-6378	<a href="mailto:Northcourtlan185@bellsouth.net">Northcourtlan185@bellsouth.net</a>
Audrey Crowe	Lawrence Medical Center	PO Box 39 Moulton, AL 35650	974-2274	
Hillard Frost	Lawrence County EMA	555 Walnut Street Moulton, AL 35650	974-7641	<a href="mailto:hfrost@charter.net">hfrost@charter.net</a>
Tammy Vinson	Lawrence County EMA	555 Walnut Street Moulton, AL 35650	974-7641	<a href="mailto:tvinson@charterinternet.com">tvinson@charterinternet.com</a>
Lyndon McWhorter	Moulton PD	720 Seminary Street Moulton, AL 35650	974-1074	
Joey Hester	NARCOG	216 Jackson St., SE Decatur, AL 35601	355-4515	<a href="mailto:joey.hester@adss.alabama.gov">joey.hester@adss.alabama.gov</a>
Peggy King	Lawrence County	P.O. Box 307 Moulton, AL 35650		<a href="mailto:peggyk@lawrenceco-al.org">peggyk@lawrenceco-al.org</a>
Tyron Newton	Lawrence County DHR	P.O. Box 278 Moulton, AL 35650		
Debbie Heard	American Red Cross	P.O. Box 297 Decatur, AL 35602	353-4891	
Susan Letson	Lawrence County Fire Association	16008 Main Street Town Creek, AL 35672	566-4532	
Mitch Craft	Alabama Forestry Commission	1200 AL HWY 157 Moulton, AL 35650	974-8168	
Major David Craddock	Salvation Army	114 14 <sup>th</sup> Street, SW Decatur, AL 35601	353-2822	
Heath Grimes	Lawrence County BOE	14131 Market Street Moulton, AL 35650		
Mac Rushing	Lawrence County Engineer	160 Parker Road Moulton, AL 35650		<a href="mailto:hgrimes@lawrenceco-al.org">hgrimes@lawrenceco-al.org</a>
Tommy Praytor	Lawrence County Revenue Commissioner	14330 Court St., Suite 104 Moulton, AL 35650		<a href="mailto:lawco@bellsouth.net">lawco@bellsouth.net</a>

The NARCOG planning staff recommended to the EMA Director, a list of requirements and guidelines that must be followed by each committee member to remain a part of the Multi-Jurisdictional Plan.

- Attendance by them or a representative at each of the Planning Committee meetings, if unable to attend a meeting, follow-up communication with the EMA and or NARCOG staff;
- Timely submission of the necessary information for final plan completion; and
- Full cooperation among the members of each jurisdiction with the County EMA and NARCOG staff.

The planning process for this required update began in October 2008 with an informal working meeting between the Lawrence County EMA and NARCOG planning staff to discuss the plan update, a proposed meeting schedule, and appoint the hazard mitigation planning committee. A second informal working meeting was held in November 2008 to finalize the previous month's decisions. During the planning process, the hazard mitigation planning committee met five (5) times between December 2008 and October 2009 to review the 2004 Plan, discuss the plan update, and gather and collect information. These meetings along with two public hearings held in October and November of 2009 to review the draft plan prior to submittal to AEMA are documented in Appendix A (meeting agendas and sign-in sheets) & B (meeting minutes). A final public hearing was held in February 9, 2010 prior to adoption by the Lawrence County EMA.

**Note: Documentation of the planning process including meeting agendas, sign-in sheets, public hearing notices, and minutes are provided in Appendices A & B.**

## **2.5 Public Involvement**

To ensure public participation, the public was notified throughout the planning process of the Lawrence County Hazard Mitigation Planning Committee meetings by:

1. Advertisement of the meetings in the local newspaper, The Moulton Advertiser.
2. Notice of the meetings was posted at the Lawrence County Courthouse.
3. Notice of the meetings was posted at the Lawrence County EMA Office.

During these meetings, information on hazard mitigation along with questionnaires, check lists, and comment sheets were provided by NARCOG in order to allow attendees (committee members and the public) to express their concerns and comments as well as provide input.

The Lawrence County EMA mailed letters to and emailed identified members of the Local Emergency Planning Committee (LEPC), municipal and county government elected officials, public works officials, the county school system, and volunteer fire departments inviting them to attend and have input into the update of the *Lawrence County Natural Hazards Mitigation Plan*.

Additionally, the NARCOG staff visited absent committee members from the jurisdictions at their respective locations and provided them with the necessary data collection sheets. The data collected sheets were explained as to what information was needed and then the sheets were filled out and returned by mail, fax, or hand delivery to either the Lawrence County EMA office or the NARCOG office.

## **2.5 Interagency & Intergovernmental Coordination**

The Lawrence County Hazard Mitigation Planning Committee was established by the Lawrence County Emergency Management Agency. As previously mentioned, the EMA Director coordinated efforts in identifying agency representation and key participants from jurisdictions to be covered by the plan. The Mayor of each participating jurisdiction, public safety, emergency service representatives, city or county engineers, public works officials, building directors, state agency, education system, industries, and Chamber of Commerce were invited to attend the Lawrence County Hazard Mitigation Planning meetings as well as participate in the planning process. Also, the following agencies helped provide valuable information in regards to the hazard profiles, vulnerabilities assessment, potential losses, land use and future development trends, and data for mapping.

### **Federal Agencies:**

- Federal Emergency Management Agency
- National Weather Service, Huntsville
- United States Geological Survey, Alabama District
- Natural Resources Conservation Service, Alabama District
- United States Army Corps of Engineers
- United States Department of Agriculture
- Tennessee Valley Authority

### **State Agencies:**

- Alabama Emergency Management Agency
- Geological Survey of Alabama
- Alabama Forestry Commission

### **Regional & Local Agencies**

- NARCOG
- Lawrence County EMA

### **Business, Academia, Non-Profit Agencies**

- Area Chambers of Commerce
- Auburn University/Alabama A&M University Extensions

## **2.5 Participating Jurisdictions**

All incorporated municipalities with Lawrence County have participated in the planning process and has committed to adoption of the final plan by formal resolution. Participating jurisdictions include the following: Lawrence County, Courtland, Hillsboro, Moulton, North Courtland, and Town Creek.

This plan was prepared by the Planning Department Staff at the North-central Alabama Regional Council of Governments (NARCOG) on behalf of the Lawrence County EMA. NARCOG is the regional planning agency for North Central Alabama, and in fulfilling its

role, the agency is in constant contact with the municipalities of Lawrence County, many of the various business owners, the Chamber of Commerce, The Industrial Development Board, the senior citizen centers, and ALDOT, among others.

NARCOG was also responsible for facilitating the hazard mitigation planning committee meetings and the public hearings. The planning staff worked with the planning committee, the public and private sector, and the above mentioned agencies and municipalities to compile and develop all aspects of this plan. The planning staff ensured the participation of all jurisdictions in the county in the planning process by email, telephone and in-person interviews.

**2.5 Integration with Existing Plans, Programs and Regulations**

There are a variety of existing policies, reports, programs, and regulations that relate to hazard activities and mitigation. These regulatory activities were reviewed at the local, state, and federal level to determine the existing policies plans and programs that address hazard mitigation or emergency response and preparedness that could be integrated into the plan update.

Each jurisdiction were asked to assist the committee by identifying plans, programs, regulations, and activities being used in their jurisdiction as it may relate to natural hazard mitigation or emergency response. Plans reviewed include but or not limited to the following (*see table below for complete list*):

- Lawrence County Emergency Operations Plan
- TVA-Browns Ferry Nuclear Power Plant Evacuation Plan
- Wildfire Prevention Plan
- Wildfire Readiness Plan

**Existing Plans, Programs and Regulations**

	<b>Lawrence County</b>	<b>Courtland</b>	<b>Hillsboro</b>	<b>Moulton</b>	<b>North Courtland</b>	<b>Town Creek</b>
National Flood Insurance Program	Yes	Yes	Yes	Yes	Yes	Yes
Hazard Mitigation Grant Program	Yes	No	No	No	No	In Progress
Flood Mitigation Assistance Program	No	No	No	No	No	No
Community Rating System Program	No	No	No	No	No	No
Storm Shelter Program	No	No	No	Yes	No	No
Emergency Alert System	Yes	No	Yes	Yes	No	Yes
Flood Plain Ordinance	Yes	Yes	No	Yes	No	No

Building Code	No	No	Yes	Yes	No	No
Zoning Ordinance	No	No	No	Yes	No	No
Subdivision Regulations	Yes	No	Yes	Yes	No	No
Storm Water Management	No	No	No	Yes	No	No
Flood Proofing	No	No	No	No	No	No
Building Elevation	No	No	No	No	No	No
Outdoor Warning Siren	Yes	Yes (1)	Yes	Yes	Yes	Yes (2)
Emergency Alert Radio System	Yes	Yes	Yes	Yes	Yes	Yes
Emergency Operating Plan	Yes	Yes	Yes	Yes	Yes	Yes
Radiological Emergency Plan	Yes	Yes	Yes	Yes	Yes	N/A
NOAA	Yes	Yes	Yes	Yes	Yes	Yes
Debris Cleanup Plan	Yes	Yes	Yes	Yes	No	No
TVA Dam Failure Plan	Yes	Yes	Yes	Yes	Yes	Yes
Comprehensive Plan	No	No	No	Yes	In Progress	No

*Source: Local Jurisdictions*

The Lawrence County Hazard Mitigation Planning Committee recognizes the importance of incorporating of hazard mitigation planning and implementation measures into existing local plans, regulatory tools, and related programs. The ***Lawrence County Natural Hazards Mitigation Plan*** is intended to influence each jurisdiction’s planning decisions concerning land use, public facilities, infrastructure, and development. Any updates to the *Lawrence County Emergency Operations Plan*, local comprehensive plans, capital Improvement Plans, subdivision regulations, zoning ordinances and maps, building codes, and any other related development controls should be consistent with the goals, objectives, and mitigation measures adopted in this plan. Each jurisdiction’s commitment to this consistency is reflected in its respective mitigation action program. As part of the subsequent five-year update process, all existing local planning mechanisms should again be reviewed for effectiveness and recommendations for new incorporation opportunities should be carefully considered.

Presently, there are no existing plans or regulations in Courtland, Hillsboro, North Courtland, or Town Creek to incorporate mitigation measures into. However, the Town of North Courtland is in the process of preparing a comprehensive plan that will include the mitigation measures identified in this plan. Lawrence County has subdivision

regulations and the City of Moulton has subdivision regulations and a zoning ordinance and map. In regards to any future planning efforts, the county and each jurisdiction were asked to provide information to the Lawrence County EMA Director as they occur. This exchange of information will ensure that mitigation measures are incorporated into any future planning efforts as well as the *Lawrence County Emergency Operations Plan*.

## 2.6 Summary of Plan Updates

This section of the 2004 Plan was reviewed by the Lawrence County Hazard Mitigation Planning Committee, Lawrence County EMA, and the NARCOG staff. While portions of this section remain unchanged and are still valid, revisions and organizational changes have been made as part of the update process. The table below provides more detail:

Section	Change
2.1	<b>This subsection was revised. The LCHMPC was updated.</b>
2.2	<b>This subsection was revised updating information.</b>
2.3	<b>This subsection was revised updating information.</b>
2.4	<b>This subsection was revised updating information.</b>
2.5	<b>This subsection was revised updating information and expanding the review and incorporating of information from other planning mechanisms into the plan update.</b>

# III. RISK & VULNERABILITY ASSESSMENT

## 3.1 Risk Assessment

The risk assessment process includes five phases of assessment in order to provide the necessary information for the development of a comprehensive hazard mitigation plan. The assessment phases utilized by the Hazard Mitigation Planning Committee for the *Lawrence County Natural Hazards Mitigation Plan* are:

- Identification of Hazards
- Hazard Profiles
- Vulnerability Assessment: Identification of Assets
- Vulnerability Assessment: Impact on Population, Buildings, Critical Facilities, Estimated Losses
- Vulnerability Assessment: Analysis of Land Use and Development Trends

## 3.2 Hazard Identification: Descriptions & Extent

Each planning committee member, including municipal representatives, was asked to review and complete a hazard identification checklist exercise and identify the natural hazards perceived to pose a threat to their respective municipalities. This checklist was used as a starting point for the hazard identification phase of the plan. *The Identified Hazards table of the following page is a composite of the checklist exercise and subsequent analysis.* Although this method is not scientific, it provided the committee an overall perspective of the natural hazards for the county and their respective communities. Relevant hazard risks were then confirmed or dismissed based on hazard specific data and a review of the 2004 Lawrence County Natural Hazard Mitigation Plan. Absent committee members from the municipalities were interviewed in person or over the phone to complete the checklist. Ultimately, the Lawrence County Hazard Mitigation Planning Committee eventually identified eleven (11) hazards (*some grouped*) as being the most likely hazards to affect and impact Lawrence County and its municipalities.

The 2004 Plan identified thirteen (13) hazards: severe thunderstorm, tornado, flooding, severe winter storm/snow/ice, hail, extreme cold, drought/extreme heat, lightning, earthquakes, hurricanes, landslides, sinkholes, and dam failure. These 13 previously identified hazards were changed using the methods described above. The changes included the grouping of hail and lightning under severe storms, grouping winter storms and extreme cold together, and adding a newly identified hazard – wildfires, which resulted in the following 11 hazards described and profiled.



Identified Hazards						
Hazard	Lawrence County	Courtland	Hillsboro	Moulton	North Courtland	Town Creek
Dam/Levee Failure	X	X	X	X	X	X
Drought/Extreme Heat	X	X	X	X	X	X
Earthquake	X	X	X	X	X	X
Flood	X	X	X	X	X	X
Hurricane	X	X	X	X	X	X
Landslide				X		
Severe Storm – hail, lightning	X	X	X	X	X	X
Sinkholes	X	X	X	X	X	X
Tornado	X	X	X	X	X	X
Winter Storm – Extreme Cold	X	X	X	X	X	X
Wildfire	X	X	X	X	X	X

Source: Hazard Mitigation Planning Committee & Individual Jurisdictions

### Dam/Levee Failure

A dam is defined as barriers constructed across a watercourse in order to store, control, or divert water. Dams are usually constructed of earth, rock, concrete, or mine tailings. A dam failure is the collapse, breach, or other failure of a dam that causes downstream flooding. Any natural event or situation that has the potential to compromise the integrity of a water barrier (dam) is considered a dam safety emergency. The biggest dam in Lawrence County is the Wheeler Dam on the Tennessee River, which would be the most catastrophic failure. The Tennessee Valley Authority (TVA) has a “*Dam Safety Emergency Action Plan*” in place in the event of failure at the Wheeler Dam. Lawrence County EMA has a copy of this plan and is prepared to coordinate efforts should the need arise. Also, there are five (5) other small dams/levees located Lawrence County (*see Dam Map in Appendix D*).

**Extent:** The worse case scenario for Lawrence County in the event of a dams/levees failure, such as the Wheeler Dam, would be the potential to create an emergency situation for the northern portions of the county along the Tennessee River including Town Creek, Courtland, North Courtland, and Hillsboro. This portion of Lawrence County would have the potential to suffer loss of life in the thousands and the destruction and/or damage

to hundreds of structures. While no dam/levee failures have occurred in Lawrence County based on the best available data, the potential threat and impact of a major dam/levee failure necessitates the need for a profile and mitigation plan for this event.

### **Drought/Extreme Heat**

A drought is defined as "a period of abnormally dry weather sufficiently prolonged for the lack of water to cause serious hydrologic imbalance in the affected area." -Glossary of Meteorology (1959). In easier to understand terms, a drought is a period of unusually persistent dry weather that persists long enough to cause serious problems such as crop damage and/or water supply shortages. The severity of the drought depends upon the degree of moisture deficiency, the duration, and the size of the affected area. Although droughts are a normal part of virtually every climate on the planet, including areas of both high and low normal rainfalls, they are difficult to predict because they are based on slowly accumulating effects. *Extreme heat's description and extent is addressed under Extreme Temperatures (hot and cold) in the Hazard Profiles subsection.*

**Extent:** Lawrence County has experience 18 drought events and 3 extreme heat events since 1950. Lack of rainfall for an extended period of time can bring farmers and metropolitan areas to their knees. And it does not take very long; in some locations of the country, a few rain-free weeks can spread panic and affect crops. Before long, we are told to stop washing our cars, cease watering the grass, and take other water conservation steps. In this situation, sunny weather is not always the best weather. As a result of the recent severe drought conditions in Lawrence County and most of Alabama in 2008, the threat of droughts to crops and water supplies is feared to become a much more significant hazard, which also heightens the threat for increased wildfires.

The worse case scenarios for Lawrence County from a severe drought would involve massive crop and livestock death resulting in huge financial losses for farmers; water shortages for residents, businesses, and industries; loss of human life from heat strokes and dehydration, and/or a wildfire devastating the Bankhead National Forest and Sipsey Wilderness Area in the southern half of the county. Therefore, the potential impacts of severe droughts on life and livelihood is significant, which necessitates a profile and mitigation plan for this natural hazard.

### **Earthquakes**

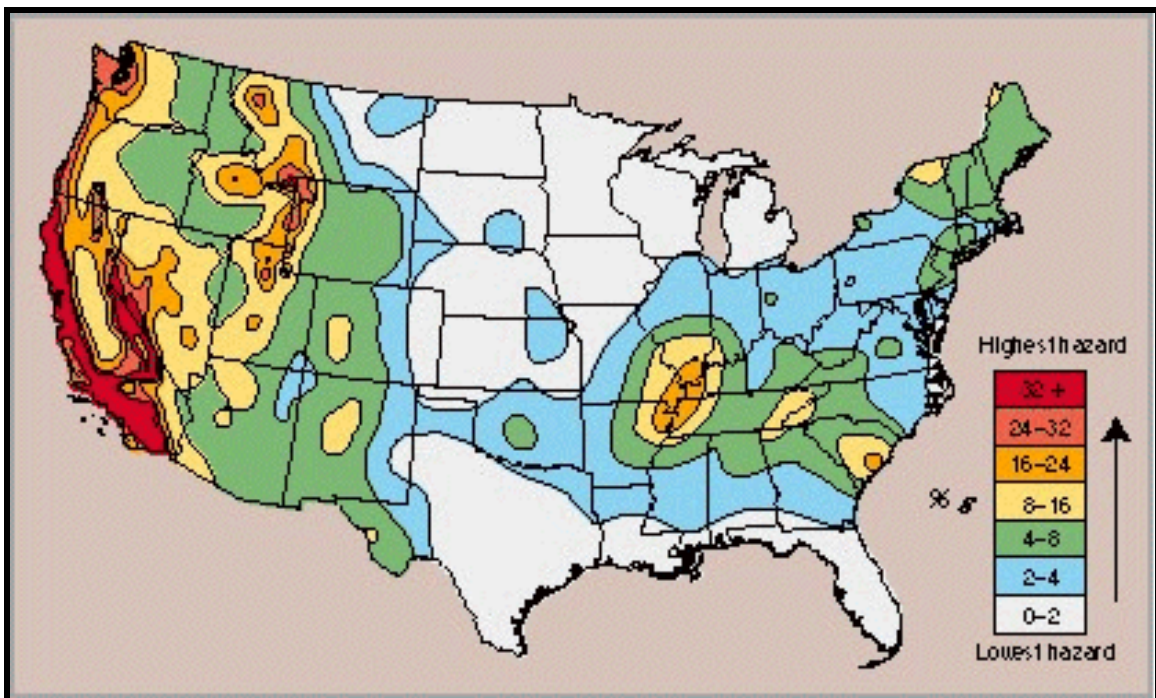
An earthquake is the sudden, sometimes violent trembling movement of the earth's surface from the release of energy in the tectonic plates that comprises the earth's crust. Earthquakes are fairly common in the eastern half of the United States and are even common in Alabama. Two zones of frequent earthquake activity effecting Lawrence County are the New Madrid Seismic Zone (NMSZ) and the Southern Appalachian Seismic Zone (SASZ). *Earthquake severity is typically measures using the Richter scale. The table below provides more detailed on earthquakes based on their magnitude.*

<b>Richter magnitudes</b>	<b>Description</b>	<b>Earthquake effects</b>	<b>Frequency of occurrence</b>
Less than 2.0	Micro	Micro earthquakes, not felt.	About 8,000 per day
2.0-2.9	Minor	Generally not felt, but recorded.	About 1,000 per day
3.0-3.9		Often felt, but rarely causes damage.	49,000 per year (est.)
4.0-4.9	Light	Noticeable shaking of indoor items, rattling noises. Significant damage unlikely.	6,200 per year (est.)
5.0-5.9	Moderate	Can cause major damage to poorly constructed buildings over small regions. At most slight damage to well-designed buildings.	800 per year
6.0-6.9	Strong	Can be destructive in areas up to about 160 kilometers (100 mi) across in populated areas.	120 per year
7.0-7.9	Major	Can cause serious damage over larger areas.	18 per year
8.0-8.9	Great	Can cause serious damage in areas several hundred miles across.	1 per year
9.0-9.9		Devastating in areas several thousand miles across.	1 per 20 years
10.0+	Epic	Never recorded; see below for equivalent seismic energy yield.	Extremely rare (Unknown)

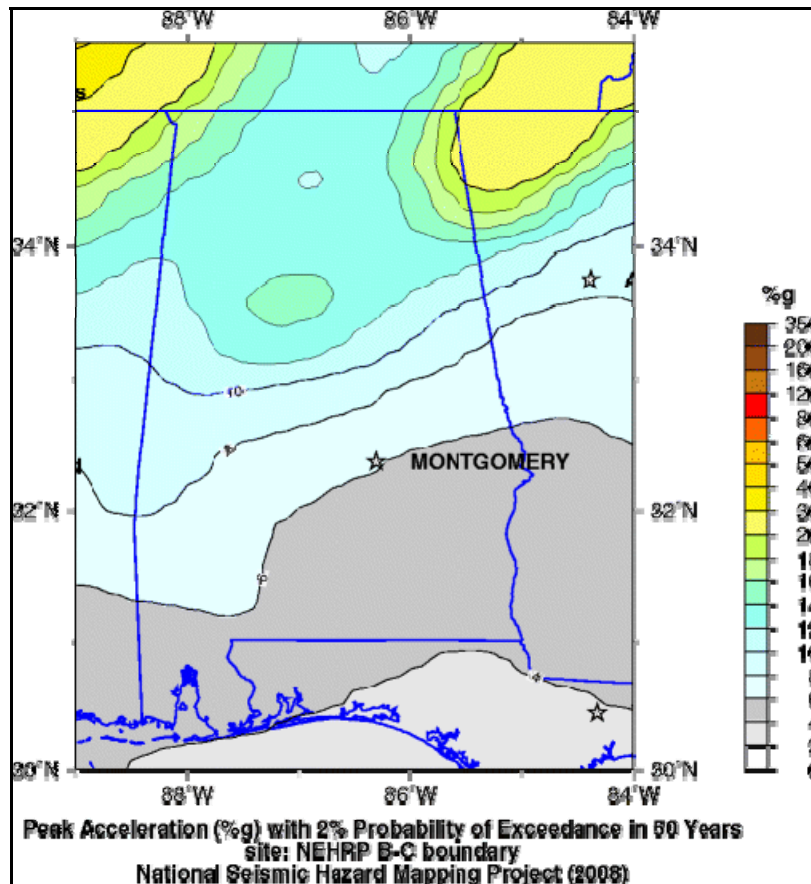
*Source: Based on U.S. Geological Survey documents*

**Extent:** This particular hazard is not one that most Alabamians (including those in Lawrence County) even consider a threat, which makes it much more deadly. The 1811-1812 Memphis earthquakes are generally thought to be the greatest North American earthquakes on record, though the written records only go back 200 years. Beginning on the night of December 11, 1811 an earthquake measuring between 8 and 9 on the Richter scale (there was no Richter scale in those days, so this is an estimate made by geologists) struck Memphis. It was only the first in a series of four. There was a second shock hours later. A third quake rocked the area on January 23 and a fourth -- the biggest of all -- was felt on February 7. Between the major quakes, there were thousands of aftershocks. Some scientists believe the biggest of the quakes may have exceeded 9.0, but this is debated. It is generally agreed that three of the four quakes exceeded 8.0.

There have been 7 recorded earthquakes in Lawrence County since 1988 with the largest one registering a magnitude of almost 3 on the Richter scale. A worse case scenario for Lawrence County would be an earthquake event like the 1811-1812 earthquakes in nearby Memphis, Tennessee, which could be very deadly, destructive, and costly. If Lawrence County experienced an earthquake with a magnitude of 8+ on the Richter scale, you could expect loss of life and/or injury to approximately 30,000 residents along with the complete destruction and/or damage to thousands of residential, commercial, and industrial structures and the local transportation system and other critical infrastructure in the millions of dollars. Upon review of the *USGS maps on the following page*, it was determined that Lawrence County is located in an area with 8-16%g (peak acceleration), which necessitates a profile and mitigation plan for this natural hazard.



Source: USGS National Seismic Hazard Maps



### Floods/Riverine & Flash

Flooding is defined as the accumulation of water within a water body (i.e. stream, river, lake, or reservoir) and the overflow of the excess water onto adjacent floodplains. Floodplains are usually lowlands adjacent to water bodies that are subject to recurring floods. Floods are natural events that are considered hazards only when people and property are affected.

- The most common type of flooding event is riverine flooding, also known as overbank flooding. The amount of water in the floodplains is a function of the size and topography of the contributing watershed, the climate, and land use characteristics.
- Flash floods involve a rapid rise in water level, high velocity, and large amounts of debris, which can lead to significant damage that includes the tearing out of trees, undermining of buildings and bridges, and scouring new channels. The intensity of flash flooding is a function of the intensity of and duration of rainfall, steepness of the watershed, stream gradients, watershed vegetation, natural and artificial flood storage areas, and configuration of the streambed and floodplain.

- Additionally, local drainage floods may occur outside of recognized drainage channels or delineated floodplains for a variety of reasons including concentrated local rainfall, a lack of infiltration (poor soil conditions), inadequate drainage facilities for storm water conveyance, or increased surface runoff.

Recently, in a nationwide effort to improve the quality and accessibility of floodplain data, FEMA has embarked on a massive effort to update, improve, and digitize local flood maps. FEMA's Map Modernization Program benefited Lawrence County by updating the old 1981 FIRM's with digital maps effective as of September 2009 (view flood map in Appendix D).

**Extent:** *Floods are the number one cause of death in the United States in terms of hazards. Since 1950, there have been 31 flood events resulting in 2 injuries and property and crop damage.* Extensive, prolonged rain could potentially be deadly to residents in Lawrence County due to the scope of floodplains located in the county and their proximity to population centers, particularly the northern portion of the county. The worse case scenario for Lawrence County in the event of a flood event would be the potential to create an emergency situation causing loss of human life in the hundreds and the destruction and/or damage to hundreds of structures costing millions of dollars. Although floods are area specific, they pose a significant threat to Lawrence County; thereby profiling and mitigation planning is necessary for this natural hazard.

### **Hurricanes**

A hurricane is a type of tropical cyclone, which is a generic term for a low pressure system that typically forms in the tropics. The hurricane season is from June to November annually. Studies of Hurricanes Hugo, Andrew, Opal, and Katrina offer evidence that inland counties can receive significant hurricane damage from high winds. Hurricanes often produce storm surges, inland tornadoes and cause flooding from intense rain. Because of its distance from the Gulf Coast, Lawrence County is not greatly susceptible to the effects of hurricanes other than damage caused by straight line winds, tornadoes, and flooding.

**Extent:** In this respect, hurricanes pose a threat to the entire state including Lawrence County. Typically, hurricanes historically do not have much of a direct impact of Lawrence County with only 2 events causing 2 deaths and over a hundred million dollars worth of damage being recorded since 1950 according to the best available data; however, they have had significant impact on several other occasions. In 1995, Hurricane Opal moved ashore in the Florida Panhandle and then travelled north-northeast across the state of Alabama. Damage was extensive and no county in the state was spared some effects of the storm. Damage varied with many trees, signs, and power lines downed. Luckily, Lawrence County suffered only minor damage from Opal, Ivan, and Katrina.

The worse case scenario for Lawrence County from a hurricane would include significant loss of life and/or injury and major structural damage and/or destruction in the hundreds of millions of dollars. Therefore, Lawrence County is found to be at risk of from this natural hazard event necessitating a profile and mitigation plan for this natural hazard.

### **Landslides**

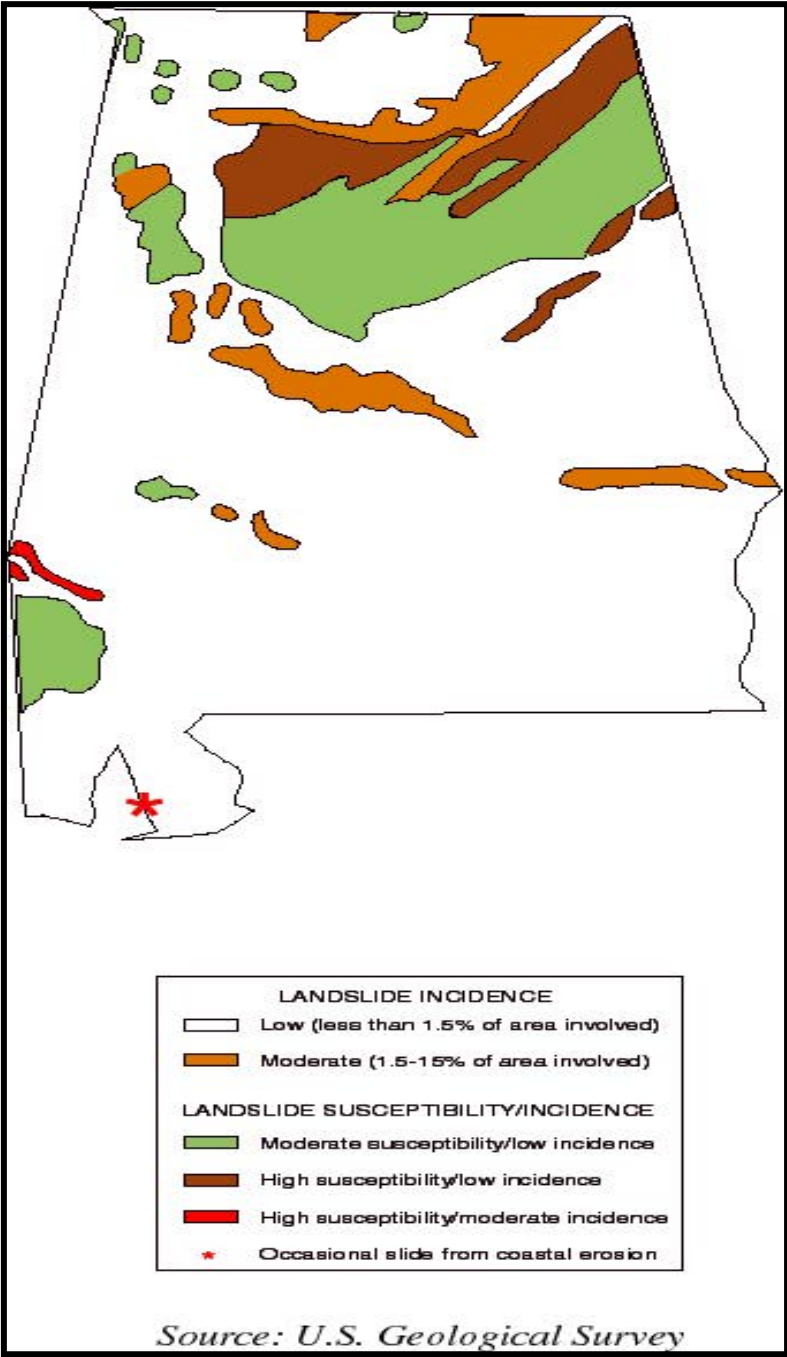
Landslides include a wide range of ground movement, such as rock falls, deep failure of slopes, and shallow debris flows. *The photo to the right depicts a landslide event in Covington County, Alabama.* Although gravity acting on an over steepened slope is the primary cause of a landslide, there are other contributing factors as well:



- Erosion by rivers, glaciers, or ocean waves creates over steepened slopes
- Rock and soil slopes are weakened through saturation caused by snowmelt or heavy rains
- Earthquakes create stresses that cause or encourage the failure of weak slopes
- Earthquakes of magnitude 4.0 and greater have been know to trigger landslides
- Volcanic eruptions produce loose ash deposits, heavy rain, and debris flows
- Excess weight from accumulation of rain or snow, stockpiling of rock or ore from waste piles, or from man-made structures may cause weak slopes to fail

The Geological Survey of Alabama is actively involved in mapping the rock formations of the state, which are susceptible to the occurrence of landslides. Slope-stability problems are most common in north Alabama where slopes are steeper. The *Landslides Incidence/Susceptible Map for Alabama* (see map on the following page) was prepared by classifying geographic areas as having high, moderate, and low susceptibility to landslides.

**Extent:** Although landslides are area specific and none have been reported since 1950, they pose a significant threat to Lawrence County. *The worse case scenario for Lawrence County in the event of a severe landslide would be potential road closures, destruction of residential and/or commercial structures, and the possible loss of human life.* Therefore, profiling and mitigation planning is necessary for this natural hazard.





## Severe Storms

Severe storms *include thunderstorms/high winds, hail, and lightning and are greatly underrated in the amount of damage, injury, and death that they can cause.* According to the National Weather Service, Lawrence County has experienced each of these natural hazard events, resulting in both property and crop damage. The expectation of further occurrences necessitates profiling and mitigation plan for each of these events. *Below are descriptions of two events linked with severe storms:*

➤ **Hail**

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

➤ **Lightning**

Lightning typically occurs as a by-product of a thunderstorm. The action of rising and descending air in a thunderstorm separates positive and negative charges, with lightning being the result of the buildup and discharge of this energy. Lightning is one of the most underrated severe weather hazards. It is ranked as the second leading weather killer in the United States behind floods and flashfloods.

**Extent:** *Since 1950, there have been 170 thunderstorm and high wind events, 113 hail events, and 9 lightening events resulting in 2 deaths and 9 injuries and hundreds of millions in property and crop damages. The worse case scenario for Lawrence County from a severe thunderstorm event and the associated hail and lightening would be extensive damage to buildings and automobiles, downed trees and utilities (power lines, telephones lines, and cable lines), and the potential for loss of life from airborne debris and lightening. Because Lawrence County is at a high risk of structural damage and loss of life from severe storm events as detailed above and in the profile, severe thunderstorms necessitates the need for a profile and mitigation plan for this natural hazard.*

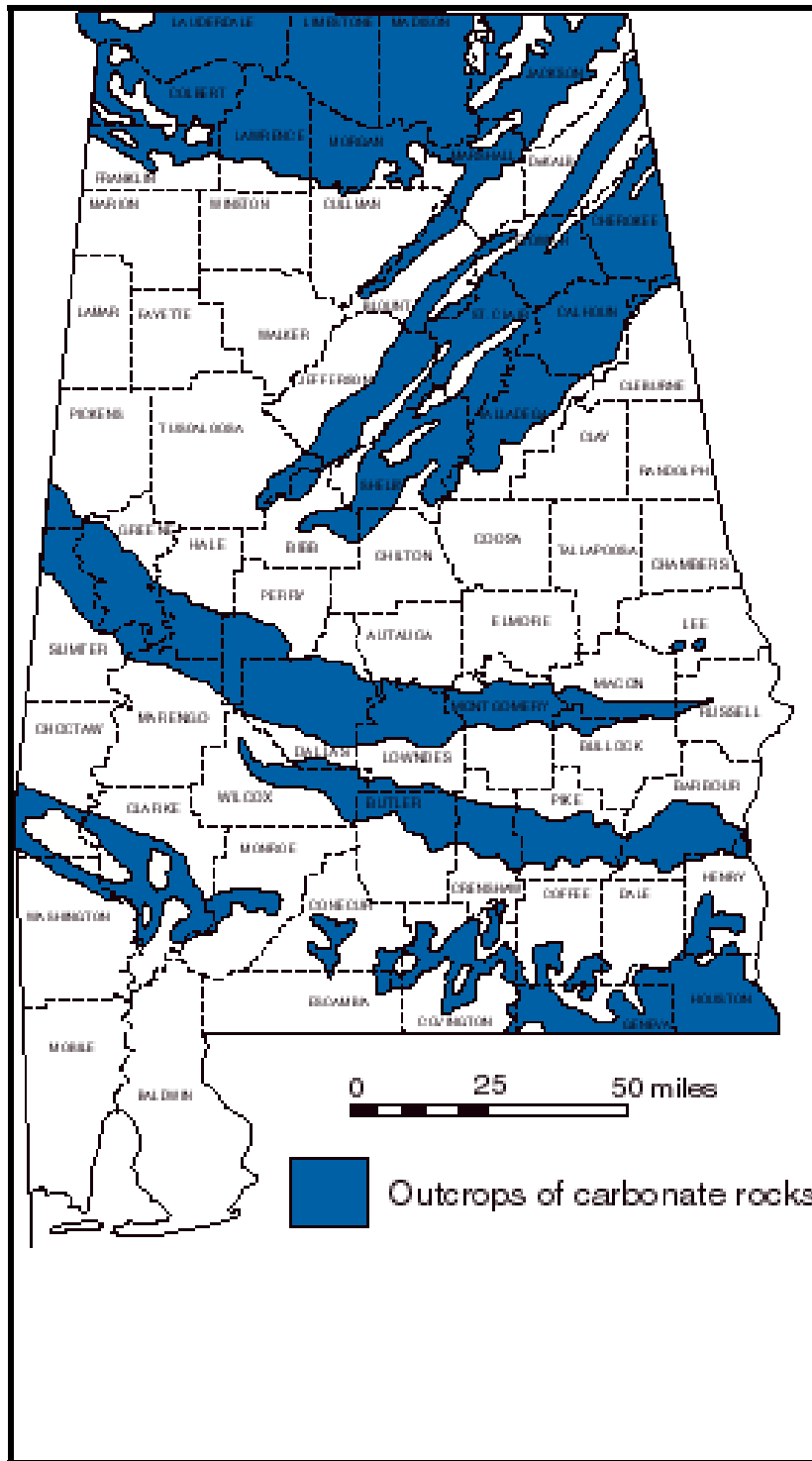
## Sinkholes

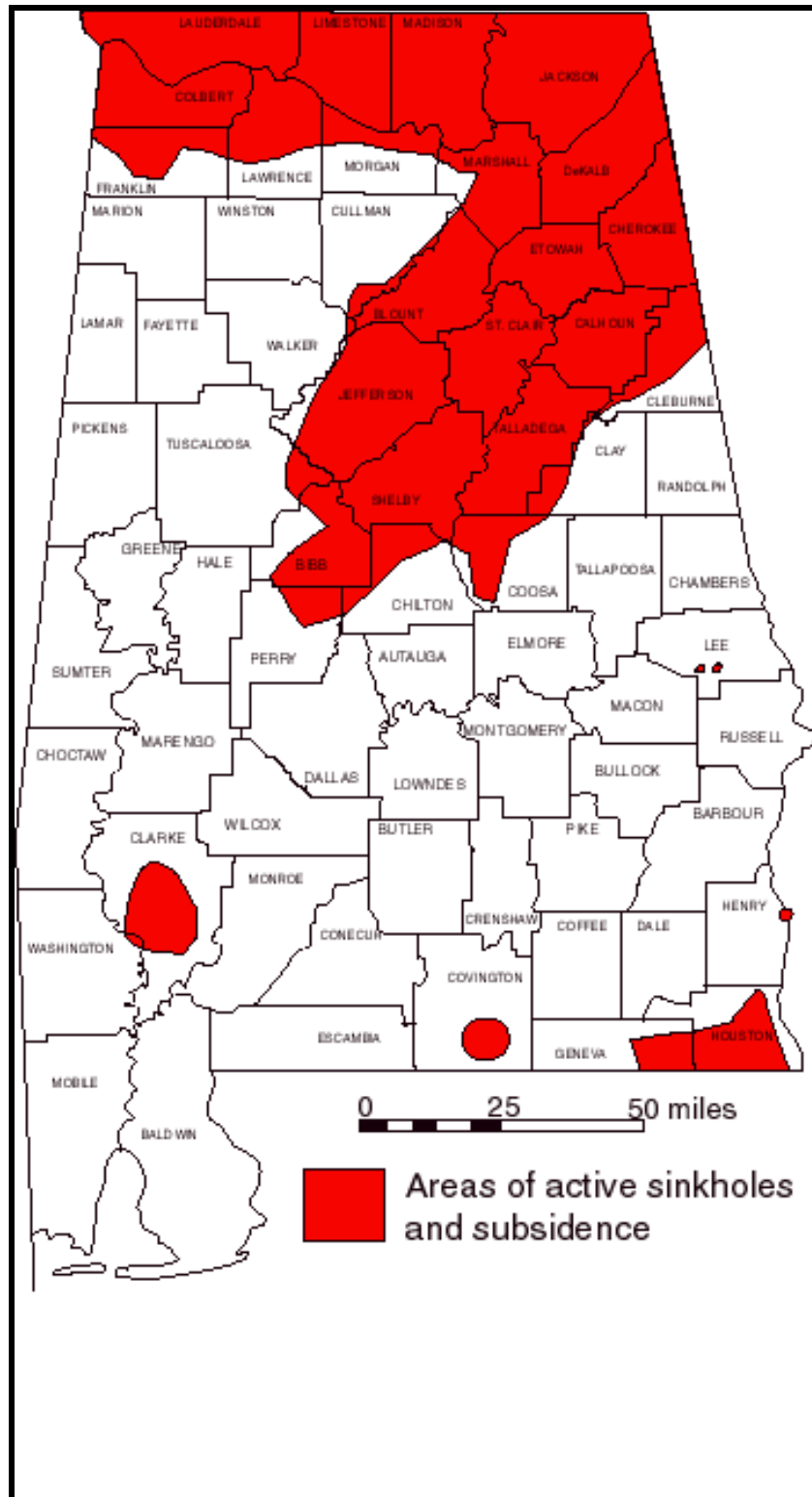
Sinkholes are a natural depression or hole in the surface topography caused by the removal of soil or bedrock, often both, by water. *The picture to right depicts a sinkhole in Birmingham, Alabama.* Sinkholes may vary in size from less than a meter to several hundred meters both in diameter and depth, and vary in form from soil-lined bowls to bedrock-edged chasms. They may be formed gradually or suddenly, and are found worldwide. According to the *Outcrops of Carbonate Rocks and*



*Areas of Active Sinkholes and Subsistence Maps of Alabama* on the following pages, the northern two-thirds of Lawrence County are susceptible to sinkholes. The expectation of further occurrences necessitates profiling and mitigation plan for each of these events.

**Extent:** Although there have been no reported sinkholes in Lawrence County based on the best available data, the worse case scenario for Lawrence County from a major sinkhole event would be the inconvenience and economic impact of the closure of a major highway such as highways 20, 24, or 157 and the associated cost of repairs. This scenario was recently experienced in neighboring Morgan County when a sinkhole on Interstate 65 closed the northbound lanes near Hartselle and caused traffic delays for several weeks. Also, a major sinkhole or sinkholes could damage or destroy residential or commercial structures resulting in millions of dollars in losses. Either of these scenarios could result in the potential loss of human lives. Although sinkholes are area specific, they pose a significant threat to Lawrence County mostly through potential road closures, destruction of structures, and possible loss of human life; thereby profiling and mitigation planning is necessary for this natural hazard.





**Tornadoes**

A tornado is a rapidly rotating funnel or vortex of air that extend toward the ground from a cumulonimbus cloud. Most tornadoes do not touch the ground, but when the lower tip of a tornado touches the earth it can cause extensive damage. *The picture to right depicts the extent of tornado damage that can be caused from a recent event in Lawrence County, Alabama.* Tornadoes often form in convective cells such as thunderstorms or at the front of hurricanes.



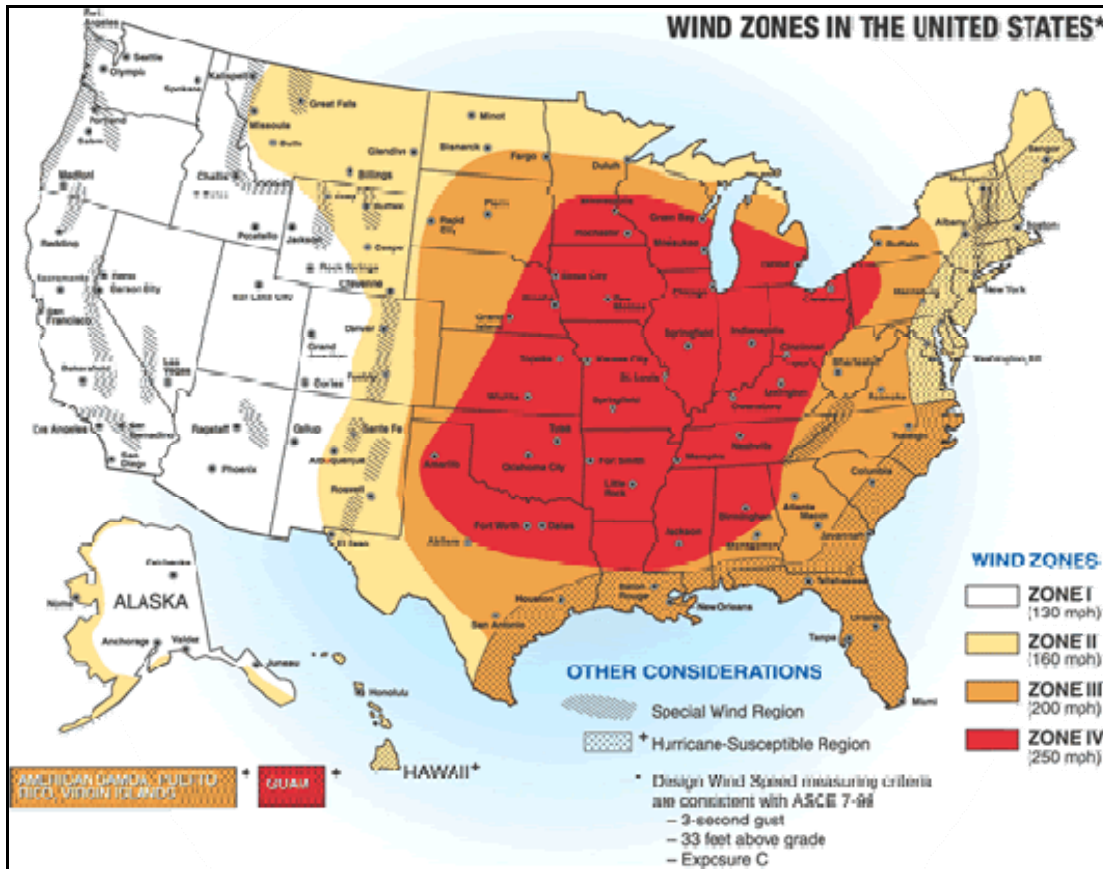
As of February 1, 2007, tornado damage severity is measured using the Enhanced Fujita Tornado Scale, which is a revision of the Fujita Scale to reflect better examinations of tornado damage surveys, so as to align wind speeds more closely with associated storm damage. The only differences between the two scales are the adjusted wind speeds and refined damage descriptors.

**Enhance Fujita Scale for Tornado Damage**

Fujita Scale			Enhanced Fujita Scale		Operational Enhanced Fujita Scale	
F #	Fastest ¼ mile (mph)	3 Second Gust (mph)	EF #	3 Second Gust (mph)	EF #	3 Second Gust (mph)
0	40-72	45-78	0	65-85	0	65-85
1	73-112	79-117	1	86-109	1	86-110
2	113-157	118-161	2	110-137	2	111-135
3	158-207	162-209	3	138-167	3	136-165
4	208-260	210-261	4	168-199	4	166-200
5	261-318	262-317	5	200-234	5	Over 200

*February 1, 2007*

Lawrence County is located in Wind Zone IV, according to the *US Wind Zone Map*. This map shows the frequency and strength of extreme windstorms across the United States. The map is based on 40 years of tornado history and more than 100 years of hurricane history. Zone IV has experienced both the most frequent and strongest tornadoes, with wind speeds reaching 250mph.



Source: FEMA

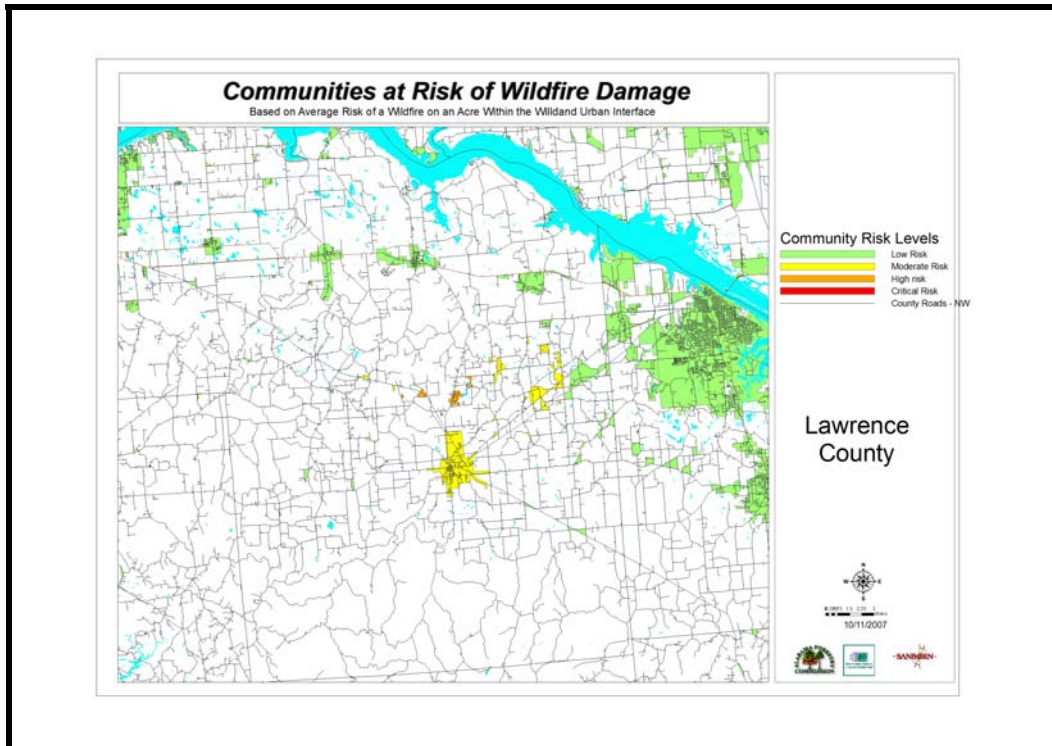
**Extent:** According to available data, there have been 26 tornados reported in Lawrence County resulting in 18 deaths, 92 injuries, and millions of dollars worth of injuries. The worst tornado on record in Lawrence County occurred in 1974. The worse case scenario for Lawrence County would involve a F5 tornado touching down in a populated area such as Moulton, which could potentially result in the injury or loss of life of hundreds of residents and the damage and/or destruction of dozens of residential and commercial structure at a cost in the tens of millions. Lawrence County is at a high risk of damage from these tornado events, which thereby necessitates the need for a profile and mitigation plan for this natural hazard.

### Wildfires

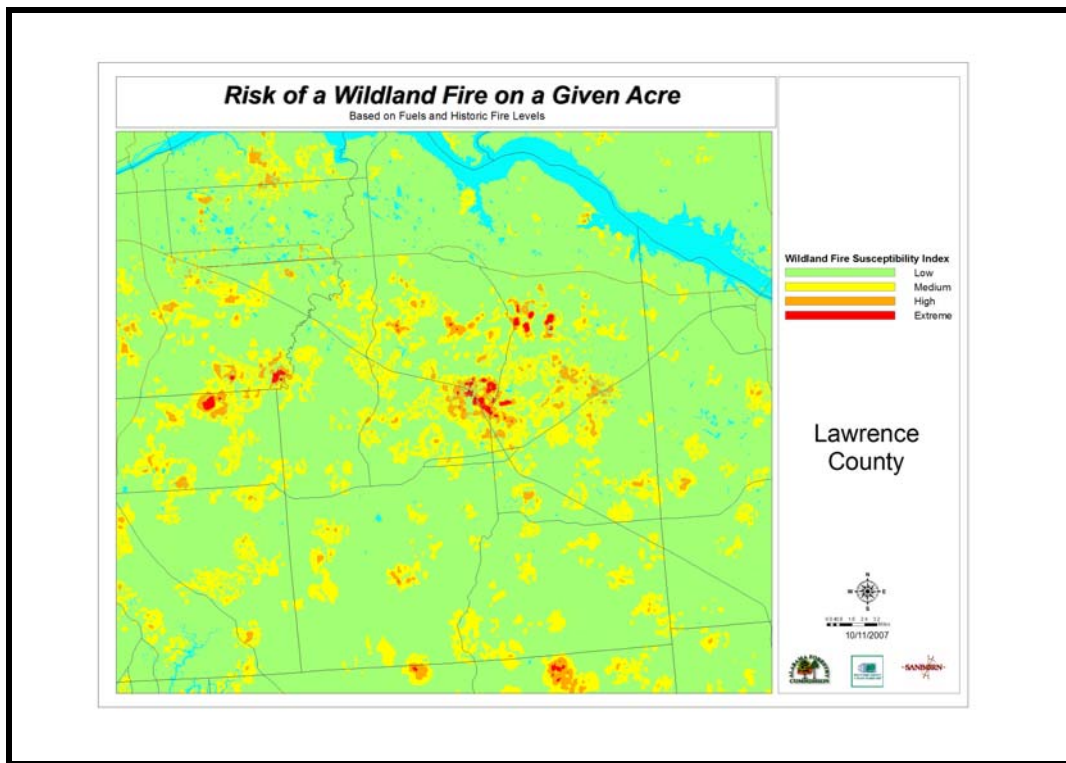
A wildfire is defined as an uncontrolled fire spreading through vegetative fuels, exposing and possibly consuming structures. They often begin unnoticed, spread quickly, and are usually signaled by dense smoke that may fill the sky for miles around. Wildfires can be caused by humans through such acts as arson or campfires, or can be caused by natural events such as lightning. Lawrence County is located in an area where the fire danger conditions vary from low to extreme risk according to the *Risk of Wildland Fire on a Given Acre Map*, and the *Communities at Risk of Wildfire Damage Map* shows the level

of risk to each of the Lawrence County’s jurisdictions and communities associated with fires. *These maps were provided by the Alabama Forestry Commission (see below and following page).* The Lawrence County Ranger’s Office, of the Alabama Forestry Commission, has two separate wildfire related plans in place for Lawrence County: the “Wildfire Prevention Plan” and the “Wildfire Readiness Plan”. These plans are developed to reduce the amount of wildfires and detail the capabilities to fight wildfires in the area, respectively.

**Extent:** Of the five (5) jurisdictions in Lawrence County, the City of Moulton (county seat and largest municipality) has a moderate risk, which is the highest in the county. The other four (4) jurisdictions have a low risk. **While no wildfires have been reported in since 1950 according to available data, the worse case scenario for Lawrence County would be a catastrophic wildfire event that decimated the City of Moulton and the Bankhead National Forest and Sipsey Wilderness located in the southern third of the county. This worse case scenario would destroy the county seat and largest city and a valuable natural resource and treasure resulting in loss of human and animal life, residential and commercial structures, public buildings and facilities, and critical infrastructure estimated in the hundreds of millions. Furthermore, it would severely cripple the counties sales tax, property tax, and recreational tourism revenue.** Lawrence County is at considerable risk of damage from these events, which thereby necessitates the need for a profile and mitigation plan for this natural hazard.



Source: Alabama Forestry Commission



Source: Alabama Forestry Commission

### Winter Storms/Extreme Cold

Winter storms can produce an array of hazardous weather conditions including heavy snow, blizzards, sleet, freezing rain, ice storms, high winds, and extreme cold. Lawrence County has experienced both winter and ice storms in the past. Although severe winter storms are a rare occurrence in Lawrence County, they do pose a significant impediment to residents when they take place. **Also, winter storms can negatively affect local agriculture, utilities, transportation systems, school, and businesses.** *Extreme cold's description and extent is addressed under Extreme Temperatures (hot and cold) in the Hazard Profiles subsection.*

**Extent:** **There have been 17 reported winter storms and 3 extreme cold events according to the best available data resulting in 5 deaths, 2 injuries, and millions in damages. In a worse case scenario, winter storms can paralyze Lawrence County and its communities, commerce, and transportation by shutting down normal day-to-day operations as accumulating snow and ice results in downed trees, power outages, and blocked or hazardous transportation routes. One impediment, the loss of electric power means loss of heat for residents, which poses a significant threat to human life, particularly the elderly. The level of impact a winter storm will have upon Lawrence County greatly depends on Lawrence's County ability to manage and control its effects by methods such as rapid mobilization of snow removal equipment. Due to the rare occurrence of severe winter**



weather in Lawrence County, coupled with the expensive costs to acquire and maintain the necessary resources to combat their effects, Lawrence County and its jurisdictions are not prepared for this type of event. Lawrence County is at risk of damage from these events, which thereby necessitates the need for a profile and mitigation plan for this natural hazard.

### 3.3 Hazard Profiles

The hazard profiles for Lawrence County are based on a survey of historical data related to the incidence or occurrence of each hazard type and the resulting loss of life and property associated with each event. This data is accessed from four main sources: the U.S. Department of Commerce, the National Oceanic and Atmospheric Administration’s National Climatic Data Center, U.S. Geological Survey, and the Geological Survey of Alabama. The hazard profiles provided on the following pages provide an approximate estimate of the probable losses associated with each type of hazard, based on the number of events and losses found in historical records.

#### Dam/Levee Failure

**0 Dam/Levee Failure** event(s) have been reported in **Lawrence County** based on available data.

#### Drought

<b>18 DROUGHT</b> event(s) were reported in <b>Lawrence County, Alabama</b> between <b>01/01/1950</b> and <b>06/30/2009</b> .				<b>Mag:</b>	Magnitude				
				<b>Dth:</b>	Deaths				
				<b>Inj:</b>	Injuries				
				<b>PrD:</b>	Property Damage				
				<b>CrD:</b>	Crop Damage				
Location or County	Date	Time	Type	Mag	Dth	Inj	PrD	CrD	
1 <a href="#">ALZ001&gt;004 - 008 - 010 - 016</a>	03/27/2007	00:00 AM	Drought	N/A	0	0	0K	0K	
2 <a href="#">ALZ001&gt;010 - 016</a>	04/01/2007	00:00 AM	Drought	N/A	0	0	0K	0K	
3 <a href="#">ALZ001&gt;010 - 016</a>	05/01/2007	00:00 AM	Drought	N/A	0	0	0K	0K	
4 <a href="#">ALZ001&gt;010 - 016</a>	06/01/2007	00:00 AM	Drought	N/A	0	0	0K	0K	
5 <a href="#">ALZ001&gt;010 - 016</a>	07/01/2007	00:00 AM	Drought	N/A	0	0	0K	0K	
6 <a href="#">ALZ001&gt;010 - 016</a>	08/01/2007	00:00 AM	Drought	N/A	0	0	0K	0K	
7 <a href="#">ALZ001&gt;010 - 016</a>	09/01/2007	00:00 AM	Drought	N/A	0	0	0K	0K	
8 <a href="#">ALZ001&gt;010 - 016</a>	10/01/2007	00:00 AM	Drought	N/A	0	0	0K	0K	
9 <a href="#">ALZ001&gt;010 - 016</a>	11/01/2007	00:00 AM	Drought	N/A	0	0	0K	0K	
10 <a href="#">ALZ001&gt;010 - 016</a>	12/01/2007	00:00 AM	Drought	N/A	0	0	0K	0K	

11	<a href="#">ALZ001&gt;010 - 016</a>	01/01/2008	00:00 AM	Drought	N/A	0	0	OK	OK
12	<a href="#">ALZ001&gt;010 - 016</a>	02/01/2008	00:00 AM	Drought	N/A	0	0	OK	OK
13	<a href="#">ALZ001&gt;010 - 016</a>	03/01/2008	00:00 AM	Drought	N/A	0	0	OK	OK
14	<a href="#">ALZ001&gt;010 - 016</a>	04/01/2008	00:00 AM	Drought	N/A	0	0	OK	OK
15	<a href="#">ALZ001 - 004&gt;010 - 016</a>	05/01/2008	00:00 AM	Drought	N/A	0	0	OK	OK
16	<a href="#">ALZ004 - 006&gt;010 - 016</a>	06/01/2008	00:00 AM	Drought	N/A	0	0	OK	OK
17	<a href="#">ALZ004&gt;010 - 016</a>	07/01/2008	00:00 AM	Drought	N/A	0	0	OK	OK
18	<a href="#">ALZ004&gt;007 - 009&gt;010 - 016</a>	08/01/2008	00:00 AM	Drought	N/A	0	0	OK	OK
<b>TOTALS:</b>						<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

<http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwevent~storms>

## Earthquakes

There have only been seven (7) recorded earthquakes in Lawrence County since 1988.

Date	County	Nearest Town	Lat	Long	Depth_km	Mag.	Description
5/27/1988	Lawrence	Moulton	34.38	87.27	2.3	1.4	Not felt
7/15/1989	Lawrence	Moulton	34.44	87.34	10	2.8	Not felt
5/14/1999	Lawrence	Trinity	34.69	87.15	3	1.6	12 km (7 mi) NW of Trinity
7/31/1999	Lawrence	Moulton	34.45	87.31	0	2.6	5 km (3 mi) SW of Moulton
8/15/2000	Lawrence	Town Creek	34.75	87.42	11	2.5	10 km (6 mi) north of Town Creek
8/29/2001	Lawrence	Moulton	35.54	87.16	7	2.2	8 miles (13 km) northeast of Moulton
7/15/2009	Lawrence	Moulton	34.393	87.362	0.1	1.8	12 km (8 mi) SW from Moulton, AL

*Source: Geologic Survey of Alabama*

## Floods/Riverine & Flash

<b>31 FLOOD</b> event(s) were reported in <b>Lawrence County, Alabama</b> between <b>01/01/1950</b> and <b>06/30/2009</b> .				<b>Mag:</b> Magnitude <b>Dth:</b> Deaths <b>Inj:</b> Injuries <b>PrD:</b> Property Damage <b>CrD:</b> Crop Damage				
Location or County	Date	Time	Type	Mag	Dth	Inj	PrD	CrD
1 <a href="#">LAWRENCE</a>	05/03/1993	2130	Flash Flood	N/A	0	0	0	0
2 <a href="#">ALZ001&gt;007</a>	02/09/1994	2200	Ice Storm/flash Flood	N/A	0	2	0	0
3 <a href="#">Terrytown</a>	03/06/1996	09:35 PM	Flash Flood	N/A	0	0	25K	0
4 <a href="#">Moulton</a>	06/21/1997	12:00 PM	Flash Flood	N/A	0	0	15K	0K
5 <a href="#">Countywide</a>	01/07/1998	09:30 AM	Flash Flood	N/A	0	0	25K	5K
6 <a href="#">Countywide</a>	01/22/1999	10:30 PM	Flash Flood	N/A	0	0	18K	0K
7 <a href="#">Moulton</a>	01/22/1999	10:30 PM	Flash Flood	N/A	0	0	25K	0K
8 <a href="#">Moulton</a>	04/03/2000	11:00 AM	Flash Flood	N/A	0	0	15K	0K
9 <a href="#">Countywide</a>	01/24/2002	06:00 AM	Flash Flood	N/A	0	0	10K	0K
10 <a href="#">Courtland</a>	02/15/2003	09:33 AM	Flash Flood	N/A	0	0	0	0
11 <a href="#">Courtland</a>	02/22/2003	01:00 AM	Flash Flood	N/A	0	0	0	0
12 <a href="#">Hillsboro</a>	02/22/2003	01:00 AM	Flash Flood	N/A	0	0	0	0
13 <a href="#">Countywide</a>	02/22/2003	06:55 AM	Flash Flood	N/A	0	0	0	0
14 <a href="#">Countywide</a>	02/22/2003	09:50 AM	Flash Flood	N/A	0	0	0	0
15 <a href="#">Moulton</a>	05/06/2003	09:25 PM	Flash Flood	N/A	0	0	0	0
16 <a href="#">Moulton</a>	05/16/2003	03:55 PM	Flash Flood	N/A	0	0	0	0
17 <a href="#">ALZ002 - 004&gt;005 - 005&gt;006 - 016</a>	02/05/2004	05:16 PM	Flood	N/A	0	0	0	0
18 <a href="#">ALZ004 - 006 - 016</a>	02/05/2004	08:40 PM	Flood	N/A	0	0	0	0
19 <a href="#">ALZ001 - 004 - 008 - 010 - 010</a>	02/06/2004	01:00 AM	Flood	N/A	0	0	0	0
20 <a href="#">Countywide</a>	09/16/2004	04:00 PM	Flash Flood	N/A	0	0	0	0
21 <a href="#">Moulton</a>	12/06/2004	02:00 PM	Flash Flood	N/A	0	0	0	0
22 <a href="#">Countywide</a>	12/09/2004	05:00 AM	Flash Flood	N/A	0	0	0	0
23 <a href="#">Speake</a>	04/06/2005	05:23 PM	Flash Flood	N/A	0	0	0	0

24	<a href="#">Mt Moriah</a>	05/27/2008	07:30 AM	Flash Flood	N/A	0	0	OK	OK
25	<a href="#">Flower Hill</a>	05/27/2008	08:00 AM	Flash Flood	N/A	0	0	OK	OK
26	<a href="#">Flower Hill</a>	12/09/2008	22:55 PM	Flash Flood	N/A	0	0	OK	OK
27	<a href="#">Speake</a>	04/02/2009	21:30 PM	Flood	N/A	0	0	OK	OK
28	<a href="#">Courtland Airfield</a>	05/01/2009	16:33 PM	Flash Flood	N/A	0	0	OK	OK
29	<a href="#">Mt Moriah</a>	05/27/2009	17:18 PM	Flash Flood	N/A	0	0	OK	OK
30	<a href="#">Mt Moriah</a>	05/27/2009	17:20 PM	Flash Flood	N/A	0	0	OK	OK
31	<a href="#">Mt Moriah</a>	05/27/2009	17:20 PM	Flash Flood	N/A	0	0	1K	OK
<b>TOTALS:</b>						<b>0</b>	<b>2</b>	<b>134K</b>	<b>5K</b>

<http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwevent~storms>

## Hurricanes

Although it is not in the listed in the hazard profile below, Hurricane Ivan struck the Alabama Gulf Coast on September 13, 2004, and Lawrence County was on one of the many declared counties in Alabama. Additionally, Hurricane Katrina in August 2005 (listed as a tropical storm below) was a Federally Declared Disaster and the entire state was eligible for HMGP funding, which provided the funds for this plan update. Lawrence County did not receive any IA or PA assistance. *The picture above was taken in April 2010 and depicts damage from Hurricane Katrina in the Lower 9<sup>th</sup> Ward of New Orleans.*



<b>2 HURRICANE &amp; TROPICAL STORM</b> event(s) were reported in <b>Lawrence County, Alabama</b> between <b>01/01/1950</b> and <b>06/30/2009</b> .						<b>Mag:</b>	Magnitude		
						<b>Dth:</b>	Deaths		
						<b>Inj:</b>	Injuries		
						<b>PrD:</b>	Property Damage		
						<b>CrD:</b>	Crop Damage		
Location or County	Date	Time	Type	Mag	Dth	Inj	PrD	CrD	
1 <a href="#">ALZ001&gt;050</a>	10/04/1995	1200	Hurricane Opal/high Winds	N/A	2	0	0.1B	10.0M	
2 <a href="#">ALZ001&gt;010 - 016</a>	08/29/2005	08:00 PM	Tropical Storm	N/A	0	0	0	0	
<b>TOTALS:</b>					<b>2</b>	<b>0</b>	<b>100.000M</b>	<b>10.000M</b>	

<http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwevent~storms>

### Landslide

**0** landslide event(s) were reported in **Lawrence County,**

### Severe Storms

<b>170 THUNDERSTORM &amp; HIGH WIND</b> event(s) were reported in <b>Lawrence County, Alabama</b> between <b>01/01/1950</b> and <b>06/30/2009</b> .						<b>Mag:</b>	Magnitude		
						<b>Dth:</b>	Deaths		
						<b>Inj:</b>	Injuries		
						<b>PrD:</b>	Property Damage		
						<b>CrD:</b>	Crop Damage		
County	Date	Time	Type	Mag	Dth	Inj	PrD	CrD	
1 <a href="#">LAWRENCE</a>	02/11/1965	1800	Tstm Wind	0 kts.	0	0	0	0	
2 <a href="#">LAWRENCE</a>	05/16/1968	0330	Tstm Wind	0 kts.	0	0	0	0	
3 <a href="#">LAWRENCE</a>	07/20/1970	1415	Tstm Wind	0 kts.	0	0	0	0	
4 <a href="#">LAWRENCE</a>	11/09/1970	2030	Tstm Wind	0 kts.	0	0	0	0	
5 <a href="#">LAWRENCE</a>	03/06/1971	1430	Tstm Wind	0 kts.	0	0	0	0	
6 <a href="#">LAWRENCE</a>	05/11/1973	1430	Tstm Wind	0 kts.	0	0	0	0	
7 <a href="#">LAWRENCE</a>	03/12/1975	1100	Tstm Wind	0 kts.	0	0	0	0	
8 <a href="#">LAWRENCE</a>	03/23/1975	2325	Tstm Wind	0 kts.	0	0	0	0	
9 <a href="#">LAWRENCE</a>	04/25/1975	0529	Tstm Wind	0 kts.	0	0	0	0	
10 <a href="#">LAWRENCE</a>	04/25/1975	0529	Tstm Wind	0 kts.	0	0	0	0	
11 <a href="#">LAWRENCE</a>	02/18/1976	0015	Tstm Wind	0 kts.	0	0	0	0	

12 <a href="#">LAWRENCE</a>	02/18/1976	0030	Tstm Wind	0 kts.	0	0	0	0
13 <a href="#">LAWRENCE</a>	06/20/1977	1540	Tstm Wind	0 kts.	0	0	0	0
14 <a href="#">LAWRENCE</a>	07/27/1978	1300	Tstm Wind	0 kts.	0	0	0	0
15 <a href="#">LAWRENCE</a>	06/19/1981	1455	Tstm Wind	0 kts.	0	0	0	0
16 <a href="#">LAWRENCE</a>	06/30/1982	1702	Tstm Wind	0 kts.	0	0	0	0
17 <a href="#">LAWRENCE</a>	07/11/1982	1340	Tstm Wind	0 kts.	0	0	0	0
18 <a href="#">LAWRENCE</a>	09/11/1983	1857	Tstm Wind	0 kts.	0	0	0	0
19 <a href="#">LAWRENCE</a>	11/23/1983	1200	Tstm Wind	0 kts.	0	0	0	0
20 <a href="#">LAWRENCE</a>	11/01/1984	1950	Tstm Wind	0 kts.	0	0	0	0
21 <a href="#">LAWRENCE</a>	04/05/1985	1500	Tstm Wind	0 kts.	0	0	0	0
22 <a href="#">LAWRENCE</a>	04/05/1985	1541	Tstm Wind	0 kts.	0	0	0	0
23 <a href="#">LAWRENCE</a>	08/24/1985	1400	Tstm Wind	0 kts.	0	0	0	0
24 <a href="#">LAWRENCE</a>	07/14/1986	2030	Tstm Wind	0 kts.	0	0	0	0
25 <a href="#">LAWRENCE</a>	08/07/1986	1800	Tstm Wind	0 kts.	0	0	0	0
26 <a href="#">LAWRENCE</a>	08/07/1986	1815	Tstm Wind	0 kts.	0	0	0	0
27 <a href="#">LAWRENCE</a>	08/07/1986	1815	Tstm Wind	0 kts.	0	1	0	0
28 <a href="#">LAWRENCE</a>	08/07/1986	1830	Tstm Wind	0 kts.	0	1	0	0
29 <a href="#">LAWRENCE</a>	02/15/1987	1950	Tstm Wind	0 kts.	0	0	0	0
30 <a href="#">LAWRENCE</a>	07/13/1987	1600	Tstm Wind	0 kts.	0	0	0	0
31 <a href="#">LAWRENCE</a>	02/20/1989	2245	Tstm Wind	0 kts.	0	0	0	0
32 <a href="#">LAWRENCE</a>	04/04/1989	0253	Tstm Wind	0 kts.	0	0	0	0
33 <a href="#">LAWRENCE</a>	06/14/1989	1130	Tstm Wind	0 kts.	0	0	0	0
34 <a href="#">LAWRENCE</a>	08/06/1989	1445	Tstm Wind	0 kts.	0	0	0	0
35 <a href="#">LAWRENCE</a>	09/22/1989	1200	Tstm Wind	0 kts.	0	0	0	0
36 <a href="#">LAWRENCE</a>	02/09/1990	2130	Tstm Wind	0 kts.	0	0	0	0
37 <a href="#">LAWRENCE</a>	06/21/1990	1336	Tstm Wind	52 kts.	0	0	0	0
38 <a href="#">LAWRENCE</a>	12/18/1990	1000	Tstm Wind	0 kts.	0	0	0	0
39 <a href="#">LAWRENCE</a>	12/30/1990	1530	Tstm Wind	0 kts.	0	0	0	0
40 <a href="#">LAWRENCE</a>	03/10/1992	0020	Tstm Wind	0 kts.	0	0	0	0
41 <a href="#">LAWRENCE</a>	03/10/1992	0040	Tstm Wind	0 kts.	0	0	0	0
42 <a href="#">LAWRENCE</a>	04/20/1992	1145	Tstm Wind	0 kts.	0	0	0	0

43	<a href="#">LAWRENCE</a>	05/29/1992	1338	Tstm Wind	0 kts.	0	0	0	0
44	<a href="#">LAWRENCE</a>	05/29/1992	1340	Tstm Wind	0 kts.	0	0	0	0
45	<a href="#">LAWRENCE</a>	07/05/1992	1200	Tstm Wind	52 kts.	0	0	0	0
46	<a href="#">LAWRENCE</a>	08/27/1992	1240	Tstm Wind	0 kts.	0	0	0	0
47	<a href="#">LAWRENCE</a>	08/27/1992	1322	Tstm Wind	0 kts.	0	0	0	0
48	<a href="#">LAWRENCE</a>	09/02/1992	1745	Tstm Wind	0 kts.	0	0	0	0
49	<a href="#">LAWRENCE</a>	04/15/1993	0450	Thunderstorm Winds	0 kts.	0	0	0	0
50	<a href="#">LAWRENCE</a>	05/03/1993	1642	Thunderstorm Winds	0 kts.	0	0	0	0
51	<a href="#">LAWRENCE</a>	08/20/1993	1845	Thunderstorm Winds	0 kts.	0	0	0	0
52	<a href="#">LAWRENCE</a>	09/03/1993	1615	Thunderstorm Winds	0 kts.	0	0	0	0
53	<a href="#">Moulton</a>	04/27/1994	1335	Thunderstorm Winds	0 kts.	0	0	5K	0
54	<a href="#">Town Creek</a>	05/15/1994	1656	Thunderstorm Winds	0 kts.	0	0	5K	0
55	<a href="#">Mt. Hope</a>	06/09/1994	0750	Thunderstorm Winds	50 kts.	0	0	50K	0
56	<a href="#">Moulton</a>	06/25/1994	1302	Thunderstorm Winds	50 kts.	0	0	50K	0
57	<a href="#">Moulton</a>	08/18/1994	1330	Thunderstorm Wind	0 kts.	0	0	0	0
58	<a href="#">Decatur</a>	03/20/1995	2015	Thunderstorm Winds	0 kts.	0	0	0	0
59	<a href="#">Hatton</a>	04/20/1995	1947	Thunderstorm Winds	0 kts.	0	0	0	0
60	<a href="#">Wheeler</a>	04/20/1995	1947	Thunderstorm Winds	60 kts.	0	0	0	0
61	<a href="#">LAWRENCE</a>	04/20/1995	2022	Thunderstorm Winds	0 kts.	0	0	0	0
62	<a href="#">Mount Hope</a>	04/20/1995	2115	Thunderstorm Winds	0 kts.	0	0	0	0
63	<a href="#">Hatton</a>	07/04/1995	2124	Thunderstorm Winds	0 kts.	0	0	2K	0
64	<a href="#">Courtland</a>	07/15/1995	1646	Thunderstorm	1 kts.	0	0	6K	0

			Winds Hail					
65 <a href="#">Wheeler</a>	07/17/1995	1705	Thunderstorm Winds	0 kts.	0	0	5K	0
66 <a href="#">Moulton</a>	08/08/1995	1425	Thunderstorm Winds	0 kts.	0	0	3K	0
67 <a href="#">Moulton</a>	08/08/1995	1430	Thunderstorm Winds	0 kts.	0	0	3K	0
68 <a href="#">ALZ001&gt;050</a>	10/04/1995	1200	Hurricane Opal/high Winds	N/A	2	0	0.1B	10.0M
69 <a href="#">ALZ001&gt;018 - 020 - 022</a>	01/18/1996	06:00 PM	High Wind	40 kts.	0	0	400K	0
70 <a href="#">Moulton</a>	04/23/1996	12:02 AM	Tstm Wind	52 kts.	0	0	65K	3K
71 <a href="#">Moulton</a>	04/29/1996	01:28 PM	Tstm Wind	52 kts.	0	0	10K	0K
72 <a href="#">Town Creek</a>	04/29/1996	01:40 PM	Tstm Wind	52 kts.	0	0	10K	2K
73 <a href="#">Courtland</a>	05/27/1996	03:35 PM	Tstm Wind	50 kts.	0	0	10K	0K
74 <a href="#">Moulton</a>	07/14/1996	06:00 PM	Tstm Wind	50 kts.	0	0	5K	0K
75 <a href="#">Moulton</a>	09/16/1996	02:35 PM	Tstm Wind	50 kts.	0	0	5K	0K
76 <a href="#">Moulton</a>	10/18/1996	12:30 AM	Tstm Wind	50 kts.	0	0	7K	1K
77 <a href="#">Mt Hope</a>	02/21/1997	06:43 AM	Tstm Wind	55 kts.	0	0	8K	0K
78 <a href="#">Moulton</a>	03/03/1997	01:32 AM	Tstm Wind	52 kts.	0	0	0K	0K
79 <a href="#">Mt Hope</a>	03/05/1997	01:25 PM	Tstm Wind	52 kts.	0	0	3K	0K
80 <a href="#">Hatton</a>	07/04/1997	04:00 PM	Tstm Wind	52 kts.	0	0	5K	0K
81 <a href="#">Moulton</a>	07/04/1997	04:15 PM	Tstm Wind	50 kts.	0	0	5K	0K
82 <a href="#">Moulton</a>	10/25/1997	04:10 PM	Tstm Wind	50 kts.	0	0	9K	0K
83 <a href="#">Hatton</a>	10/25/1997	06:40 PM	Tstm Wind	50 kts.	0	0	7K	0K



84 <a href="#">Countywide</a>	06/05/1998	03:50 AM	Tstm Wind	55 kts.	0	0	45K	10K
85 <a href="#">Town Creek</a>	04/03/1999	11:36 PM	Tstm Wind	50 kts.	0	0	8K	0K
86 <a href="#">Hatton</a>	04/03/1999	11:38 PM	Tstm Wind	55 kts.	0	0	5K	0K
87 <a href="#">Courtland</a>	05/05/1999	08:31 PM	Tstm Wind	50 kts.	0	0	3K	0K
88 <a href="#">Hillsboro</a>	09/08/1999	01:00 PM	Tstm Wind	50 kts.	0	0	3K	0K
89 <a href="#">Moulton</a>	09/08/1999	01:00 PM	Tstm Wind	55 kts.	0	0	10K	0K
90 <a href="#">ALZ001&gt;005 - 007 - 011&gt;015 - 022&gt;023 - 030&gt;034</a>	11/02/1999	05:00 AM	High Wind	45 kts.	0	0	55K	0K
91 <a href="#">Countywide</a>	02/13/2000	06:55 PM	Tstm Wind	60 kts.	0	0	20K	0K
92 <a href="#">Moulton</a>	06/17/2000	06:05 PM	Tstm Wind	60 kts.	0	0	5K	0K
93 <a href="#">Countywide</a>	07/20/2000	03:30 PM	Tstm Wind	65 kts.	0	1	75K	0K
94 <a href="#">Town Creek</a>	08/10/2000	03:45 PM	Tstm Wind	50 kts.	0	0	5K	0K
95 <a href="#">Courtland</a>	12/16/2000	02:16 PM	Tstm Wind	50 kts.	0	0	2K	0K
96 <a href="#">Moulton</a>	12/16/2000	03:45 PM	Tstm Wind	55 kts.	0	0	2K	0K
97 <a href="#">Countywide</a>	07/05/2001	12:40 PM	Tstm Wind	55 kts.	0	0	5K	0K
98 <a href="#">Moulton</a>	10/24/2001	08:22 PM	Tstm Wind	50 kts.	0	0	1K	0K
99 <a href="#">Hatton</a>	10/06/2002	04:55 PM	Tstm Wind	50 kts.	0	0	3K	0K
100 <a href="#">Moulton</a>	11/10/2002	08:15 PM	Tstm Wind	50 kts.	0	0	1K	0K
101 <a href="#">Hillsboro</a>	05/01/2003	04:13 PM	Tstm Wind	60 kts.	0	0	0	0
102 <a href="#">Speake</a>	05/06/2003	09:25 PM	Tstm Wind	60 kts.	0	0	0	0

103 <a href="#">Courtland</a>	05/17/2003	09:20 AM	Tstm Wind	50 kts.	0	0	0	0
104 <a href="#">Caddo</a>	05/17/2003	09:30 AM	Tstm Wind	60 kts.	0	0	0	0
105 <a href="#">Town Creek</a>	06/11/2003	01:30 PM	Tstm Wind	50 kts.	0	0	0	0
106 <a href="#">Moulton</a>	06/11/2003	01:32 PM	Tstm Wind	60 kts.	0	0	0	0
107 <a href="#">Moulton</a>	07/22/2003	08:30 AM	Tstm Wind	60 kts.	0	0	0	0
108 <a href="#">Moulton</a>	05/30/2004	11:35 PM	Tstm Wind	60 kts.	0	0	0	0
109 <a href="#">Courtland</a>	07/04/2004	03:10 PM	Tstm Wind	50 kts.	0	0	0	0
110 <a href="#">Moulton</a>	07/04/2004	03:10 PM	Tstm Wind	50 kts.	0	0	0	0
111 <a href="#">Moulton</a>	07/04/2004	03:15 PM	Tstm Wind	50 kts.	0	0	0	0
112 <a href="#">Moulton</a>	07/04/2004	03:37 PM	Tstm Wind	50 kts.	0	0	0	0
113 <a href="#">Courtland</a>	07/07/2004	02:48 PM	Tstm Wind	50 kts.	0	0	0	0
114 <a href="#">Moulton</a>	07/12/2004	02:25 PM	Tstm Wind	50 kts.	0	0	0	0
115 <a href="#">Speake</a>	07/13/2004	02:25 PM	Tstm Wind	50 kts.	0	0	0	0
116 <a href="#">Moulton</a>	07/25/2004	12:45 PM	Tstm Wind	50 kts.	0	0	0	0
117 <a href="#">ALZ001&gt;010 - 016</a>	09/16/2004	04:55 AM	High Wind	50 kts.	0	3	2.5M	0
118 <a href="#">Town Creek</a>	10/19/2004	01:11 PM	Tstm Wind	50 kts.	0	0	0	0
119 <a href="#">Hatton</a>	01/13/2005	08:45 AM	Tstm Wind	50 kts.	0	0	0	0
120 <a href="#">Hatton</a>	01/13/2005	08:45 AM	Tstm Wind	70 kts.	0	0	10K	0
121 <a href="#">ALZ004 - 006 - 006</a>	04/30/2005	12:40 AM	High Wind	50 kts.	0	0	5K	0
122 <a href="#">Speake</a>	08/13/2005	03:15 PM	Tstm Wind	50	0	0	0	0

				kts.				
123 <a href="#">Wren</a>	03/09/2006	04:14 PM	Tstm Wind	60 kts.	0	0	0	0
124 <a href="#">Hatton</a>	03/09/2006	04:45 PM	Tstm Wind	70 kts.	0	0	0	0
125 <a href="#">Moulton</a>	04/07/2006	09:00 PM	Tstm Wind	60 kts.	0	0	3K	0
126 <a href="#">Courtland</a>	05/09/2006	04:20 PM	Tstm Wind	50 kts.	0	0	0	0
127 <a href="#">Courtland</a>	05/11/2006	07:30 PM	Tstm Wind	50 kts.	0	0	0	0
128 <a href="#">Hatton</a>	05/30/2006	04:40 PM	Tstm Wind	50 kts.	0	0	0	0
129 <a href="#">Mt Hope</a>	06/01/2006	01:30 PM	Tstm Wind	50 kts.	0	0	0	0
130 <a href="#">Courtland</a>	06/01/2006	02:26 PM	Tstm Wind	50 kts.	0	0	0	0
131 <a href="#">Moulton</a>	06/02/2006	12:32 PM	Tstm Wind	50 kts.	0	0	0	0
132 <a href="#">Moulton</a>	06/04/2006	02:15 PM	Tstm Wind	50 kts.	0	0	0	0
133 <a href="#">Moulton</a>	07/31/2006	03:40 PM	Tstm Wind	50 kts.	0	0	0	0
134 <a href="#">Pool</a>	11/15/2006	11:15 AM	Thunderstorm Wind	50 kts.	0	0	20K	OK
135 <a href="#">Town Creek</a>	06/27/2007	17:15 PM	Thunderstorm Wind	52 kts.	0	0	OK	OK
136 <a href="#">Courtland</a>	06/30/2007	16:52 PM	Thunderstorm Wind	52 kts.	0	0	OK	OK
137 <a href="#">Courtland</a>	06/30/2007	17:25 PM	Thunderstorm Wind	52 kts.	0	0	OK	OK
138 <a href="#">Wren</a>	07/25/2007	17:10 PM	Thunderstorm Wind	50 kts.	0	0	OK	OK
139 <a href="#">Red Bank</a>	01/08/2008	19:45 PM	Thunderstorm Wind	52 kts.	0	0	OK	OK
140 <a href="#">ALZ004</a>	01/29/2008	19:30 PM	High Wind	39 kts.	0	0	OK	OK
141 <a href="#">Kimo</a>	05/10/2008	23:04 PM	Thunderstorm Wind	52 kts.	0	0	1K	OK

142	<a href="#">Chalybeate Spgs</a>	05/27/2008	06:15 AM	Thunderstorm Wind	56 kts.	0	0	5K	OK
143	<a href="#">Chalybeate Spgs</a>	05/27/2008	08:25 AM	Thunderstorm Wind	52 kts.	0	0	0K	OK
144	<a href="#">Sherrod Quarters</a>	05/27/2008	10:54 AM	Thunderstorm Wind	52 kts.	0	0	1K	OK
145	<a href="#">Kimo</a>	06/25/2008	16:08 PM	Thunderstorm Wind	52 kts.	0	0	0K	OK
146	<a href="#">Wheeler</a>	07/22/2008	13:53 PM	Thunderstorm Wind	52 kts.	0	0	1K	OK
147	<a href="#">Caddo</a>	07/23/2008	13:45 PM	Thunderstorm Wind	52 kts.	0	0	2K	OK
148	<a href="#">Masterson Mill</a>	07/31/2008	16:55 PM	Thunderstorm Wind	52 kts.	0	0	1K	OK
149	<a href="#">Mountain Home</a>	07/31/2008	17:00 PM	Thunderstorm Wind	52 kts.	0	0	5K	OK
150	<a href="#">Chalybeate Spgs</a>	08/02/2008	14:12 PM	Thunderstorm Wind	56 kts.	0	0	1K	OK
151	<a href="#">Hatton</a>	12/09/2008	21:25 PM	Thunderstorm Wind	52 kts.	0	0	1K	OK
152	<a href="#">ALZ004</a>	01/16/2009	06:00 AM	Cold/wind Chill	N/A	0	0	0K	OK
153	<a href="#">ALZ004 - 007</a>	02/11/2009	11:50 AM	High Wind	52 kts.	0	0	15K	OK
154	<a href="#">ALZ004</a>	04/02/2009	19:40 PM	Strong Wind	38 kts.	0	0	30K	OK
155	<a href="#">ALZ004</a>	04/10/2009	12:00 PM	Strong Wind	43 kts.	0	0	6K	OK
156	<a href="#">Town Creek</a>	04/10/2009	12:32 PM	Thunderstorm Wind	52 kts.	0	0	0K	OK
157	<a href="#">Hatton</a>	04/10/2009	12:46 PM	Thunderstorm Wind	56 kts.	0	0	8K	OK
158	<a href="#">Moulton</a>	04/10/2009	13:15 PM	Thunderstorm Wind	56 kts.	0	0	4K	OK
159	<a href="#">ALZ004</a>	04/12/2009	21:21 PM	Strong Wind	39 kts.	0	0	100K	OK
160	<a href="#">Hatton</a>	04/13/2009	17:58 PM	Thunderstorm Wind	52 kts.	0	0	1K	OK
161	<a href="#">Moulton</a>	04/19/2009	17:29 PM	Thunderstorm Wind	61 kts.	0	0	0K	OK

162 <a href="#">Courtland</a>	05/06/2009	07:00 AM	Thunderstorm Wind	50 kts.	0	0	8K	0K
163 <a href="#">Mt Moriah</a>	05/06/2009	07:06 AM	Thunderstorm Wind	50 kts.	0	0	4K	0K
164 <a href="#">Mt Moriah</a>	05/06/2009	07:07 AM	Thunderstorm Wind	50 kts.	0	0	4K	0K
165 <a href="#">Flower Hill</a>	05/27/2009	16:35 PM	Thunderstorm Wind	52 kts.	0	0	2K	0K
166 <a href="#">Moulton</a>	06/12/2009	18:19 PM	Thunderstorm Wind	52 kts.	0	0	0K	0K
167 <a href="#">Town Creek</a>	06/12/2009	18:34 PM	Thunderstorm Wind	52 kts.	0	0	2K	0K
168 <a href="#">Moulton</a>	06/14/2009	09:35 AM	Thunderstorm Wind	52 kts.	0	0	4K	0K
169 <a href="#">Flower Hill</a>	06/15/2009	17:55 PM	Thunderstorm Wind	50 kts.	0	0	6K	0K
170 <a href="#">Moulton</a>	06/15/2009	20:00 PM	Thunderstorm Wind	61 kts.	0	0	13K	0K
<b>TOTALS:</b>					<b>2</b>	<b>6</b>	<b>103.688M</b>	<b>10.016M</b>

<http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwevent~storms>

### Hail

<b>113 HAIL</b> event(s) were reported in <b>Lawrence County, Alabama</b> between <b>01/01/1950</b> and <b>06/30/2009</b> .				<b>Mag:</b>	Magnitude				
				<b>Dth:</b>	Deaths				
				<b>Inj:</b>	Injuries				
				<b>PrD:</b>	Property Damage				
				<b>CrD:</b>	Crop Damage				
Location or County	Date	Time	Type	Mag	Dth	Inj	PrD	CrD	
1 <a href="#">LAWRENCE</a>	02/18/1976	0900	Hail	1.00 in.	0	0	0	0	
2 <a href="#">LAWRENCE</a>	02/16/1982	2155	Hail	1.75 in.	0	0	0	0	
3 <a href="#">LAWRENCE</a>	02/16/1982	2235	Hail	1.75 in.	0	0	0	0	
4 <a href="#">LAWRENCE</a>	03/25/1982	1525	Hail	0.75 in.	0	0	0	0	
5 <a href="#">LAWRENCE</a>	04/26/1982	1635	Hail	1.75 in.	0	0	0	0	

6 <a href="#">LAWRENCE</a>	05/27/1982	1525	Hail	1.75 in.	0	0	0	0
7 <a href="#">LAWRENCE</a>	05/27/1982	1615	Hail	1.75 in.	0	0	0	0
8 <a href="#">LAWRENCE</a>	06/30/1982	1702	Hail	0.75 in.	0	0	0	0
9 <a href="#">LAWRENCE</a>	05/07/1984	1632	Hail	1.00 in.	0	0	0	0
10 <a href="#">LAWRENCE</a>	03/24/1985	0610	Hail	0.75 in.	0	0	0	0
11 <a href="#">LAWRENCE</a>	03/24/1985	0620	Hail	0.75 in.	0	0	0	0
12 <a href="#">LAWRENCE</a>	04/15/1985	1919	Hail	0.75 in.	0	0	0	0
13 <a href="#">LAWRENCE</a>	07/10/1985	1932	Hail	1.75 in.	0	0	0	0
14 <a href="#">LAWRENCE</a>	07/10/1985	1954	Hail	0.75 in.	0	0	0	0
15 <a href="#">LAWRENCE</a>	07/15/1985	1625	Hail	1.75 in.	0	0	0	0
16 <a href="#">LAWRENCE</a>	06/24/1987	1800	Hail	1.75 in.	0	0	0	0
17 <a href="#">LAWRENCE</a>	03/30/1989	2310	Hail	0.75 in.	0	0	0	0
18 <a href="#">LAWRENCE</a>	06/21/1990	1313	Hail	0.75 in.	0	0	0	0
19 <a href="#">LAWRENCE</a>	03/22/1991	1905	Hail	1.75 in.	0	0	0	0
20 <a href="#">LAWRENCE</a>	03/27/1991	1922	Hail	1.75 in.	0	0	0	0
21 <a href="#">LAWRENCE</a>	04/09/1991	1242	Hail	1.75 in.	0	0	0	0
22 <a href="#">LAWRENCE</a>	04/09/1991	1302	Hail	1.75 in.	0	0	0	0
23 <a href="#">LAWRENCE</a>	04/09/1991	1710	Hail	0.75 in.	0	0	0	0
24 <a href="#">LAWRENCE</a>	04/09/1991	1710	Hail	0.75 in.	0	0	0	0
25 <a href="#">LAWRENCE</a>	10/10/1992	1330	Hail	1.75	0	0	0	0

				in.					
26 <a href="#">Moulton</a>	04/27/1994	1330	Hail	1.00 in.	0	0	0	0	0
27 <a href="#">LAWRENCE</a>	05/15/1994	1735	Hail	1.75 in.	0	0	0	0	0
28 <a href="#">LAWRENCE</a>	04/20/1995	1615	Hail	0.75 in.	0	0	0	0	0
29 <a href="#">Moulton</a>	06/11/1995	1805	Hail	0.75 in.	0	0	0	0	0
30 <a href="#">Mt. Hope</a>	06/18/1995	1743	Hail	0.75 in.	0	0	0	0	0
31 <a href="#">Courtland</a>	06/18/1995	1750	Hail	0.75 in.	0	0	0	0	0
32 <a href="#">Town Creek</a>	06/18/1995	1810	Hail	0.75 in.	0	0	0	0	0
33 <a href="#">Courtland</a>	07/15/1995	1646	Thunderstorm Winds Hail	1 kts.	0	0	6K	0	0
34 <a href="#">LAWRENCE</a>	09/01/1995	1635	Hail	1.00 in.	0	0	0	0	0
35 <a href="#">Mt Hope</a>	03/06/1996	08:18 PM	Hail	0.75 in.	0	0	10K	0	0
36 <a href="#">Hatton</a>	03/06/1996	08:23 PM	Hail	1.75 in.	0	0	25K	0	0
37 <a href="#">Moulton</a>	04/15/1996	12:00 AM	Hail	0.75 in.	0	0	15K	4K	0
38 <a href="#">Courtland</a>	10/18/1996	12:22 AM	Hail	0.75 in.	0	0	5K	1K	0
39 <a href="#">Moulton</a>	01/24/1997	05:30 PM	Hail	1.00 in.	0	0	7K	1K	0
40 <a href="#">Moulton</a>	03/28/1997	10:45 PM	Hail	0.88 in.	0	0	4K	0K	0
41 <a href="#">Mt Hope</a>	05/26/1997	10:17 PM	Hail	3.50 in.	0	0	10K	6K	0
42 <a href="#">Moulton</a>	05/26/1997	10:23 PM	Hail	0.75 in.	0	0	3K	0K	0
43 <a href="#">Wheeler</a>	06/13/1997	02:04 PM	Hail	0.75 in.	0	0	3K	0K	0
44 <a href="#">Town Creek</a>	07/04/1997	03:55 PM	Hail	0.88 in.	0	0	4K	0K	0
45 <a href="#">Hatton</a>	07/04/1997	04:00 PM	Hail	1.00	0	0	5K	0K	0

				in.					
46 <a href="#">Mt Hope</a>	07/04/1997	04:10 PM	Hail	0.75 in.	0	0	3K	0K	
47 <a href="#">Moulton</a>	07/04/1997	04:20 PM	Hail	1.00 in.	0	0	5K	0K	
48 <a href="#">Moulton</a>	10/25/1997	06:28 PM	Hail	1.00 in.	0	0	5K	0K	
49 <a href="#">Moulton</a>	10/25/1997	06:49 PM	Hail	1.00 in.	0	0	5K	0K	
50 <a href="#">Mt Hope</a>	03/19/1998	08:12 PM	Hail	0.75 in.	0	0	0K	0K	
51 <a href="#">Hatton</a>	03/19/1998	08:15 PM	Hail	0.75 in.	0	0	0K	0K	
52 <a href="#">Moulton</a>	04/03/1998	03:57 PM	Hail	0.75 in.	0	0	0K	0K	
53 <a href="#">Moulton</a>	04/08/1998	07:00 PM	Hail	0.75 in.	0	0	0K	0K	
54 <a href="#">Moulton</a>	04/08/1998	07:12 PM	Hail	0.88 in.	0	0	0K	0K	
55 <a href="#">Moulton</a>	04/08/1998	08:12 PM	Hail	1.00 in.	0	0	3K	2K	
56 <a href="#">Moulton</a>	05/06/1998	02:45 PM	Hail	1.00 in.	0	0	2K	0K	
57 <a href="#">Moulton</a>	05/26/1998	01:36 PM	Hail	1.00 in.	0	0	2K	2K	
58 <a href="#">Mt Hope</a>	08/29/1998	02:36 PM	Hail	0.75 in.	0	0	0K	0K	
59 <a href="#">Moulton</a>	08/29/1998	02:38 PM	Hail	0.75 in.	0	0	0K	0K	
60 <a href="#">Hatton</a>	01/17/1999	11:15 PM	Hail	0.75 in.	0	0	0K	0K	
61 <a href="#">Moulton</a>	01/22/1999	04:20 PM	Hail	0.75 in.	0	0	0K	0K	
62 <a href="#">Moulton</a>	01/22/1999	05:58 PM	Hail	0.88 in.	0	0	0K	0K	
63 <a href="#">Courtland</a>	05/05/1999	08:31 PM	Hail	0.75 in.	0	0	0K	0K	
64 <a href="#">Moulton</a>	05/05/1999	08:50 PM	Hail	0.75 in.	0	0	0K	0K	



65 <a href="#">Moulton</a>	04/27/2000	05:25 PM	Hail	0.75 in.	0	0	OK	OK
66 <a href="#">Moulton</a>	04/27/2000	06:10 PM	Hail	0.88 in.	0	0	OK	OK
67 <a href="#">Moulton</a>	08/10/2000	04:15 PM	Hail	0.88 in.	0	0	OK	OK
68 <a href="#">Moulton</a>	06/26/2001	12:55 PM	Hail	0.75 in.	0	0	OK	OK
69 <a href="#">Hatton</a>	03/29/2002	09:05 PM	Hail	0.88 in.	0	0	OK	OK
70 <a href="#">Moulton</a>	03/29/2002	09:09 PM	Hail	1.75 in.	0	0	10K	OK
71 <a href="#">Mt Hope</a>	04/30/2002	08:31 AM	Hail	0.75 in.	0	0	OK	OK
72 <a href="#">Moulton</a>	07/02/2002	03:54 PM	Hail	0.75 in.	0	0	OK	OK
73 <a href="#">Moulton</a>	08/20/2002	04:30 PM	Hail	0.75 in.	0	0	OK	OK
74 <a href="#">Courtland</a>	05/02/2003	02:30 PM	Hail	1.75 in.	0	0	0	0
75 <a href="#">Mt Hope</a>	05/02/2003	02:30 PM	Hail	1.00 in.	0	0	0	0
76 <a href="#">Mt Hope</a>	05/02/2003	02:40 PM	Hail	2.50 in.	0	0	0	0
77 <a href="#">Moulton</a>	05/02/2003	02:52 PM	Hail	0.75 in.	0	0	0	0
78 <a href="#">Moulton</a>	05/02/2003	02:54 PM	Hail	1.75 in.	0	0	0	0
79 <a href="#">Mt Hope</a>	05/02/2003	03:00 PM	Hail	2.50 in.	0	0	0	0
80 <a href="#">Moulton</a>	05/05/2003	10:44 AM	Hail	0.88 in.	0	0	0	0
81 <a href="#">Wren</a>	05/06/2003	09:15 PM	Hail	0.75 in.	0	0	0	0
82 <a href="#">Courtland</a>	07/14/2004	03:44 PM	Hail	0.75 in.	0	0	0	0
83 <a href="#">Town Creek</a>	02/21/2005	05:13 PM	Hail	1.25 in.	0	0	0	0
84 <a href="#">Moulton</a>	02/21/2005	05:45 PM	Hail	0.75	0	0	0	0

				in.					
85 <a href="#">Moulton</a>	02/21/2005	05:45 PM	Hail	1.00 in.	0	0	0	0	0
86 <a href="#">Courtland</a>	12/04/2005	12:59 AM	Hail	0.88 in.	0	0	0	0	0
87 <a href="#">Moulton</a>	04/03/2006	01:25 AM	Hail	0.75 in.	0	0	0	0	0
88 <a href="#">Courtland</a>	04/07/2006	07:57 PM	Hail	1.00 in.	0	0	0	0	0
89 <a href="#">Moulton</a>	04/07/2006	09:02 PM	Hail	1.00 in.	0	0	0	0	0
90 <a href="#">Speake</a>	04/07/2006	09:40 PM	Hail	1.75 in.	0	0	15K	0	0
91 <a href="#">Hatton</a>	05/13/2006	06:00 PM	Hail	0.88 in.	0	0	0	0	0
92 <a href="#">Moulton</a>	05/30/2006	04:35 PM	Hail	1.00 in.	0	0	0	0	0
93 <a href="#">Courtland</a>	06/24/2006	01:00 PM	Hail	1.75 in.	0	0	0	0	0
94 <a href="#">Masterson Mill</a>	04/03/2007	22:04 PM	Hail	0.75 in.	0	0	OK	OK	OK
95 <a href="#">Chalybeate Spgs</a>	05/27/2008	08:25 AM	Hail	1.00 in.	0	0	OK	OK	OK
96 <a href="#">Wheeler</a>	07/22/2008	13:35 PM	Hail	1.00 in.	0	0	OK	OK	OK
97 <a href="#">Wheeler</a>	07/22/2008	13:45 PM	Hail	0.75 in.	0	0	OK	OK	OK
98 <a href="#">Moulton</a>	04/10/2009	12:26 PM	Hail	0.88 in.	0	0	OK	OK	OK
99 <a href="#">Hatton</a>	04/10/2009	12:47 PM	Hail	1.25 in.	0	0	OK	OK	OK
100 <a href="#">Northeast Smith</a>	04/10/2009	12:53 PM	Hail	1.75 in.	0	0	OK	OK	OK
101 <a href="#">Mountain Home</a>	04/10/2009	12:56 PM	Hail	1.75 in.	0	0	OK	OK	OK
102 <a href="#">Caddo</a>	04/10/2009	13:00 PM	Hail	0.88 in.	0	0	OK	OK	OK
103 <a href="#">Caddo</a>	04/10/2009	13:01 PM	Hail	2.75 in.	0	0	OK	OK	OK

104 <a href="#">Caddo</a>	04/10/2009	13:09 PM	Hail	2.75 in.	0	0	0K	0K
105 <a href="#">Moulton</a>	04/10/2009	13:22 PM	Hail	1.75 in.	0	0	0K	0K
106 <a href="#">Wheeler</a>	04/13/2009	17:15 PM	Hail	0.88 in.	0	0	0K	0K
107 <a href="#">Mountain Home</a>	04/13/2009	19:10 PM	Hail	0.88 in.	0	0	0K	0K
108 <a href="#">Moulton</a>	04/13/2009	23:47 PM	Hail	1.00 in.	0	0	0K	0K
109 <a href="#">Wren</a>	04/19/2009	17:19 PM	Hail	0.75 in.	0	0	0K	0K
110 <a href="#">Moulton</a>	04/19/2009	17:23 PM	Hail	0.88 in.	0	0	0K	0K
111 <a href="#">Caddo</a>	04/19/2009	17:29 PM	Hail	1.00 in.	0	0	0K	0K
112 <a href="#">Caddo</a>	06/15/2009	18:29 PM	Hail	1.75 in.	0	0	0K	0K
113 <a href="#">Caddo</a>	06/15/2009	18:30 PM	Hail	1.50 in.	0	0	0K	0K
<b>TOTALS:</b>					<b>0</b>	<b>0</b>	<b>147K</b>	<b>16K</b>

<http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwevent~storms>

## Lightning

<b>9 LIGHTNING</b> event(s) were reported in <b>Lawrence County, Alabama</b> between <b>01/01/1950</b> and <b>06/30/2009</b> .				<b>Mag:</b>	Magnitude				
				<b>Dth:</b>	Deaths				
				<b>Inj:</b>	Injuries				
				<b>PrD:</b>	Property Damage				
				<b>CrD:</b>	Crop Damage				
Location or County	Date	Time	Type	Mag	Dth	Inj	PrD	CrD	
1 <a href="#">Caddo</a>	07/26/1995	1406	Lightning	N/A	0	0	18K	0	
2 <a href="#">Moulton</a>	06/28/1997	03:35 PM	Lightning	N/A	0	2	45K	0K	
3 <a href="#">Moulton</a>	01/22/1999	07:00 PM	Lightning	N/A	0	0	30K	0K	
4 <a href="#">Hatton</a>	07/24/1999	06:00 PM	Lightning	N/A	0	0	5K	0K	
5 <a href="#">Moulton</a>	07/09/2002	05:45 PM	Lightning	N/A	0	1	0K	0K	
6 <a href="#">Mt Hope</a>	08/20/2002	04:35 PM	Lightning	N/A	0	0	8K	0K	

7 <a href="#">Wren</a>	07/22/2003	08:30 AM	Lightning	N/A	0	0	2K	0
8 <a href="#">Moulton</a>	04/03/2006	01:25 AM	Lightning	N/A	0	0	1K	0
9 <a href="#">Town Creek</a>	06/14/2009	09:50 AM	Lightning	N/A	0	0	1K	0K
<b>TOTALS:</b>					<b>0</b>	<b>3</b>	<b>110K</b>	<b>0</b>

<http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwevent~storms>

### Sinkholes

**0** sinkhole event(s) were reported in **Lawrence County** based on available data.

### Tornadoes

<b>26 TORNADO(s) were reported in Lawrence County, Alabama between 01/01/1950 and 06/30/2009.</b>					<b>Mag:</b>	Magnitude		
					<b>Dth:</b>	Deaths		
					<b>Inj:</b>	Injuries		
					<b>PrD:</b>	Property Damage		
					<b>CrD:</b>	Crop Damage		
Location or County	Date	Time	Type	Mag	Dth	Inj	PrD	CrD
1 <a href="#">LAWRENCE</a>	11/18/1957	1700	Tornado	F1	0	0	3K	0
2 <a href="#">LAWRENCE</a>	04/05/1958	2100	Tornado	F2	0	0	250K	0
3 <a href="#">LAWRENCE</a>	04/05/1958	2200	Tornado	F2	0	0	25K	0
4 <a href="#">LAWRENCE</a>	10/24/1967	1900	Tornado	F3	0	3	250K	0
5 <a href="#">LAWRENCE</a>	05/29/1968	1730	Tornado	F2	0	0	250K	0
6 <a href="#">LAWRENCE</a>	04/03/1974	1715	Tornado	F5	14	60	0K	0
7 <a href="#">LAWRENCE</a>	04/03/1974	2050	Tornado	F5	0	0	0K	0
8 <a href="#">LAWRENCE</a>	04/18/1978	0200	Tornado	F2	0	0	250K	0
9 <a href="#">LAWRENCE</a>	04/17/1982	0400	Tornado	F1	0	0	0K	0
10 <a href="#">LAWRENCE</a>	08/16/1985	1120	Tornado	F1	0	0	3K	0
11 <a href="#">LAWRENCE</a>	11/04/1988	1705	Tornado	F3	0	0	250K	0
12 <a href="#">LAWRENCE</a>	04/14/1991	1905	Tornado	F1	0	4	0K	0
13 <a href="#">Moulton</a>	01/24/1997	02:50 PM	Tornado	F1	0	0	40K	8K
14 <a href="#">Courtland</a>	12/16/2000	12:25 PM	Tornado	F0	0	0	0K	0K
15 <a href="#">Five Pts</a>	11/24/2001	12:10 PM	Tornado	F2	0	2	250K	0K
16 <a href="#">Hatton</a>	04/07/2006	07:45 PM	Tornado	F0	0	0	0	0

17 <a href="#">Mt Hope</a>	04/07/2006	08:30 PM	Tornado	F0	0	0	0	0
18 <a href="#">Caddo</a>	04/07/2006	09:00 PM	Tornado	F0	0	0	5K	0
19 <a href="#">Speake</a>	04/07/2006	09:35 PM	Tornado	F1	0	0	25K	0
20 <a href="#">Mt Hope</a>	10/18/2007	14:05 PM	Tornado	F1	0	0	0K	0K
21 <a href="#">Leola</a>	02/06/2008	03:02 AM	Tornado	F4	4	23	0K	0K
22 <a href="#">Lemon Hill</a>	05/08/2008	11:45 AM	Tornado	F2	0	0	250K	0K
23 <a href="#">Mt Hope</a>	04/19/2009	17:03 PM	Tornado	F0	0	0	18K	0K
24 <a href="#">Wren</a>	04/19/2009	17:18 PM	Tornado	F1	0	0	30K	0K
25 <a href="#">Caddo</a>	05/06/2009	07:25 AM	Tornado	F1	0	0	200K	0K
26 <a href="#">Masterson Mill</a>	06/14/2009	09:25 AM	Tornado	F1	0	0	0K	0K
<b>TOTALS:</b>					<b>18</b>	<b>92</b>	<b>2.098M</b>	<b>8K</b>

<http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwevent~storms>

### Winter Storms/Extreme Cold

<p><b>17 SNOW &amp; ICE</b> event(s) were reported in <b>Lawrence County, Alabama</b> between <b>01/01/1950</b> and <b>06/30/2009</b>.</p>	<p><b>Mag:</b> Magnitude  <b>Dth:</b> Deaths  <b>Inj:</b> Injuries  <b>PrD:</b> Property  <b>CrD:</b> Damage</p>
--------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------

Location or County	Date	Time	Type	Mag	Dth	Inj	PrD	CrD
1 <a href="#">ALZ001&gt;018</a>	03/12/1993	2200	Winter Storm	N/A	4	0	5.0B	0
2 <a href="#">ALZ001&gt;007</a>	02/09/1994	2200	Ice Storm/flash Flood	N/A	0	2	0	0
3 <a href="#">ALZ001&gt;011 - 014 - 016&gt;018 - 020</a>	02/06/1995	2100	Snow/ice	N/A	0	0	0	0
4 <a href="#">North Alabama</a>	02/11/1995	1300	Snow/ice	N/A	0	0	0	0
5 <a href="#">ALZ001&gt;038</a>	01/06/1996	08:00 PM	Winter Storm	N/A	0	0	380K	38K
6 <a href="#">ALZ001&gt;027 - 030&gt;032 - 034</a>	02/01/1996	03:00 PM	Winter Storm	N/A	0	0	595K	0
7 <a href="#">ALZ003&gt;015</a>	02/16/1996	02:00 AM	Winter Storm	N/A	0	0	195K	0
8 <a href="#">ALZ001&gt;010</a>	01/10/1997	10:00 AM	Winter Storm	N/A	0	0	64K	0K

9 <a href="#">ALZ001&gt;010 - 016 - 018&gt;021 - 028&gt;029 - 037&gt;038 - 047</a>	12/29/1997	01:00 AM	Winter Storm	N/A	0	0	OK	OK
10 <a href="#">ALZ001&gt;008 - 011&gt;017</a>	12/23/1998	02:00 AM	Ice Storm	N/A	1	0	14.4M	OK
11 <a href="#">ALZ001&gt;010 - 016&gt;018 - 020 - 026</a>	01/06/1999	12:00 PM	Winter Storm	N/A	0	0	OK	OK
12 <a href="#">ALZ001&gt;007 - 009&gt;017</a>	12/21/1999	04:00 AM	Ice Storm	N/A	0	0	OK	OK
13 <a href="#">ALZ001&gt;004 - 011&gt;013 - 022&gt;023 - 030&gt;032</a>	01/27/2000	09:00 PM	Winter Storm	N/A	0	0	170K	OK
14 <a href="#">ALZ001&gt;007 - 009&gt;011 - 014 - 016 - 018&gt;021</a>	02/05/2002	11:30 PM	Winter Storm	N/A	0	0	30K	OK
15 <a href="#">ALZ004</a>	02/11/2006	04:00 PM	Heavy Snow	N/A	0	0	0	0
16 <a href="#">ALZ004</a>	02/02/2007	00:00 AM	Heavy Snow	N/A	0	0	OK	OK
17 <a href="#">ALZ004</a>	12/23/2008	08:40 AM	Winter Weather	N/A	0	0	OK	OK
<b>TOTALS:</b>					<b>5</b>	<b>2</b>	<b>5.016B</b>	<b>38K</b>

<http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwevent~storms>

### Temperatures Extremes Heat/Cold

Lawrence County is vulnerable to extreme winter weather conditions such as extreme cold temperature snow and ice. The most common effects of severe winter weather are power outages due to downed power lines and traffic hazards. Generally winters in Lawrence County are mild. Lawrence County is vulnerable to extreme heat conditions primarily during the summer months although rare events have occurred in early spring. This drought condition occurs when there is a deficiency of precipitation over an extended period of time. Climatic factors such as high temperature high winds and low relative humidity can contribute to the severity of a drought.

<b>6 TEMPERATURE EXTREMES</b> event(s) were reported in <b>Lawrence County, Alabama</b> between <b>01/01/1950</b> and <b>06/30/2009</b> .					<b>Mag:</b>	Magnitude			
					<b>Dth:</b>	Deaths			
					<b>Inj:</b>	Injuries			
					<b>PrD:</b>	Property Damage			
					<b>CrD:</b>	Crop Damage			
Location or County	Date	Time	Type	Mag	Dth	Inj	PrD	CrD	
1 <a href="#">ALZ001&gt;050</a>	02/03/1996	06:00 PM	Extreme Cold	N/A	0	0	0	0	
2 <a href="#">ALZ001&gt;050</a>	02/23/1996	08:00 AM	Excessive Heat	N/A	0	0	0	0	
3 <a href="#">ALZ001&gt;050</a>	03/07/1996	08:00 AM	Extreme Cold	N/A	0	0	0	52.0M	
4 <a href="#">ALZ001&gt;010 - 016</a>	08/01/2007	00:00 AM	Heat	N/A	0	0	0K	0K	
5 <a href="#">ALZ004</a>	01/16/2009	06:00 AM	Cold/wind Chill	N/A	0	0	0K	0K	
6 <a href="#">ALZ004&gt;007 - 016</a>	06/28/2009	10:00 AM	Excessive Heat	N/A	0	0	0K	0K	
<b>TOTALS:</b>					<b>0</b>	<b>0</b>	<b>0</b>	<b>52.000M</b>	

<http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwevent~storms>

## Wildfires

**0 WILD & FOREST FIRE** event(s) were reported in **Lawrence County, Alabama** between **01/01/1950** and **06/30/2009** based on available data.

### 3.4 Lawrence County Hazard Risk and Vulnerability Analysis

The vulnerability analysis assessment shows the risk and vulnerability within Lawrence County for hazard events and occurrences. Historical records of each of the identified hazards have been considered in the calculation. The probability of occurrence was calculated using historical data provided by the national Weather Service.

### 3.5 Vulnerability Assessment: Identification of Assets

Vulnerability to a natural hazard measures the extent to which people and property is expected to be impacted. Vulnerability to natural hazards exists both in the present and in the future. This section is an inventory of assets susceptible to identified hazards within Lawrence County. Therefore, this section includes estimates of building assets, critical facilities, and populations vulnerable to identified hazards. The entire area of Lawrence County is vulnerable to all identified hazards with the exception of dam/levee failure, floods, landslides, and sinkholes, which are area specific.

### 3.6 Probability Assessment

The probability (%) that an identified hazard will occur on an annual basis was determined using the following:

*Formula:*

Number of years incidents occurred within/number of historical and/or reported events in that time period = Probability of Future Annual Event Occurrence

# Years occurred = Probability of Future Events

*Formula:*

The following was used to determine an estimate of expected damage from each event:

Total amount of damage (\$) for each historical reported event/number of damage causing events within the time period

Damage \$ dollars = \$ Per Event

# of Events reported

Event Probability Assessment - Lawrence County				
Natural Hazard	Number of Occurrences	Probability Future Annual Occurrences	Population Affected	Damage Expectations
Dam Levee Failure	0	0	N/A	0
Drought/Extreme Heat	21	2.8	34,803	0
Earthquakes	7	3	34,803	N/A
Flooding	31	1.9		\$4,484
Hurricane	3	19.67	34,803	\$3,666,667
Land Slides	0	0	N/A	0
Severe Thunderstorms: Hail & Lightning	292	0.2	34,803	\$390,332
Sinkholes	0	0	N/A	0
Tornados	26	2.27	34,803	\$80,692
Winter Storms/extreme cold	20	2.95	34,803	\$253,401,900
Wildfires	0	0	34,803	0



### 3.7 Population Impact

The table below provides a brief historical perspective of the population of Lawrence County and its jurisdiction. The 2010 Census figures will not be available until after approval of this plan.

<b>Lawrence County Population</b>			
<b>Jurisdiction</b>	<b>1990</b>	<b>2000</b>	<b>% Change</b>
Lawrence County	31,513	34,803	10.4
Courtland	803	769	-4.2
Hillsboro	587	608	3.6
Moulton	3,248	3,260	.4
North Courtland	973	799	-17.9
Town Creek	1,379	1,216	-11.8

*Source: 2000 U.S. Census*

The Lawrence County Hazard Mitigation Planning Committee used 2000 U.S. Census data to aide in identifying vulnerable populations potentially impacted during a natural hazard event for Lawrence County and each individual jurisdiction (see tables below).

<b>Lawrence County - Population Vulnerable to Hazards</b>		
<b>Natural Hazard</b>	<b>Population</b>	<b>Households</b>
Dam/Levee Failure	N/A	N/A
Drought/Extreme Heat	34,803	13,538
Earthquakes	34,803	13,538
Flooding	N/A	N/A
Hurricanes	34,803	13,538
Land Slides	N/A	N/A
Severe Thunderstorms - Hail & Lightning	34,803	13,538
Sinkholes	N/A	N/A
Tornado	34,803	13,538
Winter Storms/Extreme Cold	34,803	13,538
Wildfires	34,803	13,538

*Sources: 2000 U.S. Census and NARCOG*

<b>Courtland - Population Vulnerable to Hazards</b>		
<b>Natural Hazard</b>	<b>Population</b>	<b>Households</b>
Dam/Levee Failure	N/A	N/A
Drought/Extreme Heat	769	316
Earthquakes	769	316
Flooding	N/A	N/A
Hurricanes	769	316
Land Slides	N/A	N/A
Severe Thunderstorms - Hail & Lightning	769	316
Sinkholes	N/A	N/A
Tornado	769	316
Winter Storms/Extreme Cold	769	316
Wildfires	769	316

*Sources: 2000 U.S. Census and NARCOG*

<b>Hillsboro - Population Vulnerable to Hazards</b>		
<b>Natural Hazard</b>	<b>Population</b>	<b>Households</b>
Dam/Levee Failure	N/A	N/A
Drought/Extreme Heat	608	221
Earthquakes	608	221
Flooding	N/A	N/A
Hurricanes	608	221
Land Slides	N/A	N/A
Severe Thunderstorms - Hail & Lightning	608	221
Sinkholes	N/A	N/A
Tornado	608	221
Winter Storms/Extreme Cold	608	221
Wildfires	608	221

*Sources: 2000 U.S. Census and NARCOG*

<b>Moulton - Population Vulnerable to Hazards</b>		
<b>Natural Hazard</b>	<b>Population</b>	<b>Households</b>
Dam/Levee Failure	N/A	N/A
Drought/Extreme Heat	3,260	1,384
Earthquakes	3,260	1,384
Flooding	N/A	N/A
Hurricanes	3,260	1,384
Land Slides	N/A	N/A
Severe Thunderstorms - Hail & Lightning	3,260	1,384
Sinkholes	N/A	N/A
Tornado	3,260	1,384
Winter Storms/Extreme Cold	3,260	1,384
Wildfires	3,260	1,384

*Sources: 2000 U.S. Census and NARCOG*

<b>North Courtland - Population Vulnerable to Hazards</b>		
<b>Natural Hazard</b>	<b>Population</b>	<b>Households</b>
Dam/Levee Failure	N/A	N/A
Drought/Extreme Heat	799	330
Earthquakes	799	330
Flooding	N/A	N/A
Hurricanes	799	330
Land Slides	N/A	N/A
Severe Thunderstorms - Hail & Lightning	799	330
Sinkholes	N/A	N/A
Tornado	799	330
Winter Storms/Extreme Cold	799	330
Wildfires	799	330

*Sources: 2000 U.S. Census and NARCOG*

<b>Town Creek - Population Vulnerable to Hazards</b>		
<b>Natural Hazard</b>	<b>Population</b>	<b>Households</b>
Dam/Levee Failure	N/A	N/A
Drought/Extreme Heat	1,216	514
Earthquakes	1,216	514
Flooding	N/A	N/A
Hurricanes	1,216	514
Land Slides	N/A	N/A
Severe Thunderstorms - Hail & Lightning	1,216	514
Sinkholes	N/A	N/A
Tornado	1,216	514
Winter Storms/Extreme Cold	1,216	514
Wildfires	1,216	514

*Sources: 2000 U.S. Census and NARCOG*

### **3.8 Estimated Losses from Identified Hazards**

#### **Impact on Buildings**

All buildings located in Lawrence County are vulnerable to natural hazards with the exception of dam/levee failure, floods, landslides, and sinkholes, which are area specific. The Lawrence County Tax Appraiser’s Office and Board of Education provided the estimates in the table below. Information for the building types not available during this update will be made in the next update, as well as the building values for the area specific hazards.

**Lawrence County  
Value of Buildings Exposed to Hazards by Type**

<b>Hazard</b>	<b>Residential</b>	<b>Commercial</b>	<b>Industrial</b>	<b>Agricultural</b>	<b>Religious</b>	<b>Government</b>	<b>Education</b>	<b>County Total</b>
Dam/Levee Failure*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Drought/Extreme Heat	\$817,391,000	\$104,437,000	\$2,240,000	\$33,215,000	N/A	N/A	\$136,458,457	\$1,093,741,457
Earthquake	\$817,391,000	\$104,437,000	\$2,240,000	\$33,215,000	N/A	N/A	\$136,458,457	\$1,093,741,457
Flood*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hurricane	\$817,391,000	\$104,437,000	\$2,240,000	\$33,215,000	N/A	N/A	\$136,458,457	\$1,093,741,457
Landslide*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Severe Storm-hail, lightning	\$817,391,000	\$104,437,000	\$2,240,000	\$33,215,000	N/A	N/A	\$136,458,457	\$1,093,741,457
Sinkholes*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tornado	\$817,391,000	\$104,437,000	\$2,240,000	\$33,215,000	N/A	N/A	\$136,458,457	\$1,093,741,457
Winter Storm/Extreme Cold	\$817,391,000	\$104,437,000	\$2,240,000	\$33,215,000	N/A	N/A	\$136,458,457	\$1,093,741,457
Wildfire	\$817,391,000	\$104,437,000	\$2,240,000	\$33,215,000	N/A	N/A	\$136,458,457	\$1,093,741,457

Source: Lawrence County Tax Appraiser’s Office & Board of Education

\* Area Specific

### **3.9 Land Use and Development Trends**

*(Please see map in Appendix D)*

#### **Residential**

The most extensive residential development in Lawrence County exists and has primarily occurred in the five (5) incorporated jurisdictions. It’s anticipated that the largest portion of residential development will continue to occur in and around the city limits of Moulton. Low density residential development is also occurring in the rural unincorporated areas of the county. This development is mostly occurring on agricultural or undeveloped properties fronting on primary and secondary roads and there is little residential development expected within the next twenty years.

Although minimum residential; growth is expected over the next twenty years, it is expected that residential development increase will reflect the population increase that is projected to occur in the county by the year 2020.

## **Industrial**

Nearly all of the existing and future industrial development in Lawrence County will be focused in the northern most portion of the county along the Tennessee River, Alabama Highway 20, and the Norfolk Southern Railroad. Lawrence County has three industrial parks in this area with available land for future growth, and the Lawrence County Industrial Development Board will play a major role in attracting new industry and fostering the retention and expansion of existing industry.

The Lawrence County Industrial Development Board has opened its 1,251 acre Mallard Fox West Industrial Park on Alabama Highway 20 at the Morgan County line, and the Lawrence County Industrial Airpark located in Courtland has 2,247 acres. Also, the Harris Property offers 1,000 acres and is located 4 miles northwest of Courtland along the Tennessee River.

## **Commercial**

Commercial development will continue to locate along major transportation routes in the county. This development will occur in areas where the availability of water and sewer is present and easily assessable. Commercial development is expected to grow at a steady pace during the next twenty years.

Currently most commercial and retail acreage is located in the county's municipalities. Presently this activity is occurring along Alabama Highway 157, County Road 33, and along Alabama Highway 24 with a limited amount along Alabama Highway 20 west. The future success of expanding the commercial and retail into the unincorporated areas of the county will depend on the ability to deliver the necessary infrastructures outside the current limits.

## **Institutional**

Future expansion of county government and community facilities will primarily evaluate the areas that experience a significant growth due to residential development or other development that might impact the county areas within the next twenty years. However there are no anticipated plans for a significant increase in public expansion of facilities in the near future.

### **3.10 Community Assets and Critical Facilities Inventory**

The purpose of identifying community assets and critical facilities was to evaluate the potential impact and effects of natural hazards on them and to develop mitigation measures to protect the community. Community assets are both privately and public owned and can be damaged or lost due to natural hazards events. Community assets consists land structures and facilities that provide important functions and services to the community.

## **Critical Facilities**

Critical facilities are essential to the daily operation of Lawrence County. These facilities are of special concern because they provide essential service to the general public that are necessary in order to preserve the welfare and quality of life throughout Lawrence County while fulfilling important public safety, emergency response, and/or disaster recovery and clean up functions. The loss of use of these facilities could impose a severe impact on Lawrence County, its municipalities, and its residents. (*See Critical Facilities Map in Appendix D*).

## **Impact on Critical Facilities**

The delineation of facilities as critical is based on the HAZUS standards of critical facility definition below:

- **Essential Facilities:** These facilities are critical to the health and welfare of the entire county population and are essential following hazard events. They include emergency response facilities (police, fire and emergency management), medical care facilities (hospitals and other care facilities), schools, and shelters for evacuation. Lawrence County essential facilities include but or not limited to the following:
  - 8 - Government buildings
  - 13 - Schools
  - 4 - Health Care facilities
  - 11 - Fire departments
  - 6 - Law Enforcement Agencies
  - 1 - Emergency Operation Center
  - 1 - 911 Center
  - 2 - EMS transport services
  
- **Lifeline Utility Systems:** These facilities are essential lifelines that include portable water, wastewater, natural gas, electric, and communication systems. There are several lifeline facilities in Lawrence County to include but not limited to the following:

5 water utilities systems; 2 electrical systems (Alabama Power and TVA); 4 natural gas distributors (Joe Wheeler, Northwest Alabama Gas District, Enbridge, and City of Moulton); 3 wastewaters treatment facilities; phone companies/cell towers; 1 radio station; and 1 weekly newspaper serve Lawrence County.
  
- **Transportation Systems:** These facilities include airports, highways, bridges, railways, and waterways. Access to Lawrence County is excellent thanks to a multitude of transportation choices. Several major highways serve Lawrence County including Alabama Highway 20/Alternate 72, which is the main corridor between Atlanta and Memphis and provides access to Interstate 65. Alabama Highway 157 is the main north-south corridor and runs from the Shoals area

through Lawrence County to Cullman. The Tennessee River provides a major artery for boats and barges of all types. Alabama Highway 24 runs from Decatur to Moulton and then west to Russellville. The potential exists for additional residential development along this highway due to existing access fostering development within the eastern portion of Lawrence County. (*See Transportation Facilities Map in Appendix D*)

Presently in Lawrence County there are: 2 critical bridges, 3 critical highways (Alabama Highways 20, 24, and 157), 1 railroad line (Norfolk Southern), and the Tennessee River that if loss or disrupted due to natural hazards could greatly impact Lawrence County and its municipalities and residents.

- **High Potential Loss Facilities**  
These facilities include military installations and high potential loss dams.
  
- **Hazardous Materials Facilities**  
These facilities may pose a threat if disrupted by natural hazards and include hazardous industrial chemicals, explosives, flammables, toxins, and radioactive materials.

<b>Critical Facilities: Lawrence County</b>	
<b>Facility Type</b>	<b>Facility Value</b>
Courthouse	\$15,000,000
Courthouse Annex #1 750 Main	\$900,000
Courthouse Annex #2	\$500,000
Courthouse Annex #3 (Future/Approved)	\$450,000
EMA Office	\$500,000
EMS Office	*
Fire Department(s)	*
Sheriff Department(s)	*
County Jail	\$4,000,000
Health Department	\$1,000,000
Department of Human Resources	\$3,000,000



Joe Wheeler Office(s)	\$7,203,000
Joe Wheeler Substation(s)	\$14,150,000
Joe Wheeler Towers & Antennas	\$600,000
TVA Substation	*
BOE/Schools	\$136,458,457
Courtland Airport	\$80,000
LCATS (COA)	\$111,800
County Shop	\$47,800
Rescue Squad	\$100,000
Wheeler Dam	*
Wheeler Basin Natural Gas System	*
International Paper	*
Lockheed	*
Red Cross facilities /shelters	*
West Lawrence Water Co-Op Office	\$189,000
West Lawrence Water Co-Op Maintenance Building	\$167,000
West Lawrence Water Co-op Pump Station (Hwy. 101-Mt. Hope)	\$30,000
West Lawrence Water Co-op Pump Station (Hwy. 157-Mt. Hope, Big Nance Creek)	\$70,000
West Lawrence Water Co-op Pump Station (Hwy. 157-Mt. Hope, Cole Park)	\$40,000
West Lawrence Water Co-op Pump Station (CR460-Mt. Hope)	\$100,000
West Lawrence Water Co-op Booster Pump Station (Air Base Road-Mt. Hope)	\$183,000
West Lawrence Water Co-op Booster Pump Station #2 (CR23-Mt.Hope)	\$26,300
West Lawrence Water Co-op Water Tank (Hwy. 157-Mt. Hope)	\$250,000

West Lawrence Water Co-op Water Tank (Mt. Hope)	\$750,000
West Lawrence Water Co-op Water Tank (Mt. Hope)	\$525,000
West Lawrence Water Co-op Water Tank (CR 108-Mt. Hope)	\$1,100,000
Caddo Fire Station #1	\$100,000
Caddo Fire Station #2	\$100,000
Hatton Fire Station	\$125,000
Mount Hope Fire Department	\$70,000
Speake Fire Station #1	*
Speake Fire Station #2	*
Chalybeate Fire Department	*
Red Bank Fire Department	*
Alabama Highway 20 (Alternate U.S. Highway 72)	*
Alabama Highway 24	*
Alabama Highway 157	*
Norfolk-Southern Railroad	*
Tennessee River	*
County Bridges (141) replacement cost does not include state highways	\$20,000,000
County Roads (700 miles paved x \$150,000 per mile to replace)	\$105,000,000
County Fuel Pump	\$300,000
USDA	*

Watershed Dams	
▪ Town Creek #3	\$3,658,513
▪ Town Creek #12	\$1,078,889
▪ Town Creek #16	\$1,149,096
▪ Town Creek #22	\$489,579
▪ Big Nance Creek #4	\$1,165,239
West Morgan-East Lawrence Water Treatment	*
<b>Total Critical Facilities</b>	<b>\$320,697,673</b>

\* Value not available

<b>Critical Facilities: Town of Courtland</b>	
<b>Facility Type</b>	<b>Facility Value</b>
Town Hall	\$395,000
Police Department/Fire Department #1	\$1,150,000
Fire Department #2 & #3	\$190,000
Baptist Church (shelter)	\$1,500,000
Methodist Church (shelter)	\$1,200,000
TVA Substation	\$1,600,000
6 Lift Stations	\$166,000
2 Water Tanks/pumping station	\$2,200,000
Community Center	\$260,000
Three Springs Juvenile Detention Facility	\$2,500,000
Gas regulator station	\$350,000
Bridges (3)	\$5M repair and \$10M replace
<b>Total Critical Facilities</b>	<b>\$11,511,000</b>

<b>Critical Facilities: Town of Hillsboro</b>	
<b>Facility Type</b>	<b>Facility Value</b>
Town Hall	\$200,000
Tennessee Valley School Campus	\$350,000
Fire Department	\$300,000
VFW Building	\$250,000
Park	\$150,000
<b>Total Critical Facilities</b>	<b>\$1,250,000</b>

<b>Critical Facilities: City of Moulton</b>	
<b>Facility Type</b>	<b>Facility Value</b>
City Hall (police station)	\$1,800,000
Elementary School	\$10,000,000
Middle School	\$6,000,000
High School	\$15,000,000
Fire Department(s)	\$2,000,000
Gas Regulator Stations	\$50,000
Lawrence Medical Center	\$18,000,000
Wastewater Treatment Plant	\$12,000,000
Water Plant	\$12,000,000
First Baptist Church (shelter)	\$2,000,000
4 Water Tanks	\$1,500,000
Senior Center	\$500,000
Shelter	\$500,000
Coliseum	\$500,000

2 Booster Pump Stations	\$300,000
Moulton Recreational Center	\$1,500,000
NHC	\$18,000,000
National Guard Amory	\$1,500,000
Mental Health Facility	\$1,500,000
<b>Total Critical Facilities</b>	<b>\$104,650,000</b>

<b>Critical Facilities: North Courtland</b>	
<b>Facility Type</b>	<b>Facility Value</b>
Town Hall (Police Dept.)	\$25,000
R.A. Hubbard High School	\$3,900,500
Senior Center	\$100,000
Baptist Academy	\$275,000
Volunteer Fire Department	\$40,000
<b>Total Critical Facilities</b>	<b>\$4,340,500</b>

<b>Critical Facilities: Town of Town Creek</b>	
<b>Facility Type</b>	<b>Facility Value</b>
City Hall	\$200,000
Elementary School Campus	\$6,720,338
Fire Department	\$425,000
Police Department	\$275,000
Gas Department	\$125,000
Health Care Facility	\$575,000
Sewer Treatment Plant	\$2,900,000
First Baptist Church (shelter)	N/A
<b>Total Critical Facilities</b>	<b>\$11,220,338</b>

### **3.11 National Flood Insurance Program and Repetitive Loss Properties**

The National Flood Insurance Program (NFIP) is administered by the Federal Emergency Management Agency (FEMA) and offers flood insurance to property owners nationwide. Participation in the program is voluntary and is determined by local governments. By agreeing to enforce local regulations concerning development in floodplains, flood insurance becomes available to property owners. In some instances, insurance is required by law, in some a lender may require flood insurance, and in others the policyholder may choose to carry flood insurance at his or her discretion. The NFIP maintains flood maps and other valuable information useful to the assessment of flood vulnerability and flood hazards.

In Lawrence County, the following jurisdictions participate in the NFIP: Lawrence County, Courtland, Hillsboro, Moulton, North Courtland, and Town Creek. The NFIP produces flood maps for Lawrence County and each local jurisdiction. These maps identify areas of special flood hazards and delineate properties at risk for flooding. The 1981 Flood Insurance Rate Maps (FIRM) for Lawrence County were just updated and effective as of September 2009, digital FIRM maps are now available.

The NFIP defines *repetitive loss properties* as those properties for which two or more losses of at least \$1,000 have been paid out in any ten-year period since 1978. The following data was compiled by the ADECA Office of Water Resources (OWR) NFIP State Coordinator for Lawrence County and all jurisdictions based on the incidence of repetitive claims in Lawrence County (Please See Appendix C).

Flood prone areas are developed in accordance with the rules for construction in areas of special flood hazard established by the NFIP, which requires elevation of residential structures and elevation/flood-proofing of non-residential structures. The majority of floodplain development has been residential and this trend will likely continue. Additionally, development meeting certain requirements is required to perform a detailed flood study in areas where information concerning flood hazards is lacking. This information is then incorporated into local floodplain management ordinances and submitted to FEMA as a Letter of Map Amendment/Revision. FEMA’s recent Map Modernization Program is a nationwide effort to improve the quality and accessibility of floodplain data by updating, improving, and digitizing local flood maps. Lawrence County digital FIRM maps are now available for Lawrence County effective as of September 2009.

### 3.12 Summary of Plan Updates

This section of the 2004 Plan was reviewed by the Lawrence County Hazard Mitigation Planning Committee, Lawrence County EMA, and the NARCOG staff. All sections required revisions in Chapter 3 due to updating previous events, inventories and estimates. The most significant change was the results of the Hazard Identification Exercise which reduce the hazards identified to eleven hazards vs. the thirteen identified in the original plan. The changes included the grouping of hail and lightning under severe storms, grouping winter storms and extreme cold together, and adding a newly identified hazard – wildfires. The table below provides more detail:

Section	Change
3.1	<b>This subsection was revised as the results of the hazard identification checklist exercise which changed the identified hazards from 13 to 11.</b>
3.2	<b>This subsection was significantly revised including photos, tables, maps, descriptions and extent of hazards to reflect the hazards identified in 3.1.</b>
3.3	<b>This subsection was significantly revised updating information.</b>
3.4	<b>This subsection was significantly revised.</b>
3.5	<b>This subsection was significantly revised.</b>
3.6	<b>This subsection was revised updating information.</b>
3.7	<b>This subsection was revised adding population impact by jurisdiction.</b>
3.8	<b>This subsection was revised updating information.</b>
3.9	<b>This subsection was revised updating information.</b>
3.10	<b>This subsection was significantly revised adding critical facilities by type and dollar value for each jurisdiction.</b>
3.11	<b>This subsection was revised updating information.</b>

## IV. Hazard Mitigation Strategies

The Federal Emergency Management Agency (FEMA) has required that each municipality within the jurisdiction of the study area develops a detailed hazard mitigation plan. This hazard mitigation plan is intended to serve as an aid in determining the current status of emergency preparedness and in estimating the resources required to correct any identified shortfalls in preparedness. Furthermore, the plan will serve as an outline for the long-term development of mitigation strategies and the implementation of mitigation measures.

### 4.1 Lawrence County Capabilities

Lawrence County developed its mitigation strategies by identifying capabilities currently in place with regard to emergency preparedness. The Lawrence County Emergency Management Agency (EMA) has conducted a self-assessment to identify inadequacies in its emergency preparedness plans.

#### Lawrence County is Storm Ready

On February 9, 2009 Lawrence County was designated as a “Storm Ready Community” for another 3 years. Lawrence County was previously designated as a “Storm Ready Community” on February 17, 2006 and April 4, 2003. To receive this recognition six areas of preparedness had to be documented. The county had to have a 24 hr. Warning Point as well as an established Emergency Operations Center and multiple (4) ways to monitor receive and disseminate severe weather information and warnings. The county had to have Weather Alert Warning Radios in major locations such as the Courthouse, City Hall, 9-1-1, hospital and school administrative offices. The Emergency Management Office had to document a history of biennial severe weather spotter training and at least quarterly community presentations on weather and weather preparedness. The county also had to have an established hazardous weather operations plan biennial visits to the local weather office and host annual visits to the county by weather officials.

<b>Lawrence County EMA Self Assessment Overview</b>		
<b>Activity</b>	<b>Reviewed/ Completed</b>	<b>Comments Plan of Action</b>
<b>Law and Authority</b>		
1. Has a search of all Federal, State Laws/Statutes and County/Municipal Codes Local Ordinances, Local Directives that pertain to Emergency Management and Emergency Response been completed?	Yes	
2. Have local documents been summarized for Elected Officials, Emergency Management Coordinators and Department/Agency Officials?	Yes	
3. Has a review of existing plans and annexes been completed to establish what powers and authorities have been identified or addressed?	Yes	



4. Has a training program been developed for employees that specifically outlines authorities, responsibilities, duties, and functions in times of emergency?	Yes	
5. Has what needs to be documented during emergency and disaster operations (to reduce litigation risk) been identified specifically?	Yes	
6. Has a review of current training standards and education for emergency responders and disaster workers been completed?	Yes	Education not addressed for responders and disaster workers.
<b>Risk Assessment</b>		
1. Has a hazard vulnerability analysis (HVA) for the jurisdiction been completed?	Yes	
2. Has the HVA been distributed to agencies and municipalities who need it? (Executive, planning, organizations, nearby entities, fire, police, etc.)	Yes	
3. Does the HVA contain a list of all known hazards existing within or affecting the jurisdiction?	Yes	
4. Does the HVA include: Demographics? Geography? Description of the hazards? Historical occurrences of incidents? People, property, or facilities vulnerable to hazards? Hazardous structures or hazards shown on maps? Critical facilities inventory?	Yes Yes Yes Yes Yes No Yes	
5. Indicate how you have used or plan to use grant funding to reduce vulnerability:		Hazmat training, weather warning systems.
6. What is the schedule for updating the HVA?		Every 5 years
<b>Mitigation</b>		
1. Is the HVA being used to educate elected, planning, zoning, code enforcement, permitting, etc, officials about the hazards associated with your county and their consequences?	Yes	
2. Do you have a mechanism in place to track monies spent by state and local agencies in your jurisdiction on mitigation projects on an annual basis?	Yes	
3. Are issues related to growth management in vulnerable areas formulated or revised using hazard mitigation opportunities?	Yes	
4. In your planning efforts have you addressed hazard mitigation and identified a process for all agencies (including Emergency Management) to follow in pre and post disaster situations?	Yes	
5. Have you identified all critical/vital facilities within your county?	Yes	
6. Are you involved in the development of your county's Intergovernmental Coordination Element of the County Comprehensive Plan?	Yes	
<b>Disaster Planning</b>		
1. Is there an ordinance for your local EMA?	Yes	
2. Does your EMA have a basic plan?	Yes	
3. Is the plan signed by executives?	Yes	

4. Does your EMA plan follow the Emergency Support Functions (ESF) concept?	Yes	
5. Do your local ESFs match the state's structure?	Yes	
6. Indicate how you have used, or plan to use, your grant funding to enhance emergency planning.		Updating plans, SOPS, Checklists
<b>Resource Identification</b>		
1. Does your EMA have a list of local government personnel and equipment?	Yes	
2. Do you have points of contact for municipal government personnel and equipment?	Yes	
3. Does your EMA have a list of private sector personnel and equipment?	Yes	
4. Does your EMA have procedures for activation of resources?	Yes	
5. Does the procedure include activation of individual municipal resources?	Yes	
6. Are volunteer personnel being specifically registered by emergency assignment classifications?	Yes	
7. Are volunteer personnel trained to carry out responsibilities?	Yes	Some are cross-trained could serve in more than one capacity.
<b>Training and Education</b>		
1. Has the EMA director received training in the past year?	Yes	
2. Has the EMA director participated in state-sponsored seminars in the past year?	Yes	
3. Is the local program based on all-hazards Comprehensive Emergency Management?	Yes	
4. Have local elected officials received briefing or training on all hazard CEM programs in the past year?	Yes	
5. Has training been conducted for EOC staff in the past year?	Yes	
6. Has volunteer training been provided in the past year? What types?	Yes	Radiological, Incident Management, Hazmat, & Weather
7. Does your EMA maintain records of training dates and personnel trained?	Yes	
8. Have local officials been trained to participate in Assessment Teams?	No	
9. Has staff received training to participate in Regional Response Teams?	Yes	
10. Have local officials received training in damage assessment techniques?	No	
11. Have local officials received training to serve as applicant agents for federal public disaster assistance?	No	
<b>Tests and Exercises</b>		
1. Have tests and/or exercises been conducted in the past year for: Response (on-scene) agencies? Warning systems? Emergency Broadcast System (EBS)? Emergency staff alert?	Yes	When? November 4 <sup>th</sup>

EOC activities? Individual annex(es) to plan(s)?		
<b>External Influences</b>		
1. Does your EMA maintain contact with the following external influences: Elected officials? Other agency heads? Media? Local business and industry? School officials? Municipalities?	Yes	
2. Have family emergency preparedness plans been prepared for emergency responders and EOC personnel?	No	
3. Are there procedures for recording and releasing casualty figures?	Yes	
4. Do any municipalities maintain emergency management programs?	No	County EMA
<b>Public Education</b>		
1. Are emergency preparedness handouts and other information available for public distribution?	Yes	
2. Have handouts and programs been prepared locally for hazards?	Yes	
3. Have appropriate Public Service Announcements (PSAs) been provided to local media?	Yes	
4. Have newspaper articles been written by local media on the local emergency services program or activities?	Yes	
5. Has an Emergency Public Information Officer (PIO) been designated by your local EMA?	Yes	
6. Is your local Operational Area Emergency Alert System (EAS) plan activation authority list current?	Yes	
7. Are the procedures for activating the local EAS current?	Yes	
8. Have agreements been made to provide emergency public information with local: Radio Stations? TV Stations? Cable TV? Chamber of Commerce? Newspapers?	Yes Yes Yes No No Yes	
9. Is there communication capability other than by telephone to provide information to media?	Yes	Fax Machine
10. Are there procedures for alternate methods of providing information to the media?	Yes	
<b>Communications</b>		
1. Does the jurisdiction have an Emergency Operations Center (EOC)?	Yes	
2. Is there a communication facility as part of the EOC?	Yes	
3. Is it also a central dispatch/9-1-1 center?	Yes	
4. Telecommunications (phone or radio) between the EOC and: Law Enforcement? Emergency medical?	Yes Yes	

Fire?	Yes	
Search and Rescue?	Yes	
Amateur Radio (RACES)?	Yes	
Adjacent entity (jurisdiction) EOC?	Yes	
State EOC?	Yes	
Public Works?	Yes	
Elected officials?	Yes	
5. Is back-up power available within the EOC?	Yes	
<b>Warning</b>		
1. Does your community have a 24-hour-a-day warning capacity?	Yes	
2. Are there warning procedures?	Yes	
3. Are procedures posted at the warning points?	Yes	
4. Is there an established warning “fan-out”?	Yes	
5. Does warning system include: Sirens? Pagers/Mobile Phones? EAS System? Individual NOAA weather radios? Nation Warning Systems (NAWAS)? Weather Wire?	Yes Yes Yes Yes Yes No	
6. Are rural areas covered by the warning systems?	Yes	Not all have out-door warning sirens.
<b>EOC Activation and Management</b>		
1. Can the local EMA director be contacted on a 24-hour-a-day basis?	Yes	
2. Is an alternate designated in writing if the director is unavailable?	Yes	
3. Is any other designated official available (on-call) 24-hours-a-day?	Yes	
<b>Disaster Declaration</b>		
1. Are your local elected officials aware of their disaster responsibilities?	Yes	
2. Are there written procedures for declaring a local Proclamation of Emergency?	Yes	
<b>Evacuation Strategies</b>		
1. Are major evacuation routes identified in your community?	Yes	
2. Are traffic control points identified?	Yes	
3. Are pre-designated shelter/destinations identified?	Yes	Handled by the Red Cross
4. Do agencies have specific evacuation functions?	Yes	Assist in traffic control-registration decontamination contact person.
<b>Weather Information and Equipment</b>		
1. Do you currently have the NOAA Weather Wire Service (NWS)?	No	
2. How does your EMA receive its weather information: The Weather Channel? Local television news weather? NOAA weather radio?	 Yes Yes	

Other? 800MZH	Yes Yes	Trained storm spotters
3. Do you receive: Satellite images? Radar data? Doppler radar or nexrad images?	Yes Yes Yes	
<i>Source: Lawrence County Emergency Management Agency</i>		

Each Municipality of Lawrence County has police, fire and emergency response capabilities. In addition, the county is served by the Lawrence County Sheriff’s Office and major transportation routes are served by the Alabama State Trooper’s Office. Lawrence County also has eleven (11) volunteer fire departments with three (3) sub-stations serving rural areas, and search and rescue capability. The Lawrence County Emergency Management Agency (EMA) coordinates emergency preparedness and response in the event of natural (or other emergency) hazard. The area is served by one major hospital, the Lawrence Medical Center, located in Moulton. The hospital has a disaster contingency plan in place in the event if disaster (see Appendix D for transportation and siren maps of Lawrence County).

#### **4.2 WHY MITIGATE?**

Natural hazards exist with or without the presence of humans and the development we produce. Natural disasters occur when the developed environment happens to be in the way of a natural event and human lives are affected. Mitigation is an ongoing process that attempts to lesson the impact of natural disasters by identifying and planning for the occurrence of natural hazards.

Natural disasters are cyclical. The interval between them may vary but not their ultimate inevitability. Communities must incorporate the expectation of future disasters into their planning and environmental consciousness. While the disasters are recurrent the pattern of recovering and rebuilding in the same place and manner that caused the developed areas to be vulnerable in the first place need not be. Effective mitigation breaks this cycle.

**The benefits of implementing hazard mitigation are plenty. The following list illustrates some of the more obvious:**

- Saving lives and reducing injuries
- Preventing or reducing property damage
- Minimizing agricultural losses
- Reducing economic losses
- Protecting infrastructure from damage
- Maintaining critical facilities in working order
- Minimizing social dislocation and stress
- Protecting mental health
- Limiting legal liability of public officials

- Fostering cooperation between community public and private entities
- Providing a positive template for post-disaster government action

### **4.3 HAZARD MITIGATION MEASURES**

The physical damage from a natural disaster is typically structural but the methods used to decrease the chance of such damage in the future need not be. A person can group mitigation measures into two large categories non-structural and structural. A community selects mitigation measures from within these broad categories depending upon its legal political institutional fiscal and technical capabilities both before and after a disaster. Communities make plans in the relative calm of normal community life however disasters have a tendency to introduce the unforeseen. That is why mitigation is an ongoing process. It takes place in relative calm while incorporating the lessons of previous catastrophes.

#### **NON-STRUCTURAL MITIGATION ACTIVITIES**

Non-structural choices are those that do not rely primarily on the construction of some type of structure to provide for mitigation in the face of a predictable future disaster. For instance the development and use of vulnerable land such as floodplains or potentially unstable slopes might be limited through planning land acquisition regulation or a combination of all three. Buildings zoning planning and/or code enforcement officials usually administer these activities.

Non-structural choices are often the least costly option for local governments. Another attraction of these choices is that they can help the local government accomplish its goal of protecting health and welfare despite not having the power to dictate activities to local private property owners. Most owners welcome the opportunity to reduce their risk once they become aware that they have exposure. Incentives can be all owners need to act.

#### **The following is a partial listing of useful non-structural mitigation methods:**

- Comprehensive planning allowing for growth while protecting the community
- Enacting zoning that will best protect the community assets
- Preserving open space providing buffer zones of protection
- Developing and enforcing building codes
- Managing storm water for both quantity and quality
- Maintaining and improving existing community drainage systems
- Relocating to less hazardous places
- Acquiring vulnerable building or parcels for relocation or conversion to a more impact resistance use
- Maintaining adequate hazard insurance

#### **Taking positive measures during a hazardous event to minimize its effect such as:**

- Warning the members of the community
- Protecting critical facilities
- Having a tested emergency response plan in place

- Evacuation

**Establishing an ongoing effort to inform the community of the hazards and what each person can do to decrease their risk. Typically communities do this by:**

- Publishing flood maps and data
- Publishing maps of potentially unstable slopes
- Publishing maps of soils unsuitable for different purpose
- Stocking the public library with resources from private and public sources
- Disclosing hazard potential information in real estate transactions
- Providing technical assistance
- Establishing public outreach projects
- Providing hazard education programs to all community constituencies

**Considering the protection already afforded by natural resources and maintaining that thought:**

- Wetlands protection
- Open space set-asides
- Using best management practices
- Using sediment and erosion control measures

## **STUCTURAL MITIGATION MEASURES**

Structural measures are just as the name implies. They are physical constructs typically designed by engineers to lessen the impact of a potential disaster of a particular size. *The picture to the right depicts a typical community storm shelter.* Essentially things are built to keep natural out or to keep them resigned in or to let them pass by while causing the minimal amount of damage or to strengthen existing building to withstand greater assaults. **A partial list of structural mitigation techniques would include:**



- Modifying stream channels so they can produce and accommodate faster flows
- Building levees or floodwalls to keep streams within their banks
- Building reservoirs to store excess water until they safely release it downstream
- Building stream diversion structures to direct floodwaters away from communities
- Building storm sewers to help drain the community as quickly as possible

- Retrofitting existing structures to withstand greater pressure from seismic waves or high winds

Specific mitigation measures cannot be applied blindly to any situation. Community leaders may elect to construct several combinations from a palette of choices.

The **Natural Hazards Center** located at the University of Colorado, Boulder Colorado USA is a national and international clearinghouse for information on natural hazards and how human behavior changes because of hazards and disaster researchers. The center's prime goal is to increase communications among hazard/disaster researchers and those individuals' agencies and organization actively working to reduce disaster damage and suffering.

With funds contributed by the National Science Foundation the Natural Hazards Center Quick Response Program enables social scientists to travel to the site of a disaster soon after it occurs to gain valuable information concerning immediate impact and response. The findings of these studies cover a board range of disasters both natural and human caused in diverse setting affecting all types of human communities.

#### **4.4 LAWRENCE COUNTY HAZARD MITIGATION STRATEGY GOALS & OBJECTIVES**

The mission of the Lawrence County Natural Hazards Mitigation Plan is to promote sound public policy designed to protect the citizens, private property, critical facilities, infrastructure, and the environment from the effects of natural hazards. The goals and objectives in the 2004 plan and the 2006 plan amendment were reviewed by the Lawrence County Hazard Mitigation Planning Committee and NARCOG staff and they were updated and reorganized as part of the plan update. The following goals, objectives and actions in this plan update have been jointly agreed upon as needed collectively in Lawrence County and each of the jurisdictions in mitigating risk from the effects of the identified natural hazards. The consistent implementation of these goals, objectives, and actions will over time, ensure that Lawrence County and its jurisdictions goals are achieved.

##### ***GOAL 1: To protect life and property from effects of all natural hazards***

##### **MITIGATION OBJECTIVES AND ACTIONS:**

- Promote activities that assist in protecting lives by making homes, businesses, infrastructure, critical facilities, and other property more resistant to losses from all identified natural hazards
- To increase public awareness of and preparedness for all natural hazards that the public is vulnerable to



- To provide adequate warning capability by providing warning sirens to provide warnings for all hazards
- Encourage the construction of community storm shelters/safe rooms to protect lives during severe storms and tornadoes
- Ensure that all hospitals, schools, and nursing home facilities have a severe weather plan in place to protect patients and students
- Reduce losses and repetitive damages for chronic flooding hazard events
- Develop and implement a debris clean-up plan for the county and participating jurisdictions. **(Implemented)**

***GOAL 2: To protect life and property from flooding by properly managing flood prone areas and natural resources **along with** continued participation in the National Flood Insurance Program to minimize damages and control the effects of flooding.***

**MITIGATION OBJECTIVES AND ACTIONS:**

- Encourage and improve existing and future zoning and subdivision regulations to properly manage identified flood plains
- **Administer a comprehensive floodplain management program which meets or exceeds the minimum standards of the NFIP**
  - **Promote the adoption and enforcement of a uniform flood hazard prevention ordinance with higher regulatory standards that discourage floodplain development and seek to maintain the natural functions of floodplains**
  - **Train local floodplain managers with programs offered through the state floodplain manager and FEMA**
  - **Seek and obtain membership for local floodplain managers in the Association of State Floodplain Managers**
- Encourage **and maintain** continued participation in the FEMA’s National Flood Insurance Program (NFIP)
  - **Promote and provide public access to the new Lawrence County DFIRM’s**
- Preserve, rehabilitate, and enhance natural systems to serve natural hazard mitigation functions

- Promote storm drainage maintenance programs and encourage new storm drainage infrastructure

***GOAL 3: To minimize the disruption of local infrastructures due to the effects of all natural disasters to include public utilities***

**MITIGATION OBJECTIVES AND ACTIONS:**

- Continue to maintain and upgrade public infrastructures and services.
- Suggest that new electrical distribution lines to be placed under ground.
- Ensure that all county and municipal structures are protected from lightning strikes.
- Develop a tree control program near power lines, county, municipal, and private utilities, enter into a pre-disaster contract.
- Encourage the installation of back-up generators in critical facilities
- Promote education training and certification of public works employees

***GOAL 4: To encourage partnerships and implementation of mitigation actions concerning the effects of all natural hazards***

**MITIGATIONS OBJECTIVES AND ACTIONS:**

- Strengthen communication and coordinate participation between the county government, local municipalities, citizens, public agencies, business, industry, non-profit organization and the private sector.
- Encourage leadership within public and private sector organizations to prioritize and implement local, county, and regional hazard mitigation activities

***GOAL 5: To promote public awareness education concerning all identified hazards***

**MITIGATION OBJECTIVES AND ACTIONS:**

- Develop, implement, and expand current education and outreach programs to increase public awareness of the risks associated with all natural hazards
- Educate property owners on the affordable individual mitigation and preparedness to be taken before all identified disaster events

- Provide information on tools, partnership opportunities, and funding resources to assist in implementing mitigation activities for all identified hazards

#### **4.5 MITIGATION ACTION PLAN**

Responsibility for hazard mitigation in Lawrence County is found at the local level and is shared between local governments and private and semi-private entities such as utility companies, hospitals, and business/industry entities. Primary responsibility of recommending and implementing the strategies necessary for hazard mitigation has typically been vested in the local governments. Therefore, the following section contains the mitigation action plans of Lawrence County and each of the five (5) jurisdictions.

The Lawrence County Hazard Mitigation Planning Committee reviewed the 2004 Plan Mitigation Actions and the 2006 Amended Mitigation Actions. From the results of the review, all mitigation actions from the original/amended plan for all participating jurisdictions were deemed still valid mitigation actions that had not been completed and the mitigation actions will be on going in the plan update. None of the Mitigation Actions were deleted or deferred. The jurisdiction of the Town of Town Creek submitted one new mitigation action not included for that jurisdiction in the last plan amendment in 2006. All Mitigation Actions/Projects were prioritized by the need of the jurisdiction (high, medium or low) and also considering the cost effectiveness review of the projects according to the FEMA Cost/Benefit Ratio to maximize benefits.

Each participating jurisdiction and the county submitted the mitigation actions. The proposed actions primarily focused on mitigation measures the county and the jurisdictions can implement to lessen and eventually prevent losses from future natural hazard events.

#### **Lawrence County Mitigation Actions**

Goal 1: Safety and protection of lives and property.

Objective:

- Encourage the building of community safe rooms.

Priority: High

Location: Lawrence County Rural areas.

Effects: New buildings and infrastructure

Mitigation: Identify sites, secure funding, and construct community safe rooms.

Est. Time: 1-3 Years-an on going action from the previous plan due to funding (*five applications for DR-1787/1797 HMGP funding have been submitted to FEMA*).

Est. Cost: \$35,000.00 -\$90,000 each

Responsible Agency: Lawrence County Commission and EMA.

Funding Sources: HMGP, Local, FEMA and State  
Hazard: Severe Storms and Tornadoes

Objective:

- Encourage the installation of back-up generators on critical facilities.

Priority: High

Location: Rural areas of Lawrence County

Effects: New and existing buildings and infrastructure

Mitigation: Identify sites, secure funding, and install back-up generators in critical facilities

Est. Time: 1-3 Years-an on going action from the previous plan due to funding

Est. Cost N/A

Responsibility Agency: Lawrence County Commission and Lawrence County EMA

Funding Sources: HMPG, Local, FEMA, and State

Hazards: All

Objective:

- To provide adequate warning capability for rural areas.

Priority: High

Location: Lawrence County rural areas

Effects: New and existing buildings and infrastructure

Mitigation: Identify area of need to install additional out-door warning sirens.

Est. Time: 1 – 3 years-an on going action from the previous plan due to funding

Est. Cost: \$27,000 for each siren

Responsible Agency: Lawrence County Commission and County EMA

Funding Sources: HMGP, State, and Local

Hazards: All, especially Severe Storm and Tornadoes

Goal 2: To protect population and properly manage flood prone areas and natural resources along with continued participation in the NFIP to minimize damage to property and reduce and control the effects of flooding.

Objectives:

- Improve existing and encourage future zoning and subdivision regulations to properly manage identified flood plains
- Administer a comprehensive floodplain management program which meets or exceeds the minimum standards of the NFIP

- Promote the adoption and enforcement of a uniform flood hazard prevention ordinance with higher regulatory standards that discourage floodplain development and seek to maintain the natural functions of floodplains
  - Train local floodplain managers with programs offered through the state floodplain manager and FEMA
  - Seek and obtain membership for local floodplain managers in the Association of State Floodplain Managers
- Encourage and maintain continued participation in the FEMA’s National Flood Insurance Program (NFIP)
    - Promote and provide public access to the new Lawrence County DFIRM’s
  - Preserve, rehabilitate, and enhance natural systems to serve natural hazard mitigation functions
  - Promote storm drainage maintenance programs and encourage new storm drainage infrastructure

Priority: High

Location: Lawrence County

Effects: New and existing buildings and infrastructure

Mitigation: Improve drainage, add new culverts, and clean out culverts as needed.

Est. Time: N/A

Est. Cost: N/A

Responsible Agency: Lawrence County

Funding Sources: CDBG, FEMA, HMGP, and local

Hazards: Flooding

Mitigations Actions:

- Provide Notification and Early Warning Siren Devices
- Clear and grub drainage ditches and waterways
- Provide Generators
- Provide Storm Shelters/Safe Rooms
- Investigate Flood Prone Zoning Authority in the Code of Alabama
- Encourage use of vacant schools and gyms to house displaced persons after natural hazard events
- Provide a new fire training center (Moulton and Town Creek area)
- Provide rescue boats (Valley area)

## Town of Courtland Mitigation Actions

Goal 1: To protect population and properly manage flood prone areas and natural resources along with continued participation in the NFIP to minimize damage to property and reduce and control the effects of flooding.

### Objectives:

- Improve existing and encourage future zoning and subdivision regulations to properly manage identified flood plains
- Administer a comprehensive floodplain management program which meets or exceeds the minimum standards of the NFIP
  - Promote the adoption and enforcement of a uniform flood hazard prevention ordinance with higher regulatory standards that discourage floodplain development and seek to maintain the natural functions of floodplains
  - Train local floodplain managers with programs offered through the state floodplain manager and FEMA
  - Seek and obtain membership for local floodplain managers in the Association of State Floodplain Managers
- Encourage and maintain continued participation in the FEMA's National Flood Insurance Program (NFIP)
  - Promote and provide public access to the new Lawrence County DFIRM's
- Preserve, rehabilitate, and enhance natural systems to serve natural hazard mitigation functions
- Promote storm drainage maintenance programs and encourage new storm drainage infrastructure
- To take measures to get the Corp. of Engineers to clean out the Big Nance Creek water shed.

Priority: High

Location: City of Courtland, Big Nance Creek

Effects: New and existing buildings and infrastructure

Mitigation: To get Big Nance Creek watershed cleaned out.

Est. Time: 1 – 2 Years-an on going action from the previous plan due to funding

Est. Cost: N / A

Responsible Agency: Local, Corp. of Engineers, EMA

Funding Sources: Federal, Local, HMGP, CDBG, and US Corp of Engineers  
Hazards: Flooding

Goal 2: Safety and protection of lives and property.

Objective:

- Encourage the building of community safe rooms.

Priority: High

Location: City of Courtland

Effects: New buildings and infrastructure

Mitigation: Seek funding and construct community safe rooms.

Est. Time: 1-3 years-an on going action from the previous plan due to funding

Est. Cost: \$40,000-\$90,000

Responsible Agency: City of Courtland and EMA.

Funding Sources: City of Courtland, HMGP, and EMA

Hazards: Severe Storms and Tornadoes

Objective:

- Encourage the installation of back-up generators in critical facilities.

Priority: High

Location: City of Courtland

Effects: New and existing buildings and infrastructure

Mitigation: Identify sites, secure funding, and install back-up generators in critical facilities

Est. Time: 1-3 Years-an on going action from the previous plan due to funding

Est. Cost N/A

Responsibility Agency: City of Courtland, County, Local

Funding Sources: City of Courtland, HMPG, Local

Hazards: All

Mitigation Actions:

- Provide Notification and Early Warning Siren Devices
- Clear and grub drainage ditches and waterways
- Provide Generators
- Provide Storm Shelters/Safe Rooms
- Prepare a Big Nance Creek Feasibility Study
- Replace 3 bridges (Big Nance Creek most important)

## Town of Hillsboro Mitigation Actions

Goal 1: To protect human life, health, and safety.

Objective:

- Encourage the building of community storm safe rooms.

Priority; High

Location: Town of Hillsboro

Effects: New buildings and infrastructure

Mitigation: Identify area, seek funding, and construct community storm safe rooms.

Est. Time: 1 – 3 years-an on going action from the previous plan due to funding

Est. Cost: \$50,000-\$90,000

Responsibility Agency: Town of Hillsboro, County, Local

Funding Sources: Town of Hillsboro, HMPG, County, Local

Hazards: All Hazards, especially Severe Storms and Tornadoes

Objective:

- Encourage the installation of back-up generators on critical facilities.

Priority: High

Location: Town of Hillsboro

Effects: New and existing buildings and infrastructure

Mitigation: Identify sites, secure funding, and install back-up generators in critical facilities

Est. Time: 1-3 Years-an on going action from the previous plan due to funding

Est. Cost N/A

Responsibility Agency: Town of Hillsboro, County, Local

Funding Sources: Town of Hillsboro, HMPG, County, Local

Hazards: All

Goal 3: To protect population and properly manage flood prone areas and natural resources along with continued participation in the NFIP to minimize damage to property, to reduce and control the effects of flooding.

Objectives:

- Improve existing and encourage future zoning and subdivision regulations to properly manage identified flood plains
- Administer a comprehensive floodplain management program which meets or exceeds the minimum standards of the NFIP



- Promote the adoption and enforcement of a uniform flood hazard prevention ordinance with higher regulatory standards that discourage floodplain development and seek to maintain the natural functions of floodplains
  - Train local floodplain managers with programs offered through the state floodplain manager and FEMA
  - Seek and obtain membership for local floodplain managers in the Association of State Floodplain Managers
- Encourage and maintain continued participation in the FEMA’s National Flood Insurance Program (NFIP)
    - Promote and provide public access to the new Lawrence County DFIRM’s
  - Preserve, rehabilitate, and enhance natural systems to serve natural hazard mitigation functions
  - Promote storm drainage maintenance programs and encourage new storm drainage infrastructure

Priority: High

Location: Town of Hillsboro

Effects: New and existing buildings and infrastructure

Mitigation: Improve drainage, add new culverts, and clean out culverts as needed.

Est. Time: N/A

Est. Cost: N/A

Responsible Agency: Town of Hillsboro

Funding Sources: Local, CDBG, and HMGP

Hazards: Flooding

Mitigation Actions:

- Provide Notification and Early Warning Siren Devices
- Clear and grub drainage ditches and waterways
- Provide storm water drainage facilities and culverts
- Provide Generators
- Provide Storm Shelters/Safe Rooms
- Provide Fire Hydrants

## City of Moulton Mitigation Actions

Goal 1: To protect population and properly manage flood prone areas and natural resources along with continued participation in the NFIP to minimize damage to property, to reduce and control the effects of flooding.

### Objectives:

- Improve existing and encourage future zoning and subdivision regulations to properly manage identified flood plains
- Administer a comprehensive floodplain management program which meets or exceeds the minimum standards of the NFIP
  - Promote the adoption and enforcement of a uniform flood hazard prevention ordinance with higher regulatory standards that discourage floodplain development and seek to maintain the natural functions of floodplains
  - Train local floodplain managers with programs offered through the state floodplain manager and FEMA
  - Seek and obtain membership for local floodplain managers in the Association of State Floodplain Managers
- Encourage and maintain continued participation in the FEMA's National Flood Insurance Program (NFIP)
  - Promote and provide public access to the new Lawrence County DFIRM's
- Preserve, rehabilitate, and enhance natural systems to serve natural hazard mitigation functions
- Promote storm drainage maintenance programs and encourage new storm drainage infrastructure

Priority: High

Location: City of Moulton

Effects: New and existing buildings and infrastructure

Mitigation: Improve drainage, add new culverts, and clean out culverts as needed.

Est. Time: Ongoing 1-2 years-an on going action from the previous plan due to funding

Est. Cost: \$150,000

Responsible Agency: City of Moulton

Funding Sources: City of Moulton, CDBG, and HMGP

Hazards: Flooding

Goal 2: To protect life, health, and safety.

Objective:

- Encourage the installation of back-up generators on critical facilities.

Priority: High

Location: City of Moulton

Effects: New and existing buildings and infrastructure

Mitigation: Identify sites, secure funding, and install back-up generators in critical facilities

Est. Time: 1-3 Years-an on going action from the previous plan due to funding

Est. Cost N/A

Responsibility Agency: City of Moulton, County, Local

Funding Sources: City of Moulton, HMPG, Local

Hazards: All

Objectives:

- Encourage the building of community storm safe rooms.
- Identify existing buildings as safe storm safe rooms.

Priority: High

Location: City of Moulton

Effects: Existing buildings and infrastructure

Mitigation: To identify existing buildings that is safe for community shelter use.

Est. Time: 1 – 3 years-an on going action from the previous plan

Est. Cost: N/A

Responsible Agency: City of Moulton, County EMA

Funding Sources: City of Moulton, HMGP, Local

Hazards: Severe Storms and Tornadoes

Priority: High

Location: City of Moulton

Effects: New buildings and infrastructure

Mitigation: Identify location, seek funding, and construct community safe rooms

Est. Time: 1 – 5 years-an on going action from the previous plan due to funding (one community safe room funded from DR-1605 HMGP will be completed early 2010)

Est. Cost: \$50,000-\$600,000

Responsible Agency: City of Moulton, County EMA

Funding Sources: Local, HMGP, FEMA

Hazards: Severe Storms and Tornadoes

Mitigation Actions:

- Provide Notification and Early Warning Siren Devices
- Clear and grub drainage ditches and waterways
- Provide Generators (city hall, WWTP, NHC, water treatment plant, and Lawrence Medical Center)
- Provide Storm Shelters/Safe Rooms (1 community safe room will be completed early 2010)
- Create Floodplain Overlay Zoning District
- Purchase new ladder truck

**Town of North Courtland Mitigation Actions**

Goal 1: To protect human life, health, and safety.

Objective:

- Encourage the building of community storm safe rooms.

Priority: High

Location: Town of North Courtland

Effects: New buildings and infrastructure

Mitigation: Identify area, seek funding, and construct community storm safe rooms.

Est. Time: 1 – 3 years-an on going action from the previous plan due to funding

Est. Cost: \$50,000-\$90,000

Responsible Agency: Local, County EMA

Funding Sources: HMGP, FEMA, Local

Hazards: Severe Storms and Tornadoes

Objective:

- Encourage the installation of back-up generators.

Priority: High

Location: Town of North Courtland

Effects: New and existing buildings and infrastructure

Mitigation: Identify sites, secure funding, and install back-up generators in critical facilities

Est. Time: 1-3 Years-an on going action from the previous plan due to funding

Est. Cost N/A

Responsibility Agency: Town of North Courtland, County, Local

Funding Sources: Town of North Courtland, HMPG, Local

Hazards: All

Goal 3: To protect population and properly manage flood prone areas and natural resources along with continued participation in the NFIP to minimize damage to property, to reduce and control the effects of flooding.

Objectives:

- Improve existing and encourage future zoning and subdivision regulations to properly manage identified flood plains
- Administer a comprehensive floodplain management program which meets or exceeds the minimum standards of the NFIP
  - Promote the adoption and enforcement of a uniform flood hazard prevention ordinance with higher regulatory standards that discourage floodplain development and seek to maintain the natural functions of floodplains
  - Train local floodplain managers with programs offered through the state floodplain manager and FEMA
  - Seek and obtain membership for local floodplain managers in the Association of State Floodplain Managers
- Encourage and maintain continued participation in the FEMA's National Flood Insurance Program (NFIP)
  - Promote and provide public access to the new Lawrence County DFIRM's
- Preserve, rehabilitate, and enhance natural systems to serve natural hazard mitigation functions
- Promote storm drainage maintenance programs and encourage new storm drainage infrastructure

Priority: High

Location: Town of North Courtland

Effects: New and existing buildings and infrastructure

Mitigation: Improve drainage, add new culverts, and clean out culverts as needed.

Est. Time: N/A

Est. Cost: N/A

Responsible Agency: Town of North Courtland

Funding Sources: Local, CDBG, and HMGP

Hazards: Flooding

Mitigation Actions:

- Provide Notification and Early Warning Siren Devices
- Clear and grub drainage ditches and waterways
- Provide Generators
- Provide Storm Shelters/Safe Rooms
- Construct a Town Hall/Police/Fire Station

**Town of Town Creek Mitigation Actions**

Goal 1: To protect population and properly manage flood prone areas and natural resources along with continued participation in the NFIP to minimize damage to property, to reduce and control the effects of flooding.

Objectives:

- Improve existing and encourage future zoning and subdivision regulations to properly manage identified flood plains
- Administer a comprehensive floodplain management program which meets or exceeds the minimum standards of the NFIP
  - Promote the adoption and enforcement of a uniform flood hazard prevention ordinance with higher regulatory standards that discourage floodplain development and seek to maintain the natural functions of floodplains
  - Train local floodplain managers with programs offered through the state floodplain manager and FEMA
  - Seek and obtain membership for local floodplain managers in the Association of State Floodplain Managers
- Encourage and maintain continued participation in the FEMA's National Flood Insurance Program (NFIP)
  - Promote and provide public access to the new Lawrence County DFIRM's
- Preserve, rehabilitate, and enhance natural systems to serve natural hazard mitigation functions
- Promote storm drainage maintenance programs and encourage new storm drainage infrastructure

Priority: High

Location: Town of Town Creek

Effects: New and existing buildings and infrastructure

Mitigation: Clean out Warren Branch that flows through town; clean out on the south side of Highway 20, clean out ditches and culverts, open up culverts 300 feet high and 24 feet wide on the North side of Highway 20.

Est. Time: 6 months-an on going action from the previous plan due to funding

Est. Cost: \$30,000

Responsible Agency: Town of Town Creek, Lawrence County EMA, ALDOT

Funding Sources: Local, CDBG, and HMGP

Hazards: Flooding

Goal 2: To protect human life, health, and safety.

Objective:

- To provide adequate warning capability for the township.

Priority: High

Location: Town Creek

Effects: New and existing buildings and infrastructure

Mitigation: Identify area to install additional out-door warning sirens.

Est. Time: 1 – 2 years-an on going action from the previous plan due to funding (DR-1605-HMGP funded two siren completed in 2009)

Est. Cost: \$27,000 for each siren

Responsible Agency: Town of Town Creek, County EMA

Funding Sources: HMGP, and Local

Hazards: All

Objective:

- Encourage the installation of back-up generators on critical facilities.

Priority: High

Location: Town of Town Creek

Effects: New and existing buildings and infrastructure

Mitigation: Identify sites, secure funding, and install back-up generators in critical facilities

Est. Time: 1 – 3 years-an on going action from the previous plan due to funding

Est. Cost: \$40,000

Responsible Agency: Town of Town Creek, County EMA

Funding Sources: HMGP, and Local

Hazards: All

Objective:

- Encourage the building of community safe rooms.

Priority: High

Location: Town of Town Creek

Effects: New buildings and infrastructure

Mitigation: Seek funding and construct community safe rooms.

Est. Time: 1-3 Years-a new mitigation action

Est. Cost: \$40,000-\$90,000

Responsible Agency: Town of Town Creek and County EMA.

Funding Sources: Local, County, HMGP, and EMA

Hazards: Severe Storms and Tornadoes

Mitigation Actions:

- Provide Notification and Early Warning Siren Devices
- Clear and grub drainage ditches and waterways
- Provide Generators
- Provide Storm Shelters/Safe Rooms

#### **4.6 Summary of Plan Updates**

This section of the 2004 Plan was reviewed by the Lawrence County Hazard Mitigation Planning Committee, Lawrence County EMA, and the NARCOG staff. While portions of this section remain unchanged and are still valid, revisions and organizational changes have been made as part of the update process. The table below provides more detail:

<b>Section</b>	<b>Change</b>
<b>4.1</b>	<b>This subsection was revised.</b>
<b>4.2</b>	<b>This subsection is unchanged, but has been moved from the “Introduction” of the 2004 Plan.</b>
<b>4.3</b>	<b>This subsection is unchanged, but has been moved from the “Introduction” of the 2004 Plan.</b>
<b>4.4</b>	<b>This subsection was revised updating information</b>
<b>4.5</b>	<b>This subsection was significantly revised updating information.</b>



## V. Mitigation Plan Maintenance

### 5.1 The Planning Cycle

This chapter presents a continuous cycle for monitoring, evaluating, and updating the *Lawrence County Natural Hazards Mitigation Plan*; the process for incorporating mitigation strategies into other ongoing planning activities; and methods for continuing public involvement. Continual plan maintenance ensures an active and relevant hazard mitigation planning process.

### 5.2 Plan Maintenance Procedures

The *Lawrence County Natural Hazards Mitigation Plan* will be reviewed annually and updated every five (5) years. The update will allow the Committee to determine whether there have been any significant changes in the county and municipalities that may necessitate changes in the type of proposed mitigation actions and to evaluate actions completed.

The Lawrence County Hazard Mitigation Planning Committee will be responsible for overall plan maintenance and implementation. The Lawrence County EMA staff will continue to serve as the Committee's facilitator and the Committee's liaison with the participating municipalities and the County Commission. The Lawrence County EMA staff will be responsible for holding meetings to review goals and objectives to determine their effectiveness to changing situations in the county as well as changes in local government, state or federal regulations and policies to review changes in land development, population growth, programs and activities that may affect mitigation actions and strategies. This review will allow for any revision of hazard vulnerability risk factors and mitigation strategies.

- New committee members may be appointed by the Lawrence County EMA Director.
- The Lawrence County EMA and Hazard Mitigation Planning Committee will review the plan following a disaster declaration to address specific circumstances from the event.
- The facilitator (Lawrence County EMA) will schedule the committee meetings at a time and location convenient to all of the committee members. The Annual Hazard Mitigation Planning Committee meeting will be held in March in conjunction with the Local Emergency Planning Committee (LEPC) meeting. All meetings will be advertised in the local newspaper and be open to the public.

### **5.3 Implementation & Incorporation of the Existing Plan into other Planning Mechanisms**

The *Lawrence County Natural Hazards Mitigation Plan* will be adopted as a separate document as an annex to the *Lawrence County Emergency Operations Plan* which is administered by the Lawrence County Emergency Management Agency.

Each participating jurisdiction will be responsible for implementing individual specific mitigation actions based on funding availability, availability of resources, and jurisdiction priorities. With this being a multi-jurisdiction plan, the incorporation into existing and future plans and programs will vary between jurisdictions. This will allow individual jurisdictions to update their mitigation actions as needed without altering the broader scope of the multi-jurisdiction plan.

The Lawrence County Hazard Mitigation Planning Committee recognizes the importance of incorporating of hazard mitigation planning and implementation measures into existing local plans, regulatory tools, and related programs. The *Lawrence County Natural Hazards Mitigation Plan* is intended to influence each jurisdiction's planning decisions concerning land use, public facilities, infrastructure, and development. Any updates to the *Lawrence County Emergency Operations Plan*, local comprehensive plans, capital Improvement Plans, subdivision regulations, zoning ordinances and maps, building codes, and any other related development controls should be consistent with the goals, objectives, and mitigation measures adopted in this plan. Each jurisdiction's commitment to this consistency is reflected in its respective mitigation action program. As part of the subsequent five-year update process, all existing local planning mechanisms should again be reviewed for effectiveness and recommendations for new incorporation opportunities should be carefully considered.

Presently, there are no existing plans or regulations in Courtland, Hillsboro, North Courtland, or Town Creek to incorporate mitigation measures into. However, the Town of North Courtland is in the process of preparing a comprehensive plan that will include the mitigation measures identified in this plan. Lawrence County has subdivision regulations and the City of Moulton has subdivision regulations and a zoning ordinance and map. In regards to any future planning efforts, the county and each jurisdiction were asked to provide information to the Lawrence County EMA Director as they occur. This exchange of information will ensure that mitigation measures are incorporated into any future planning efforts.

### **5.4 Continuing Public Involvement**

A critical part of maintaining an effective and relevant natural hazard mitigation plan is ongoing public review and comment. Consequently, the Hazard Mitigation Planning Committee is dedicated to direct involvement of its citizens in providing feedback and comments on the plan through-out the five-year implementation cycle.

Therefore, a copy of the plan will be available for viewing at all appropriate agencies throughout Lawrence County, at a minimum to include the Lawrence County EMA office, the office of the Lawrence County Commission, and the offices of each municipalities Mayor. Also, the plan will be available on the NARCOG website at [www.narcog.gov](http://www.narcog.gov).

Public meetings will be held when significant modifications to the plan are required or when otherwise deemed necessary by the Hazard Mitigation Planning Committee. The public will be able to express their ideas, concerns, and opinions at the meetings. At a minimum, the public hearings will be held during the drafting stage of the five-year plan update and to present the final plan to the public before adoption.

### **5.5 Summary of Plan Updates**

This section of the 2004 Plan was reviewed by the Lawrence County Hazard Mitigation Planning Committee, Lawrence County EMA, and the NARCOG staff. While portions of this section remain unchanged and are still valid, revisions and organizational changes have been made as part of the update process. The table below provides more detail:

<b>Section</b>	<b>Change</b>
<b>5.1</b>	<b>This subsection is new.</b>
<b>5.2</b>	<b>This subsection revises the “Mitigation Plan Maintenance” portion of the 2004 Plan.</b>
<b>5.3</b>	<b>This subsection was revised updating information.</b>
<b>5.4</b>	<b>This subsection was revised updating information.</b>

# **APPENDIX A**

**Lawrence County Hazard Mitigation Planning Committee**

**Meeting #1  
Lawrence County EMA  
December 4, 2008  
10:00AM**

**AGENDA**

- I. Welcome and Introductions
- II. Planning Process Overview & Requirements
- III. Planning Committee Responsibilities & Requirements
- IV. Mission Statement Development Exercise
- V. Risk Assessment Exercises
- VI. Committee Assignments
- VII. Next Meeting
- VIII. Adjourn

Lawrence County Hazard Mitigation Planning Committee  
Meeting #1

Lawrence County EMA

December 4, 2008

10:00AM

Name	Agency/Town	Title	Address	Phone Number	Email
X Brenda MORGAN	Lawrence Co EMA	Deputy Director	555 Walnut St Moulton, AL 35650	974-7641	brenda.morgan@charter.net
X TYPON MAULTON	Lawrence Co EMA	Director	PO Box 218 Moulton	905-3124	TYRON.NEWTON@DHR.ALABAMA.GOV
X MILIARD FROST	Lawrence Co EMA	Director	555 Walnut St Moulton, AL 35650	256-974-2424	mfrost@charter.net
X JOEY HESTER	NARCOG	Director of Planning	216 Jackson St, SE. Decatur, AL 35601	355-4515	joey.hester@adss.alabama.gov
PEGGY KING	Law Co Comm	Co Admin	12001 AL Highway Moulton	974-0663	peggyk@lawrenceco-al.org
LAUREN JOHNSON	Amur. Red Cross	Dir of Comm. Serv.	431 Kelly St. 370 Ch. Rd. 258 Town Creek, AL	353-4891	ljohnson@morglawredcross.org
SUSAN LETSON	T C F D	Firefighter		566-4532	letsonse@hiway.net
X TAMMY VINSON	Law Co EMA	TUA Planner	555 Walnut St Moulton	974-7641	tvinson@charter.net/ncipn
SANDRA NASSER	ADPH	Surveillance Nurse	201 Gordon Dr Decatur, AL 35601	340-2113	sandra.nasser@state.ak.us
LYNDON McKEITHEN	Moulton P.D.	Chief	720 Seminary St 271 Alabama St P.O. Box 1600 Moulton	974-3961	lmcKeithen@Bellsouth.net
X ROGER ODELL	Countland PD	Chief		637-2701	cpol4@bellsouth.net
HAROLD CLETON	Law Co 911	Dispatcher	555 WALNUT ST MOULTON, AL	974-7641	HAROLD@AEL.COM

**Lawrence County Hazard Mitigation Planning Committee**

**Meeting #2  
Lawrence County EMA  
March 12, 2009  
1:00PM**

**AGENDA**

- I. Welcome and Introductions
- II. Review Draft Mission Statement
- III. Hazard Identification & Preliminary Risk Assessment Results
- IV. Wildland-Urban Interface Presentation – Alabama Forestry Commission
- V. Committee Assignments
- VI. Next Meeting
- VII. Adjourn

Lawrence County Hazard Mitigation Planning Committee

Meeting #2

Lawrence County EMA

March 12, 2009

1:00PM

Name	Agency/Town	Title	Address	Phone Number	Email
TAMMY VINSON	Law Co EMA	TVA Planner	555 Walnut St Moulton, AL 35650	974-7641	tjvinson@chgrt.com
Sandra Nassetta	Area 2-ADPH	Surveillance Nurse	201 Gordon Decatur, 35601	256-301-6708	Sandra.Nassetta@adph.state.al.us
Susan Letson	TCFD	Fire Fighter	1208 Main St Town Creek AL 35072	566-4532	letsonsehi.waacy.net
Joan Hester	MARCOG	Director of Planning	216 Jackson St. Decatur, AL 35601	351-4515	joey.hesterc@eds.alabamagov
Harold Frost	Law Co EMA	Director	555 Walnut St Moulton, AL	974-7641	letsonsehi.waacy.net
Mitch Craft	Forestry/Lewis	Co. Supervisor	1200 Al. Hwy 157 Moulton, AL	974-8168	
Daniel Caggans	Forestry/Cobert	Ranger	1101 Hwy 72 East Tusculum, AL 35674	381-4576	
Jeff Britnell	Joe Wheeler EMC	Manager of Engineering	25700 AL Hwy 24 Trinity, AL 35673	552-2312	jbritnell@jwemc.org
Harold Allen	Law. Co. Commission		2870 Co. Rd. 59 Moulton, AL 35650	974-1989	
Zed Letson	Town of Corinth	Mayor	P.O. Box 6 Corinth, AL 35606	687-2707	T.H.L@AOL.com
Audrey Orme	Lawrence Medical Center	Director of ER+ICU	202 Hospital St. Moulton, AL 35650	974-2197	audrey.orme@lawrencemedicalcenter.com
Lyndon McWhorter	Moulton P.D.	Chief	720 Seminway St Moulton, AL 35650	974-3961	lcsireen@bellsouth.net
Brenda Murray	Law Co EMA	Deputy Director	555 Walnut St Moulton, AL	974-7641	brenda.murray@cheffer.net
Coleen Vansant	AFC	Wildland Urban Interface Coord.	6650 Old Hwy 31 N Gardendale, AL	256-347-1785	coleen.vansant@forestry.alabamagov
HAROLD LETSON	911	911 DISPATCHER	555 WALNUT ST MOULTON, AL 35650	256-974-7641	alabamagov
					hrs115@cheffer.net



**Lawrence County Hazard Mitigation Planning Committee**

**Meeting #3  
Lawrence County EMA  
June 4, 2009  
10:00AM**

**AGENDA**

- I. Welcome and Introductions
- II. Review Hazard Profiles
- III. Identify Assets, Critical Facilities, and Estimated Losses
- IV. Discuss FEMA's FY 2010 Unified Hazard Mitigation Assistance Guidance & Letter of Intent
- V. Committee Assignments
  - a. Review Goals & Strategies / Provide Input
- VI. Set Next Meeting
- VII. Adjourn

**Lawrence County Hazard Mitigation Planning Committee**  
**Meeting #3**  
**Lawrence County EMA**  
**June 4, 2009**  
**10:00AM**

Name	Agency/Town	Title	Address	Phone Number	Email
MAJOR DAVID CRANDOCK	THE SALVATION ARMY			256-353-2822 (w) 256-257-6619 (c)	
Doyle Dutton	USDA/FSA Moulton AL	County Executive Director	13075 N Hwy 157 Moulton AL 35650 P.O. BOX 460	256-974-1174 Ext. 100	
KEN McGEE	JOE WHEELER EMC	DISTRIBUTION ENGR	TRINITY AL 35870	256-552-2309	
Tom Lyson	City of Moulton	Mayor	P.O. Box 160 Moulton AL	256-637-2707	
Raymond King	Law Co. Comm	Admin	P.O. Box 307 Moulton	256-974-0663	
Paul McWhorter	Moulton P.D.	Chief	720 Seminary St	974-3961	
HAROLD KNIGHTEN	LAW. CO. S.O.	MAJOR	242 PARKER RD MOULTON	974-2526	
Scottie Bolden	Hillsboro	COUNCILMAN PARK & REC.	P.O. Box 7 Hillsboro, AL 35644	637-6111	
Ronald Burke	Law. Co. Hwy.	Asst. Co. Engr.	P.O. Box 275 Moulton	974-2478	
Mike Realey	"	Co. Engr	"	974-2480	
Leah Johnson	Law. Co. Engineer	County Election Candidate	13015 Al. Hwy 157 Moulton, AL 35650 P.O. 190	974-2464	
Stevie Lindsey	Town Creek P.D.	officer	Town Creek AL 35672	685-3200	
Whitney Shulley	City of Moulton	City Clerk	714D Seminary St. Moulton	974-5191	
Alfred Priest	Law Co. EMA	Director	555 Walnut St Moulton	974-5881	



**Lawrence County Hazard Mitigation Planning Committee**

**Meeting #4  
Lawrence County EMA  
August 6, 2009  
10:00AM**

**AGENDA**

- I. Welcome and Introductions
- II. Review Mitigation Strategies & Actions Exercise Results
- III. Review Critical Facilities Exercise Results
- IV. REMINDER: FEMA's FY2010 Unified Hazard Mitigation Assistance Guidance & Letter of Intent
- V. Next Steps
- VI. Set Public Hearings
- VII. Adjourn

Lawrence County Hazard Mitigation Planning Committee  
 Meeting #4  
 Lawrence County EMA  
 August 6, 2009  
 10:00AM

Name	Agency/Town	Title	Address	Phone Number	Email
TAMMY VINSON	Law. Co EMA	TWA Planner	555 Walnut St Moulton, AL	974-7641	tvinson@charterwater.com
SUSAN LETSON	Town Creek	Fire Fighter	1608 Main St Town Creek AL	666-4532	letsons@hiway.net
STEVEN TERRY	Courtland P.I.	Patrolman	P.O. Box 160 Courtland AL 35618	256 637-2701	Norm
DOYLE DUTTON	USDA/FSA	Director	13075 Hwy 157 Moulton AL 35660	974-1174	
ZILLIAC ROGERS	USDA/FSA	Field Agent	13075 Al Hwy 157 Moulton, AL 35660	974-1174	
RONALD BURKE	Law. Co. Hwy Dept	Asst. Co. Eng.	P.O. Box 275 Moulton, AL	974-2428	
RODNEY DANDREA	Law. Co.	Lab. Tech	P.O. Box 275 Moulton, AL	974-2428	
JASON GUNZ	Courtland	Clerk	509 Main St Courtland, AL 35614	637-2707	
MARK THOMAS	Courtland	Supervisor	1580 Courtland Town Creek	256-2335	
FRED LETSON	Courtland LAWRENCE CO SHERIFFS OFFICE	Mayor	P.O. Box 160 Courtland AL 35660	221 4737	
HAROLD KNIGHTEN	Moulton Police Dept	CAPT	442 PARKER RD MOULTON, AL 35660	974-2526	
DANNON MORGAN	JWEMC	Manager of Engineering	720 Seminary St Moulton, AL 35660	974-3961	jbrinnell@jwemc.org
JEFF BRITNELL	USDA/FSA	FARM LOAN MGR.	P.O. Box 460 Trinity AL 35673	552-2312	
RICKY KNOWFF	USDA/FSA	FARM LOAN MGR.	13075 Al Hwy 157 Moulton, AL 35660	974-1174	RICKY.KNOWFF@AL.USDA.GOV

Lawrence County Hazard Mitigation Planning Committee  
 Meeting #4  
 Lawrence County EMA  
 August 6, 2009  
 10:00AM

Name	Agency/Town	Title	Address	Phone Number	Email
Scott Norwood	Covington FIRE	Chief	P.O. Box 593 Covington, AL 35618	256-214-2534	nfirefly@medic@yahoo.com
X Brenda Morgan	Law. Co. EMA	Deputy Director	555 Walnut St. Moulton, AL 35650	256-974-7641	brenda.morgan@charter.net
Peggy King	Law Co. Commission	County Administrator	PO Box 507 Moulton AL AL 35650	256-974-0663	peggyk@lawrenceco-al.org
Greg Duffin	Moulton	Water Superintendent	720 Seminary St	256-214-0770	moultonwater@bellsouth.net
Patrick R. Jolly	Moulton Fire	Fire Chief	909 East St Moulton, AL	256-974-0279	moultonfire@bellsouth.net
Shirley Gilley	City of Moulton	City Clerk	720 Seminary St.	256-974-5191	MULTICITY@BellSouth.net
Audrey Craine	Lawrence Medical Center	Director of ER + ICU	202 Hospital St Moulton, AL	256-974-2197	Audrey.Craine@lawrencemedicalcenter.com
X Willard Frost	Lawrence Co. Fire	Director	555 Walnut St Moulton, AL 35650	256-974-7641	ifrost@charter.net
X Joey Hester	NATRCOB	Director of Planning	216 Jackson St., SE Decatur, AL	353-4515	joey.hester@adss.alabama.gov

**Lawrence County Hazard Mitigation Planning Committee**

**Meeting #5  
Lawrence County EMA  
October 15, 2009  
8:00AM**

**AGENDA**

- I. Welcome and Introductions
  
- II. Review “Draft” Hazard Mitigation Plan
  
- III. Next Steps
  
- IV. Set Public Hearings
  
- V. Adjourn

Lawrence County Hazard Mitigation Planning Committee  
 Meeting #5  
 Lawrence County EMA  
 October 15, 2009  
 8:00AM

Name	Agency/Town	Title	Address	Phone Number	Email
Tyron Newton	Dttr Moulton	Director	PO Box 277 Moulton, AL	905-3124	Tyron.newton@dttr.alabama.gov
Kathy Gotcher	USDA/NRCS	District Conservationist	13075 AL Hwy 157 Suite 4 Moulton	974-1174 ext 3	Kathy.Gotcher@al.usda.gov
Amy Moncus	" "	Soil Conservationist	" "	" "	amy.moncus@al.usda.gov
Henrietta Taylor	LawCoSWCD	District (DAC) Administrative Coordinator	13075 AL Hwy 157 Ste 4 Moulton, AL	974-1174 ext 3	henrietta.taylor@al.usda.gov
Robin Legan	Scarts		P.O. Box 305 Moulton AL 35650	974-2478	robin@scarts.net
Hilmael Frost	EMA	Director	55 Walnut St P.O. Box 275 Moulton AL 35650	974-2478	hfrost@scarts.net
Ben Duran	Road Dept	Asst. Eng	Rd 275 Moulton, AL 35650	639-2707	BDURAN@LAWCO.ORG
Ted Letson	Town of Moulton	Mayor	Lawford Ph. 3548 Walnut St Moulton, AL 35650	974-7641	T.H.Letson@AAL.CO
Tammy Vinson	LawCo EMA	Planner	13075 Al. Hwy 157 #6	974-2464	tvins@emahazardmitigation.com
Shirley Pledge	Coop Extension	Extension Coordinator	720 Seminary St		robidh@aces.edu
Lynette McWhorter	Moulton P.D.	Chief	720 Seminary St	974-3961	
Sharon Moore	Moulton P.D.	CAPTAIN	720 Seminary St	974-3961	sharon.moore@scarts.net
HAROLD KNIGHTEN	LAWRENCE CO SO	MAJOR	242 PARKER RD MOULTON, AL 35650	974-2526	hknigh@al.usda.gov
Brenda Morgan	Law. Co EMA	Deputy Director	555 Walnut St Moulton AL	974-7641	brenda.morgan@scarts.net



Lawrence County Hazard Mitigation Planning Committee  
 Meeting #5  
 Lawrence County EMA  
 October 15, 2009  
 8:00AM

Name	Agency/Town	Title	Address	Phone Number	Email
Thomson, Frank	Law. Co. Neg.	Asst. Co. Eng.	Moulton P.O. Box 275	974-2428	
Robin Bradford	Law. Co. Hospice	T.H. III	P.O. Box 275 Moulton	974-2428	
Pam Baggett	Hospice of the Valley	Health Info Coordinator	P. Moulton, AL	256-350-5585	pbaggett@hospiceofthevalley.net
CRAIG KNIGHT	MOULTON P.D.	SERGEANT	720 SEMINARY ST. MOULTON	974-3961	
Shane Barrett	Moulton P.D.	Asst. Chief	720 SEMINARY ST. MOULTON	974-3961	
Patricia Ferguson	DHR	Finance Officer	P.O. Box 278 Moulton	905-3114	Patricia.Ferguson@dhr.alabama.gov
Brent White	DHR	Prog. Supervisor	P.O. Box 278 Moulton	905-3112	brent.white@dhr.alabama.gov
Shelia Stachman	DHR	ASST	P.O. Box 278 Moulton	905-3112	shelia.stachman@dhr.alabama.gov
Michelle Daniel	DHR	Supervisor	P.O. Box 278 Moulton	905-3133	Michelle.daniel@dhr.alabama.gov
William Allen	Law Co. Comm.	Solid Waste	P.O. Box 307 AL 35650	974-2573	
Jay Deuster	USDA-FSA	County Director	13075A Hwy 157 Moulton	974-1674	
Jeff Britnell	SWEMC	Manager of Engineering	23700 AL Hwy 24 Trinity	552-2312	jbritnell@swemc.org
Ray Alexander	City Moulton	Mayor			
Joey Hester	NARCOS	Director of Planning	216 Jackson St, SE Decatur, AL 35601	354-5151	joey.hester@alabama.gov

# **NOTICE OF PUBLIC HEARING**

The Lawrence County Emergency Management Agency (EMA) will hold a Public Hearing on Thursday, October 29, 2009, at 10 a.m. at the Lawrence County EMA Building. The purpose of the Public Hearing will be to discuss and review the "Draft" Lawrence County Natural Hazards Mitigation Plan prepared by the Lawrence County Hazard Mitigation Planning Committee and NARCOG. All interested citizens are urged to attend and provide their comments and/or input on the "Draft" Lawrence County Natural Hazards Mitigation Plan at this time. A hard copy of the "Draft" Lawrence County Natural Hazards Mitigation Plan is available for review at the Lawrence County EMA Building located at 555 Walnut Street in Moulton, Alabama, or NARCOG located at 216 Jackson Street, SE in Decatur, Alabama. Also, the "Draft" Lawrence County Natural Hazards Mitigation Plan will be available on the NARCOG website at [www.narcog.org](http://www.narcog.org). For assistance with accessibility or more information, please contact the Lawrence County EMA at (256) 974-7641.

**The Public Hearing will be held:  
Thursday, October 29, 2009 • 10 a.m.  
Lawrence County EMA Building**

Lawrence County Hazard Mitigation Planning Committee  
 Public Hearing #1  
 Lawrence County EMA  
 October 29, 2009  
 10:00AM

Name	Agency/Town	Title	Address	Phone Number	Email
Joy Hester	NARCOG	Director of Planning	216 Jackson St, SE Decatur, AL 35601	355-4515	joy.hester@adss.alabama.gov
Brent White	DHR/Moulton	Program Supervisor Carcelina	PO Box 278 Moulton, AL 35650	905-7126	brent.white@dhr.alabama.gov
Patti Ferguson	DHR/Moulton	Finance Officer	PO Box 298 Moulton, AL 35650	905-3114	patricia.ferguson@dhr.alabama.gov
Michelle Daniel	DHR/Moulton	Supervisor	PO Box 476 Moulton, AL 35650	905-3133	Michelle.daniel@dhr.alabama.gov
Shelia Steadman	DHR/Moulton	ASAP	PO Box 278 Moulton, AL 35650	905-3112	shelia.steadman@dhr.alabama.gov
Leticia Legare	Heart's		P.O. Box 305 Moulton, AL 35650	974-2488	Legare302@aol.com
Pam Baraggett	Hospice of the Valley	Health Information	24885 Co. Rd 460 Seminole, AL	256 350-5585	pbaraggett@hospiceofthevalley.net
Alma White	New Co. Comm	Chair	555 Walnut St Moulton, AL 35650	476-6169	albie2@gmail.com
Samy Wynn	Law Co EMA	Planner	" "	974-7641	twinnwed@ptn.utv.net
Brenda Morgan	Law. Co EMA	Deputy Director	" "	974-7641	brenda.morgan@charter.net
Hillard Frost	" "	Director	" "	" "	hfrost@charter.net
Kathy Gotcher	USDA - NRCS	District Conservationist	13075 Al Hwy 157 Suite 4 Moulton, AL	ext 3 974-1174	Kathy.gotcher@al.usda.gov
Ann Mancus	USDA - NRCS	Engineer	" "	" "	ann.mancus@al.usda.gov
HAROLD KNIGHTEN	LAWRENCE CO. S.O.	MAJOR.	242 PARKER RD MOULTON, AL 35650	256 974-2526	hknighen.lcso@albellsonline.net
Harold Coulter	Lawrence Co. Commission		7870 Co. Rd. 59, Moulton	974-1989	

# **NOTICE OF PUBLIC HEARING**

The Lawrence County Emergency Management Agency (EMA) will hold a Public Hearing on Thursday, November 12, 2009, at 9 a.m. at the Lawrence County EMA Building. The purpose of the Public Hearing will be to discuss and review the "Final Draft" of the Lawrence County Natural Hazards Mitigation Plan prepared by the Lawrence County Hazard Mitigation Planning Committee and NARCOG. All interested citizens are urged to attend and provide their comments and/or input at this time. A hard copy of the "Final Draft" of the Lawrence County Natural Hazards Mitigation Plan is available for review at the Lawrence County EMA Building located at 555 Walnut Street in Moulton, Alabama, or NARCOG located at 216 Jackson Street, SE in Decatur Alabama. Also, the "Final Draft" of the Lawrence County Natural Hazards Mitigation Plan will be available on the NARCOG website at [www.narcog.org](http://www.narcog.org). For assistance with accessibility or more information, please contact the Lawrence County EMA at (256) 974-7641.

**The Public Hearing will be held:  
Thursday, November 12, 2009 • 9 a.m.  
Lawrence County EMA Building**

Lawrence County Hazard Mitigation Planning Committee  
 Public Hearing #2  
 Lawrence County EMA  
 November, 12 2009  
 9:00AM

Name	Agency/Town	Title	Address	Phone Number	Email
Brenda Morgan	Lawrence Co EMA	Deputy Director	555 Walnut Street Moulton, AL 35650	256-974-7641	brenda.morgan@lcc.ema.al.gov
Fanny Vinson	Law Co. EMA	Power	555 Walnut St Moulton, AL 35650	256-974-7641	twinsonecharter1@att.net
Major Davis Craback	THE SAVANNAH ARMY	CORPS OFFICER	114 14th St SW Decatur, AL 35601	256-353-2822	david_e-craback@army.mil
Pam Baggett	Hospice of the Valley	Health Information Coordinator	555 Washington St. SE Decatur, AL 35605	256-350-5585 ext 100	proagette@hospiceofthevalley.net
Susan Letson	TC FD	FF	10008 Main St Town Creek AL 35672	566-4532	letsun5@hiwray.com
Amy Marcus	USDA-NRCS	Engineer	13075 Hwy 151, Moulton	974-1170	amy.marcus@cal.usda.gov
Harold Frost	Law Co EMA	EMA Director	555 Walnut St Moulton AL 35650	974-7641	hfrost@charter.net
Roger Odell	Countland PD	Police Chief	271 Alabama St. Countland	637-2701	cpol4@bellsouth.net
Patrick P. Tolly	Moulton Fire	Fire Chief	905 East St Moulton, AL Moulton, AL	256-974-0279	moultonfire@bellsouth.net
Judith Letson	911 Law	Dispatcher	515 Co Rd 241	256-974-3303	letjil115@aol.com
Harold Letson	911 Law	Dispatcher	515 Co Rd 241	256-974-3303	hcrs36@aol.com

## **NOTICE OF PUBLIC HEARING**

*The Lawrence County Commission  
will hold a Public Hearing on  
Monday, February 8th at 8:30 a.m.  
at the Lawrence County Commission Building.*

The purpose of this public hearing will be to receive any input, questions or comments concerning the Lawrence County Natural Hazards Mitigation Plan before adoption of plan. This plan was prepared by the Lawrence County Hazard Mitigation Planning Committee and NARCOG. A hard copy of the Lawrence County Natural Hazards Mitigation Plan is available for review at the Lawrence County EMA building located at 555 Walnut Street in Moulton, Alabama or NARCOG located at 216 Jackson Street, SE Decatur, Alabama. Also, the Lawrence County Natural Hazards Mitigation Plan will be available on the NARCOG website at [www.narcog.org](http://www.narcog.org).

*For assistance with accessibility or more information, please contact the  
Lawrence County EMA at 974-7641.*

Lawrence County Natural Hazard Mitigation Plan  
 Public Hearing #3  
 Lawrence County Commission - Annex  
 February 8, 2010  
 8:30AM

Name	Agency/Town	Title	Address	Phone Number	Email
Brenda Morgan	EMA	Deputy Director	555 Walnut St Moulton, AL 35650	256-974-7641	brenda@morganecharter.net
Shirley Alexander	Road Dept	Superintendent Road Dept	Mountain Ave. P.O. Box 275 35650	303-7412	N/A
William de Forest	EMA	Director	555 Walnut St Moulton, AL	256-974-7641	lforest@charter.net
Joy Hester	NARC/OB	Director of Planning	216 Walnut St., SE Dexter, AL 35601	355-4515	joy.hester@alabama.gov
Will Hill	Law Co. Comm.	Lic. Inspector	P.O. Box 307 Maulden, AL 35650	974-2573	NA
Albert Whitner	Comm. Sec	Dist. IV	84985 Co. Rd 400 Trinity, AL 35673	256-446-1169	alwhit2@ymail.com
Clayton King	Lawrence County Comm.	Co. Administrator	P.O. Box 307 Moulton 3849 County Rd 236	256-974-0663	pkings@lawrencoco.org
Danny Keith	Lawrence County Commission	Dist. 2 Commissioner	Tom Creek AL 35672 7870 Co. Rd 59	256-476-4442	DrKeith3314@jpl.com
Harold Williams	Lawrence County Commission	Dist. 4 Commissioner	Moulton, AL 35650	256-974-1989	N/A
Mark Spofford	" "	Dist. 1	210 CR 52 P. C. 357	685-0265	N/A
Bradley Carr	" "	Dist. 3	226 Co. Rd. 249 Moulton	974-8004	N/A

<b>Lawrence County Repetitive Loss Properties (Flood)</b>				
<b>Location</b>	<b># of Structures</b>	<b>Type of Structure</b>	<b># of Claims</b>	<b>Claim Amount</b>
Lawrence County	1	Residential	5	\$43,781.60
Lawrence County	1	Non-Residential		
Courtland	1	Residential	3	\$30,352.30
Moulton	1	Non-Residential	2	\$34,121.86
<b>Totals</b>	<b>4</b>	<b>N/A</b>	<b>10</b>	<b>\$108,255.76</b>

*Source: NFIP State Coordinator (Alabama)*



# APPENDIX E

**RESOLUTION \_\_\_\_\_**

**A RESOLUTION TO ADOPT  
THE LAWRENCE COUNTY NATURAL HAZARD MITIGATION PLAN**

**WHEREAS**, the Federal Disaster Mitigation Act of 2000 (DMA 2000), as administered by the Alabama Emergency Management Agency (AEMA) and the Federal Emergency Management Agency (FEMA) provides Federal assistance to local governments to alleviate suffering and damage from disasters to encourage disaster preparedness plans and programs, coordination and responsiveness, and hazard mitigation measures; and

**WHEREAS**, the DMA 2000 requirements for local mitigation plans are set forth in 44 C.F.R. Section 201.6 and the Local Multi-Hazard Mitigation Planning Guidance, FEMA, July 1, 2008 (Federal planning criteria); and

**WHEREAS**, as a prerequisite for Lawrence County to continue to qualify for FEMA hazard mitigation grant assistance programs, the DMA 2000 requires the five year update of the Lawrence County Natural Hazard Mitigation Plan; and

**WHEREAS**, the AEMA awarded a \$20,709 planning grant funded through the FEMA Hazard Mitigation Grant Program (HMGP) to the Lawrence County Commission to fund 75% of the total cost of \$27,612 to update the plan for all jurisdictions in Lawrence County; and

**WHEREAS**, the 2009 Lawrence County Natural Hazard Mitigation Plan has been prepared in accordance with DMA 2000 requirements under the direction of the *Lawrence County Hazard Mitigation Planning Committee* with the support of the *Lawrence County EMA*, on behalf of all of the jurisdictions in Lawrence County; and

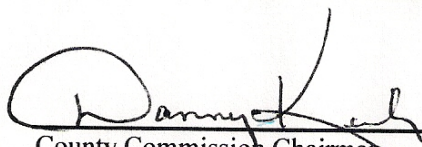
**WHEREAS**, the 2009 Lawrence County Natural Hazard Mitigation Plan addresses all natural hazards deemed to threaten life and property within the incorporated and unincorporated areas of Lawrence County; and

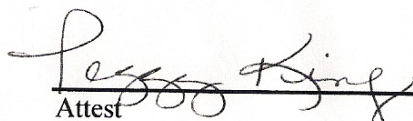
**WHEREAS**, a final public hearing was held on February 8, 2010 to review the FEMA approved plan prior to adoption; and

**WHEREAS**, the Federal planning criteria requires formal adoption of the FEMA approved plan update by each participating jurisdiction.

**NOW THEREFORE, BE IT RESOLVED** that the 2009 Lawrence County Natural Hazard Mitigation Plan is hereby formally adopted by the Lawrence County Commission.

Adopted this 8<sup>th</sup> day of February, 2010.

  
County Commission Chairman

  
Attest

NARCOG

FEB 26 2010

RECEIVED

RESOLUTION \_\_\_\_\_

A RESOLUTION TO ADOPT  
THE LAWRENCE COUNTY NATURAL HAZARD MITIGATION PLAN

**WHEREAS**, the Federal Disaster Mitigation Act of 2000 (DMA 2000), as administered by the Alabama Emergency Management Agency (AEMA) and the Federal Emergency Management Agency (FEMA) provides Federal assistance to local governments to alleviate suffering and damage from disasters to encourage disaster preparedness plans and programs, coordination and responsiveness, and hazard mitigation measures; and

**WHEREAS**, the DMA 2000 requirements for local mitigation plans are set forth in 44 C.F.R. Section 201.6 and the Local Multi-Hazard Mitigation Planning Guidance, FEMA, July 1, 2008 (Federal planning criteria); and

**WHEREAS**, as a prerequisite for Lawrence County to continue to qualify for FEMA hazard mitigation grant assistance programs, the DMA 2000 requires the five year update of the Lawrence County Natural Hazard Mitigation Plan; and

**WHEREAS**, the AEMA awarded a \$20,709 planning grant funded through the FEMA Hazard Mitigation Grant Program (HMGP) to the Lawrence County Commission to fund 75% of the total cost of \$27,612 to update the plan for all jurisdictions in Lawrence County; and

**WHEREAS**, the 2009 Lawrence County Natural Hazard Mitigation Plan has been prepared in accordance with DMA 2000 requirements under the direction of the Lawrence County Hazard Mitigation Planning Committee with the support of the Lawrence County EMA, on behalf of all of the jurisdictions in Lawrence County; and

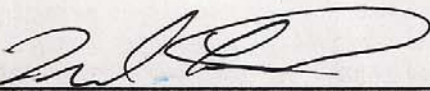
**WHEREAS**, the 2009 Lawrence County Natural Hazard Mitigation Plan addresses all natural hazards deemed to threaten life and property within the incorporated and unincorporated areas of Lawrence County; and

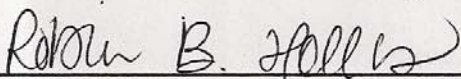
**WHEREAS**, a final public hearing was held on February 8, 2010 to review the FEMA approved plan prior to adoption; and

**WHEREAS**, the Federal planning criteria requires formal adoption of the FEMA approved plan update by each participating jurisdiction.

**NOW THEREFORE, BE IT RESOLVED** that the 2009 Lawrence County Natural Hazard Mitigation Plan is hereby formally adopted by the Town of Courtland.

Adopted this 15<sup>th</sup> day of February, 2010.

  
\_\_\_\_\_  
Mayor, Town of Courtland

  
\_\_\_\_\_  
Attest

**A RESOLUTION TO ADOPT  
THE LAWRENCE COUNTY NATURAL HAZARD MITIGATION PLAN**

**WHEREAS**, the Federal Disaster Mitigation Act of 2000 (DMA 2000), as administered by the Alabama Emergency Management Agency (AEMA) and the Federal Emergency Management Agency (FEMA) provides Federal assistance to local governments to alleviate suffering and damage from disasters to encourage disaster preparedness plans and programs, coordination and responsiveness, and hazard mitigation measures; and

**WHEREAS**, the DMA 2000 requirements for local mitigation plans are set forth in 44 C.F.R. Section 201.6 and the Local Multi-Hazard Mitigation Planning Guidance, FEMA, July 1, 2008 (Federal planning criteria); and

**WHEREAS**, as a prerequisite for Lawrence County to continue to qualify for FEMA hazard mitigation grant assistance programs, the DMA 2000 requires the five year update the of the Lawrence County Natural Hazard Mitigation Plan; and

**WHEREAS**, the AEMA awarded a \$20,709 planning grant funded through the FEMA Hazard Mitigation Grant Program (HMGP) to the Lawrence County Commission to fund 75% of the total cost of \$27,612 to update the plan for all jurisdictions in Lawrence County; and

**WHEREAS**, the 2009 Lawrence County Natural Hazard Mitigation Plan has been prepared in accordance with DMA 2000 requirements under the direction of the *Lawrence County Hazard Mitigation Planning Committee* with the support of the *Lawrence County EMA*, on behalf of all of the jurisdictions in Lawrence County; and

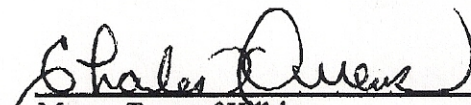
**WHEREAS**, the 2009 Lawrence County Natural Hazard Mitigation Plan addresses all natural hazards deemed to threaten life and property within the incorporated and unincorporated areas of Lawrence County; and

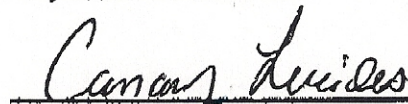
**WHEREAS**, a final public hearing was held on February 8, 2010 to review the FEMA approved plan prior to adoption; and

**WHEREAS**, the Federal planning criteria requires formal adoption of the FEMA approved plan update by each participating jurisdiction.

**NOW THEREFORE, BE IT RESOLVED** that the 2009 Lawrence County Natural Hazard Mitigation Plan is hereby formally adopted by the Town of Hillsboro.

Adopted this 15 day of March, 2010.

  
\_\_\_\_\_  
Mayor, Town of Hillsboro

  
\_\_\_\_\_  
Attest

NARCOG

MAR 05 2010

RECEIVED

**RESOLUTION 2010-002**

**A RESOLUTION TO ADOPT  
THE LAWRENCE COUNTY NATURAL HAZARD MITIGATION PLAN**

**WHEREAS**, the Federal Disaster Mitigation Act of 2000 (DMA 2000), as administered by the Alabama Emergency Management Agency (AEMA) and the Federal Emergency Management Agency (FEMA) provides Federal assistance to local governments to alleviate suffering and damage from disasters to encourage disaster preparedness plans and programs, coordination and responsiveness, and hazard mitigation measures; and

**WHEREAS**, the DMA 2000 requirements for local mitigation plans are set forth in 44 C.F.R. Section 201.6 and the Local Multi-Hazard Mitigation Planning Guidance, FEMA, July 1, 2008 (Federal planning criteria); and

**WHEREAS**, as a prerequisite for Lawrence County to continue to qualify for FEMA hazard mitigation grant assistance programs, the DMA 2000 requires the five year update of the Lawrence County Natural Hazard Mitigation Plan; and

**WHEREAS**, the AEMA awarded a \$20,709 planning grant funded through the FEMA Hazard Mitigation Grant Program (HMGP) to the Lawrence County Commission to fund 75% of the total cost of \$27,612 to update the plan for all jurisdictions in Lawrence County; and

**WHEREAS**, the 2009 Lawrence County Natural Hazard Mitigation Plan has been prepared in accordance with DMA 2000 requirements under the direction of the *Lawrence County Hazard Mitigation Planning Committee* with the support of the *Lawrence County EMA*, on behalf of all of the jurisdictions in Lawrence County; and

**WHEREAS**, the 2009 Lawrence County Natural Hazard Mitigation Plan addresses all natural hazards deemed to threaten life and property within the incorporated and unincorporated areas of Lawrence County; and

**WHEREAS**, a final public hearing was held on February 8, 2010 to review the FEMA approved plan prior to adoption; and

**WHEREAS**, the Federal planning criteria requires formal adoption of the FEMA approved plan update by each participating jurisdiction.

**NOW THEREFORE, BE IT RESOLVED** that the 2009 Lawrence County Natural Hazard Mitigation Plan is hereby formally adopted by the City of Moulton.

Adopted this 22nd day of February, 2010.

  
\_\_\_\_\_  
Mayor, City of Moulton

  
\_\_\_\_\_  
Attest

RESOLUTION 223 2010

A RESOLUTION TO ADOPT  
THE LAWRENCE COUNTY NATURAL HAZARD MITIGATION PLAN

WHEREAS, the Federal Disaster Mitigation Act of 2000 (DMA 2000), as administered by the Alabama Emergency Management Agency (AEMA) and the Federal Emergency Management Agency (FEMA) provides Federal assistance to local governments to alleviate suffering and damage from disasters to encourage disaster preparedness plans and programs, coordination and responsiveness, and hazard mitigation measures; and

WHEREAS, the DMA 2000 requirements for local mitigation plans are set forth in 44 C.F.R. Section 201.6 and the Local Multi-Hazard Mitigation Planning Guidance, FEMA, July 1, 2008 (Federal planning criteria); and

WHEREAS, as a prerequisite for Lawrence County to continue to qualify for FEMA hazard mitigation grant assistance programs, the DMA 2000 requires the five year update the of the Lawrence County Natural Hazard Mitigation Plan; and

WHEREAS, the AEMA awarded a \$20,709 planning grant funded through the FEMA Hazard Mitigation Grant Program (HMGP) to the Lawrence County Commission to fund 75% of the total cost of \$27,612 to update the plan for all jurisdictions in Lawrence County; and

WHEREAS, the 2009 Lawrence County Natural Hazard Mitigation Plan has been prepared in accordance with DMA 2000 requirements under the direction of the *Lawrence County Hazard Mitigation Planning Committee* with the support of the *Lawrence County EMA*, on behalf of all of the jurisdictions in Lawrence County; and

WHEREAS, the 2009 Lawrence County Natural Hazard Mitigation Plan addresses all natural hazards deemed to threaten life and property within the incorporated and unincorporated areas of Lawrence County; and

WHEREAS, a final public hearing was held on February 8, 2010 to review the FEMA approved plan prior to adoption; and

WHEREAS, the Federal planning criteria requires formal adoption of the FEMA approved plan update by each participating jurisdiction.

NOW THEREFORE, BE IT RESOLVED that the 2009 Lawrence County Natural Hazard Mitigation Plan is hereby formally adopted by the Town of North Courtland.

Adopted this 23 day of February, 2010.

Ronald J. Jones  
Mayor, Town of North Courtland

Della Taylor  
Attest

NARCOG

FEB 19 2010

RECEIVED

RESOLUTION 2010-01-1

**A RESOLUTION TO ADOPT  
THE LAWRENCE COUNTY NATURAL HAZARD MITIGATION PLAN**

**WHEREAS**, the Federal Disaster Mitigation Act of 2000 (DMA 2000), as administered by the Alabama Emergency Management Agency (AEMA) and the Federal Emergency Management Agency (FEMA) provides Federal assistance to local governments to alleviate suffering and damage from disasters to encourage disaster preparedness plans and programs, coordination and responsiveness, and hazard mitigation measures; and

**WHEREAS**, the DMA 2000 requirements for local mitigation plans are set forth in 44 C.F.R. Section 201.6 and the Local Multi-Hazard Mitigation Planning Guidance, FEMA, July 1, 2008 (Federal planning criteria); and

**WHEREAS**, as a prerequisite for Lawrence County to continue to qualify for FEMA hazard mitigation grant assistance programs, the DMA 2000 requires the five year update the of the Lawrence County Natural Hazard Mitigation Plan; and

**WHEREAS**, the AEMA awarded a \$20,709 planning grant funded through the FEMA Hazard Mitigation Grant Program (HMGP) to the Lawrence County Commission to fund 75% of the total cost of \$27,612 to update the plan for all jurisdictions in Lawrence County; and

**WHEREAS**, the 2009 Lawrence County Natural Hazard Mitigation Plan has been prepared in accordance with DMA 2000 requirements under the direction of the Lawrence County Hazard Mitigation Planning Committee with the support of the Lawrence County EMA, on behalf of all of the jurisdictions in Lawrence County; and

**WHEREAS**, the 2009 Lawrence County Natural Hazard Mitigation Plan addresses all natural hazards deemed to threaten life and property within the incorporated and unincorporated areas of Lawrence County; and

**WHEREAS**, a final public hearing was held on February 8, 2010 to review the FEMA approved plan prior to adoption; and

**WHEREAS**, the Federal planning criteria requires formal adoption of the FEMA approved plan update by each participating jurisdiction.

**NOW THEREFORE, BE IT RESOLVED** that the 2009 Lawrence County Natural Hazard Mitigation Plan is hereby formally adopted by the Town of Town Creek.

Adopted this 16 day of February, 2010.

Mike Parker

Mayor, Town of Town Creek

Christy Weeason

Attest

## *Lawrence County Natural Hazards Mitigation Plan*

### *Public Hearing #3*

*February 8, 2010*

- ❖ The Lawrence County Commission held a Public Hearing on February 8, 2010 beginning at 8:30am. Commission Chair Danny Kerby, Commissioners Bradley Cross, Mose Jones, Jr., Harold LouAllen, and Alma Whitlow were present. County Attorney Dave Martin and County Administrator Peggy King were also in attendance.
- ❖ Chairman Kerby called the public hearing to order. Chairman Kerby recognized Mr. Joey Hester, Director of Planning with NARCOG to address the group. Mr. Hester stated that this is the third public hearing on the “draft plan”, the first public hearing was held on October 29<sup>th</sup> and the second public hearing was held on November 12<sup>th</sup> at the Lawrence County EMA office.
- ❖ The purpose of this public hearing is to provide an opportunity for citizens to review the “draft plan” and provide input, comments, and/or ask questions.
- ❖ Mr. Hester continued to recap the following: the Lawrence County EMA is required to maintain and update its natural hazard mitigation plan every five (5) years by the Disaster Mitigation Act (DMA) of 2000.
- ❖ This draft plan is the required update to the last plan that was adopted and approved by FEMA in 2004.
- ❖ The draft plan was submitted to AEMA for review and required corrections were made per the crosswalk, the plan has been approved by the AEMA and sent to FEMA for approval.
- ❖ Once the plan is FEMA approvable, then the county and all jurisdictions must adopt the plan by resolution.
- ❖ **IMPORTANT:** Having a FEMA approved and adopted plan is required for a jurisdiction to be eligible for federal disaster assistance in the case of a natural disaster event.
- ❖ Chairman Kerby then asked if anyone had any comments or questions regarding the “draft plan” before we submit to AEMA and FEMA for review. Chairman Kerby reminded everyone that the “draft copy” was in front of him if anyone wanted to review further. He continued to say that if there were no other comments or questions, the public hearing is now closed. Thank you all for coming.