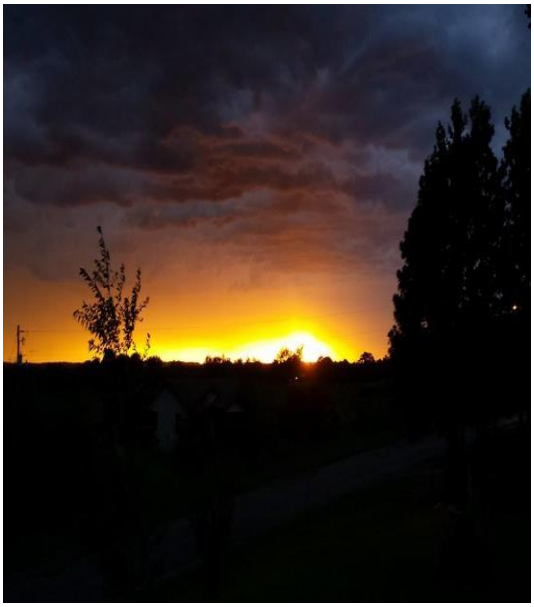
Multi-Hazard Mitigation Plan
for
Walker County, Alabama



Building Sustainable, Disaster Resistant Communities in Alabama

Developed by the Walker County Hazard Mitigation Planning Team
&
Adopted By the Walker County Commission and the City Councils of Carbon Hill, Cordova, Dora, Eldridge, Jasper, Kansas, Nauvoo, Oakman, Parrish, Sipsey and Sumiton
December, 2014

Foreward

This Multi Hazard Mitigation Plan for Walker County, Alabama was formally adopted by the Walker County Commission on March 2, 2015 and signed by the County Commissioners and the Director of the Walker County EMA on the same date. Likewise, a representative of each individual municipality adopted this Plan and copies of the resolutions from each town can be found in Appendix D.

Before the Walker County Commission, Alabama

March 2, 2015

Resolution No. _____

"A RESOLUTION APPROVING AND ADOPTING THE CITIES OF CARBON HILL, CORDOVA, DORA, ELDRIDGE, JASPER, KANSAS, NAUVOO, OAKMAN, PARRISH, SIPSEY AND SUMITON AND WALKER COUNTY, ALABAMA, HAZARD MITIGATION PLAN."

WHEREAS, our lives, residential and commercial property, businesses, and infrastructure are at risk from a variety of natural hazards, including floods, thunderstorms, earthquakes, wildfire and tornadoes; and,

WHEREAS, Hazard Mitigation Planning will create an operational framework for reducing losses from these hazards in a cost-effective, environmentally sound, manner; and,

WHEREAS, a Hazard Mitigation Planning process was undertaken in order to maintain eligibility for multiple sources of Federal Mitigation Funding Programs that support loss-reduction activities; and,

WHEREAS, a Hazard Mitigation Planning Committee did analyze the hazards that threaten our community, have determined our vulnerability to those hazards and evaluated alternatives to minimize or eliminate their impact; and,

WHEREAS, the Walker County Commission has adopted policies and regulations that must be implemented following any incident that results in significant damages and that would impact rebuilding and redevelopment; and,

WHEREAS, as a benefit of being enrolled in the Community Rating System within the National Flood Insurance Program, formally establishing our Hazard Mitigation Plan contributes towards lowering the cost of flood insurance across the entire community.

NOW, THEREFORE, BE IT RESOLVED by the Walker County Commission, meeting in regular session on this the 2nd day of March 2015, with a lawful quorum of said Commission being present and with a majority of said Commission voting in the affirmative as follows:

1. Walker County Commission does hereby approve and adopt a Hazard Mitigation Plan that identifies protective and mitigation measures that will lessen the County's

exposure to future hazard losses, while contributing to other community goals and objectives as identified in other community plans, policies and regulations.

2. The Walker County Commission did solicit public input throughout the development of the Hazard Mitigation Plan.

3. The Walker County Commission desires to keep the County in good standing in the National Flood Insurance Program (NFIP) and the NFIP's Community Rating System which reduces the cost of flood insurance for our constituents that either are required or desire to purchase it.

4. This Resolution shall be effective from and after its adoption.

Walker County Commission

By:_____ _____
Commission Chair EMA Coordinator

_____
Commissioner

_____
Commissioner

_____
Commissioner

_____
Commissioner

ATTEST:

_____ _____
County Administrator Date

State of Alabama
County of Walker

Executive Summary

Walker County Officials and Public Servants recognize that natural hazards pose a significant threat at varying degrees of magnitude and frequency, to the safety and economic stability of the County and its residents. Often, the reality of hazards is not fully understood until a major disaster occurs. At that point, significant resources are required to respond to and recover from the damage. Responding to hazards post-incident results in increased costs both financially and in terms of lives lost. It is for that reason that the Walker County Multi-Hazard Mitigation Plan has been prepared and adopted. We feel that this plan, which includes an assessment of the County's vulnerability hazards, provides a strategy that will reduce the risks associated with those hazards.

The Disaster Mitigation Act of 2000 (DMA2K) set forth compliance measures that will enable Walker County to maintain eligibility for federal and state mitigation funds The overall purpose of DMA2K was to establish a national program for pre-disaster mitigation, streamline administration of disaster relief at both federal and state levels, and control federal costs of disaster assistance.

The benefits envisioned by Congress are to (1) reduce loss of life and property, human suffering, economic disruption and disaster costs; (2) incorporate the planning process at the local level with emphasis on public involvement with the goal of assessing local risks, implementing loss reduction measures and ensuring critical services and facilities survive a disaster; and (3) establish economic incentives, awareness and education through federal support to local governments which would result in local partnerships.

In order to be eligible to receive federal mitigation funds such as through the Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation Program (PDM), and the Flood Mitigation Assistance Program (FMA) funds, all governments must develop a plan for their respective communities.

To satisfy the regulatory requirements of DMA2K, the primary purpose of this plan is to identify hazards that impact Walker County, assess the vulnerability and risk posed by these identified hazards to human and structural assets, develop strategies for mitigation of those hazards, present future maintenance procedures for the plan, and document the planning process. The Walker County Multi-Hazard Mitigation Planning Committee, through the guidelines set by FEMA, set forth in Janruary 2014 to prepare a mitigation plan for Walker County that will ensure preparedness for natural hazards and mitigate the effects of destructive events to the best of our ability.

The Walker County HMP follows this format:

Section 1 – Plan Purpose

Section 2 – Jurisdictional Profile

Section 3 – Planning Process

Section 4 – Risk Assessment

Section 5 – Mitigation Strategies

Section 6 – Plan Adoption

Section 7 – Plan Implementation and Maintenance

Documentation is found in appendices. When "sensitive" information is referenced, general summaries will be given, but the data-sets will be documented in a separate technical binder and not submitted to FEMA.

The planning process used to develop the Plan included the assembly of a multi-jurisdictional planning team comprised of members of each incorporated community, county leaders, state representatives, and various other public and private entities with interest in the mitigation of hazards. Walker County Emergency Management functioned as the primary point of contact and the lead agency for the planning effort. The planning team focused on these development objectives and used these objectives to guide planning meetings:

►Involve the public in the compilation of information and development of the plan;

►Identify, evaluate, prioritize, and profile the types of hazards impacting the county and its communities;

►Develop general, county-wide hazard mitigation goals and objectives to use as a starting template;

►Provide a forum for community and inter-agency communication during the development of mitigation actions and projects;

►Capitalize on the experience and institutional knowledge base common to a cooperative multi-agency, multi-community team.

A key element of the planning process is the ***risk assessment***. The performance of a risk assessment includes the determination of what can occur, how often it is likely to occur, and estimate the level of devastation. To perform a risk assessment, it is necessary to identify the possible hazards, profile hazard events that have occurred in the past, and assess our vulnerability to the possible hazards.

The planning committee utilized information provided by the Walker County Tax Assessor's Office, National Weather Service, National Oceanic and Atmospheric Administration, the Bureau of Labor Statistics, Alabama Historical Archives, Walker County Soil and Water Conservation, FEMA, Alabama State EMA, and local historians and public records.

With this information in hand, the planning committee conducted surveys through the use of questionnaires to compile a list of threatening natural hazards common to our community. Profiles were then developed for each of the top ranked hazards.

The natural hazards identified in this process and investigated include:

- Floods
- Severe Weather (drought, extreme temperatures, thunderstorms, highwinds, hail, lightning ,tornadoes, hurricanes, and winter weather)
- Sink Holes/Expansive Soils/Landslides
- Dam Failure
- Wildfire
- Earthquake

A county-wide vulnerability analysis was performed to access and evaluate the city and county's population and critical facility exposure risk to the identified hazards. The risk was tabulated in terms of economic loss estimates and human population exposure. Economic losses include estimates of damage to residential, commercial and public utility facilities. For the three most common hazards, estimates of potential economic loss and potential human exposure are shown in this table:

Hazard	Potential Economic Loss	Potential Human Exposure
Tornado	$ 627,906,250	100%
Thunderstorm/High Wind	$ 627,906,250	100%
Snow/Ice	$ 627,906,250	100%

The next step in the process is the mitigation of the identified hazards. The Walker County Hazard Mitigation Planning Committee developed a strategy for mitigation. The mitigation strategy provides the "what, when, and how" of actions that will reduce or possibly remove the community's exposure to hazard risks, and is generally categorized in this way:

- The Capability Assessment
- The Goals and Objectives
- The Mitigation Actions and Projects, and
- The Implementation Strategy

The Planning Committee made an assessment of the County's legal, regulatory, technical and financial resource capabilities. The Planning Committee then developed goals and objectives for use in setting the guidelines for the mitigation of the identified hazards in the county and incorporated communities.

Goal 1. Implement a comprehensive Public Education Campaign regarding the hazards posing significant risk to the community.

Goal 2. Build and support the concept of sustainable communities through a commitment to become less vulnerable to hazards.

Goal 3. Reduce exposure to hazard related losses, before and after disaster strikes.

The development of a vulnerability analysis, capability assessment, and goals and objectives, enabled the Walker County Planning Team to develop an initial list of mitigation actions and projects. These actions have been ranked for legal, political, economic and environmental considerations which then allowed the team to prepare an implementation strategy.

The development of mitigation projects by jurisdiction revealed a common purpose throughout the county. The mayor and local disaster team of each municipality as well as the balance of county representation were found to be of a single mind on several of the projects, so the committee was able to develop county-wide projects in many cases that will benefit all citizens of Walker County. Where localized hazards were identified that threaten smaller areas, mitigation projects were more specific to a location. The planning committee is pleased with the support of the eleven area mayors in Walker County and commends their vision for building a sustainable community. First and foremost, the planning committee identified education and preparedness as the number one product of our work.

The final step in the planning process is plan maintenance and procedures have been developed to ensure the plan is maintained, reviewed and updated periodically. Each review will evaluate: public involvement, reconsideration of the risk assessment, and the mitigation strategy. This plan will require updating and re-approval from FEMA in 5 years.

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Multi-Hazard Mitigation Plan
1.0 Introduction

Figure 1.1, Location of individual municipalities in Walker County

Hazard Mitigation is defined as any sustained action taken to reduce or eliminate long-term risk to human life and property from hazards. Hazard Mitigation Planning is the process through which the natural hazards that threaten communities are identified, impacts of those hazards are determined, mitigation goals are set, and appropriate strategies to reduce impacts are selected, prioritized, and implemented.

Hazard Mitigation Planning is a requirement for state and local governments in order to maintain eligibility for certain federal disaster assistance and hazard mitigation funding programs. Communities that are at risk from natural disasters cannot afford to jeopardize this funding.

1.1 Purpose and Need

This plan addresses identified disasters and mitigation efforts affecting Walker County, Alabama and the eleven municipalities within the county boundaries: Carbon Hill, Cordova, Dora, Eldridge, Jasper, Kansas, Nauvoo, Oakman, Parrish, Sipsey, and Sumiton. Proactive hazard mitigation planning initiated by these local governments can help reduce the cost of disaster response and recovery by protecting critical community facilities, reducing liability exposure, and minimizing overall community impacts and disruption. Each year, natural disasters take the lives of and injure people throughout the United States. Additionally, these same disasters destroy property – homes, businesses, critical facilities and infrastructure – that results in economic devastation. To recover from these disastrous events, taxpayers must pay billions of dollars annually to help communities, organizations, businesses and individuals rebuild.

Natural disasters are to some degree predictable, and often repetitive with similar results. Through mitigation and planning, the damage caused by many of these events can be alleviated or eliminated.

The Department of Homeland Security (DHS) through the efforts of its Federal Emergency Management Agency (FEMA), has made hazard mitigation and damage reduction a primary goal. Hazard mitigation planning has been successful in reducing the effects of disasters and through the mitigation projects contained in this plan, the writers of this Multi-Hazard Mitigation Plan for Walker County, Alabama hope to be successful in reducing the effects of natural disasters in this community.

This plan was developed in accordance with the Disaster Mitigation Act of 2000 (DMA) and the regulations published in the Federal Register Volume 67, Number 38, Tuesday, February 26, 2002. Section 104 of DMA revises the Robert T. Stafford Disaster Relief and Emergency Assistance Act by adding Section 322, which provides new and revitalized emphasis on hazard mitigation, including adding a new requirement for local mitigation plans. These new local mitigation planning regulations are implemented through 44 CFR Part 201.6. We also used Local Mitigation Planning Handbook, March 2013, Local Multi-Hazard Planning Guidance, July 1st, 2008 & Hazard Mitigation Assistance Unified Guidance, July 2013.

This plan fulfills requirements for the following programs:
1. Flood Mitigation Assistance Program (FMA)
2. Pre-Disaster Mitigation (PDM)
3. National Flood Insurance Program's (NFIP) Community Rating System (CRS)
4. Hazard Mitigation Grant Program (HMGP).

1.2 Scope

The Walker County Multi-Hazard Mitigation Plan is a multi-jurisdictional plan that has identified goals, objectives, and measures for hazard mitigation. This Plan covers the municipalities of Carbon Hill, Cordova, Dora, Eldridge, Jasper, Kansas, Nauvoo, Oakman, Parrish, Sipsey, and Sumiton, as well as outlying areas within the county boundaries. This plan will be used to guide mitigation efforts as well as policy decisions for future land use.

The DMA provides guidance for developing local hazard mitigation plans through a 4-phase process:

1. Organize resources,
2. Assess hazards and risks,
3. Develop a mitigation plan, and
4. Evaluate work.

This plan will only address natural hazards. The planning committee made the decision to not address human-caused hazards early in the planning stages. The reason for this decision was a concern that the nature of the process which includes public involvement would lead to public exposure of local vulnerability to human-caused hazards. The planning team feels that at this time, the various local organizations involved in activities of a vulnerable nature have sufficiently planned for human-caused hazards under their jurisdiction. These individual organizations have provided copies of their disaster plans to the local EMA director and these plans are currently on file with that entity. In the future, however, this planning team hopes to incorporate human-caused hazards into the multi-hazard mitigation plan.

Multi-Hazard Mitigation Plan
2.0 Community Profile

2.1 Geography – Location and Area

Figure 2.1, Walker County located in the northwest region of Alabama

Walker County, including the previously mentioned municipalities, is located in the northwest region of the state of Alabama. It is part of the Cumberland Plateau physiographic section of the Appalachian Highlands region and consists of narrow valleys and broad plateaus covered with oak and pine forests. Each jurisdiction has an equal chance of experiencing the same hazards with little difference in the degree of risk and vulnerability, with the exception of river flooding.

According to the most recent US Dept of Agriculture Soil Survey, published in 1992, all of Walker County is underlain by the nearly level bedded Pottsville Formation. This formation is of Pennsylvanian age. The part of it in Walker County is entirely in the Warrior coal field. The sediments in this formation are sandstone, siltstone, and shale and thin layers of limestone. The many coal seams in the Warrior coal field are mined on or below the surface. Extensive open-pit mining constantly changes the landscape and soils.

The county is drained by the Black Warrior River Basin and the Mulberry and Sipsey Forks. The principal forks of the Black Warrior River – the Sipsey, Mulberry, and Locust – converge at the Jefferson-Walker county line. Besides the Sipsey and Mulberry Forks, there are other large streams including Blackwater, Lost Creek and Wolf Creek. There are two manmade lakes – Smith Lake and Walker County Lake.

Founded in 1823, Walker County covers 805 square miles. The 2010 Census Bureau estimate lists the population at 67,023. The County seat of Jasper lies within 200 miles of 7 important metropolitan areas:

40 miles northwest of Birmingham, AL
92 miles southwest of Huntsville, AL – home of Redstone Arsenal
183 miles south of Nashville, TN
186 miles west of Atlanta, GA
187 southwest of Chattanooga, TN
55 miles southwest of Tuscaloosa Al
97 miles northwest of Tupelo MS

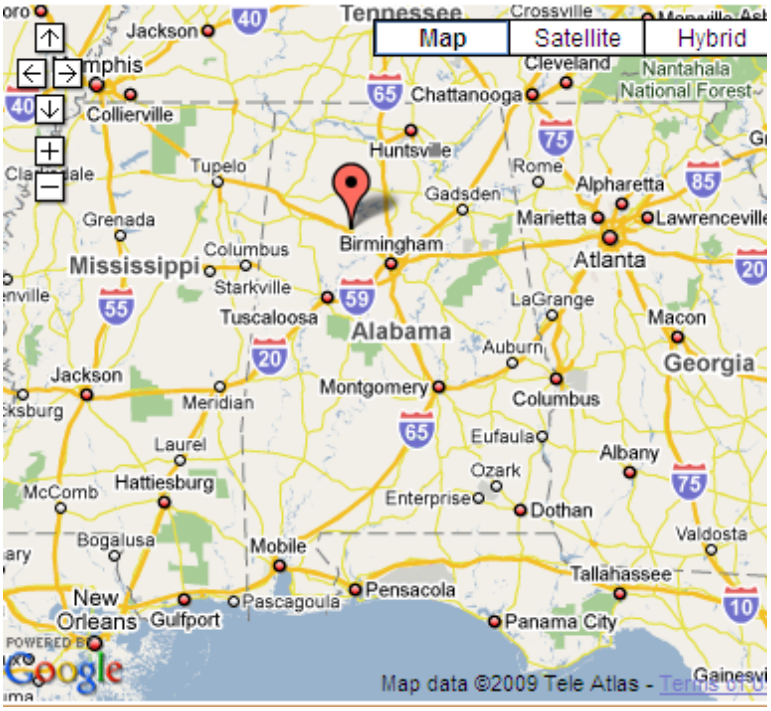


Figure 2.2, Location of Jasper in relation to Major Cities in the Southeast

2.2 Climate

Walker County lies within the state's Upper Plains climatological region, which has a moist, subtropical climate, characterized by hot summers, mild winters, and abundant rainfall. The average daily high temperature ranges from 51 °F in January to 90 °F in July. The sun shines an average of 58 % of the daylight hours. Prevailing winds are from the south during the winter and from the southeast during the summer.

Walker County lies near the heart of a tornado alley known as the Dixie Alley, due to the frequency of tornadoes in Central Alabama. Dixie Alley includes a large portion of the Southern United States, including northern Alabama. Tornadoes are less frequent in this area than the southern Plains, however, Alabama and Mississippi have reported more tornado fatalities than the Plains states. This is due in part to the relatively high number of strong and violent, long tracking tornadoes and a higher population density.

Walker County also experiences occasional tropical storms and hurricanes due to its proximity to the Central Gulf Coast. Walker County was impacted heavily by Hurricane Ivan in 2004 and to a lesser degree Hurricane Katrina in 2005.
Average annual climate statistics include the following:

• Temperature averages – low of 48.2° and high of 73.2° in Walker County

• Rainfall – 59.68 inches

• Sun shines an average of 59% of the daylight hours.

Walker County Data

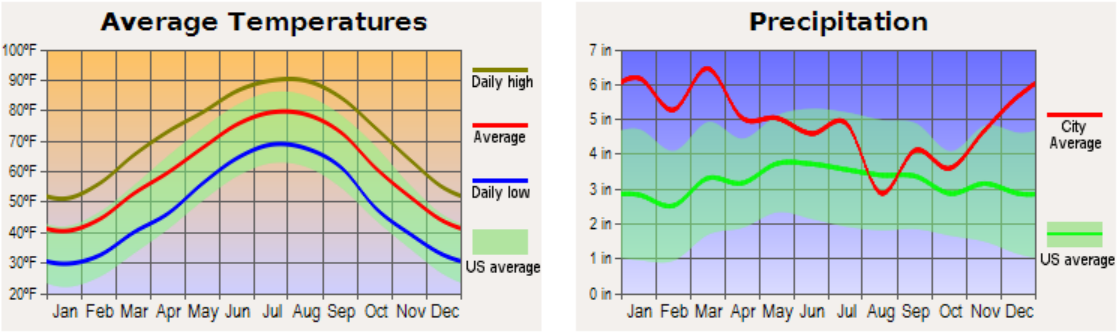


Figure 2.3, Avg Temp and Rainfall for Walker County

2.3 Physical Features and Land Use

Elevation ranges from approximately 298 feet to 664 feet. About 400,000 acres in Walker County is commercial forest land – 77%, about 16% is pasture and about 2% is cropland. Forestry is of major importance in the economy of Walker County.

The land surface is highly dissected and contains narrow valleys and broad plateaus. Water supplies are adequate for domestic uses in most areas. Smith Dam, located on the Sipsey Fork of the Black Warrior River, creates more than 8,000 acres of surface water for a habitat and recreation. The riverbed overlies vast deposits of coal from the Warrior Coal Field, the southernmost large-scale coal-producing area in North America.

The 1992 US Dept of Agriculture Soil Survey can be used to compare the suitability of large areas for general land uses. Areas of suitable soils can be identified on associated maps. Likewise, areas where the soils are not suitable can be identified. The survey can help planners to maintain or create a land use pattern that is in harmony with nature. Information in the survey can be used to determine appropriate sites for sanitary facilities, highways, transportation systems, industrial sites, and residential settlements.

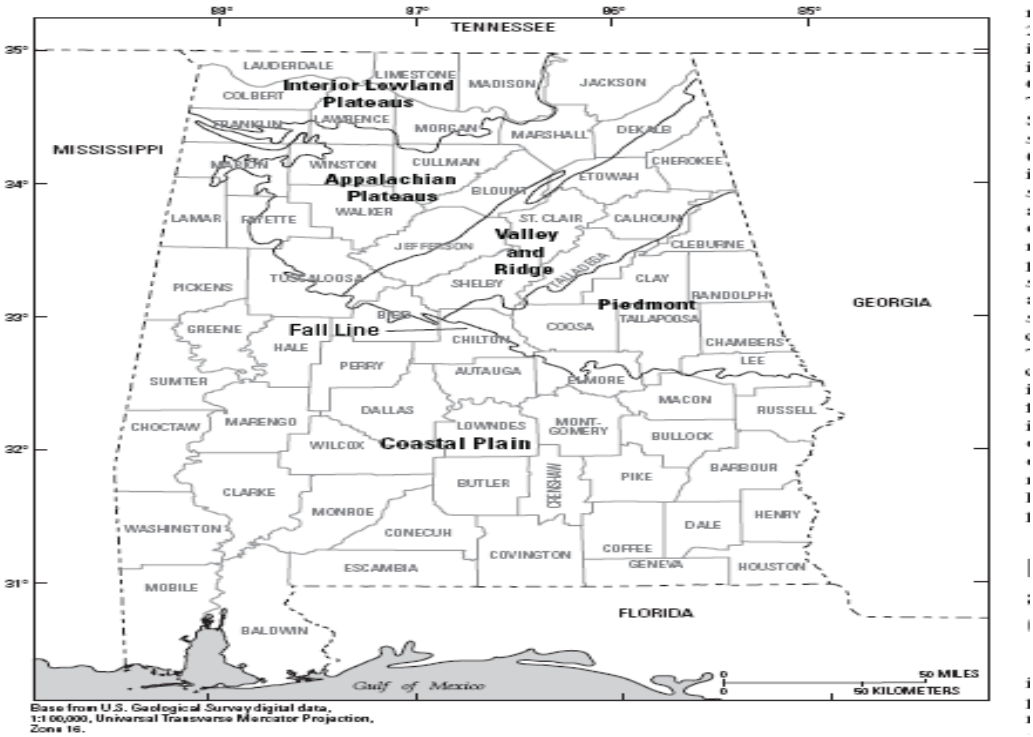


Figure 2.4, Locations of physiographic provinces in Alabama

2.4 Population

The total population for Walker County, Alabama is 67,023. This information is provided by the U.S. Census Bureau through their 2010 "2010 Census Interactive population Search" .

Population and Growth by Town Table 2.1

	2010	2007	2000
Carbon Hill	2,021	2,029	2,071
Cordova	2,095	2,283	2,423
Dora	2,025	2,411	2,413
Eldridge	130	173	184
Jasper	14,352	13,978	14,052
Kansas	226	254	260
Nauvoo	221	279	284
Oakman	789	926	944
Parrish	982	1,242	1,268
Sipsey	437	541	552
Sumiton	2,520	2,554	2,665
Walker County	67,023 (2010)	68,970 (2008)	70,713

Populations at Risk: An important component to be considered in the formation of mitigation activities is the identification of vulnerable populations. Vulnerable populations are primarily made up of individuals whose household income is below the poverty level, are disabled, or do not speak or understand English. According to the US Census 2010 data, there were 13.20% families & 16.5% of the population in the county whose income falls under the poverty level and number of residents who speak a language other than English at home – 2.2%.

The population in Walker County has remained steady during the past 23 years, while some surrounding counties have shown considerable growth during this same time period.

Table 2.2

	2010	2008	2000
Cullman	80,406	81,324	77,483
Fayette	17,241	17,691	18,495
Jefferson	658,466	659,503	662,047
Marion	30,776	29,465	31,214
Tuscaloosa	194,656	179,448	164,875
Winston	24,484	13,978	14,052

2.5 Jurisdictional Information – By Municipality

Carbon Hill

Carbon Hill was begun as a small mining town in extreme Western Walker County in 1886. The city is located at 33º53'26"N 87º31'28"W. The city has a total area of 5.6 square miles and .1 square mile of it is water. According to the 2010 Census, the population density was 354.3 people per square mile. There were 995 housing units at an average density of 183.8 per sq mile. The median household income in the city was $20,861 and 24% of the population was below the poverty line.

Cordova

Cordova was originally a settlement on the Warrior River called "Dent" or "Dent's Place", and became Cordova in 1859. The company that had the biggest impact on the city was Nashua Manufacturing Company, which brought in the Indian Head Textile Mills.

Cordova is located at 33º45'36"N 87º11'13"W and has a total area of 6 square miles, of which .1 square miles is water. Cordova is located in the rolling foothills of the Appalachian Mountains, near the banks of the Mulberry Fork of the Warrior River.

According to the 2010 Census, the population density was 350 people per square mile. There were 1,180 housing units at an average density of 200 per sq mile. The median

household income for a household in the city was $23,667, and 23% of the population was below the poverty line.

Dora

The City of Dora, located in 1886 in a valley through which the Kansas City-Memphis and Birmingham Railroad ran, was originally called Sharon. Located at 33º43'46"N 87º5'13"W, Dora has a total area of 7.5 square miles, all of it land. According to the 2010 Census, the population density was 269 people per square mile. There were 1080 housing units at an average density of 143 per sq mi. The median household income was $42,375 and 18% of the population was below the poverty line.

Eldridge

The Town of Eldridge, originally called Camp Springs, was an Indian camp site and later became a coach stop. Located at 33º55'11"N 87º37'16"W, Eldridge has a total area of .7 square miles, all of it land. According to the 2010 Census, the population density was 186 people per square mile. There were 62 housing units at an average density of 88.6 per sq mi. The median household income was $33,750 and 32.9% of the population was below the poverty line.

Jasper

Jasper is the county seat of Walker County and named in honor of Sgt William Jasper, a noted American soldier in the Revolutionary War. Jasper was settled in 1815 and incorporated in 1888. The first significant growth came when the Kansas City-Memphis & Birmingham and the Sheffield & Birmingham Railroad were completed through Jasper. In a special edition in 1891, the *Mountain Eagle* stated there were 400 coke ovens in operation, six coal mines, one foundry and machine shop, two saw mills, one brick work, two sandstone quarries, four hotels, and two banks.

Jasper has a total area of 28.46 square miles, of which .04% is water, and is located at 33º50'32" N 87º16'38"W . According to the 2013 Census estimate, the population of Jasper was 14,222 and the density was 504 people per square mile. There were 6,478 housing units at an average density of 240 per sq mi. The median household income was $43,728 and 13.1% of the population was below the poverty line.

Kansas

The Town of Kansas, located at 33º54'11"N 87º33'24"W, has a total area of 1 square mile, all of it land. According to the 2010 Census, Kansas had a population density of 226 people per square mile. There were 122 housing units at an average density of 122 per sq mile. The median household income was $30,459.00 and 28.6% of the population was below the poverty line.

Nauvoo

The Town of Nauvoo is a small town in the Northwestern corner of Walker County adjacent to the Winston County line. Founded in 1888 during the construction of the Northern Alabama railway, Nauvoo was formerly a center of coal mining and originally known as Ingle Mills. Nauvoo, located at 33º59'19"N 87º29'16"w, has a total area of 1 square mile,

all of it land. According to the 2010 Census, the population density was 221 people per square mile. There were 150 housing units at an average density of 153 per sq mi. The median household income was $22,274, and 24.4% of the population was below the poverty line.

Oakman

Oakman, one of the oldest towns in the county was called Day's Gap and Marietta prior to 1895. Located at 33º42'49"N 87º23'10"W, Oakman has a total area of 3.1 square miles. According to the 2010 Census, Oakman had a population density of 254 people per square mile. There were 449 housing units at an average density of 144 per sq mile. The median household income was $31,383 and 20.2% of the population was below the poverty line.

Parrish

Parrish, originally named Hewitt, was a post office served by the Pony Express. Located at 33º43'57"N 87º16'45"W, Parrish has a total area of 2.1 square miles. According to the 2010 Census, Parrish had a population density of 491 people per square mile. There were 466 housing units at an average density of 233 per sq mi. The medial household income was $26,517 and 24.2% of the population was below the poverty line.

Sipsey

The Town of Sipsey was founded in 1912 by Milton H. and Rose Fies and the Maryland Coal and Coke Co. (later named the DeBardeleben Coal Co.) The village was built as a showplace of a mining village in the South. It consisted of a large commissary, school building, church and 200 houses built from logs sawed on the property. Sipsey is a Choctaw Indian name for the word poplar. The name was chosen because of the numerous poplar trees in the area when the town was founded.

Sipsey is located at 33º49'23"N 87 º5'10"W, has a total area of .5 square miles. According to the 2010 Census, Sipsey had a population of 435 people and a population density of 870 people per square mile. There were 239 housing units at an average density of 486 per sq mi. The median household income was $32,604 and 38% of the population was below the poverty line.

Sumiton

Sumiton, originally called Summit, is located at 33º44'50"N 87º2'48"W, and has a total area of 5.3 square miles, all of it land. According to the 2010 Census, Sumiton has a population density of 475 people per square mile. There were 1,134 housing units at an average density of 214 per sq mile. The median household income was $37,221 and 15.5% of the population was below the poverty line.

Multi-Hazard Mitigation Plan
3.0 Planning Process

3.1 Funding

All funding was provided in house by Walker EMA and the Cities/Towns.

3.2 Local Government/Community Participation

DMA planning regulations and guidance stresses that each jurisdiction seeking the required FEMA approval of their mitigation plan must:

- Participate in the process,
- Detail areas within the local jurisdiction where the risk differs from that facing the entire area,
- Identify specific projects for funding eligibility, and
- Formally adopt the plan.

Participation can be defined as:

- Attendance at the planning committee meetings
- Provide available data requested by the planning committee
- Review, provide and coordinate comments on the Draft plans
- Advertise, coordinate and participate in the Public Input process
- Coordinate the formal adoption of the plan by the city and county officials.

Jurisdictional committee members contacted local sources – such as governmental officials, business leaders, citizens, etc - to obtain and compile local information for use in this plan. They also reviewed existing plans, ordinances and codes in their communities as a resource for the plan. All municipalities participated in the development of this plan.

3.3 Planning Process

The Walker County EMA lead the mitigation plan development activities, meet with local officials, compile information and write the plan. With the assistance of the DMA planning requirements and FEMA's associated guidance, the planning committee was able to develop a plan that closely follows the model set forth by FEMA. The planning committee utilized the information found in the FEMA Local Mitigation Plan Review Guide, Local Mitigation Planning Handbook and the Multi-Jurisdictional Mitigation Planning which provides planning steps for formulating a plan.

The planning steps utilized by the planning team are:

1. Organize
2. Involve the Public
3. Coordinate with other Departments and Agencies
4. Assess the Hazards
5. Assess the Risks
6. Set Planning Goals
7. Review Possible Mitigation Projects and Activities
8. Draft an Action Plan
9. Adopt the Plan
10. Implement the Plan, Evaluate its Worth, Revise as Needed

Development of the Planning Team – The planning process used to develop the Walker County Hazard Mitigation Plan started with the assembly of a multi-jurisdictional planning team that was comprised of members of each incorporated community and various other public and private entities with interest in the mitigation of hazards. Walker County EMA contacted all jurisdictional mayors and directed the development of individual local disaster planning teams which consist of at least: the mayor, fire chief, police chief, city clerk, public works director, city engineer, and any other members with interest in the process.

The Core Planning Committee Members are:

Table 3.1

Walker County and State Officials		
Name	Title	Organization
Regina Myers	EMA Coordinator	Walker County EMA
Tommy Davis	EMA Assistant	Walker County EMA
Cheryl Ganey	County Administrator	Walker County Commission
Billy Luster	Commission Chairman	Walker County Commission
Dan Wright	Commissioner	Walker County Commission
Katherine Patton	Consultant	Walker Co Soil and Water Conservation
Bartley Wyers	Forestor	US Forestry Department
Chuck Cordell	Local Director	Department of Transportation
Tony Wingo	EMA Representative	State EMA
Municipal Representatives		
Mark Chambers	Mayor, Risk Manager	City of Carbon Hill
Paul Agnew	Police Chief	City of Carbon Hill
Buddy Smith	Fire Chief	City of Carbon Hill
Janice Pendley	City Clerk	City of Carbon Hill
Dean Harbison	Fire Chief	City of Cordova
Drew Gilbert	Mayor	City of Cordova
Nick Smith	Police Chief	City of Cordova

Leanne Dawkins	City Clerk	City of Cordova
Randy Stephens	Mayor	City of Dora
John Duchock	Police Chief	City of Dora
Chris Edwards	Fire Chief	City of Dora
Marcy Brown	City Clerk	City of Dora
Bobbie Jean Dodd	Mayor	Town of Eldridge
Ralph Tittle	Fire Chief	Town of Eldridge
Martha Tittle	Council	Town of Eldridge
Sue Piotrowski	City Clerk	Town of Eldridge
Bartley Wyers	Forestry	Town of Eldridge
Sonny Posey	Mayor	City of Jasper
Kathy Chambless	City Clerk	City of Jasper
JC Poe	Police Chief	City of Jasper
David Clark	Fire Chief	City of Jasper
Russ Smallwood	Public Works	City of Jasper
Joe Matthews	PW Director	City of Jasper
Shelia Clark	Mayor	Town of Kansas
Jackie Cole	City Clerk	Town of Kansas
Vicki Howard	Council	Town of Kansas
Gilbert Behel	Utilities	Town of Kansas
Dwight A. Byram	Mayor	Town of Nauvoo
Deborah Barton	Mayor Pro Tem	Town of Nauvoo
Gary Knight	Fire Chief	Town of Nauvoo
Keith Sizemore	City Clerk	Town of Nauvoo
Joyce Todd	Mayor	Town of Oakman
John Wilson	Police Chief	Town of Oakman
Shane Calloway	Fire Chief	Town of Oakman
DeAnna Woods	City Clerk/Finance	Town of Oakman
Cedrick Ramsey	Mayor	Town of Parrish
Roderick McConico	Police Chief	Town of Parrish
Randy Phillips	Fire Chief	Town of Parrish
DeBran Suddath	City Clerk	Town of Parrish
Belinda McCain	Mayor	Town of Sipsey
Carla Williams	Town Clerk	Town of Sipsey
Gary “Sonny” Aaron	Acting Fire Chief	Town of Sipsey
John Jackson	Police Chief	Town of Sipsey
Petey Ellis	Mayor	City of Sumiton

T.J. Burnett	Police Chief	City of Sumiton
David Waid	Fire Chief	City of Sumiton
Judy Glover	City Clerk	City of Sumiton

Each of the eleven municipalities developed a local disaster team which consists of their core group plus local officials, community representatives and business owners. The local disaster teams are shown in the Municipal Preparedness section beginning on page 25.

While certain meetings were held for the benefit of all members, other smaller meetings were held that involved core representation from each of the local disaster teams. There were also local meetings held between the mitigation consultant and the local disaster teams. All meetings were open to the public. Additionally, each individual municipal team held local meetings – usually in conjunction with their town hall meetings – and at these local meetings, the public was invited to attend and to make comments as appropriate. Monthly meetings of local disaster teams are advertised locally and minutes of each meeting are kept in the mayors' offices.

Timeline - The development process utilized to form this Hazard Mitigation Plan began with a mail out to all city/towns in January 2014. The mail out there was links to the Multi-Jurisdictional Mitigation Planning, Local Mitigation Plan Review Guide and the Local Mitigation Guidance. Meetings were held February, March, April, May, June, August, November and January 2015.Meetings were held periodically for the purpose of information gathering and guidance to the local disaster team.

Once all areas of information had been covered, a draft of the plan was created and forwarded to each mayor. Each local team had the opportunity to peruse the entire plan prior to the draft review meeting in February 2015. The public was invited to the draft review meeting and they were also invited to receive a copy of the plan prior to the meeting. The draft review meeting was held and each mayor was given the opportunity to request changes to the draft version. Once all approved changes were made, the mayors signed off on the plan and the plan was submitted to the State EMA office for approval. Once approved by the State office, the plan will be forwarded to FEMA for final approval.

Contact/Chairperson – The primary point of contact for information regarding this plan is Regina A. Myers, EMA Coordinator for Walker County. The secondary point of contact is Tommy Davis, EMA Admin Assistant.

Planning Committee Meetings – The agenda, attendees and minutes for each of the planning committee meetings can be found in *Appendix A*. Documentation of public meeting notices, ads and flyers can be found in *Appendix B*.

The 8 planning meetings were held as follows:

February – Kickoff Meeting, Hazard Identification

March – Jurisdictional Information, Resources, Risk Assessment, Vulnerability Assessment, Identified Critical Facilities, Identified Projects
April – went over February and March Information
May – went over February and March Information
June – went over City/Towns information in Hazard Mitigation Plan
August – went over Projects
November – went over Projects
January – Collected all information from City / Towns
February – Review of Draft Plan

Public Involvement – Public meetings were held and attendees were allowed to provide input. Citizens within Walker County were encouraged to attend the public planning meetings. The local daily newspaper provided notice of public meetings. Emails and faxes were sent to individuals who asked to be involved. Flyers were also placed throughout the county in government facilities to inform the public of upcoming meetings

Involvement of other Agencies and Organizations – Public agencies, private organizations and businesses all have to contend with the effects of disaster. These organizations were asked to contribute information on the past and potential hazard threats and comment on the planning process and content. The local director of the American Red Cross, a local representative of the U.S. Forestry Service, Walker County Soil and Water, and the Alabama Department of Transportation were involved in the development of the plan.

3.3.1 Coordination

Coordination with other community planning efforts is also paramount to the success of this Plan. Hazard mitigation planning involves identifying existing community policies, tools, resources, preparedness activities, and actions that will reduce a community's risk and vulnerability from natural hazards. Walker County, and the eleven municipalities within the county boundaries, utilizes a variety of comprehensive planning mechanisms such as land use and master plans, emergency response and mitigation plans, and municipal ordinances and building codes to guide and control community development. Integrating existing planning efforts, mitigation policies, and action strategies into this Hazard Mitigation Plan establishes a credible and consistent plan that ties into and supports other community programs. This Plan, therefore, links the specific natural hazards that present a risk in the community with the existing mitigation elements found in other county plans.

3.3.2 Incorporation of Existing Plans

Each municipality and the county government have in place governing documents which direct the way business is done. Each mayor and county official is aware of the importance of including these documents and their content into the process of development this Hazard Mitigation Plan for Walker County. All ordinances, codes, plans and policies have been utilized in the development of this mitigation plan. Here is a brief list of the documents which affect planning and that were included in the process:

Southern Building Code
Local Ordinances
Fire Department Emergency Plans
Public Works Emergency Plans
Alabama League of Municipalities
Police Department Emergency Plans
Zoning Ordinances
Tax Assessor Records
911 Procedures
Copies of the actual documents are kept on file along with this Plan in the County EMA office.

Agencies who were asked to contribute information needed in the development of the plan include Walker County Soil and Water, American Red Cross, Alabama Department of Transportation, Alabama Forestry Commission, Walker County Engineering Office, Walker County Commission Mapping Division, and the Walker County Revenue Department.

3.3.3 Municipal Preparedness

A major component of municipal preparedness has been to identify Mutual Aid Agreements and Continuity of Operation Plans currently in effect. The following information was gathered by surveying the mayor's office in each of the eleven towns. Here is a synopsis of the jurisdictional information gathered by survey, by location:

Carbon Hill

Local Disaster Planning Team

Mark Chambers	Mayor
Janice Pendley	City Clerk
Buddy Smith	Fire Chief
Paul Agnew	Police Chief
Terry Acuff	City Engineer
Alan May	Public Works
Jackie Stough	Utilities
Bill Jenkins	City Council

-Emergency Operations Plan – COOP
-Participates in the National Flood Insurance Program
-Has received no funding in the past 5 years in support of mitigation projects.
-Funds are not regularly budgeted for a response to a catastrophic event.
-There are no planned future building projects including infrastructure, housing developments, retail establishments, municipal buildings or schools in the area.
-New municipal buildings and/or critical facilities built since 2003 include: a fire station, a library, and an elementary and high school complex.
-Major rivers and watersheds in the area are Mill Creek, Lost Creek, Rabbit Branch, and the AL State fish hatcheries.
-No mutual aid agreements

Cordova

Local Disaster Planning Team

Drew Gilbert	Mayor
Nick Smith	Police Chief
Leanne Dawkins	City Clerk/Finance
Dean Harbison	Fire Chief
Calvin Cassady	City Engineer
Wayne Brown	Public Works
Phillip Reed	Risk Manager
Brett Dawkins	Fire Dept
Tony Reid	Police Dept
David Robertson	Fire Dept

-Emergency Operations Plan – COOP
-Participates in the National Flood Insurance Program
-Has received funding in the past 5 years in support of mitigation projects (Community Shelter).
-Funds are not regularly budgeted for a response to a catastrophic event.
-Planned future building projects including infrastructure, housing developments, retail establishments, municipal buildings or schools in the area include: a new civic center, fire station
-New municipal buildings and/or critical facilities built since 2003 include: high school, community center, city hall, police station and jail.
-Major rivers and watersheds in the area are Black Warrior River Basin, Black Warrior River, Cane Creek.
-Mutual aid agreements in place to share resources with other towns.

Dora

Local Disaster Planning Team

Randy Stephens	Mayor
Marcy Brown	City Clerk
Chris Edwards	Fire Chief
John Duchock	Police Chief
Randy Vines	Public Works

-Emergency Operations Plan – COOP
-Participates in the National Flood Insurance Program
-Has received no funding in the past 5 years in support of mitigation projects.
-Funds are not regularly budgeted for a response to a catastrophic event.

-No planned future building projects including infrastructure, housing developments, retail establishments, municipal buildings or schools in the area .
-No new municipal buildings and/or critical facilities built since 2003.
-No major rivers and watersheds in the area.
-Mutual aid agreements in place to share resources with other towns.

Eldridge

Local Disaster Planning Team

Bobbie Jean Dodd	Mayor
Ralph Tittle	Fire Chief
Martha Tittle	Council
Sue Piotrowski	Town Clerk
Bartley Wyers	Forestry

-Emergency Operations Plan – COOP
-Participates in the National Flood Insurance Program
-Has received no funding in the past 5 years in support of mitigation projects.
-Funds are not regularly budgeted for a response to a catastrophic event.
-No planned future building projects including infrastructure, housing developments, retail establishments, municipal buildings or schools in the area .
-No new municipal buildings and/or critical facilities built since 2003.
-Major rivers and watersheds in the area: New River
-Mutual aid agreements in place to share resources with Winfield and Carbon Hill.

Jasper

Local Disaster Planning Team

Sonny Posey	Mayor
Kathy Chambless	City Clerk
David Clark	Fire Chief
JC Poe	Police Chief
Russ Smallwood	Public Works
Joe Matthews	PW Director

-Emergency Operations Plan – COOP
-Participates in the National Flood Insurance Program
-Has received no funding in the past 5 years in support of mitigation projects.
-Funds are not regularly budgeted for a response to a catastrophic event.
-New High School under construction
-No new municipal buildings and/or critical facilities built since 2011.
-Major rivers and watersheds in the area: Warrior River, Smith Lake
-No mutual aid agreements.

Kansas

Local Disaster Planning Team

Shelia Clark	Mayor	Town of Kansas
Jackie Cole	City Clerk	Town of Kansas
Vicki Howard	Council	Town of Kansas
Gilbert Behel	Utilities	Town of Kansas

-Emergency Operations Plan – COOP
-Participates in the National Flood Insurance Program
-Has received no funding in the past 5 years in support of mitigation projects.
-Funds are not regularly budgeted for a response to a catastrophic event.
-No planned future building projects including infrastructure, housing developments, retail establishments, municipal buildings or schools in the area .
-No new municipal buildings and/or critical facilities built since 2003.
-Major rivers and watersheds in the area: Lost Creek and Trinity Creek
-No mutual aid agreements.

Nauvoo

Local Disaster Planning Team

Dwight A. Byram	Mayor
Gary Knight	Fire Chief
Keith Sizemore	Town Clerk
Deborah Barton Dwight A. Byram	Town Council Public Works

-Emergency Operations Plan – COOP
-Participates in the National Flood Insurance Program
-Has received no funding in the past 5 years in support of mitigation projects.
-Funds are not regularly budgeted for a response to a catastrophic event.
-No planned future building projects including infrastructure, housing developments, retail establishments, municipal buildings or schools in the area .
-No new municipal buildings and/or critical facilities built since 2003.
-No major rivers and watersheds in the area.
-No mutual aid agreements.

Oakman

Local Disaster Planning Team

Joyce Todd	Mayor
John Wilson	Police Chief
Shane Calloway	Fire Chief
DeAnna Woods	City Clerk/Finance
Robert Nelson	City Engineer
Richard Thacker	Public Works
Jon Harbin	Fire Dept
Pat Blackwell	Council
Cecil Canida	Waterworks

-Emergency Operations Plan – COOP
-Participates in the National Flood Insurance Program
-Has received no funding in the past 5 years in support of mitigation projects.
-Funds are not regularly budgeted for a response to a catastrophic event.
-Planned future building projects including infrastructure, housing developments, retail establishments, municipal buildings or schools in the area include: a new fire department.
-No new municipal buildings and/or critical facilities built since 2003.
-Major rivers and watersheds in the area include Cane Creek and Town Creek.
-No mutual aid agreements.

Parrish

Local Disaster Planning Team

Cedrick Ramsey	Mayor
Roderick McConico	Police Chief
Randy Phillips	Fire Chief
DeBran Suddath	City Clerk

-Emergency Operations Plan – COOP
-Participates in the National Flood Insurance Program
-Has received no funding in the past 5 years in support of mitigation projects.
-Funds are not regularly budgeted for a response to a catastrophic event.
-Planned future building projects including infrastructure, housing developments, retail establishments, municipal buildings or schools in the area include: a new fire department.
-No new municipal buildings and/or critical facilities built since 2003, but was given a school building and currently town is using as a community center.
-Major rivers and watersheds in the area includes the Warrior River
-No mutual aid agreements.

Sipsey

Local Disaster Planning Team

Belinda McCain	Mayor
John Jackson	Police Chief
Gary “Sonny” Aaron	Fire Chief
Carla Williams	City Clerk
Stephanie Sanders	Council
LaTronda Hagler	Council
Freda E. Vann	Council
Michael Harris	Council
Carla Williams	City Clerk

-Emergency Operations Plan – COOP
-Participates in the National Flood Insurance Program
-Has received no funding in the past 5 years in support of mitigation projects.
-Funds are not regularly budgeted for a response to a catastrophic event.
-Planned future building projects including infrastructure, housing developments, retail establishments, municipal buildings or schools in the area include: a new fire department.
-No new municipal buildings and/or critical facilities built since 2003.
-Major rivers and watersheds in the area: Warrior and Sipsey Rivers
-Mutual aid agreements are in place with local fire and police departments.

Sumiton

Local Disaster Planning Team

Petey Ellis	Mayor
Judy Glover	City Clerk
David Waid	Fire Chief
TJ Burnett	Police Chief
George Woods	Public Works
Timothy Diveto	Utilities

-Emergency Operations Plan – COOP
-Participates in the National Flood Insurance Program
-Has received no funding in the past 5 years in support of mitigation projects.
-Funds are not regularly budgeted for a response to a catastrophic event.
-Planned future building projects including infrastructure, housing developments, retail establishments, municipal buildings or schools in the area include: expansion of Sanitation Sewer System.
-New municipal buildings and/or critical facilities built since 2003: Sumiton Senior/Community Center.
-No major rivers and watersheds in the area.
-No mutual aid agreements.

3.3.4 Resource Evaluation by Town

Each municipality was asked to provide a list of resources that they can make available following a disaster. This includes manpower, equipment and materials.

Carbon Hill

Personnel:

7 Police Officers

15 Fire Fighters

2 Office Workers

6 Street and Sanitation Workers

6 Utility Workers including office

Cordova

Emergency Resources:

3 Pumpers Collapse Rescue Tools

1 Ladder Truck Hydraulic Rescue Tools

1 Brush Truck	2 Dump Trucks
1 Ambulance	1 Road Grader
6 Police Tahoe	Personnel:
1 Military Humvee	25 Firefighters
1 Police UTV	10 Law Enforcement Officers
4 Utility Trucks	5 Laborers
1 Bush Hog	4 Operators
1 Tractor	4 Utility Workers
2 Backhoes	1 Trackhoe

Dora

Emergency Resources:

1 -2 ton dump/brush truck	10 Night Vision
2 -½ ton pickup trucks	Mobile Command
1 ditching unit	Shelter
7 police cruisers	4 Generator Power Stations
3 fire pumpers	Semi-Truck
1 4x4 jeep rescue unit	3 Hummers
2 sets of extrication/cutting units	Personnel:
1 acetelyne torch unit	20 Firefighters with 2 EMT's
1 thermal imaging camera	10 Police Officers / 5 Reserve
A variety of hand tools and rescue tools	6 Street & Public Service Employees

Eldridge

Emergency Resources:

1 Hazmat Spill Kit Oil Dry

1 Cascade Filling Station	1 AED
1 2006 Ford – 1500 Gal	1 1977 Mack -1000 Gal
1 2002 Ford 4x4 500 Gal	1 1967 Dodge 250 Gal
1 2003 Chevy Blazer Medical	3 Generators
3 Chain Saws	1 Backpack Blower
1 Air Compressor	1 1991 S10 Truck
1 1994 S10 Truck	1 Ditchwitch
1 Backhoe	2 Booster Pumps

Jasper

Emergency Resources:

37 Pickup trucks	27 Mowers
4 Dump trucks	8 Gators and 4 wheelers
14 Heavy duty trucks for hauling	7 Generators
1 Travel trailer	4 Street sweepers/vacs
4 Pumper trucks	3 Concrete mixers
1 Tank truck	2 Pressure washer
1 Ladder truck	1 Tiller
8 Garbage trucks	1 Caterpillar
14 Tractor	1 Caterpillar with bucket
6 Trailers	1 Holmatro Rescue Tool
4 Flat beds	2 Cooling fans
2 Rescue trucks	1 Midland 45 Watt Base Station
8 Arc antennas	8 M24MFb antennas
2 Bucket trucks	6 SRN international high band
1 Tar truck	6 remote control models
3 Loader	2 DC high band radios
3 Backhoes	29 WT Radio Fire
1 Trackloader	60 WT Radio Police

Personnel:

29 fire fighters	52 police officers
12 heavy equipment operators	9 laborers

7 maintenance/construction

1 city planner

2 mechanics

4 masons

14 operators

21 office workers

Nauvoo

Emergency Resources:

1 2005 Ford Sterling Fire Engine

1 1989 Pierce Fire Engine

1 1987 Ford Tanker

1 2011 Ford F350 Service Rescue

1 1996 Ford F350 Brush Truck

1 1999 GMC truck for water and utility

1 1996 F350 Service Truck

1 2011 Ranger PU

1 2012 Tractor with Loader and Attachments

1 2014 Vermeer Utility Machine with Backhoe

1 1977 Dodge brush truck for Fire Dept

Personnel:

2 water dept operators

14 Volunteer Fire Fighters

1 EMT / 5 First Responders

2 clerical

Kansas

Personnel:

2 office workers

1 meter reader

1 bush hog

Oakman

Emergency Resources:

2 fire trucks

1 brush truck

1 rescue van

2 generators

3 inch pump

1 - 22 foot trailer

1 pressure washer

1 tanker and equipment van

2 patrol cars

2 backhoes

4 pickup trucks

2 tractors

1 bush hog

Personnel:

30 fire fighters

3 police officers

2 street workers

Parrish

Emergency Resources:	Personnel:
2 tractors	1 clerk
1 dump truck	4 dispatchers
1 garbage truck	4 police officers
4 police cars	5 street dept workers
6 fire truck	5 town employees

Sumiton

Emergency Resources:	Personnel:
3 fire pumpers	33 fire personnel
1 rescue	17 police personnel
1 command truck	10 street dept personnel
12 police cars	
2 dump trucks	
3 backhoes	

Walker County Commission

District One	District Three
5 Dump Trucks	3 Dump Trucks
1 Backhoe	6 Loaders/Dozers
2 Patching Trucks	1 Generator
6 Pickup Trucks	8 Pickup Trucks

District Two	District Four
5 Dump Trucks	3 Dump Trucks
7 Loaders/Dozers	5 Loaders/Dozers
1 Generator	1 Generator
3 Pickup Trucks	

Multi-Hazard Mitigation Plan
4.0 Risk Assessment

Risk from natural hazards is a combination of hazard and exposure. The risk assessment process measures the potential loss to a community – including loss of life, personal injury, property damage, and economic injury – resulting from a hazard event.

The risk assessment process provides information that allows a community to better understand its potential risk and associated vulnerability to natural hazards. This information provides the framework for a community to develop and prioritize mitigation strategies and to implement plans for reducing the risk and vulnerability to future hazard events. The risk assessment for Walker County and municipalities therein followed: Local Multi-Hazard Mitigation Planning Guidance, Risk Assessment. Also we used the Local Mitigation Planning Handbook, Conduct a Risk Assessment. And in the methodology described in FEMA How to Guide Publication 386-2, "Understanding Your Risks: Identifying Hazards and Estimating Losses". This publication uses a 4 step approach:

1. Identify Hazards,
2. Profile Hazard Events,
3. Inventory Assets and,
4. Estimate Losses

4.1 Hazard Identification

The process of answering the question "What hazards can occur in my community". The planning committee conducted a Hazard Identification study to determine what hazards threaten the planning area. This section will document the previous occurrences of natural hazards, those that might occur in the future, and the likelihood of their occurrence or recurrence.

The natural hazards identified and investigated include:

- Dam Failure

- Drought
- Earthquake
- Extreme temperature
- Flood
- Hail
- Hurricane
- Sinkhole/Landslide/Expansive Soil
- Snow/Ice
- Thunderstorm/high wind
- Tornado
- Wildfire

Identification of Hazards by Municipality

Table 4.1

	Carbon Hill	Cordova	Dora	Eldridge	Jasper	Kansas	Nauvoo	Oakman	Parrish	Sipsey	Sumiton	County
Dam Failure	No	Yes	Yes	No	Yes	No	No	Yes	Yes	Yes	Yes	Yes
Drought	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Earthquake	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Extreme Temperatures	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Flood	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hail	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hurricane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sinkhole/ Expansive Soil	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes
Snow/Ice	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Thunderstorm/ High Wind	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Tornado	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wildfire												

	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Disaster Declaration

One method of identifying hazards is to determine what events triggered federal and/or state disaster declarations within the planning area. Disaster declarations are granted when the severity and magnitude of the event surpasses the local government's ability to respond and recover. Disaster assistance is supplemental and sequential. When the local government's capacity is surpassed, a state disaster declaration may be issued, allowing for the provision of state assistance. If the disaster is so severe that both the local and state government capacities are exceeded, a federal disaster declaration may be issued, allowing for the provision of federal disaster assistance

Since 1961, FEMA has issued 58 Disaster Declarations in Alabama. Here are seven recent declarations for Walker County (*):

FEMA Disaster Declarations – Walker County – Past 10 Years

Table 4.2

Declaration Number	Event	Date of Declaration	Type of Assistance
1971	Severe storms, tornadoes, flooding	4/15 – 5/31 2011	Individual & Public
1908	Severe storms, tornadoes, flooding	4/24 – 4/25 2010	Individual & Public
1549	Hurricane Ivan	9/15/2004	Individual
1466	Severe storms, tornadoes, flooding	5/12/2003	Individual and Public
1442	Severe storms, tornadoes	11/14/2002	Individual and Public
1362	Severe storms, flooding	3/5/2001	Public
1214	Tornadoes, severe storms	4/9/1998	Individual

*Detailed data prior to 1998 was not available from FEMA.

4.2 Hazard Profiles

Answers the question "How bad can it get"? Based on historical data and what is known about the identified hazards, projections can be prepared. Each hazard is assigned a likelihood rating based on the criteria and methods described on page 87.

Historic Hazard Events – Previous occurrences
Hazard Descriptions for each identified probable hazard, include: definition of the hazard, previous occurrences, likely geographic location of impact, extent of severity, probability, calculated priority risk.

Tornado

The National Weather Service defines a tornado as a violently rotating column of air pendant from a thunderstorm cloud that touches the ground. Tornadoes are generally considered the most destructive of all atmospheric-generated phenomena. On average, 800 touch down annually in the United States. More tornadoes occur during the months of May and June than in other months nationally. In Central Alabama, the peak tornado season starts March 1st and runs into May. The secondary tornado season is in November. Alabama averages about 23 tornadoes per year, with the greatest number – 55 – occurring in April 27, 2011.

The corridor of states along the Gulf of Mexico from Texas eastward to Georgia and Florida (and including Arkansas) is called "Dixie Alley". Much like "Tornado Alley" in the Midwest, here cool-season (October through February) tornadoes are most frequent. Some locations within Dixie Alley (especially Mississippi) get nearly as many tornadoes during the cool season as during the rest of the year.

Tornadoes follow the path of least resistance. Therefore, valleys and flatter land areas are most susceptible to them. The typical tornado path is 16 miles long with a width of less than one-quarter mile. Tornadoes have resulted in some of the greatest losses of life of any natural hazard, with the mean national death toll being between 80 and 100 persons every year.

Tornadoes are classified using the tornado scale developed by Dr. Theodore Fujita. The Fujita Tornado Scale assigns a category to tornadoes based on their wind speeds and relates this to the general type of damage that is expected. Ratings range from F0 (gale tornado), to F6 (inconceivable). The scale is presented in Figure 4.1. Approximately ninety percent of tornados nationwide recorded between 1956 and 2001 were F2, F1, and F0 tornadoes.

Fujita Scale

F-Scale Number	Intensity Phrase	Wind Speed	Type of Damage Done
F0	Gale tornado	40-72 mph	Some damage to chimneys; breaks branches off trees; pushes over shallow-rooted trees; damages sign boards.
F1	Moderate tornado	73-112 mph	The lower limit is the beginning of hurricane wind speed; peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off the roads; attached garages may be destroyed.
F2	Significant tornado	113-157 mph	Considerable damage. Roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light object missiles generated.
F3	Severe tornado	158-206 mph	Roof and some walls torn off well constructed houses; trains overturned; most trees in fores uprooted
F4	Devastating tornado	207-260 mph	Well-constructed houses leveled; structures with weak foundations blown off some distance; cars thrown and large missiles generated.
F5	Incredible tornado	261-318 mph	Strong frame houses lifted off foundations and carried considerable distances to disintegrate; automobile sized missiles fly through the air in excess of 100 meters; trees debarked; steel re-inforced concrete structures badly damaged.
F6	Inconceivable tornado	319-379 mph	These winds are very unlikely. The small area of damage they might produce would probably not be recognizable along with the mess produced by F4 and F5 wind that would surround the F6 winds. Missiles, such as cars and refrigerators would do serious secondary damage that could not be directly identified as F6 damage. If this level is ever achieved, evidence for it might only be found in some manner of ground swirl pattern, for it may never be identifiable through engineering studies

Figure 4.1 – The Fujita Scale, provided by the NOAA

The tornado activity between 1950 and presented in the figure below.

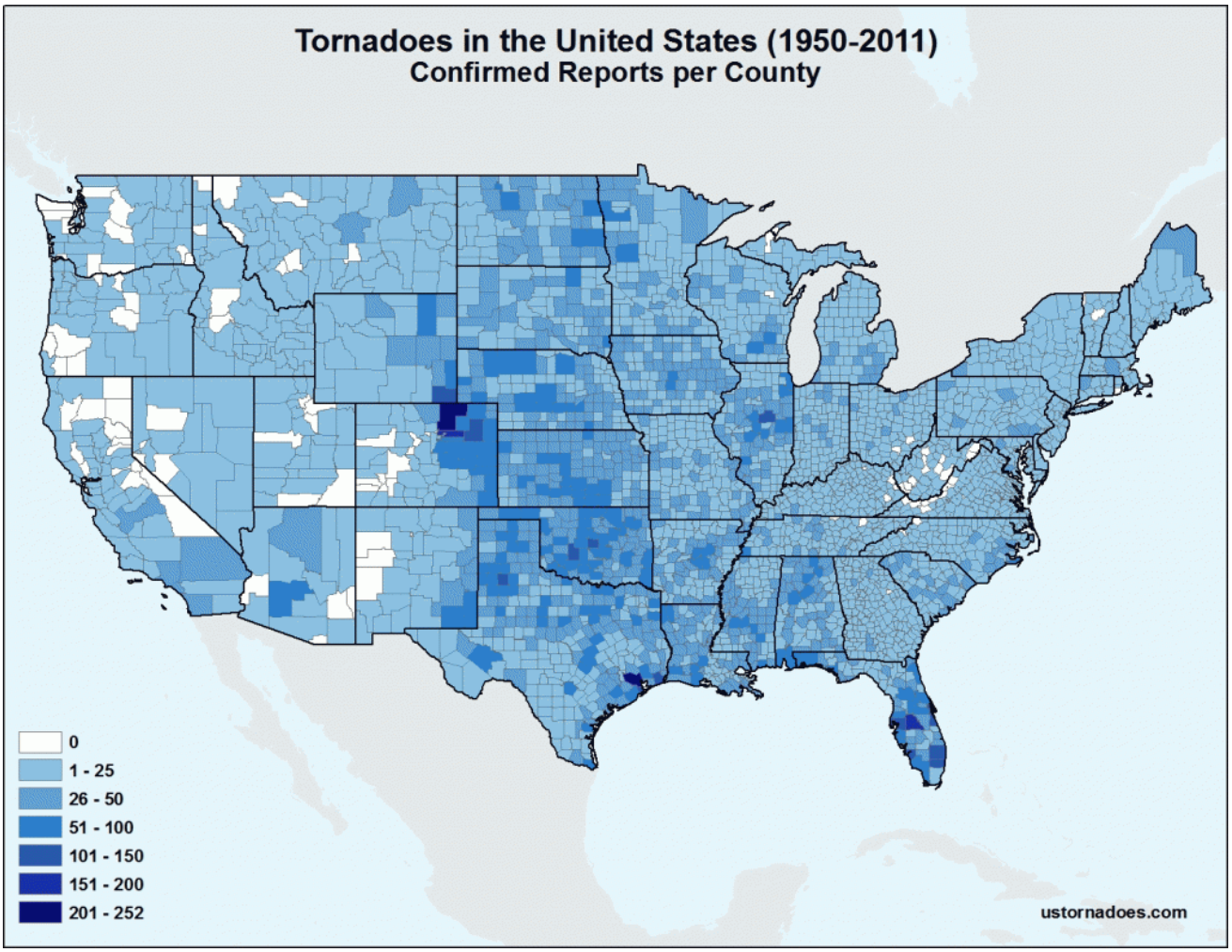


Figure 4.2 – Tornado Activity in the US 1950 - 2011

Past Occurrences

There have been 51 tornado events in Walker County since 1950, **resulting in 26 deaths and 236 injuries. Estimated total dollar loss = $41,803,439.89.** A complete listing of the recorded tornado events can be found in *Appendix C.*

Likelihood of Future Occurrences

In Central Alabama, the peak tornado season starts March 1st and runs into May. The secondary tornado season is in November. Alabama averages about 37 tornadoes in a 30 year average (1981-2010), with the greatest number – 121 – occurring in 2011.

Summary

At the time (2009) our original mitigation plan was prepared, there had been 36 tornadoes reported for the area with a property loss of 40.1 M. The 2009 Plan reported all property in

the county to have an assessed value of $615,220,392. Today (2014) the total property value has risen to $627,906,250. It is believed that this significant increase is due to a change in the record keeping system used by the county tax assessor's office. Today's number is more accurate and a better reflection of what is at risk. Even though the tax assessor's office has updated their record keeping, it is still deficient for our purposes. Due to time constraints we were unable to separate property into the recommended categories of residential, commercial, industrial, agricultural, religious/non profit, government and educational. We were also unable to identify the number of structures in hazard areas, as this information was not available.

It can be said that in the event of a catastrophic tornado outbreak in Walker County, all structures are at risk. As shown in the Vulnerability Assessment section beginning on page 76, all infrastructure is at risk. A value could not be assigned to these items individually or as a whole due to the unavailability of data from the tax assessor's office. However, 100% of property and infrastructure would be at risk.

Similarly, 100% of the population would be at risk. In 2010, total population for the county was reported as 67,023 and the total number of households in Walker County in 2010 were 30,492 – 100% at risk.

Mitigation strategies have been developed to offset the damage caused by a tornado event.

Flood

Flooding is among the most frequent and costly natural disasters in terms of human hardship and economic loss. Likely flood events in Alabama include flash, riverine, and stormwater floods. Flooding due to dam failure is also a possibility. Flooding can almost always be attributed to excessive rainfall.

Flash flooding is a localized event of great volume and short duration over a relatively small area, usually resulting from a heavy rainfall.

Riverine floods result from precipitation over large areas. This type flood occurs in river systems whose tributaries drain large geographic areas and independent river basins. Duration may be hours or days. Factors that directly affect the amount of flood runoff include frequency, intensity and duration; the amount of soil moisture, seasonal variation in vegetation, and soil permeability. The Warrior River can experience this type of flooding.

Urbanization that converts fields or woodlands to roads, buildings and parking lots often leads to runoff two to six times over what would occur on undeveloped terrain. In the case of urban flooding, streets can become swift moving rivers.

Backwater flooding occurs when channel restrictions downstream result in upstream flooding during times of high flow.

The county has a distinctive pattern of soils, relief, and drainage, providing several unique natural landscapes. Walker County contains about 25 different kinds of soils. The Mooreville, Spadra, Pruitton, and Spadra-Whitewell soil types are prone to flooding - about 5% of the acreage is expected to flood either frequently or occasionally. The predominate soil types, making up about 50% of the soil, are Sunlight-Townley, Sipsey-Bankhead, Sipsey and Montevallo. These soils types are well-draining and not likely to flood.

FEMA Flood Zone Designations

Table 4.3

Risk	Zone	Description
Moderate to Low Risk Areas	B, C, and X	Areas outside the 1-percent annual chance floodplain, areas of 1% annual chance sheet flow flooding where average depths are less than 1 foot, areas of 1% annual chance stream flooding where the contributing drainage area is less than 1 square mile, or areas protected from the 1% annual chance flood by levees. No Base Flood Elevations or depths are shown within this zone. Insurance purchase is not required in these zones.
High Risk Areas	A	Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones.
	AE, A1-A30	Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. In most instances, base flood elevations derived from detailed analyses are shown at selected intervals within these zones.
	AH	Areas with a 1% annual chance of shallow flooding, usually in the form of a pond, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.
	AO	River or stream flood hazard areas, and areas with a 1% or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Average flood depths derived from detailed analyses are shown within these zones.
	AR	Areas with a temporarily increased flood risk due to the building or restoration of a flood control system (such as a levee or a dam). Mandatory flood insurance purchase requirements will apply, but rates will not exceed the rates for unnumbered A zones if the structure is built or restored in compliance with Zone AR floodplain management regulations.
	A99	Areas with a 1% annual chance of flooding that will be protected by a Federal flood control system where construction has reached specified legal requirements. No depths or base flood elevations are shown within these zones.

High Risk-Coastal Areas	V	Coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves. These areas have a 26% chance of flooding over the life of a 30-year mortgage. No base flood elevations are shown within these zones.
	VE, V1 - 30	Coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.
Undetermined Risk Areas	D	Areas with possible but undetermined flood hazards. No flood hazard analysis has been conducted. Flood insurance rates are commensurate with the uncertainty of the flood risk.

In this illustration, you can see that the entire county could potentially be affected by localized flooding as the watershed of the Black Warrior River permeates the entire county.

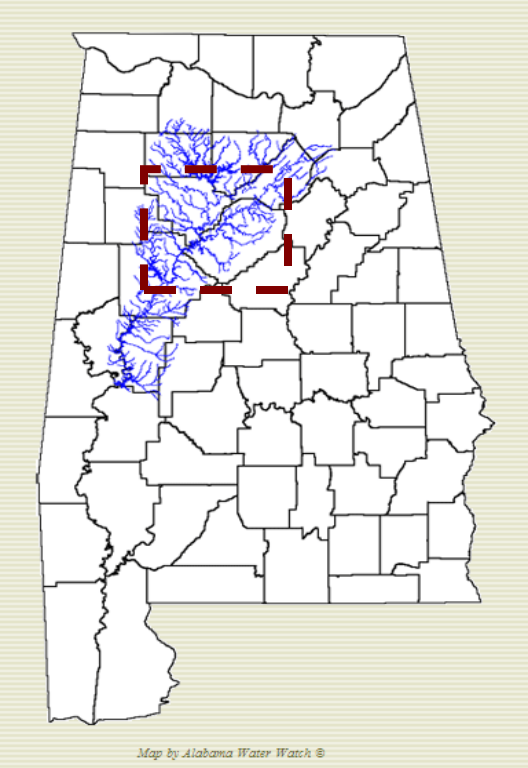


Figure 4.4, Black Warrior River Watershed

The Black Warrior River System is the largest watershed wholly within Alabama's state boundaries. The river is divided into two sections: its upper portion lies above the Fall Line at Tuscaloosa, and its lower flatter portion enters the Tombigbee at Demopolis.

The Black Warrior actually begins with three of Alabama's most significant forks. The largest – Sipsey Fork – is the western most fork, and flows into the Mulberry Fork, the

center prong. These merged streams flow together until they meet the Locust Fork, the right prong, at the Jefferson and Walker County line. It is here that they become the Black Warrior River. That natural union of these powerful forks has now been submerged under the waters of Bankhead Lake. All of these forks flow through sandstone canyons of the Cumberland Plateau and provide some of Alabama's best whitewater runs and most scenic vistas.

The Locust Fork River flows through several counties including Walker County, but not near any major cities in the county. This river drains approximately 1,209 square miles or 6,020 acres.

The Mulberry Fork River flows through several counties including Walker County, and is close to Jasper and Cordova. This river drains about 1,387 square miles or 6,055 acres. The Sipsey Fork River flows through several counties including Walker County, but no major cities are within the watershed. Alabama Power Company's Smith Lake and Smith Lake Dam are located on the Sipsey Fork River.

The Upper Black Warrior Tributaries include the North River which drains 1,100 square miles in 3 counties including Walker County. The Lower Black Warrior tributaries are not in Walker County.

The Mulberry River and Sipsey River are prone to flooding, with a history of damage to homes, businesses and property.

All streams within Walker County are subject to flooding and backwater flooding. The primary effect of flooding on these streams appears to be inundation, although velocities will become significant to persons and structures under more extreme flooding situations. Calculated floodplain velocities range from 1.2 to 15.2 feet per second (fps). Velocities greater than 5.0 fps are considered to be of dangerous magnitude. The following table outlines the critical depths and velocities that will harm residents and structures during a flood event.

Critical Flood Depths and Velocities Table 4.4

Depth (threat to life)	In stagnant backwater areas (zero velocity), depths in excess of about 1m (3.3ft) are sufficient to float young children, and depths above 1.4m (4.6ft) are sufficient to float teenage children and many adults.
Velocity (threat to life)	In shallow areas, velocities in excess of 1.8m/s (5.9 ft/s) pose a threat to the stability of many individuals.
Depth and Velocity (threat to life)	The hazards of depth and velocity are closely linked as they combine to effect instability through an upward buoyant force and a lateral force. A product of less than or equal to $0.4m^2/s$ ($43\ ft^2/s$) defines a low hazard provided the depth does not exceed 0.8m (2.6ft) and the velocity does not exceed 1.7m/s (5.6 ft/s).
Vehicular access (emergency access)	Most automobiles will be halted by flood depths above 0.3-0.5m (1.0-1.7ft). A maximum flood velocity of 3m/s (9.8 ft/s) would be permissible, providing that flood depths are less than 0.3m (1.0ft). A depth of 0.9-1.2m (2.9-3.9 ft) is the maximum depth for rapid access of large emergency vehicles.
Structural Integrity (structures above ground)	A depth of 0.8m (2.6ft) is the safe upper limit for the above ground/super structure of conventional brick veneer, and certain types of concrete block buildings. The structural integrity of elevated structures is more a function of flood velocities (e.g. Erosion of foundations, footings or fill) than depth. The maximum velocity to maintain structural stability depends on soil type, vegetation cover, and slope but ranges between 0.8-1.5m/s (2.6-4.9 ft/s)
Fill (stability)	In general, fill may become susceptible to erosion/instability at depths of 1.8-2.4m (5.9-7.9ft).

Provided by FEMA

Identified Problem Areas

The identified chronic flooding areas within Walker County have been categorized as:

● Neighborhood flooding – primarily street flooding due to undersized storm sewers and roadside ditches,

● River system flooding – areas where natural streams exceed their channel banks or back up at culverts or bridges and flood adjacent property.

Specifically, these areas have been trouble spots in the past:

Lynns Park – Sipsey Fork River, Hwy 118, 10 miles east of Jasper, near the junction of Black Water Creek.

McCollum – Rocky Branch and Sparks Branch on Hwy 124. Flooding occurs in extreme cases due to heavy rains along the Pleasant Grove Road.

Quinton – Mulberry Fork River near Hwy 269 and the Warrior River Bridge.

Other areas of concern:

Blackwater Creek Near Manchester – Drainage Area 181 miles, 100 ft downstream from State Hwy 257. Lat 33º54'30", long 87º15'25"

Lost Creek Near Jasper – Drainage area 115 miles, at bridge on US Hwy 78, 6 miles west of Jasper. Lat 33º 48'56", long 87 º 23'02"

Lost Creek Near Oakman – Drainage area 134 miles, on State Hwy 69 S, .2 miles upstream from Wolf Branch, .8 miles downstream from Pumpkin Creek, 4 miles NE of Oakman. Lat 33º45'50", long 87º21'30".

Wolf Creek Near Oakman – Drainage area 85 miles, on State Hwy 69 S, 3 miles S of Oakman and 9 miles upstream from Indian Creek. Lat 33º40'20", long 87º23'15".

Blue Creek Near Oakman – Drainage area 5.32 miles, on State Hwy 69 S, 14 miles SW of Oakman. Lat 33º31'17", long 87º29'07"

A complete list of the vast network of streams and creeks in Walker County can be found at this site: http://www.topozone.com/states/Alabama.asp?county=Walker&feature=Stream

The specific locations of problematic flooding named above are generally in low population areas, open land, forested, few structures at risk, and sparsely populated.

Other areas prone to flooding are bridge sites and State highways throughout the county:

Bridges in Walker County

Table 4.5

Bridge Location	Creek	Nearest Town
Mayo Rd	Lost Creek	Nauvoo
Smith Chapel Rd	Mill Creek	Carbon Hill, Nauvoo
Slicklizard Rd	Buck Creek	Nauvoo
King Rd	Buck Creek	Nauvoo
Nichols Rd	Dry Creek	Nauvoo
Country Club Rd	Blackwater Creek	Jasper
Pleasant Grove Rd	Lost Creek	Oakman
Kings Mill Rd	Lost Creek	Oakman
Day Hill Rd	Cane Creek	Parrish, Cordova
Lockhart Hill Rd	Wolfe Creek	Parrish
Gibson Hill Rd	Frost Creek	Oakman
Pendley Creek Rd	Pendley Creek	Oakman
Calumet Rd	Cane Creek	Parrish, Jasper
Pleasantfield Rd	Lost Creek	Parrish
Tutwiler Rd	Lost Creek	Parrish

Manual Hill Rd	Bull Barn	Cordova
Hunters Chapel Rd	Walker County Lake	Jasper
Dovertown Rd	Rail Road Track	Cordova
Browns Bridge Rd	Lost Creek	Oakman

State Roads Vulnerable to Flooding

Table 4.6

Name	Type	Flood Type
US 78	Major Transportation Route	100 Year
Future I 22	Major Transportation Route	100 Year
State Hwy 69	Major Transportation Route	100 Year
State Hwy 269	Major Transportation Route	100 Year
State Hwy 257	Major Transportation Route	100 Year
State Hwy 5	Major Transportation Route	100 Year
State Hwy 18	Major Transportation Route	100 Year

Past Occurrences

Eighteen Flooding Events were recorded in Walker County by the National Climatic Data Center between January 1, 1950 and December 31, 2014. **Estimated total dollar loss is $869,000.** A complete listing of the recorded flooding events can be found in *Appendix C*.

Likelihood of Future Occurrences

The terms "10 year", "50 year", "100 year" and "500 year" floods are used to describe the estimated probability of a flood event happening in any given year. A 10 year flood has a 10 percent probability of occurring in any given year, a 50 year event a 2% probability, a 100 year event a 1% probability, and a 500 year event a 0.2% probability. While unlikely, it is possible to have two or more 500 year floods within years or months of each other.

The potential for flooding can change and increase through various land use changes and changes to land surface. A change in environment can create localized flooding problems inside and outside of natural floodplains through the alteration or confinement of natural drainage channels. These changes can be created by human activities or by other events, such as wildfires, earthquakes, or landslides.

Summary

At the time our original mitigation plan was prepared, there was 28 flooding events since 1997 with a total property loss of $869,000. In 2009 the total property value has risen to $615,220,392. The 2014 total property value has increased to $627,906,250. It is believed

that this significant increase is due to a change in the record keeping system used by the county tax assessor's office. Today's number is more accurate and a better reflection of what is at risk. Even though the tax assessor's office has updated their record keeping, it is still deficient for our purposes. We were unable to separate property into the recommended categories of residential, commercial, industrial, agricultural, religious/non profit, government and educational due to time constraints. We were also unable to identify the number of structures in hazard areas, as this information was not available. However, as can be seen in the illustrations above, Walker County has a huge potential for flooding due to the vast system of streams, branches and rivers running throughout the county. While not all property is in proximity to this vast water system, much of the county is at risk.

Similarly, a huge portion of the population would be at risk. In 2010, total population for the county was reported as 67,023. Municipalities identifying their jurisdictions as at risk for flooding were Carbon Hill, Cordova, Jasper, Kansas, Nauvoo, Oakman, Parrish, and Sipsey. These towns, and their outlying areas, contain about 89% of the population in the county. This puts at risk about 62,478 citizens. Likewise, the total number of households in Walker County in 2010 were 30,492. About 90% of the households are in the areas identified as at risk, which indicates 27,443 households are at risk to flooding.

It is estimated as well that in the event of a significant flooding event in Walker County about 90% of structures would be at risk. As shown in the Vulnerability Assessment section beginning on page 76, all infrastructure is at risk. A value could not be assigned to these items individually or as a whole due to the unavailability of data from the tax assessor's office. However, about 90% of property and infrastructure would be at risk. Mitigation strategies have been developed to offset the damage caused by a large scale flooding event.

Repetitive Flood Insurance Losses. A repetitive loss property is one that has two or more flood insurance claims with the NFIP. Within Walker County there are 96 policies, 10 claims, 4 repetitive losses with 2 residential properties. The types are undetermined due to insufficient data. During the next update, our Hazard Mitigation Planning team will have the types listed.

Drought

Drought is a period of drier-than-normal conditions that results in water-related problems. Precipitation falls in uneven patterns across the country. The amount of precipitation at a particular location varies from year to year but over a period of years, the average amount is fairly constant. The average monthly precipitation for Walker County is about 59 inches.

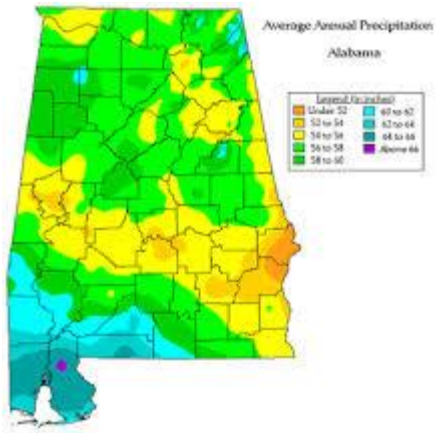


Figure 4.5, provided by Worldatlas.com

All areas of Walker County have an equal chance of experiencing drought. When no rain or only a very small amount of rain falls, soils can dry out and plants can die. When rainfall is less than normal for several weeks, months, or years, the flow of streams and rivers decline and the water levels in lakes, reservoirs, and wells fall. If dry weather persists and water-supply problems develop, the dry period can become a drought.

A common indicator of drought is the Palmer Drought Severity Index (PDSI), as shown below. The PDSI is a soil moisture algorithm calibrated for relatively homogeneous regions. It is used by many U.S. government agencies and states to trigger drought relief programs. It was also the first comprehensive drought index developed in the U.S.

Palmer Classifications

Table 4.7

4.0 or more	extremely wet
3.0 to 3.99	very wet
2.0 to 2.99	moderately wet
1.0 to 1.99	slightly wet
0.5 to 0.99	incipient wet spell
0.49 to -0.49	near normal
-0.5 to -0.99	incipient dry spell
-1.0 to -1.99	mild drought
-2.0 to -2.99	moderate drought
-3.0 to -3.99	severe drought
-4.0 or less	extreme drought

The PDSI indicates that for the period 1895 through 1995, Alabama was in a severe to extreme drought 5 – 10% of the time. During periods of drought, the Governor calls for bans of open burning in an effort to reduce the wildfire risk. Alabama recorded their driest January-August in the last 100 years in 2007.

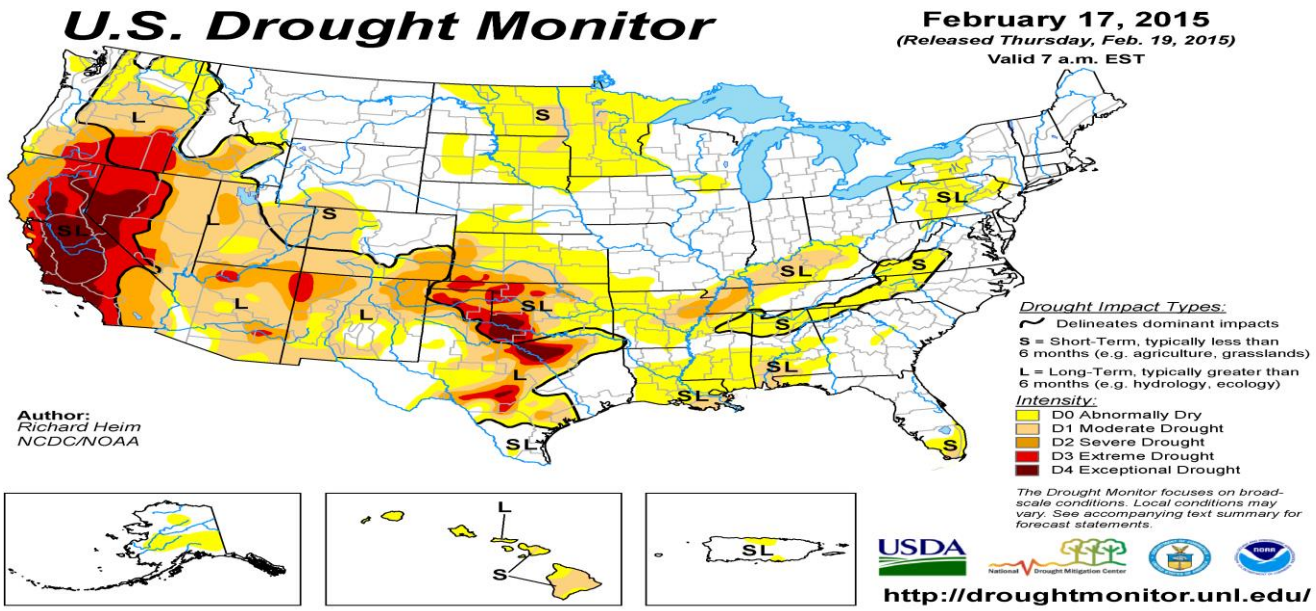


Figure 4.6, provided by Drought.gov

The beginning of a drought is difficult to determine. Several weeks, months, or even years may pass before people recognize that a drought is occurring. The end of a drought can occur as gradually as it began. Dry periods can last for 10 years or more. The first evidence of drought usually is seen in rainfall records. Within a short period of time, the amount of moisture in soils can begin to decrease. The effects of a drought on flow in streams and rivers or on water levels in lakes and reservoirs may not be noticed for several weeks or months. Water levels in wells may not reflect a shortage of rainfall for a year or more after a drought begins.

Past Occurrences

Nineteen drought events were recorded in Walker County by the National Climatic Data Center between January 1, 1950 and March 31, 2009. A complete listing of the recorded drought events can be found in *Appendix C*.

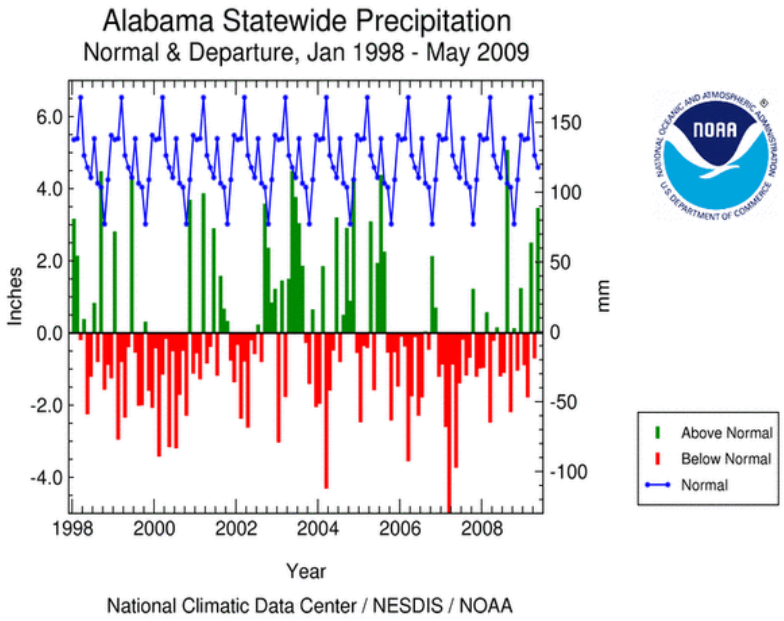


Figure 4.7, provided by the NOAA

Likelihood of Future Occurrences…

The Climate Prediction Center (DPD) of the National Weather Service, together with the U.S. Dept of Agriculture, the National Drought Mitigation Center, and NOAA's National Climatic Data Center, issues a weekly drought assessment for the U.S. This assessment provides a consolidated depiction of national drought conditions based on a combination of drought indicators and field reports. The CPC also issues a Seasonal United States Drought Outlook each month in conjunction with the weekly release of the long-lead temperature and precipitation outlooks near the middle of the month.

The current seasonal outlook for the U.S. is presented below:

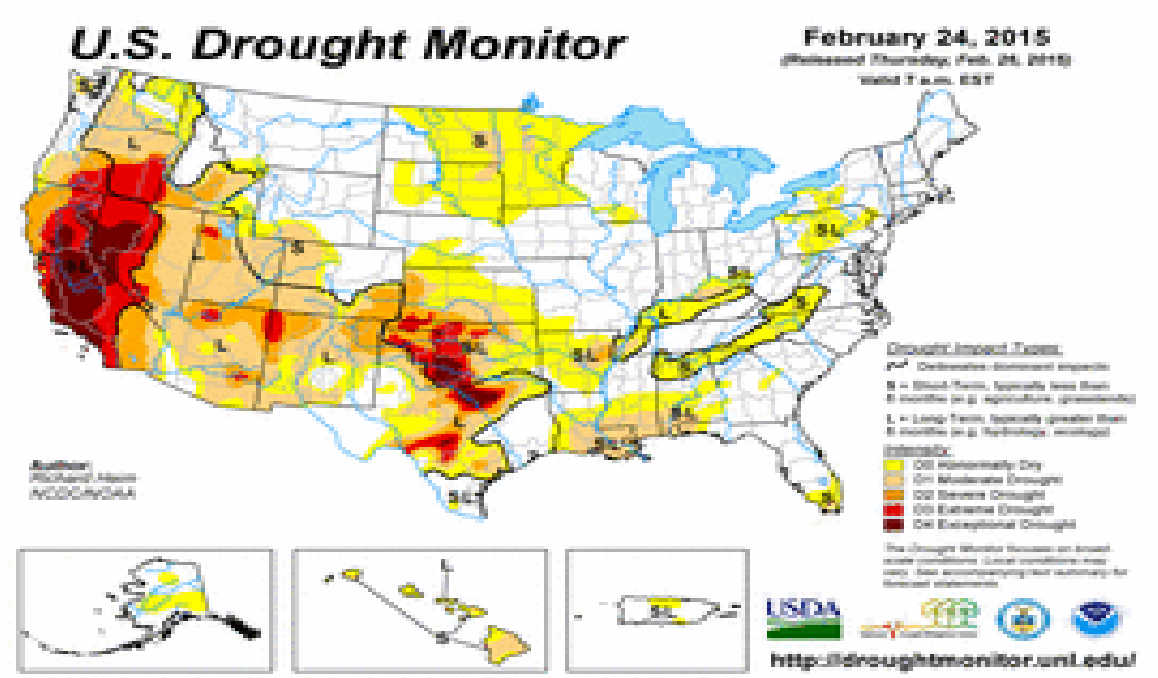


Figure 4.8, provided by the NOAA

According to the National Weather Service, “the abnormally dry area along the Gulf Coast and over southern Alabama and Georgia has seen significant relief. In fact some of these areas are currently undergoing flooding. A wetter than normal pattern is expected to continue along the eastern Gulf Coast and over parts of the Southeast in the short and medium range.”

Summary

The 2004 Plan reported all property in the county to have an assessed value of $2,127,948 and indicated that all property was at risk in the event of severe drought. In 2009 the total property value was$615,220,392, today (2014) the total property value is $627,906,250. It is believed that this significant increase is due to a change in the record keeping system used by the county tax assessor’s office. Today’s number is more accurate and a better reflection of what is at risk. Even though the tax assessor’s office has updated their record keeping, it is still deficient for our purposes. We were unable to separate property into the recommended categories of residential, commercial, industrial, agricultural, religious/non profit, government and educational due to time constraints. We were also unable to identify the number of structures in hazard areas, as this information was not available.

It can be said that in the event of a severe drought in Walker County, all structures are at risk. As shown in the Vulnerability Assessment section beginning on page 76, all infrastructure is at risk. A value could not be assigned to these items individually or as a whole due to the unavailability of data from the tax assessor’s office. However, 100% of property and infrastructure would be at risk.

Similarly, 100% of the population would be at risk. In 2010, total population for the county was reported as 67,023. Likewise, the total number of households in Walker County in 2010 were 30,492 – 100% at risk.

Mitigation strategies have been discussed to offset the damage caused by severe drought.

Extreme Temperatures

Extreme Temperature events, both hot and cold, can have severe impacts on natural ecosystems, agriculture and other economic sectors, human health and mortality. All areas of Walker County have an equal chance of experiencing extreme temperatures in the summer or winter months.

2010 Average temperatures for Walker County Alabama are presented in the table below:

Table 4.8

Season	Months	Average Temps.
Spring	March, April, May	60.9
Summer	June, July, Aug.	81.9
Fall	Sept., Oct., Nov.	62.7
Winter	Dec., Jan., Feb.	36.9
Mean Annual	12 Months	60.6

All temperatures given in Fahrenheit

High Temperatures – Temperatures that remain 10 degrees or more above the average high temperature for the region and last for several weeks are defined as extreme heat by FEMA. Humid or muggy conditions, which add to the discomfort of high temperatures, occur when high atmospheric pressure traps damp air near the ground.

In an effort to alert the public to the hazards of prolonged heat and humidity episodes, the NOAA devised the “heat index”. The heat index is an accurate measure of how hot it feels to an individual when the affects of humidity are added to high temperature. Table 4.9 presents heat index values and their potential physical effects.

Table 4.9

Heat Index Values Combination of Heat and Humidity	Heat Index Effects

80 to 90 degrees F	Fatigue possible with prolonged exposure and/or physical activity.
90 to 105 degrees F	Sunstroke, heat cramps, and heat exhaustion possible with prolonged exposure and/or physical activity.
105 to 130 degrees F	Sunstroke, heat cramps or heat exhaustion likely, and heatstroke possible with prolonged exposure and/or physical activity.
130 degrees and higher F	Heatstroke/sunstroke highly likely with continued exposure.

The NWS will issue a Heat Advisory for Walker County when daytime heat indices are at or above 105 degrees F and nighttime heat indices are at or above 80 degrees F for two consecutive days. An Excessive Heat Warning is issued when the heat index equals or exceeds 120 degrees F for three hours or longer. An excessive heat advisory is also issued when heat advisory conditions persist for at least 3 days. In either event, the heat becomes dangerous for a large portion of the population.

Low Temperatures – The NWS will issue a Wind Chill Warning for the county when wind-chill temperatures are expected to reach -20 degrees F or colder for 3 hours or more with a minimum wind speed of 10 mph or more.

In 2001, NWS implemented an updated Wind Chill Temperature (WCT) index. This index was developed to describe the relative discomfort/danger resulting from the combination of wind and temperature. Wind chill is based on the rate of heat loss from exposed skin caused by wind and cold. As the wind increases, it draws heat from the body, driving down skin temperature and eventually the internal body temperature.

Past Occurrences

Seven temperature extreme events were recorded in Walker County by the National Climatic Data Center between January 1, 1950 and December 31, 2014. A complete listing of the recorded temperature extreme events can be found in *Appendix C*.

In February 1996, records were set when a strong Arctic cold front brought extremely cold air to Alabama. New record lows were established at numerous locations, with the average low temperature in central Alabama ranged from 4 – 6 degrees F.

In August 2007, the hottest month on record across Central Alabama occurred as a result of a large ridge of high pressure and very dry ground from the recent drought. The core of the heat wave started around August 4th when the temperatures first topped 100 degrees in several cities. The heat reached its peak August 10th through the 15th as temperatures climbed above 105 – 109 degrees. In central Alabama, daily record maximum

temperatures were broken or tied on 10 -14 days. In Walker County, 1 person died and 17 were injured as a result of the heat.

Likelihood of Future Occurrences

Extreme temperatures are common to Alabama and are likely to occur in the future.

Summary

Unlike other natural hazards, extreme temperatures primarily affects the population. In this instance, all residents of the county would be at risk during intense events – 100% of the 67,023 residents in Walker County.

Thunderstorms and High Wind

Thunderstorms and High Wind events are defined as localized storms, always accompanied by lightning, and often having strong wind gusts, heavy rain and sometimes hail. Thunderstorms can produce a strong out-rush of wind known as a down-bursts, or straight-line winds which may exceed 120 mph. These storms can overturn mobile homes, tear roofs off of houses and topple trees. All areas of Walker County have an equal chance of experiencing thunderstorms, high winds and lightning. As noted in Figure 4.9, Walker County, as well as most of Alabama and the South, experience thunderstorms 50-70 days per year, per 10,000 sq miles. Figure 4.10 indicates north central AL is in Zone 4 of the Design Wind Speed Map.

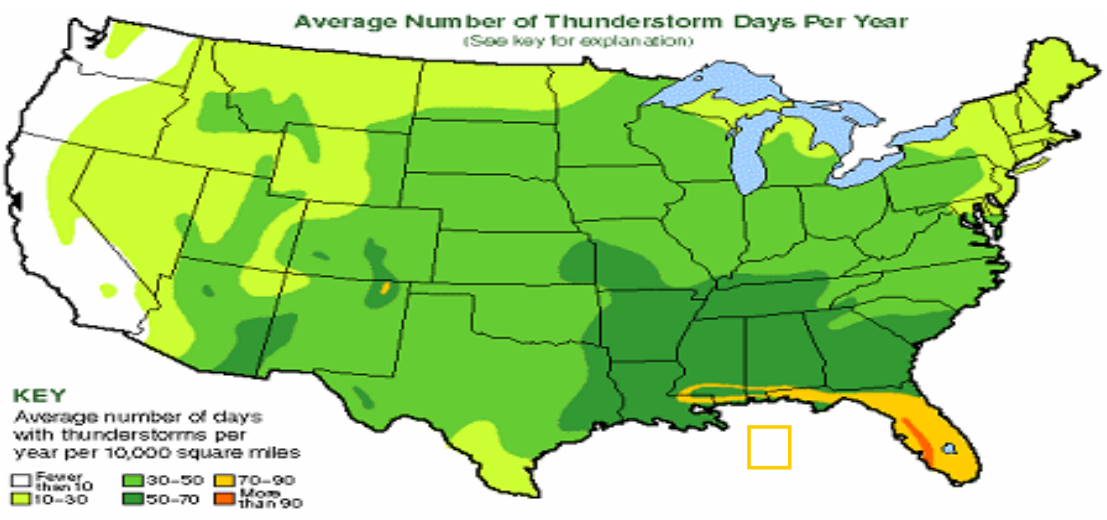


Figure 4.9, Historical data for Thunderstorms, provided by the NOAA

Approximately 10% of the thunderstorms that occur each year in the U.S. are classified as severe. A thunderstorm is classified as severe when it contains one or more of the following phenomena:

- Hail measuring ¾ inch or greater,
- Winds gusting in excess of 57.5 mph, or

● A tornado

A severe thunderstorm watch is issued by the National Weather Service when the weather conditions are such that a severe thunderstorm is likely to develop. This is the time to identify a safe place in the home and to watch the sky and listen to the radio or television for more information.

A severe thunderstorm warning is issued when a severe thunderstorm has been sighted or indicated by weather radar. At this point, the danger is very serious and it is time to go to a safe place, turn on a battery-operated radio or television, and wait for the "all clear" from authorities.

Lightning – a common component of localized thunderstorm activity - is defined as any and all of the various forms of visible electrical discharge caused by thunderstorms. Cloud-to-ground lightning can kill or injure people by direct or indirect means. The lightning current can branch off to a person from a tree, fence, pole, or other tall object.

Similarly, objects can be directly struck and this impact may result in an explosion, fire, or total destruction. Or, the damage may be indirect when the current passes through or near it. Sometimes, current may enter a building and transfer through wires or plumbing, and damaging everything in its path. In urban areas, lightning may strike a pole or tree and the current then travels to several nearby houses and other structures and enters them through wiring or plumbing.

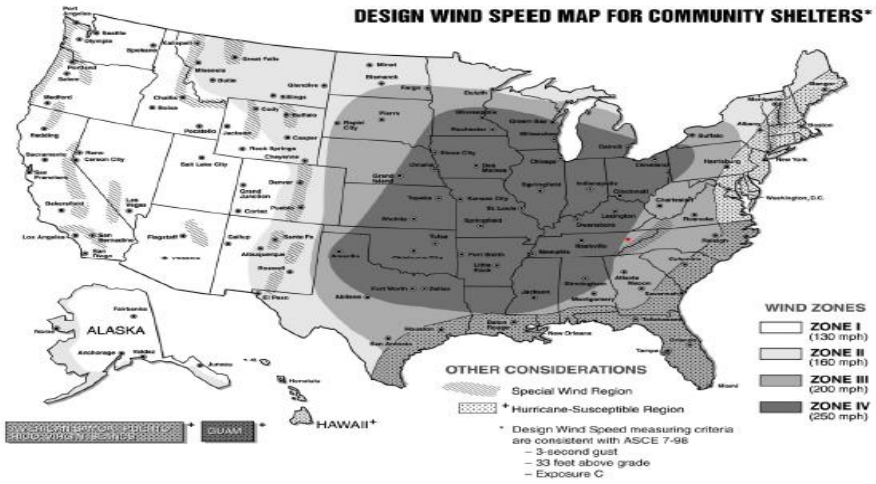


Figure 4.10 Design Wind Speed Map (FEMA)

Past Occurrences

One hundred and thirty three thunderstorm and high wind events were recorded in Walker County by the National Climatic Data Center between January 1, 1950 and March 18, 2013. A complete listing of the recorded thunderstorm and high wind events can be found in *Appendix C*. There were 6 significant lightning events recorded by the NCDC.

Likelihood of Future Occurrences

Thunderstorm and high wind events including lightning and hail are common to Alabama and are likely to occur in the future.

Summary

At the time (2009) our original mitigation plan was prepared, there had been 135 severe thunderstorm and high wind events reported for the area with property damage of 1.196 M. The 2004 Plan reported all property in the county to have an assessed value of $2,127,948. Today the total property value has risen to $627,906,250. It is believed that this significant increase is due to a change in the record keeping system used by the county tax assessor's office. Today's number is more accurate and a better reflection of what is at risk. Even though the tax assessor's office has updated their record keeping, it is still deficient for our purposes. We were unable to separate property into the recommended categories of residential, commercial, industrial, agricultural, religious/non profit, government and educational. We were also unable to identify the number of structures in hazard areas, as this information was not available.

It can be said that in the event of a catastrophic severe thunderstorm and high wind event in Walker County, all structures are at risk. As shown in the Vulnerability Assessment section beginning on page 74, all infrastructure is at risk. A value could not be assigned to these items individually or as a whole due to the unavailability of data from the tax assessor's office. However, 100% of property and infrastructure would be at risk.

Similarly, 100% of the population would be at risk. In 2010, total population for the county was reported as 67,023 and the updated population numbers for 2008 show 68,970. Likewise, the total number of households in Walker County in 2004 were 32,417 and today, the report reflects 33,348 – 100% at risk.

Mitigation strategies have been developed to offset the damage caused by thunderstorm and high wind events.

Hail

Hail is frozen water droplets formed inside a thunderstorm cloud. They are formed during the strong updrafts of warm air and downdrafts of cold air, when the water droplets are carried well above the freezing level to temperatures below 32 deg F, and then the frozen droplet begins to fall, carried by cold downdrafts, and may begin to thaw as it moves into warmer air toward the bottom of the thunderstorm. This movement up and down inside the cloud, through cold then warmer temperatures, causes the droplet to add layers of ice and can become quite large, sometimes round or oval shaped and sometimes irregularly shaped, before it finally falls to the ground as hail. The size ranges from smaller than a pea to as large as a softball, and can be very destructive to buildings, vehicles and crops. Even small hail can cause significant damage to young and tender plants. Take cover

immediately in a hailstorm, and protect pets and livestock, which are particularly vulnerable to hail, and should be under shelter as well.

The magnitude of a hail storm is measured as follows:

Pea = ¼ inch in diameter

Marble or Mothball = ½ inch in diameter

Dime or Penny = ¾ inch in diameter - Hail penny sized or larger is considered severe.

Nickel = 7/8 inch in diameter

Quarter = 1 inch in diameter

Ping-Pong Ball = 1 ½ inches in diameter

Golf Ball = 1 ¾ inches in diameter

Tennis Ball = 2 ½ inches in diameter

Baseball = 2 ¾ inches in diameter

Tea Cup = 3 inches in diameter

Grapefruit = 4 inches in diameter

Softball = 4 ½ inches in diameter

Most of the hail experienced since 1996 in Walker County has been quarter size (1 inch in diameter) hail. Of those events with larger hailstones, five events had baseball size (2 ¾ inches in diameter) hail.

The severity of hail events range based on size of hail, winds, and structures in the path of a hail storm. Storms that produce high winds in addition to hail are most damaging and can result in numerous broken windows and damaging siding. Hailstorms can cause extensive property damage affecting both urban and rural landscapes. Fortunately, most hailstorms produce marble-size or smaller hailstones. These can cause damage to crops, but they normally do not damage buildings or automobiles. Larger hailstones can destroy crops, livestock and wildlife and can cause extensive damage to buildings, including roofs, windows and outside walls. Vehicles can be total losses. When hail breaks windows, water damage from accompanying rains can also be significant. A major hailstorm can easily cause damage running into the millions of dollars.

Past Occurrences

There have been 92 hail events recorded by the National Weather Service since 1950, with an **estimated total dollar loss of $187,000**. Walker County normally has pea to dime size hail. A complete listing of the recorded hail events can be found in *Appendix C*.

Likelihood of Future Occurrences

Vulnerability is difficult to evaluate since hail occurs in random locations and creates relatively narrow paths of destruction. Hail is capable of causing considerable damage to crops, buildings, and vehicles, and occasionally death to farm animals. Hail can also strip leaves and small limbs from non-evergreen trees. While large hail poses a threat to people caught outside in a storm, it seldom causes loss of human life.

Hail can occur in any strong thunderstorm. However, the size of the hailstones is a direct function of the severity and size of the storm. Hail larger than 1.75, can cause serious damage to cars, roofs, walls, windows, and inflict serious bodily injury as well. All of Walker County has a significant exposure to hailstorms, and virtually all buildings and automobiles are at risk. Crops are also at risk since the peak periods for hailstorms occur during early spring and late fall, which coincide with critical agricultural seasons. The probability of Walker County experiencing a hail event in the following years is highly likely based on the historical records.

Summary

At the time our original mitigation plan was prepared, there had been 63 hail events reported for the area with a property and crop damage loss of $167,000. The 2004 Plan reported all property in the county to have an assessed value of $2,127,948. The total property value in 2009 was $615,220,392 and today (2014) it has risen to $627,906,250. It is believed that this significant increase is due to a change in the record keeping system used by the county tax assessor's office. Today's number is more accurate and a better reflection of what is at risk. Even though the tax assessor's office has updated their record keeping, it is still deficient for our purposes. We were unable to separate property into the recommended categories of residential, commercial, industrial, agricultural, religious/non profit, government and educational. We were also unable to identify the number of structures in hazard areas, as this information was not available.

It can be said that in the event of a severe large hail event in Walker County, all structures are at risk. As shown in the Vulnerability Assessment section beginning on page 76, all infrastructure is at risk. A value could not be assigned to these items individually or as a whole due to the unavailability of data from the tax assessor's office. However, 100% of property and infrastructure would be at risk.

Similarly, 100% of the population would be at risk. In 2010, total population for the county was reported as 67,023. Likewise, the total number of households in Walker County in 2010 were 30,816 and the report reflects – 100% at risk.

Mitigation strategies have been discussed to offset the damage caused by a severe large hail event.

Hurricanes

A tropical cyclone is a storm system characterized by a large low-pressure center and numerous thunderstorms that produce strong winds and heavy rain. Tropical cyclones feed on heat released when moist air rises, resulting in condensation of water vapor contained in the moist air. Tropical cyclones originate in the doldrums near the equator, about 10° away from it.

The term "tropical" refers to both the geographic origin of these systems, which form almost exclusively in tropical regions of the globe, and their formation in maritime tropical air masses. The term "cyclone" refers to such storms' cyclonic nature, with counterclockwise rotation in the Northern Hemisphere and clockwise rotation in the Southern Hemisphere. Depending on its location and strength, a tropical cyclone is referred to by many other names, such as hurricane, typhoon, tropical storm, cyclonic storm, tropical depression, and simply cyclone.

While tropical cyclones can produce extremely powerful winds and torrential rain, they are also able to produce high waves and damaging storm surge as well as spawning tornadoes. They develop over large bodies of warm water, and lose their strength if they move over land. This is why coastal regions can receive significant damage from a tropical cyclone, while inland regions are relatively safe from receiving strong winds. Heavy rains, however, can produce significant flooding inland, and storm surges can produce extensive coastal flooding up to 40 kilometers (25 mi) from the coastline. Although their effects on human populations can be devastating, tropical cyclones can also relieve drought conditions. They also carry heat and energy away from the tropics and transport it toward temperate latitudes, which makes them an important part of the global atmospheric circulation mechanism. As a result, tropical cyclones help to maintain equilibrium in the Earth's troposphere, and to maintain a relatively stable and warm temperature worldwide.

In the Northern Atlantic Ocean, a distinct hurricane season occurs from June 1 to November 30, sharply peaking from late August through September. The statistical peak of the Atlantic hurricane season is 10 September.

Table 4.10

Season lengths and seasonal averages[21][34]					
Basin	Season start	Season end	Tropical Storms (>34 knots)	Tropical Cyclones (>63 knots)	Category 3+ TCs (>95 knots)
Northwest Pacific	April	January	26.7	16.9	8.5
South Indian	November	April	20.6	10.3	4.3
Northeast Pacific	May	November	16.3	9.0	4.1
North Atlantic	June	November	10.6	5.9	2.0
Australia Southwest Pacific	November	April	9	4.8	1.9
North Indian	April	December	5.4	2.2	0.4

The Saffir-Simpson Hurricane Wind Scale is a 1 to 5 categorization based on the hurricane's intensity at the indicated time. The scale provides examples of the type of damages and impacts in the United States associated with winds of the indicated intensity. The scale replaces the Saffir-Simpson Hurricane Scale which incorporated scientific data concerning storm surge ranges, flooding impact and central pressure. This information tended to cause more public confusion and the new scale employs only peak winds:

Category 1 Hurricane: Sustained winds 74-95 mph. Damaging winds expected.
Category 2 Hurricane: Sustained winds 96-110 mph. Very strong winds will produce widespread damage.
Category 3 Hurricane: Sustained winds 111-130 mph. Dangerous winds will cause extensive damage.
Category 4 Hurricane: Sustained winds 131-155 mph. Extremely dangerous winds causing devastating damage are expected.
Category 5 Hurricane: Sustained winds greater than 155. Catastrophic damage is expected.

Past Occurrences

Walker County has experienced 6 hurricane events in the past 15 years. A complete listing of the recorded hurricane events can be found in *Appendix C*.

Figure 4.11, Hurricane Ivan Path, Source: National Hurricane Center

Likelihood of Future Occurrences

In its initial outlook for the 2014 Atlantic hurricane season, which runs from June through November, NOAA's National Weather Service Climate Prediction Center calls for a 50 percent probability of a near-normal season, a 25 percent probability of an above-normal season and a 25 percent probability of a below-normal season. Global weather patterns are imposing a greater uncertainty in the 2014 hurricane season outlook than in recent years. Forecasters say there is a 70 percent chance of having nine to 14 named storms, of which four to seven could become hurricanes, including one to three major hurricanes (Category 3, 4 or 5). It is unlikely that the remnants of a hurricane or tropical storm will strike Walker County in any given year, however it is possible as past history will show.

Summary

At the time (2009) our original mitigation plan was prepared, there had only been 1 significant hurricane event reported for the area with a regional property loss of 100 M. The 2004 Plan reported all property in the county to have an assessed value of $2,127,948. Today the total property value has risen to $615,220,392. It is believed that this significant increase is due to a change in the record keeping system used by the county tax assessor's office. Today's number is more accurate and a better reflection of what is at risk. Even though the tax assessor's office has updated their record keeping, it is still deficient for our purposes. We were unable to separate property into the recommended categories of residential, commercial, industrial, agricultural, religious/non profit, government and educational. We were also unable to identify the number of structures in hazard areas, as this information was not available.

It can be said that in the event of a hurricane/tropical storm event in Walker County, all structures are at risk. As shown in the Vulnerability Assessment section beginning on page 76, all infrastructure is at risk. A value could not be assigned to these items individually or as a whole due to the unavailability of data from the tax assessor's office. However, 100% of property and infrastructure would be at risk.

Similarly, 100% of the population would be at risk. In 2010, total population for the county was reported as 67,023. Likewise, the total number of households in Walker County in 2010 were 30,816, the report reflects 33,348 – 100% at risk.

Mitigation strategies have been developed to offset the damage caused by hurricanes/tropical storms moving through the area.

Snow and Ice - Winter Storms

Winter storms are especially hazardous in terms of closing emergency routes, creating power and utility system failures, and immobilizing economic activity. Accumulations of snow and ice can cause roofs to collapse and knock down trees and power lines. Ice can disrupt communications and power for days while utility companies repair extensive

damage. Even small accumulations of ice can be extremely dangerous to motorists and pedestrians. Bridges and overpasses freeze before other surfaces and are particularly dangerous.

Figure 4.12, Typical ice storm damage, news file FEMA

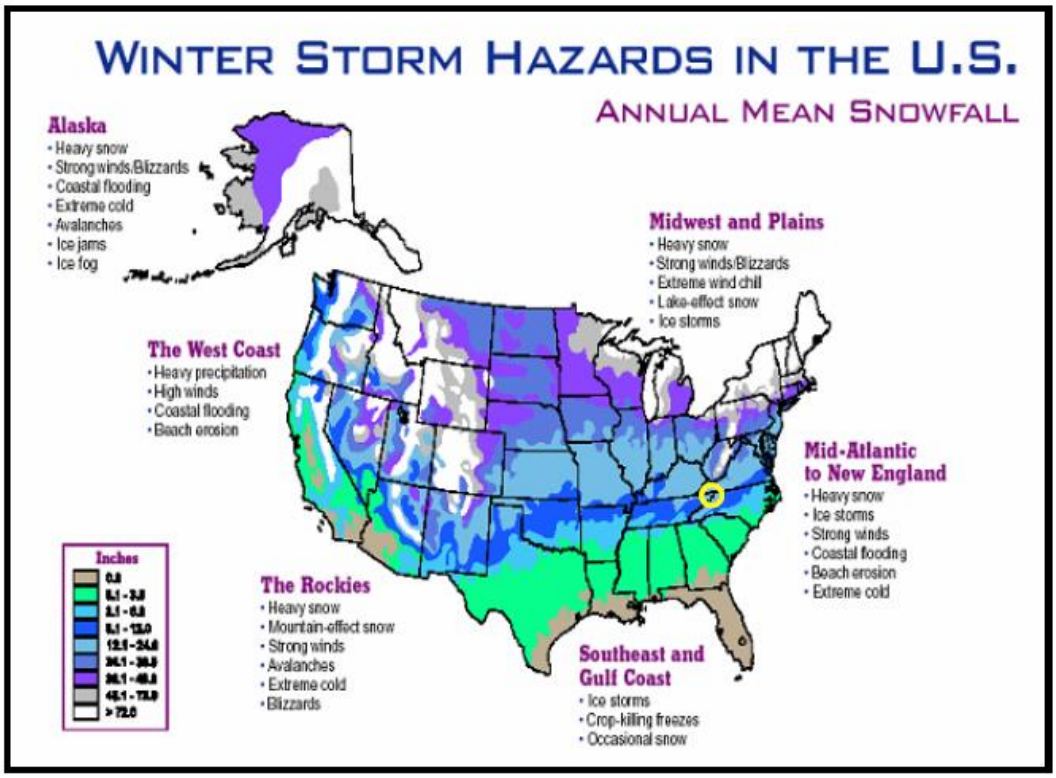
The types of winter precipitation which may occur in Walker County are:

• **Snow Flurries** -- Light snow falling for short durations, resulting in a light dusting or no accumulation.

• **Snow Showers** -- Snow falling at varying intensities for brief periods of time. Some accumulation possible.

• **Sleet** -- Forms from rain drops that freeze into ice pellets before reaching the ground. Sleet usually bounces when hitting a surface and does not stick. It can, however, accumulate and make driving treacherous. Typically occurs at temperatures from 30 to 31 degrees on the ground and 32 to 34 degrees in the clouds.

• **Freezing Rain** -- Falls onto a surface with a temperature below freezing, causing it to freeze to surfaces such as trees, cars and roads and form a coating of ice. Can be very hazardous even in small accumulations. Typically occurs at temperatures from 30 to 33 degrees on the ground and 34 to 36 degrees in the clouds.



Winter Storm Hazards in the United States

Figure 4.13 (Courtesy of NOAA)

Past Occurrences

Walker County has experienced 11 winter weather events in the past 15 years. A complete listing of the recorded winter storm events can be found in *Appendix C*.

Likelihood of Future Occurrences

Due to the climate of this area, it is possible for future winter storm events including snow and ice to occur in Walker County. All parts of the county are equally susceptible to snow and ice events.

Summary

At the time our original mitigation plan was prepared, there had been 11 snow and ice events reported for the area with a regional property loss of over 5.016B. The 2004 Plan reported all property in the county to have an assessed value of $2,127,948. Today the total property value has risen to $627,906,250. It is believed that this significant increase is due to a change in the record keeping system used by the county tax assessor's office. Today's number is more accurate and a better reflection of what is at risk. Even though the tax assessor's office has updated their record keeping, it is still deficient for our purposes. We were unable to separate property into the recommended categories of residential, commercial, industrial, agricultural, religious/non profit, government and educational. We

were also unable to identify the number of structures in hazard areas, as this information was not available.

It can be said that in the event of another snow/ice event in Walker County, all structures are at risk. As shown in the Vulnerability Assessment section beginning on page 76, all infrastructure is at risk. A value could not be assigned to these items individually or as a whole due to the unavailability of data from the tax assessor's office. However, 100% of property and infrastructure would be at risk.

Similarly, 100% of the population would be at risk. In 2010, total population for the county was reported as 67,023. Likewise, the total number of households in Walker County in 2010 were 30,816 the report reflects 30,816 – 100% at risk.

Mitigation strategies have been discussed to offset the damage caused by a winter storm involving snow and/or ice.

Wildfires

There are three different classes of wild land or wildfires. A surface fire is the most common type and burns along the floor of a forest, moving slowly and killing or damaging trees. A ground fire is usually started by lightning and burns on or below the forest floor. Crown fires spread rapidly by wind and move quickly by jumping along the tops of trees. Wildfires are usually signaled by dense smoke that fills the area for miles around.

Periods of drought, dry conditions, high temperatures, and low humidity set the stage for wildfires in pasture lands. Areas along railroads and homes located in woodland settings in rural areas also have an increased risk of wildfire. Ironically, fire suppression is capable of creating larger fire hazards, because live and dead vegetation is allowed to accumulate in areas where fire has been excluded.

As dry spells occur, it is very likely that wildfires will occur. Through the use of Red Flag Fire Alerts and Burn Bans, the county informs the public as the potential for wildfires increases. The various fire departments are put on standby for emergency response to fires as they occur.

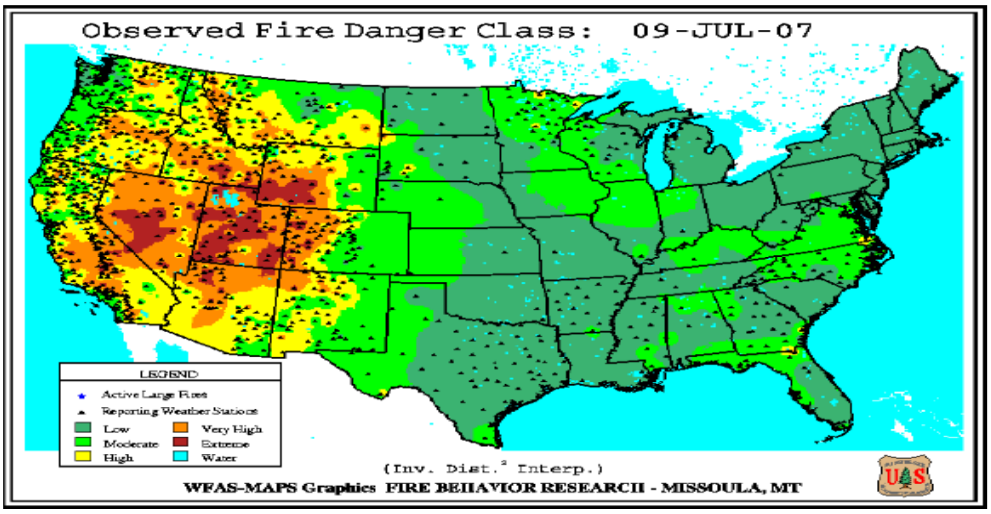


Figure 4.14

Past Occurrences

Although the number of incidences indicate that wildfires are likely to occur, most wildfires are small in size and contained by local resources. Also growth within the wildland/urban interface has been limited. Therefore, firefighters within Walker County do not consider wildfire to be a major threat to the County overall.

Likelihood of Future Occurrences

Dry conditions, high temperatures, low humidity, and high winds can increase the potential and severity of a wildfire. In such conditions, wildfires can spread quickly, affecting large areas in a short amount of time. A worst case scenario would be multiple wildfires started simultaneously by lightning during dry thunderstorms that move across an area experiencing drought conditions.

Summary

Wildfires are common to the area, as Walker County is largely forested. This is a unique risk, not quite like weather related disasters, but still natural in nature. With the writing of the 2004 version of our Plan, it was reported that we had about 75 fires per year. These are normally small in nature and contained rather quickly. However, in the event of a large scale fire, the damage could be catastrophic.

The 2009 Plan reported all property in the county to have an assessed value of $615,220,392. Today (2014) the total property value has risen to $627,906,250. It is

believed that this significant increase is due to a change in the record keeping system used by the county tax assessor's office. Today's number is more accurate and a better reflection of what is at risk. Even though the tax assessor's office has updated their record keeping, it is still deficient for our purposes. We were unable to separate property into the recommended categories of residential, commercial, industrial, agricultural, religious/non profit, government and educational due to time constraints. We were also unable to identify the number of structures in hazard areas, as this information was not available.

It can be said that in the event of a catastrophic wildfire outbreak in Walker County, all structures are at risk. As shown in the Vulnerability Assessment section beginning on page 76, all infrastructure is at risk. A value could not be assigned to these items individually or as a whole due to the unavailability of data from the tax assessor's office. However, 100% of property and infrastructure would be at risk.

Similarly, 100% of the population would be at risk. In 2010, total population for the county was reported as 67,023. Likewise, the total number of households in Walker County in 2010 were 30,816 – 100% at risk.

Mitigation strategies have been discussed to offset the damage caused by a wildfire event. State Forestry Office representative who is partnering with us in the writing of this plan, has provided us a copy of the Alabama Forestry Commission Walker County Fire Readiness Plan and this Plan is a resource of our Mitigation Plan. We also have their assessment of the County Community Wildfire Protection Plan at our disposal.

Sinkholes/Landslides

A sinkhole is a natural depression or hole in the surface topography caused by the removal of soil and/or bedrock by water. 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.

Mechanisms of formation may include the gradual removal of slightly soluble bedrock (such as limestone) by percolating water, the collapse of a cave roof, or a lowering of the water table.

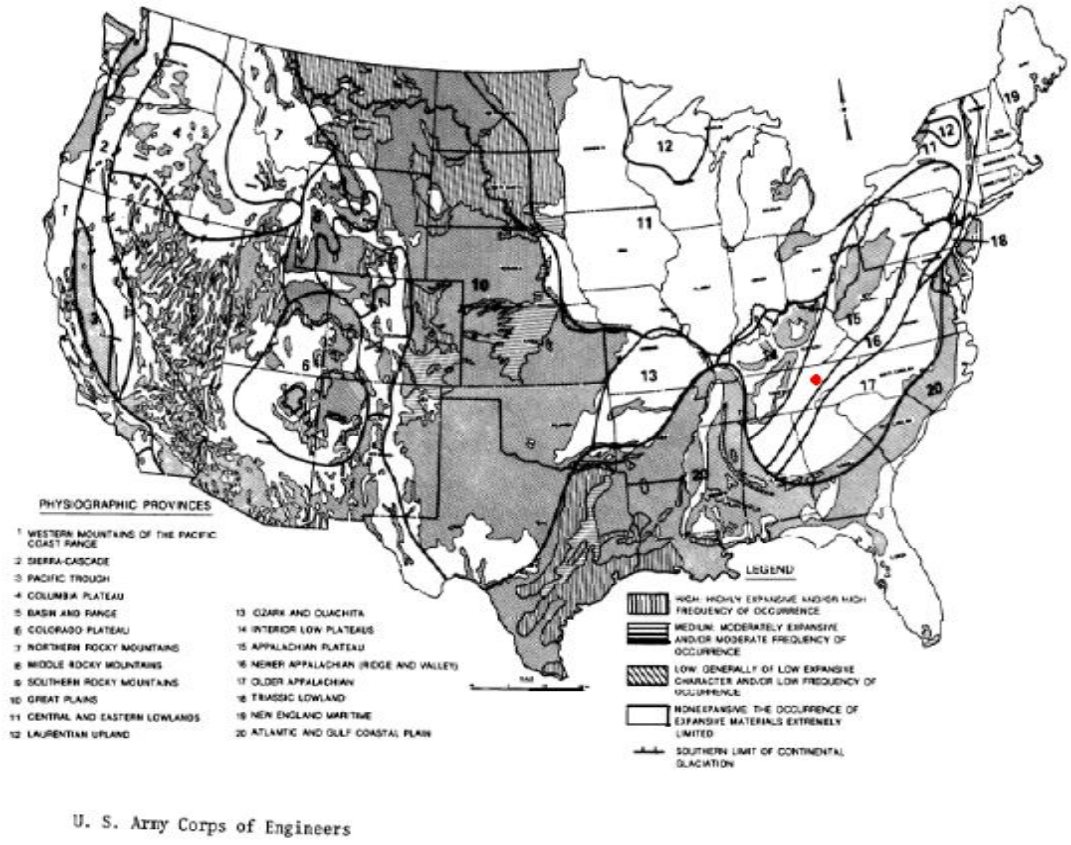
Land subsidence is the lowering of the land-surface elevation from changes that take place underground. Common causes of land subsidence from human activity are pumping water, oil, and gas from underground reservoirs; dissolution of limestone aquifers (sinkholes); collapse of underground mines; drainage of organic soils; and initial wetting of dry soils (hydrocompaction). Land subsidence occurs in nearly every state of the United States.

In Alabama, most sinkholes or subsidence are caused by a loss of support, roof collapse and/or raveling. In Walker County, much of the activity is caused by the extensive under-mining of certain areas.

Loss of Support: Ground water provides support to the roofs of subsurface cavities. Lowering the water table removes this support and may result in the collapse of the roof of the subsurface cavity.

Collapse of Unsupported Openings: Result from the enlargement of the opening beyond the ability of materials above to bridge it.

Raveling: Is the slow erosion of unconsolidated sediments into an underground opening.



U. S. Army Corps of Engineers

Figure 4.15, United States Areas of Expansive Soils. (Source: Army Corps of Engineers)

Past Occurrences

Structural damage caused by sinkholes, land subsidence or landslides in Walker County has been extensive since 1986. The Alabama Soil and Water District Office provided us with a list of subsidence and sinkhole incidents, which can be found in *Appendix C*, and that reflects a lengthy history of sinkholes in Walker County. The Department of Transportation also has records of landslides in the past that have affected State Highways in the county, which could not be incorporated into this Plan.

The subsidence incident list shows that there were 110 subsidence emergencies in Walker County between 1986 and 2014. A dollar amount for damage was not available.

Likelihood of Future Occurrences

Historically, sink hole damage has been a problem in Walker County. This map shows the areas of Alabama where sinkholes have been reported.

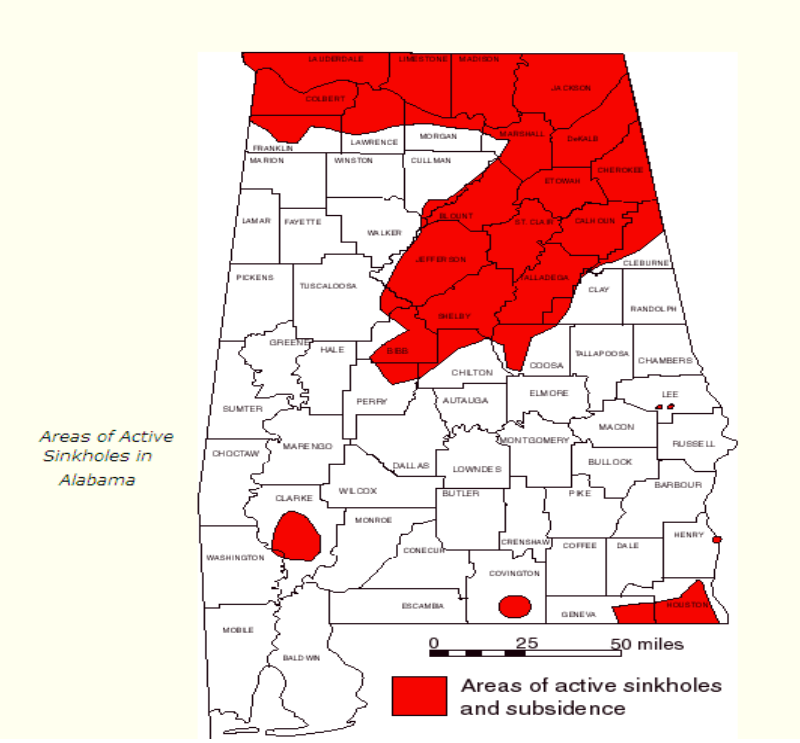


Figure 4.16, provided by the Geological Society of America

This map shows sinkhole and subsidence risk due to the usual causes and Walker County is not included. However, due to the extensive mining system underneath Walker County including the towns of Nauvoo, Parrish, Carbon Hill, Oakman, Townley and other outlying areas in western Walker County, much of the county is at risk for sinkholes.

Summary

At the time our original mitigation plan was prepared, we reported 4 landslide events for the area with a property loss unknown. The 2004 Plan reported all property in the county to have an assessed value of $2,127,948. Today (2010) the total property value has risen to $627,906,250. It is believed that this significant increase is due to a change in the record keeping system used by the county tax assessor's office. Today's number is more accurate and a better reflection of what is at risk. Even though the tax assessor's office has updated their record keeping, it is still deficient for our purposes. We were unable to separate property into the recommended categories of residential, commercial, industrial, agricultural, religious/non profit, government and educational. We were also unable to identify the number of structures in hazard areas, as this information was not available.

Another deficiency in this section is the availability of undermining maps for the county. While we have a general idea of what areas are undermined, it is not possible to specify what areas are definitely at risk.

It can be said that in the event of severe subsidence in the areas named previously, much of our property and infrastructure is at risk. As shown in the Vulnerability Assessment section beginning on page 76, all infrastructure is at risk. A value could not be assigned to these items individually or as a whole due to the unavailability of data from the tax assessor's office. However, approximately 70% of property and infrastructure could be at risk.

Similarly, 68% of the population would be at risk. In 2010, total population for the county was reported as 67,023. Likewise, the total number of households in Walker County in 2010 were 30,816, the report reflects 69% at risk.

Mitigation strategies have been discussed to offset the damage caused by severe subsidence, landslides and sinkholes. Our local Soil and Water Conservation representative has provided the group with program information designed to assist homeowners and governments with damage from subsidence. The local Surface Mining Commission representative has also provided program information available through the Department of Industrial Relations in the event of damage from sinkholes associated with undermining. This information will be made available to local residents.

Dam Failure

Dam failures are potentially the most catastrophic of flooding events. A dam failure can be the result of neglect, poor design, or structural damage caused by a major event such as an earthquake. When a dam fails, a large quantity of water is suddenly expelled downstream, destroying everything in its path. While no dam failure events have been recorded in Walker County, the potential for catastrophic damage is possible in the event of dam failure, especially with Alabama Power's Lewis Smith Dam.

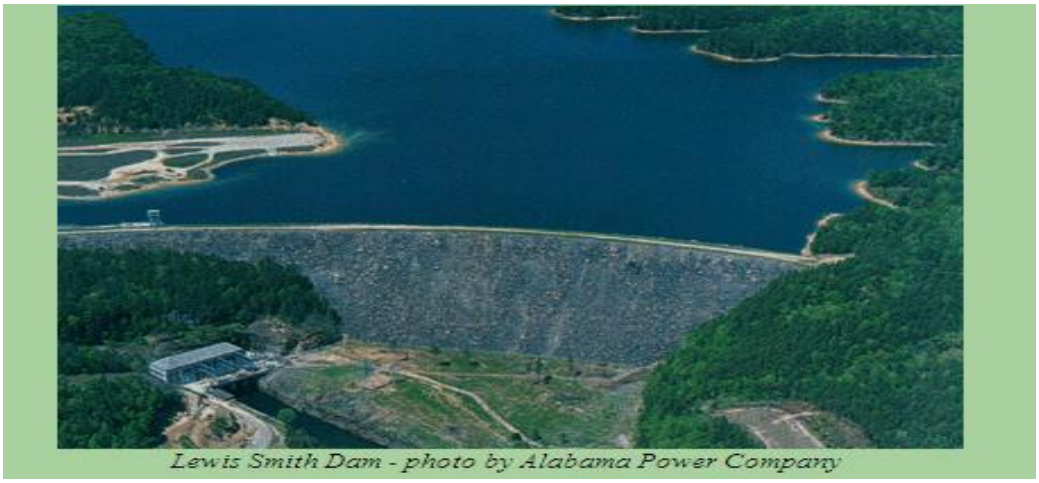


Figure 4.17, Smith Dam
In service: 09/05/61. Capacity: two generators, rating 78,750 kilowatts each.

The Smith Dam powerhouse contains two electric generators, rated at 78,750 kilowatts each. Water reaches the powerhouse, located just south of the dam, through two tunnels that are 26 feet in diameter and 1,925 feet long. The average annual electrical output from the generators is 233,000 megawatt-hours, but generation can vary depending on the availability of water. Smith Dam does not generate electricity constantly, but is put into service when peak demand for electricity requires it, or when market prices for electricity are favorable. In general, hydropower is the most economical way for Alabama Power to generate electricity, since there is no cost for fuel, but it cannot be used at all times because of limited supply. During the drought years in the early twenty-first century, for example, hydro-generation across Alabama Power's system of dams, including Smith Dam, was reduced significantly.

One of the largest earth and rock-filled dams in the Eastern United States, the Lewis Smith Dam was constructed at the Sipsey Fork tributary. It was named in honor of Lewis Martin Smith, who was president of Alabama Power from 1952 to 1957. Smith Dam was the first of three Alabama Power Company projects on the Warrior River. In 1965, FERC authorized Alabama Power to build a powerhouse at Holt Lock and Dam. Both Bankhead Lock and Dam and Holt Lock and Dam are owned by the Corps of Engineers, U.S. Army.

Smith Lake is 35 miles long, with 500 miles of shoreline, and it covers 21,200 acres. The maximum depth at the dam is 264 feet. For many years, property around Smith Lake remained relatively undeveloped. But since the 1980s, residential and commercial development resulting from the lake's beauty and its recreational attractions has increased dramatically.

Smaller Dams in Walker County:

Table 4.11

Feature	Type	County	USGS Topo Map	Elevation	Lat	Long
Bill Grey Dam	Dam	Walker	Sipsey	335 feet	33.848°N	87.073°W
Boshells Mill Dam	Dam	Walker	Townley	400 feet	33.857°N	87.445°W
Lewis Smith	Dam	Walker	Cold Springs	279 feet	33.937°N	87.105°W
Little Creek Impoundment Dams	Dam	Walker	Sipsey	295 feet	33.812°N	87.043°W
Lock Number Fifteen (historical)	Dam	Walker	Goodsprings	249 feet	33.665°N	87.140°W
Lock Number Fourteen (historical)	Dam	Walker	Goodsprings	249 feet	33.632°N	87.214°W
Odums Mill Dam	Dam	Walker	Nauvoo	502 feet	33.957°N	87.400°W
Rattlesnake Dam	Dam	Walker	Goodsprings	305 feet	33.640°N	87.185°W
Strip Mining Impoundment Dam Number 1	Dam	Walker	Parrish	321 feet	33.652°N	87.258°W
Strip Mining Impoundment Dam Number 2	Dam	Walker	Goodsprings	522 feet	33.700°N	87.220°W
W H Williams Junior Dam	Dam	Walker	Dora	380 feet	33.720°N	87.068°W
Walker County Public Lake Dam	Dam	Walker	Cordova	312 feet	33.797°N	87.230°W

Past Occurrences

There have been no past occurrences of Dam Failure in Walker County.

Likelihood of Future Occurrences

The consensus is that a large scale dam failure of Lewis Smith Dam would likely be triggered by an earthquake only. Therefore, the likelihood is minimal. Areas at risk are Cordova, Dora, Jasper, Oakman, Parrish, Sipsey and Sumiton, as well as the outlying areas of the county.

Summary

The committee discussed dam failure at length. Should Lewis Smith Dam breach, we can expect catastrophic damage to a large portion of Walker County. The likelihood is slim and it has been said that nothing short of a terrorist attack or earthquake can damage the dam. Yet, the worst case scenario must be addressed and plans are in place.

The 2004 Plan reported all property in the county to have an assessed value of $2,127,948. Today (2010) the total property value has risen to $627,906,250. It is believed that this significant increase is due to a change in the record keeping system used by the county tax assessor's office. Today's number is more accurate and a better reflection of what is at risk. Even though the tax assessor's office has updated their record keeping, it is still deficient for our purposes. We were unable to separate property into the recommended categories of residential, commercial, industrial, agricultural, religious/non profit,

government and educational. We were also unable to identify the number of structures in hazard areas, as this information was not available.

It can be said that in the event of a catastrophic dam break in Walker County, a significant number of structures are at risk. As shown in the Vulnerability Assessment section beginning on page 76, all infrastructure is at risk. A value could not be assigned to these items individually or as a whole due to the unavailability of data from the tax assessor's office. However, approximately 95% of property and infrastructure would be at risk.

Similarly, 96% of the population would be at risk. In 2010, total population for the county was reported as 67,023. Likewise, the total number of households in Walker County in 2010 were 30,816 and today, the report reflects 96% at risk.

Mitigation strategies have been developed to offset the damage caused by a large scale dam break. A dam break plan, including evacuation, has been in place for some time and this plan is a part of our mitigation plan.

Earthquake

An earthquake is a shaking or trembling of the earth's surface caused by the lifting, shifting, breaking, or slipping of a fault line. Stresses in the earth's outer layer push the sides of the fault together. Stress builds up and the rocks slip suddenly, releasing energy in waves that travel through the earth's crust and cause the shaking that is felt during an earthquake. Earthquakes may also be categorized as Intraplate Earthquakes. All areas of Walker County have an equal chance of experiencing earthquakes because of the close proximity of the Southern Appalachian and the New Madrid Seismic Zones.

Figure 4.18, Provided by the Geological Society of America

The Southern Appalachian Seismic Zone extends from near Roanoke in southwestern Virginia southwestward to central Alabama. Considered a zone of moderate risk, the SASZ includes the Appalachian Mountains. The hypocenters of earthquakes in this zone are probably on deeply buried faults. The greatest earthquake in the zone occurred in 1897 near Pearisburg, Virginia, with an estimated magnitude of 5.8. Most of the earthquakes in Alabama are in the SASZ.

The New Madrid Seismic Zone lies within the central Mississippi Valley, extending from northeast Arkansas through southeast Missouri, western Tennessee, and western Kentucky, to southern Illinois. Historically, this area has been the site of some of the largest earthquakes in North America. The last major earthquakes in this area were in 1811 and 1812, when population was small and there were few buildings. Today the area is densely populated by millions of people and includes the cities of St. Louis, Missouri, and Memphis, Tennessee. A major earthquake could result in great loss of life and property damage in the billions of dollars. Adding to the danger is the fact that structures in the area were not built to withstand earthquake shaking. There is a 90% chance of an earthquake of magnitude 6.0 or greater in this area by the year 2040. A large earthquake could result in significant damage in northern Alabama and would have a significant economic impact on Alabama.

The following figure shows Seismic Risk for Alabama resulting from an impact on the New Madrid Seismic Zone and the Southern Appalachian Seismic Zone:

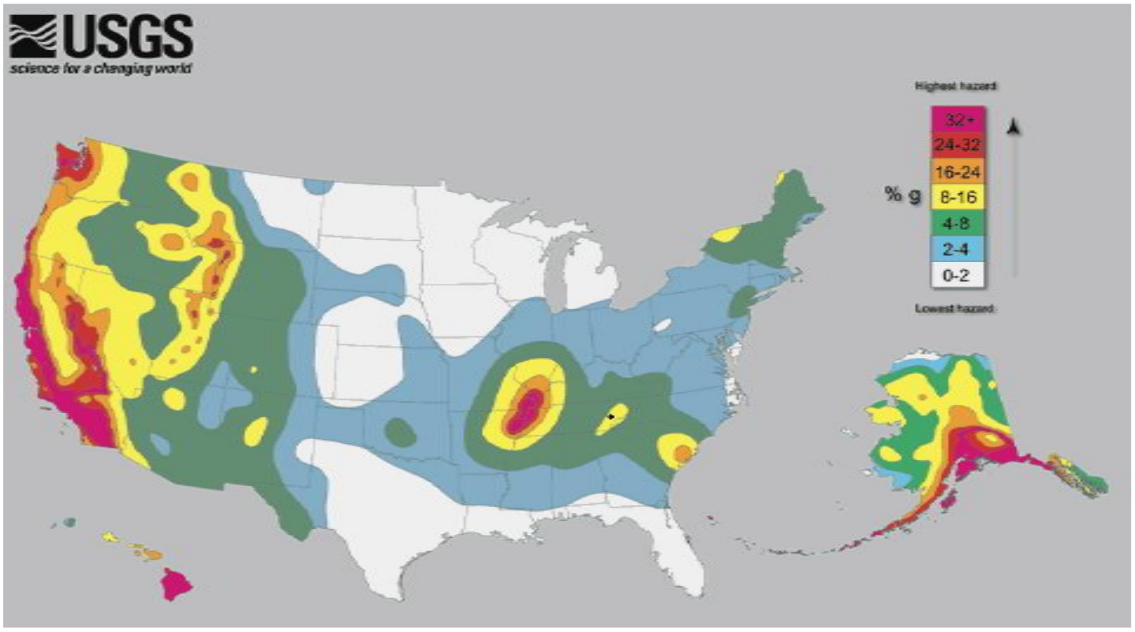


Figure 4.19, Seismic Risk Map, (Source: United States Geological Survey)

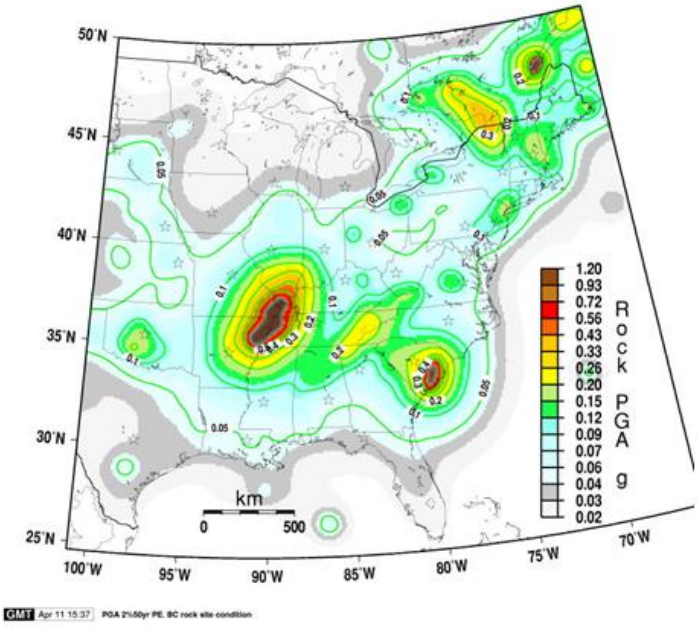


Figure 4.20, provided by the U.S. Geological Survey

These figures depict probabilistic ground motion for peak ground acceleration for the Central/Eastern U.S., corresponding to a 10% in 50 year probability of exceedance. It clearly shows North Alabama's, including Walker County, proximity to the New Madrid, Southern Appalachian and South Carolina intraplate earthquake seismic zones.

The 1886 Charleston, South Carolina earthquake is a heavily studied example of an intraplate earthquake. The earthquake was felt 750 miles from the epicenter, and several areas in Alabama recorded damage. The earthquake is believed to have occurred on faults formed during the break-up of Pangea. Similar faults are found all along the east coast of North America. It is thought that such ancient faults remain active from forces exerted on them by present-day motions of the North American Plate. The exact mechanisms of intraplate earthquakes are a subject of much ongoing research.

Earthquakes are usually not intraplate earthquakes, but are caused by the slips along plate boundaries (fault lines) created by stress and pressure. Intraplate earthquakes do not occur at plate boundaries, but at fault zones ('cracks') in the middle of a plate. These often occur at the location of ancient fault zones or failed rifts due to adjustments on an old rupture.

Several methods have been developed to quantify the strength of an earthquake. The most recognized methods are described below.

Richter Magnitude is a measure of earthquake strength or the amount of energy released. This scale was originally developed by Charles Richter in 1935. Magnitude is expressed in

whole numbers and decimals, with each succeeding whole number representing a tenfold increase in the energy released. There is only one Richter value calculated for the epicenter of a specific earthquake. (The epicenter is the location on the surface of the earth directly above where an earthquake originates. It is determined by measuring the amplitudes of ground motion on seismograms.)

Modified Mercalli Intensity Scale is an evaluation of the severity of ground motion at a given location measured relative to the effects of the earthquake on people and property. This scale was developed by Wood and Nueman in 1931, based on Mercalli's 1902 original version. Intensity is expressed in Roman numerals I – XII. The Mercalli scale is the most effective means of determining the approximate magnitude of a quake that occurred in historic time prior to the advent of uniform seismic detection devices and the Richter Scale.

Comparison of Richter Magnitude and Modified Mercalli Intensity Scales

Table 4.12

Richter Magnitude	Mercalli Scale	Effects
2	I – II	Usually detected only by instruments
3	III	Felt Indoors
4	IV – V	Felt by most people; slight damage
5	VI – VII	Felt by all; damage moderate
6	VII – VIII	Damage moderate to major
7	IX – X	Major damage
8+	X - XII	Total and major damage

Past Occurrences

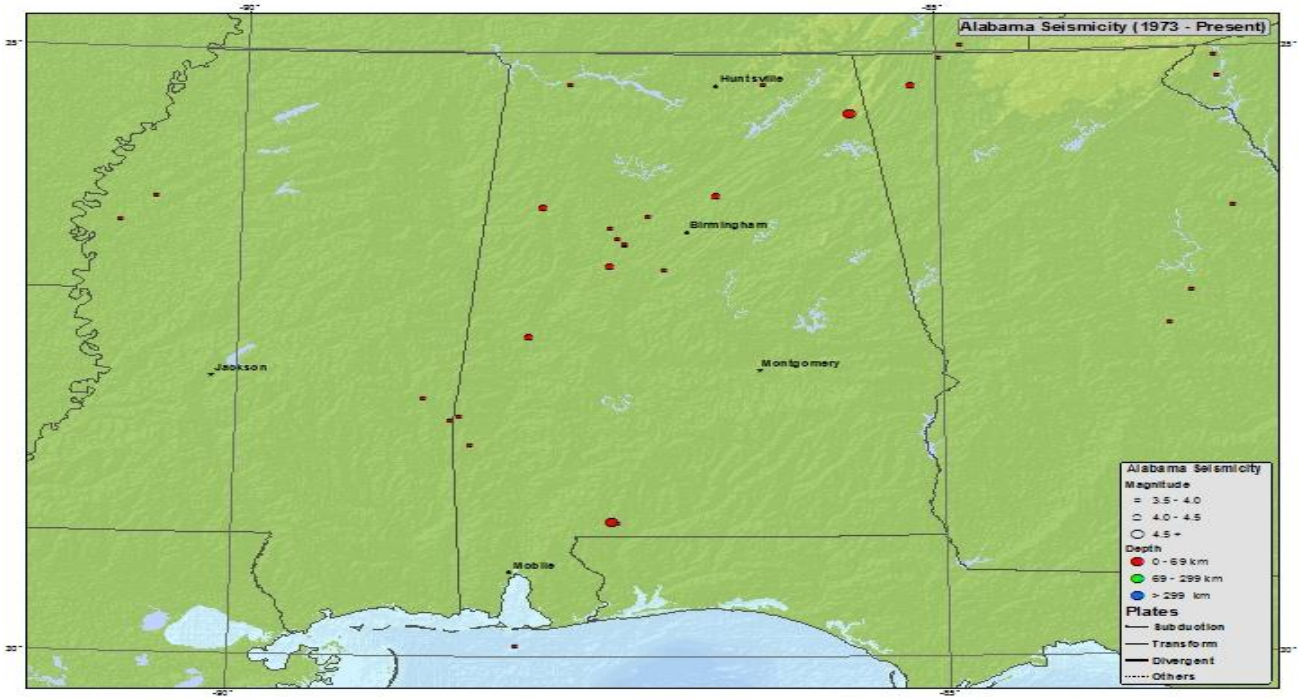


Figure 4.21, provided by the US Geological Society

Likelihood of Future Occurrences

The close proximity of Walker County to the Southern Appalachian and the New Madrid Seismic Zones indicate that an earthquake is possible.

In a report filed in November 2008, FEMA warned that a serious earthquake in the New Madrid Seismic Zone could result in "the highest economic losses due to a natural disaster in the U.S., further predicting "widespread and catastrophic" damage across Alabama, Arkansas, Illinois, Indiana, Kentucky, Mississippi, Missouri and Particularly Tennessee, where a 7.7 magnitude quake or greater would cause damage to tens of thousands of structures affecting water distribution, transportation systems, and other vital infrastructure.

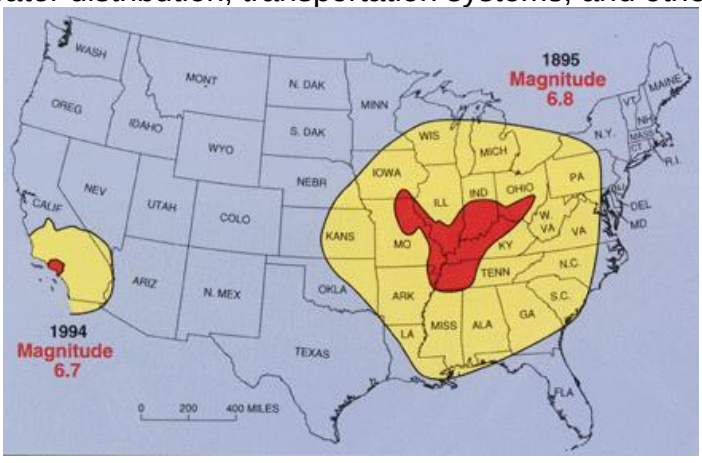


Figure 4.22, **Variances in Earthquake Effects Across United States.** Source: United States Geological Survey

The probability of magnitude 6.0 or greater in the near future is considered significant – a 90% chance of such an earthquake by 2040 has been given.

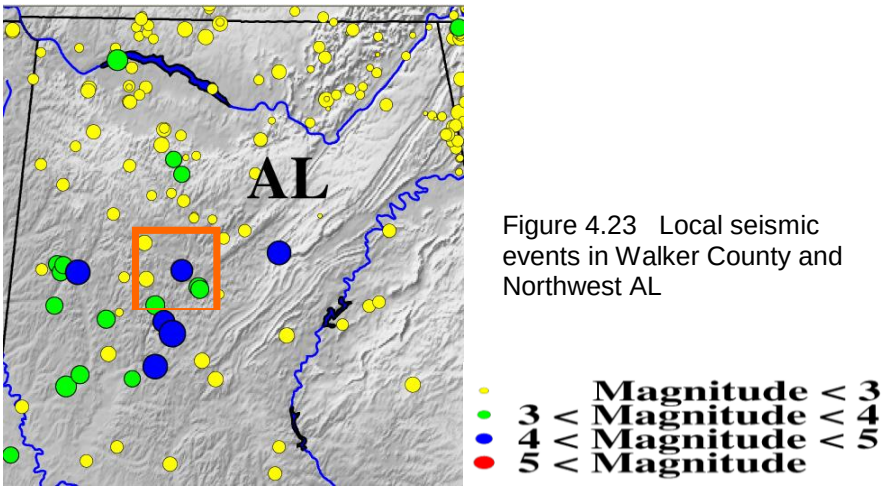


Figure 4.23 Local seismic events in Walker County and Northwest AL

Summary

At the time our original mitigation plan was prepared, we reported 6 small earthquakes for the area with a property loss of 0. The 2004 Plan reported all property in the county to have an assessed value of $2,127,948. Today (2010) the total property value has risen to $627,906,250. It is believed that this significant increase is due to a change in the record keeping system used by the county tax assessor's office. Today's number is more accurate and a better reflection of what is at risk. Even though the tax assessor's office has updated their record keeping, it is still deficient for our purposes. We were unable to separate property into the recommended categories of residential, commercial, industrial, agricultural, religious/non profit, government and educational. We were also unable to identify the number of structures in hazard areas, as this information was not available.

It can be said that in the event of an earthquake in Walker County, all structures are at risk. As shown in the Vulnerability Assessment section beginning on page 76, all infrastructure is at risk. A value could not be assigned to these items individually or as a whole due to the unavailability of data from the tax assessor's office. However, 100% of property and infrastructure would be at risk.

Similarly, 100% of the population would be at risk. In 2010, total population for the county was reported as 67,023. Likewise, the total number of households in Walker County in 2010 were 30,816 and today, the report reflects – 100% at risk.

Mitigation strategies have been discussed to offset the damage caused by an earthquake.

4.3 Vulnerability Assessment - Asset Inventory, Loss Estimation

A detailed vulnerability analysis for each hazard should include: percent of vulnerable population, critical facilities, non-critical facilities, hazard economic loss estimate, human loss estimate, vulnerability to future assets and infrastructure.

The planning committee utilized the County Assessor's data to define a baseline against which disaster impacts could be compared. The baseline is the catastrophic, worst-case scenario: the assessed value of the entire county as a whole.

Total Vulnerability of Walker County, including all municipalities, to Catastrophic Disaster is show in this table.

Walker County Property, Assessed Value (2014)

Table 4.13

Location	Class I	Class II	Class III
Carbon Hill	886,330	5,145,790	3,148,560
Cordova	726,660	3,995,070	2,216,800
Dora	1,177,940	7,337,390	6,050,060
Eldridge	62,900	196,040	348,060
Jasper	9,894,360	118,299,890	53,575,160
Kansas	84,360	432,300	443,440
Nauvoo	226,640	589,320	379,620
Oakman	538,020	2,146,220	1,241,160
Parrish	839,220	4,030,840	1,167,560
Sipsey	218,960	700,500	407,060
Sumiton	942,640	11,918,530	6,967,960
Total Municipal	**15,598,000**	**154,791,890**	**75,945,440**
Remainder of County	**127,526,660**	**128,618,160**	**125,426,100**
Total All	**$ 143,124,660**	**$ 283,410,050**	**$ 201,371,540**

The assessor's office in Walker County collects data according to class and location. ***Class I includes public utility property; Class II includes rental, commercial and small tracts of vacant land less than 5 acres; Class III includes all residential, homestead and large tracts of vacant land greater than 5 acres.*** (Due to the record keeping system used by the county tax assessor's office, due to time constraints it was no possible to be any more specific concerning the types of structures and their values – such as separating out commercial as opposed to industrial or agricultural.)

Identified Critical Facilities, by Area

City Fire Stations –

Carbon Hill Fire
Cordova Fire
Dora Fire
Eldridge Fire

Jasper Fire 1, 2 & 3
Nauvoo Fire
Oakman Fire
Parrish Fire
Sumiton Fire
Town of Sipsey Fire

County:
Argo Fire
Barney Fire
Boldo Volunteer Fire 1 & 2
Curry Fire
Copeland Ferry Fire
Hay Valley Fire
Piney Woods Volunteer Fire
Pleasantfield Volunteer Fire
Saragossa Fire 1 & 2
Thach Fire
Towncreek Fire
Townley Fire 1 & 2
Tutwiler Fire
Yerkwood Fire (Quinton)
Midway McCollum Fire
Mt Zion Fire (fall city road)
Empire Fire

Health Related -

Hospitals
- Walker Baptist Medical Center, Jasper

EMS
- Regional Paramedical Services

Nursing Homes
- Jasper:
  - Ridgeview Health Services
  - Ridgewood Health Care Center
  - Shadescrest Health Care Center
- Carbon Hill:
  - Consult America
- Cordova:
  - Cordova Health and Rehabilitation

Clinics
- Cordova
  - Haskett Memorial Clinic
- Dora

Premier Health Care Center
Dr. Nancy Duggers Family Practice
Jasper
Afterhours Clinic
Hope Clinic
Sipsey
Whatley Healthcare
Nauvoo
Christian Place united Methodist Church Clinic
Oakman
Whatley
Parrish:
Capstone Rural Health Center
Sumiton
Afterhours Clinic

Police Stations -

Carbon Hill
Cordova
Dora
Jasper
Oakman
Parrish
Sipsey
Sumiton
Walker County Sheriff's Dept

Schools –

Carbon Hill Elementary Jr High
Carbon Hill High
Cordova Elementary
Cordova/Bankhead Middle
Cordova High
Dora High
Jasper Area -
Alternative School – Highland Ave
Center of Technology
Maddox Middle
Memorial Park Elementary
North Highlands
TR Simmons Elementary
Walker High
West Jasper Elementary
Oakman Elementary
Oakman High
Parrish Elementary

Sumiton Elementary
Sumiton Jr High
Sumiton Christian
Carbon Hill Christian Academy
Victory Christian
Trinity Christian Academy
Jericho Way (Cordova)
Freewill Baptist Children's Home (Eldridge)

County – Curry Elementary
Curry Middle
Curry High
Lupton Jr High
Valley Jr High
Alternative School – Bankhead Hwy

Bevill State Jasper
Bevill State Sumiton

Transportation:

State Highways -
Hwy 5
13
18
69
102
118
124
195
269
257
US Highways -
Hwy 78

Interstate 22 when completed
Rail -
BNSF Railway
Norfolk Southern Railway

Airport – Walker County Airport

State Docks – Cordova

911 Operations Area (include health dept, Red Cross, etc.)

911 Dispatch Office – Jasper
Walker County EMA
Walker County Health Department – Jasper
American Red Cross – Jasper
- Shelters:
  - Jasper
    - First Baptist Church
    - Farmstead Baptist Church
  - Dora
    - Aldersgate United Methodist Church
  - Carbon Hill
    - First United Methodist Church
  - Parrish
    - Town Hall
  - Oakman
    - Senior Center

Government Facilities including City Halls and Courthouse

Carbon Hill City Hall
Cordova City Hall
Dora City Hall
Dora Civic Center
Eldridge City Hall
Jasper City Hall
Kansas Town Hall
Nauvoo Town Hall
Oakman City Hall
Parrish City Hall
Sipsey Town Hall
Sumiton City Hall

Walker County Courthouse – Jasper
- Annexes
- County Barns

Alabama State, Jasper:
- ABC Board
- Career Center
- Cooperative Extension
- Conservation and Natural Resources
- Forestry
- Surface Mining
- Transportation Department
- Vocational Rehabilitation

Water treatment plants -

Jasper, Sipsey Rd water plant
Sewer Plant, Florida Ave
Oakman – sewer system
Cordova – sewer system
East Walker – sewer system
Carbon Hill -sewer system
Parrish – sewer system
Birmingham Waterworks Pump Station, Warrior River – Quinton

Water towers

Cordova Water & Gas Board
Curry Water Authority
Dora Utilities
Parrish Water Authority
Town of Nauvoo Water Works Board

Funeral Homes

Collins-Burke, Jasper
Faith Chapel, Jasper
Kilgore-Green, Jasper
Wilson Brothers, Carbon Hill
Bell, Sumiton
New Horizon, Sumiton

Communication Systems – including TV and Radio Stations

W55BJ, Channel 55, Jasper
W66CN, Channel 66, Jasper
W23AK, Channel 23, Jasper
WFFN, 95.3 FM, Cordova
WDXB 102.5 FM, Jasper
WQOP 92.5 FM, Dora

FCC Registered Antenna Structures

Hwy 195, Registration #1246089
29123 Hwy 69, Registration #1263486
2251 Hwy 195, Registration #1025703
.25 miles N of RT 79 4.5 miles NW, Registration #1029023
714 South Lowell Road, Registration #1239939
1st Ave South, West of Southern Railroad Tracks, Registration #1200489
.08 miles N of Hemlock Ln, .34 miles W of US Hwy 69, Registration #1263611
494 Luther Dutton Road, Registration #1265165
Smith Lake Dr, Registration # 1270090
814 Tidwell Cemetery Road, Registration #1273717
261 Old Mill Rd, Registration #1281701
502 Hwy 78 East, Registration #1002012

Old US Hwy 78, Registration #1030483
5365 Old Tuscaloosa Road, Registration #1036701
7719 Hwy 195, Registration #1244695
.3 miles West of Hwy 5 & Edgil Grove Road, Registration #1257726
160 Edgil Grove Road, Registration #1276806
74 Sylvia Circle, Registration #1000477
275 Smith Lake Dam Road, Registration #1239253
302 15th St NE, Registration #1239787
NE Jasper, Registration #1240319
1345 South Skyline Dr, Registration #1036970
5480 Old Tuscaloosa Road, Registration #1036971
Skyline Dr, Registration #1036973
BNSF @ 24th St, Registration #1046653
2 KM WSW of SR 5 and US Hwy 78, Registration #1050552
11413 Hwy 78, Registration #1245214
300 23th St, Registration #1251512
19875 Hwy 69, Registration #1260211
23564 Hwy 78, Registration #10002590
Jackson Road, Registration #1036693
578 Radio Tower Road, Registration #1039313
6021 Red Hill Road, Registration #1255094
Near 110 Bryan Street, Registration #1293016
.64 miles North of Tubbs Hill Rd, Registration #1263871
1926 Blackwood Rd (Kings Mill), Registration #1265228
6214 Hwy 69, Registration #1266966
141 Dixie Springs Road, Registration #1274555
6350 Hwy 269, Registration #1244738
283 Mount Piscah Road, Registration #1254063
269 Courington Rd, Registration #1261742
89 Short Drive, Registration #1263831
Aldridge Rd, Registration #1266451
107 Hoover Road, Registration #1267149
2810 Pridemore Road, Registration #1262907
1218 Old Hwy 78, Registration #1035731
357 Lost Creek Rd, Registration #1255051
Al 00116 Lost Creek, Registration #1276626
Near 248 Arrow Rd, Registration #1290288
410 S Skyline Drive, Registration #1290961
.01 miles S of Copperhead Rd & .09 miles W Reno Hill Rd, Registration #1263650
650 Main St, Registration #1270695
Beech Grove Rd, Registration #1272906
1222 Old Hwy 78, Registration #1002851
1222 Old Hwy 78, Registration #1040152
9825 Bankhead Hwy, Registration #1004006
51265 Hwy 13, Registration #1273680
Bonner Hollow Road, Registration #1278533

246 Phillips Dr, Registration #1254192
7504 Tutwiler Road, Registration #1291495
Old Baltimore Road, Registration #1293255
1098 East Lake Road, Registration #1290725
67 Fire Tower Road, Registration #1036703
Buttercup Road, Registration #1036765
196 Hill Ave, Registration #1245055
Cordova Gorgas Road, Registration #1254061
Cordova Al, Registration #1270924
9 miles S of Hwy 78, Registration #1029508
1.9 miles SE, Registration #1032962
4936 White House Road, Registration #1264006
100 Walker Road, Registration #1292330
6654 Hwy 78 W, Registration #1293086

Communication Towers

North and South repeater – Sheriff's Dept
(water tank Curry Hwy next to BP Station and old Tuscaloosa Rd.)
911 Building and Tower – old airport
Jasper City – College Hill
Cordova Police - Hilltop Rd and Reservoir Hill
Carbon Hill Police
Sumiton Police City Hall
Dora Police
Parrish Police
Jasper Mobile Command Trailer
911 Command RV

Military Installations

National Guard Armory
Army Reserve Center

Large Apartment Complexes

Cordova Park Apartments (Two Locations)
Dora Vila Apartment Complexes
Dora Housing Authority Facilities
Walker County Housing Authority Facilities
Jasper Housing Authority Facilities
Parrish Housing Authority Facilities
Sumiton Housing Authority Facilities
Cordova Housing Authority Facilities
Carbon Hill Housing Authority Facilities
Woodland Villa Apartments
Northwood Town Homes

Mountainside Apartments
Summerville Manor
Westfork Apartments

Dams

Lewis Smith Dam

Energy Systems

Alabama Power – Gorgas Steam Plant
Alabama Gas
Carbon Hill Gas and Utilities
Alabama Power substation, Pediatric Drive
Substation Curry
Substation Cordova/Gorgas Rd
Cordova Gas

Natural Resources, by Area (include protected species)

City Lake, Dora
Horsecreek Golf Course, Dora
City Rails to Trials, Dora
William B Bankhead National Forest
Lewis Smith Lake
Walker County Lake
Fish hatcheries, Carbon Hill
Bear Branch Lodge, Townley
Owls, hawks, turtles – US Fish and Wildlife
Blackwater Creek – Fishing, Swimming & Canoeing

Cultural Resources, by Area

Alabama Mining Museum, Dora
Carl Elliott House Museum, Jasper
Libraries (Cordova, Jasper, Carbon Hill, Sumiton
Bankhead House and Visitor Center, Jasper
Free Will Baptist Children's Home, Eldridge
Free Will Baptist Association Office, Eldridge
Nauvoo Recreation Facility, Nauvoo

Government Owned Critical Facility Values – by Municipality

Walker County Table 4.14

Facility Type	Facility Value
Courthouse Annex	$ 8,000,000
Airport/terminal building	552,000
T Hangers (2)	200,000

Courthouse	15,000,000
Courthouse Annex #2	1,700,000
County Jail	15,000,000
County Reserve Deputies Building	30,000
County Garage – Jasper	64,000
County Garage #2 – Jasper	150,000
County Garage – Carbon Hill	150,000
County Garage – Parrish	150,000
County Garage – Sipsey	150,000
Health Dept	120,000
Total	$41,766,000

Carbon Hill Table 4.15

Facility Type	Facility Value
City Hall/Police Station	$ 50,000
Fire and Rescue	30,000
Total	$ 80,000

Cordova Table 4.16

Facility Type	Facility Value
City Hall/Police Station	$ 4,000,000
Fire Station	$ 250,000
Sewer Plant	$ 2,380,000
Water Tanks (4)	$ 2,280,000
Sewer Lift Pump Stations (9)	$ 1,180,000
Fuel Tanks	$ 25,750
Community Center / Water & Gas Office	$ 1,500,000
Activity Center / Polling Place	$ 700,000
Total	$ 12,315,750

Dora Table 4.17

Facility Type	Facility Value
City Hall/Police Dept	$952,750
Fire Dept	$607,770
Civic Center	$849,750

Armory	$550,000
Medical Clinic	$709,071
School	$1,000,000.00
Total	$4,669,341.00

Eldridge Table 4.18

Facility Type	Facility Value
Fire Dept	$ 40,000
Community Center	100,000
Town Hall	$300,000
Water Tanks	$500,000
Pump Stations	$175,000
Lunch Room	$100,000
Town Barn	$ 60,000
Booster Pumps	$ 40,000
Total	$1,315,000

Jasper Table 4.19

Facility Type	Facility Value
Jasper City Hall	$ 2,797,930
Sherer Auditorium	3,345,233
Lee Swann Gymnasium	2,024,580
Memorial Park Natatorium	3,600,000
Jasper Police Station/Jail	3,354,673
Jasper Fire Station #1	1,003,697
Jasper Fire Station #2	283,852
Jasper Fire Station #3	270,895
Frisco Gym	471,000
Sewage Treatment Plant	22,649,291
Total	$34,122,000

Kansas Table 4.20

Facility Type	Facility Value
Town Hall	$87,000
Total	$87,000

Nauvoo Table 4.21

Facility Type	Facility Value
Town Hall	$ 246,659
Fire Dept	263,636
Community Shelter	65,000
Water Tanks (3)	745,815

Community Center	291,768
Total	$1,612,878

Oakman Table 4.22

Facility Type	Facility Value
Police Dept	$ 20,000
Fire Dept	15,000
City Hall	30,000
Total	$ 65,000

Parrish Table 4.23

Facility Type	Facility Value
Old City Hall	$ 20,000
Old School Gym	50,000
Police Dept/City Hall	80,000
Community Center	1,000,000
Senior Center	100,000
Fire Station 1	25,000
Fire Station 2	100,000
Total	$ 1,375,000

Sipsey Table 4.24

Facility Type	Facility Value
Community Center	$ 257,500
Town Hall	463,500
Fire Hall	200,850
Recreation Center	233,398
B&B Welding Building	155,000
Total	$ 1,310,248

Sumiton Table 4.25

Facility Type	Facility Value
City Hall/Police Station	$ 665,055
Fire Station 1	79,806
Fire Station 2	52,167
Community Center	1,420,545
Street / Sanitation	93,107
Water / Gas	50,000
Total	$ 2,360,680

4.4 Hazard Ranking

Each hazard is assigned a likelihood rating based on the criteria and methods described below.

►Likelihood of Event "Rating" is based on the following definitions:

Highly Likely	Event is probable within the calendar year.
Likely	Event is probable within the next three years.
Possible	Event is probable within the next five years.
Unlikely	Event is possible within the next ten years.

►These four classifications of Magnitude/Severity will be used to determine the hazard's effect:

4 – Catastrophic Multiple deaths, complete shutdown of facilities for 30 or more days, more than 50% of property severely damaged

3 – Critical Injuries and/or illnesses result in permanent disability, complete shutdown of critical facilities for at least two weeks, more than 25% of property severely damaged.

2 – Limited Injuries and/or illnesses do not result in permanent disability, complete shutdown of critical facilities for more than one week, more than 10% of property severely damaged.

1 – Negligible Injuries and/or illnesses are treatable with first aid, minor quality of life lost, shutdown of critical facilities and services for 24 hours or less, less than 10% of property severely damaged.

►Calculated Priority Risk Index

Table 4.26

Calculated Priority Risk Index			
.45 Probability	.45 Probability	.45 Probability	.45 Probability
4 – Highly Likely	4 – Catastrophic	4 – Less than 6 Hours	4 – More than 1 Week
3 – Likely	3 – Critical	3 – 6-12 Hours	3 – Less than 1 Week
2 – Possible	2 – Limited	2 – 12-24 Hours	2 – Less than 1 Day
1 – Unlikely	1 – Negligible	1 – 24+ Hours	1 – Less than 6 hours

Risk and Vulnerability by Event:

Tornado

Calculated Priority Risk Index for Tornado

Probability:	4 Highly Likely
Magnitude/Severity:	2 Limited
Warning Time:	4 < 6 hours
Duration:	4 > 1 week

Probability +	Magnitude/Severity +	Warning Time +	Duration =	CPRI
4 x .45	2 x .30	4 x .15	4 x .10	3.4

Areas likely to be affected by future occurrences:

Carbon Hill, Cordova, Dora, Eldridge, Jasper, Kansas, Nauvoo, Oakman, Parrish, Sipsey, Sumiton and outlying areas of Walker County have an equal chance of being affected by tornado.

All critical facilities and properties equally at risk.

Worst case scenario puts all Assessed Property at risk totaling a dollar value of **$627,906,250.**

Flood

Calculated Priority Risk Index for Flood

Probability:	4 Highly Likely
Magnitude/Severity:	1 Negligible
Warning Time:	3 6-12 hours
Duration:	3 < one week

Probability +	Magnitude/Severity +	Warning Time +	Duration =	CPRI
4 x .45	1 x .30	3 x .15	3 x .10	2.85

Areas likely to be affected by future occurrences:

Cordova, Jasper, Oakman, Parrish, Sipsey, and certain outlying areas of Walker County have a good chance of being affected by flood based on historical records.

Drought

Calculated Priority Risk Index for Drought

Probability:	4 Highly Likely
Magnitude/Severity:	3 Critical
Warning Time:	1 24+ hours
Duration:	4 > one week

Probability +	Magnitude/Severity +	Warning Time +	Duration =	CPRI
4 x .45	3 x .30	1 x .15	4 x .10	3.25

Areas likely to be affected by future occurrences:

Carbon Hill, Cordova, Dora, Eldridge, Jasper, Kansas, Nauvoo, Oakman, Parrish, Sipsey, Sumiton and outlying areas of Walker County have an equal chance of being affected by drought. Assigning a dollar value to drought damage is difficult because even a catastrophic drought is unlikely to damage a facilities and property.

Extreme Temperatures

Calculated Priority Risk Index for Extreme Temperatures

Probability:	4 Highly Likely
Magnitude/Severity:	2 Limited
Warning Time:	1 24+ hours
Duration:	4 > one week

Probability +	Magnitude/Severity +	Warning Time +	Duration =	CPRI
4 x .45	2 x .30	1 x .15	4 x .10	2.95

Areas likely to be affected by future occurrences:

Carbon Hill, Cordova, Dora, Eldridge, Jasper, Kansas, Nauvoo, Oakman, Parrish, Sipsey, Sumiton and outlying areas of Walker County have an equal chance of being affected by extreme temperatures. Assigning a dollar value to drought damage is difficult because even a catastrophic drought is unlikely to damage a facilities and property.

Thunderstorms and High Wind

Calculated Priority Risk Index for Thunderstorm/High Winds

Probability:	4 Highly Likely

Magnitude/Severity: 2 Limited
Warning Time: 4 < 6 hours
Duration: 3 < one week

Probability + Magnitude/Severity + Warning Time + Duration = CPRI

4 x .45 2 x .30 4 x .15 3 x .10 3.3

Areas likely to be affected by future occurrences:

Carbon Hill, Cordova, Dora, Eldridge, Jasper, Kansas, Nauvoo, Oakman, Parrish, Sipsey, Sumiton and outlying areas of Walker County have an equal chance of being affected by an thunderstorms and high winds.

All critical facilities and properties equally at risk.

Worst case scenario puts all Assessed Property at risk totaling a dollar value of **$627,906,250.**

Hail

Calculated Priority Risk Index for Hail

Probability: 4 Highly Likely
Magnitude/Severity: 1 Negligible
Warning Time: 4 < 6 hours
Duration: 1 < 6 hours

Probability + Magnitude/Severity + Warning Time + Duration = CPRI

4 x .45 1 x .30 4 x .15 1 x .10 2.8

Areas likely to be affected by future occurrences:

Carbon Hill, Cordova, Dora, Eldridge, Jasper, Kansas, Nauvoo, Oakman, Parrish, Sipsey, Sumiton and outlying areas of Walker County have an equal chance of being affected by hail.

All critical facilities and properties equally at risk.

Worst case scenario puts all Assessed Property at risk totaling a dollar value of **$627,906,250.**

Hurricanes

Calculated Priority Risk Index for Hail

Probability:	3 Likely
Magnitude/Severity:	3 Critical
Warning Time:	1 24+ hours
Duration:	3 < 1 week

Probability +	Magnitude/Severity +	Warning Time +	Duration =	CPRI
3 x .45	3 x .30	1 x .15	3 x .10	2.7

Areas likely to be affected by future occurrences:

Carbon Hill, Cordova, Dora, Eldridge, Jasper, Kansas, Nauvoo, Oakman, Parrish, Sipsey, Sumiton and outlying areas of Walker County have an equal chance of being affected by a hurricane.

All critical facilities and properties equally at risk.

Worst case scenario puts all Assessed Property at risk totaling a dollar value of **$627,906,250.**

Snow and Ice - Winter Storms

Calculated Priority Risk Index for Snow/Ice

Probability:	4 Highly Likely
Magnitude/Severity:	3 Critical
Warning Time:	1 24+ hours
Duration:	4 > one week

Probability +	Magnitude/Severity +	Warning Time +	Duration =	CPRI
4 x .45	3 x .30	1 x .15	4 x .10	3.25

Areas likely to be affected by future occurrences:

Carbon Hill, Cordova, Dora, Eldridge, Jasper, Kansas, Nauvoo, Oakman, Parrish, Sipsey, Sumiton and outlying areas of Walker County have an equal chance of being affected by an winter storms, snow and ice.

All critical facilities and properties equally at risk.

Worst case scenario puts all Assessed Property at risk totaling a dollar value of **$627,906,250.**

Wildfires

Calculated Priority Risk Index for Wildfire

Probability:	4 Highly Likely
Magnitude/Severity:	1 Negligible
Warning Time:	4 < 6 hrs
Duration:	3 < 1 week

Probability +	Magnitude/Severity +	Warning Time +	Duration =	CPRI
4 x .45	1 x .30	4 x .15	3 x .10	3

Areas likely to be affected by future occurrences:

Carbon Hill, Cordova, Dora, Eldridge, Jasper, Kansas, Nauvoo, Oakman, Parrish, Sipsey, Sumiton and outlying areas of Walker County have an equal chance of being affected by wildfire.

All critical facilities and properties equally at risk.

Worst case scenario puts all Assessed Property at risk totaling a dollar value of **$627,906,250.**

Sinkholes/Landslides

Calculated Priority Risk Index for Sinkholes

Probability:	4 Highly Likely
Magnitude/Severity:	4 Catastrophic
Warning Time:	4 < 6 hours
Duration:	4 > one week

Probability +	Magnitude/Severity +	Warning Time +	Duration =	CPRI
4 x .45	4 x .30	4 x .15	4 x .10	4

Areas Likely to be Affected

All areas previously under-mined including Nauvoo, Parrish, Carbon Hill, Oakman and other outlying areas in western Walker County.

Dam Failure

Calculated Priority Risk Index for Dam Failure

Probability:	1 Unlikely
Magnitude/Severity:	4 Catastrophic
Warning Time:	1 24+ hours
Duration:	4 > one week

Probability +	Magnitude/Severity +	Warning Time +	Duration =	CPRI
1 x .45	4 x .30	1 x .15	4 x .10	2.2

Areas likely to be affected by future occurrences:

Cordova, Jasper, Sipsey, Sumiton, Dora and much of Eastern Walker County would be affected by dam failure.

Earthquake

Areas likely to be affected by future occurrences:

Carbon Hill, Cordova, Dora, Eldridge, Jasper, Kansas, Nauvoo, Oakman, Parrish, Sipsey, Sumiton and outlying areas of Walker County have an equal chance of being affected by an earthquake.

Calculated Priority Risk Index for Earthquake

Probability:	2 Possible
Magnitude/Severity:	2 Limited
Warning Time:	4 < 6 hrs
Duration:	1 < 6 hrs

Probability +	Magnitude/Severity +	Warning Time +	Duration =	CPRI
2 x .45	2 x .30	4 x .15	1 x .10	2.2

Areas likely to be affected by future occurrences:

Carbon Hill, Cordova, Dora, Eldridge, Jasper, Kansas, Nauvoo, Oakman, Parrish, Sipsey, Sumiton and outlying areas of Walker County have an equal chance of being affected by an earthquake.

All critical facilities and properties equally at risk.

Worst case scenario puts all Assessed Property at risk totaling a dollar value of **$627,906,250.**

County Wide Hazard Summary

Table 4.27

Hazard Event	History	Estimated Total Dollar Loss	Average Cost Per Event	Likelihood Rating

Floods	Walker County has experienced 17 floods in the past 11 years.	$ 661,000	$ 38,882	Highly Likely
Tornadoes	The NCDC records show the county experiencing 42 events in the past 58 years.	$40.988 M	$ 976,190	Highly Likely
Thunderstorms/High Winds	There have been 175 reported high wind events in past 58 years.	$ 101.924 M	$ 582,857	Highly Likely
Hail	The historical archives show 92 events occurring in the county over the past 58 years.	$ 187,000	$ 2033	Highly Likely
Snow and Ice	The county has experienced 8 events in the past 15 years.	$ 5.016 B – regional	$ 625 M	Highly Likely
Drought	There was limited amount of data on droughts, only dating back to 2006. There were 19 drought events reported for the county in the past 3 years.	N/A	N/A	Highly Likely
Wildfires	There have been no reported major wildfires in Walker County	$ 0	$ 0	Highly Likely
Earthquakes	Data was limited on Earthquakes. The USGS earthquake records for Alabama go back to 1886 and record a total of 18 quakes in AL.	N/A	N/A	Possible
Expansive Soils	There have been no reported events in Walker County according to the NCDC.	$ 0	$ 0	Highly Likely
Temperature Extremes	There have been 5 reported events in the past 13 years.	$ 52 M crop damage - regional	$ 13 M	Highly Likely
Hurricanes	The county has experienced 4 events in the past 14 years.	$ 134.95 M – regional	$ 33.75 M	Likely
Dam Failure	There have been no recorded events in the past 50 years.	N/A	N/A	Unlikely

Hazard Ranking

Table 4.28

Rank	Hazard
1	Sinkhole/Expansive Soil
2	Tornado
3	Thunderstorm/High Wind
4	Drought
5	Snow/Ice
6	Wildfire
7	Extreme Temp
8	Flood
9	Hail
10	Hurricane

11	Earthquake
12	Dam Failure

4.5 Capability Assessment

An additional method of evaluating the potential for hazards to adversely impact Walker County, and its municipalities, is by conducting an inventory and analysis of the community's existing mitigation capabilities. Doing so provides an assessment of how well prepared Walker County is presently, and highlights any areas for improvements. The term "mitigation capabilities" is meant to include all existing policies, regulations, procedures, and abilities that contribute to the protection of Walker County.

The Planning Committee identified policies, regulations, procedures, and abilities that contribute to reducing disaster damages. The committee evaluated these mechanisms in terms of whether they could be improved in order to reduce future disaster damages. For example, a community with building codes has adopted procedures that take a significant step in preventing future damage. However, if that community does not have a Building Official, then the usefulness and effectiveness of that Building Code has been substantially undermined. Such a circumstance would lead the committee towards recommending that the position of Building Official be funded and filled.

The following matrix captures the inventory of existing mitigation capabilities within Walker County and the City of Jasper. An evaluation of key capabilities follows.

Walker County Capabilities

Table 4.29

Capability	Walker County
Comprehensive Plan	Yes
Land Use Plan	Yes
Subdivision Ordinance	Yes
Zoning Ordinance	Yes
NFIP/FPM Ordinance	Yes
- Map Date	Yes
- Substantial Damage language?	Yes
- # of Floodprone Buildings?	Yes
- # of NFIP policies	Yes
- Maintain elevation certificates?	Yes

- # of Repetitive losses	Yes
CRS Rating, if applicable	Yes
Stormwater Program?	No
Building Code Version	Follows Southern Building Code
Full-time Building Official	Yes
- Conduct “as-built” inspections	Yes
Local Emergency Operations Plan	Yes
Hazard Mitigation Plan	Yes – April 2005
Warning System in Place?	Yes
- Storm Ready Certified	Yes
- Weather Radio reception?	Yes – countywide
- Outdoor Warning Sirens	Yes
- Emergency Notification (R-911)?	No
- Other? (ex. cable over-ride)	Yes – through State EMA
GIS System?	Yes
- Hazard Data?	No
- Building footprints?	No
- Tied to Assessor data?	No
- Land-Use designations?	Zoning
Structural Protection Projects	Walker County Commission
Critical Facilities Protected?	Yes
Natural Resources Inventory?	No
Cultural Resources Inventory?	No
Erosion Control procedures?	Yes – Walker County Soil and Water
Sediment Control procedures?	Yes– Walker County Soil and Water
Public Information Program/Outlet?	Yes
Environmental Education Program?	Yes– Walker County Soil and Water

Explanation of Capability Assessment Matrix

Comp Plan: Comprehensive Long-Term Community Growth Plan

Land Use Plan: Designates type of Land Use desired/required – Comprised of Zoning

Subdivision Ordinance: Regulates platting, recording, infrastructure improvement

Zoning Ordinance: Dictates type of Use and Occupancy, lot sizes, density, set-backs, and construction types, Implements Land Use Plan

NFIP/FPM Ord: Floodplain Management Ordinance: Directs development in identified Flood Hazard Areas. Required for Participation in NFIP and Availability of Flood Insurance

Sub. Damage: Does your FPM Ordinance contain language on Substantial Damage/Improvements? (40% rule)

Administrator: Do you have a Floodplain Management Administrator (someone with the responsibility of enforcing the ordinance and providing ancillary services (map reading, public education on floods, etc.)

# of FP Bldgs: How many buildings are in the Floodplain?

# of policies? How many buildings are insured against flood through the NFIP?

# of RL's: # of Repetitive Losses: (Paid more than $1,000, twice in the past 10 years)

CRS Rating: Are you in the Community Rating System of the NFIP, and if so, what's your rating?

LEOP: Do you have a Local Emergency Operations Plan – a disaster RESPONSE plan

HM Plan: Do you have a Hazard Mitigation Plan

Warning: Do you have any type of system, such as: "Storm Ready" Certification from the National Weather Service NOAA Weather Radio reception Sirens? Cable (TV) Override? "Reverse 911"?

GIS: Geographic Information System

Structural Protection Projects: (levees, drainage facilities, detention/retention basins)

Critical Facility Protection: (for example, protection of power substations, sewage lift stations, water-supply sources, the EOC, police/fire stations. medical facilities . that are at risk . e.g., in the floodplain)

Natural And Cultural Inventory: Do you have an inventory of resources, maps, or special regulations within the community? (wetlands and historic structures/districts, etc.)

Erosion Or Sediment Control: Do you have any projects or regulations in place?

Public Information And/Or Environmental Education Program: Do you have an ongoing program even if it's primary focus is not hazards? Examples would be "regular" flyers included in city utility billings, a website, or an environmental education program for kids in conjunction with Parks & Recreation?)

Other Existing Mitigation Capabilities within Walker County.

In addition to the examination of municipal and county government policies and procedures, the preparedness and emergency plans of local agencies and facilities were examined and included in the process of developing our mitigation plan. Contributing entities include:

Walker County Health Department
Walker Baptist Medical Center
Walker County Board of Education
Jasper City Board of Education
AL State Department of Transportation
Jasper Police Department

Walker County Sherriff's Office
Regional Paramedical Service

All plans and policies related to disaster planning developed by these entities are kept on file in the Walker County EMA office.

Multi-Hazard Mitigation Plan
5.0 Mitigation Strategy

The Planning Committee reviewed and discussed the process of formulating mitigation goals. Each member was provided with a written explanation of Goals and Objectives, the purposes they serve, and how they are developed and written. Up to this point in the planning process, the committee has been involved in talking to agencies and organizations, and collecting and recording hazard related data. From these discussions and efforts, the members completed all three components of the Risk Assessment:

1. Hazard Identification,
2. Vulnerability Assessment, and
3. Capability Assessment.

The first two components have painted a picture of the vulnerability of Walker County to natural hazards. The committee learned that:

1. The number one threat as identified by the committee is sinkhole/expansive soils. While incidents in the past have been minor and not quite frequent, there is great potential for widespread damage due to the extensive undermining of the county.

2. Although most severe weather occurs periodically (drought, extreme temperatures, severe thunderstorms/high wind, tornadoes, and severe winter storms), it still constitutes a significant on-going threat to the community.

3 Earthquakes and dam breaks pose a low threat.

The third component, Capability Assessment, described the current ability of Walker County to counter these threats through existing policies, regulations, programs, and procedures. Here, the committee learned that:

1. Walker County has a solid Emergency Management Program

2. All municipalities participate in the National Flood Insurance Program

3. The county has an excellent amateur radio operator organization.

4. Representatives from each municipality participated in Incident Command System training in 2008, many emergency responders in the county have a substantial background in FEMA training and the local EMA Director continues to provide opportunities for the emergency sector to receive FEMA sponsored training.

5. County officials use a data back-up system to preserve vital information

6. Walker Baptist Medical Center has completed its Hospital Incident Command System training.

7. The Walker County Health Department has updated and implemented their emergency plan for biological incidents and pandemic flu.

5.1 Goal Setting

The analysis of the three components of the Risk Assessment identified areas where mitigation improvements could be made, providing the framework for the committee to formulate planning goals. Each committee member was provided with an example set of goals from similar community plans. These sample goals were discussed at length during planning meetings and the participants consolidated and established the following goals:

Goal 1. Implement a comprehensive Public Education Campaign regarding the hazards posing significant risk to the community.

Objectives:

A. Educate the public to increase awareness of hazards and opportunities for mitigation actions.

B. Promote hazard mitigation in business, residential and agricultural communities and develop regional partnerships to implement mitigation actions.

C. Monitor and publicize the effectiveness of mitigation actions implemented community-wide.

Goal 2. Build and support the concept of sustainable communities through a commitment to become less vulnerable to hazards.

Objectives:

A. Improve capabilities to warn the public of emergency situations.

B. Develop programs to enhance the safety of the residents of each community during an emergency.

C. Identify vulnerable populations

Goal 3. Reduce exposure to hazard related losses, before and after disaster strikes.

Objectives:

A. Implement policies, procedures and regulations to reduce exposure to identified hazards.

B. Decrease vulnerability of community assets, especially critical facilities, located in vulnerable areas.

5.2 Identification of Mitigation Measures

Following the goal setting meeting, the committee undertook a brainstorming session to generate a set of viable alternatives that would support the goals and objectives. Potential mitigation actions were presented to the committee. A facilitated discussion examined and analyzed the alternatives. Then, with an understanding of the alternatives, the committee generated a prioritized list of mitigation actions. Similar to the goal-setting activity, the committee included all previously recommended mitigation actions from existing mitigation plans in its review. This process reinforced the use of the Multi-Hazard Mitigation Plan as an umbrella document for all exiting mitigation plans.

After the old and new mitigation actions were identified, the committee members prioritized them. Financial considerations (cost/benefit reviews) of the prioritized actions weighed heavily in the final selection of mitigation actions. In addition to cost benefit review, secondary considerations included social impact, technical feasibility, administrative capabilities, and political and legal effects, as well as environmental issues.

5.3 The Mitigation Strategy

Throughout the process of developing our mitigation plan, the committee found that each jurisdiction basically had the same goals for mitigating disaster. While some jurisdictions identified specific projects that were unique to their area, many of the projects were educational in nature. The educational projects were agreed upon by each jurisdiction and adopted as a countywide project. The following mitigation projects will reflect the joint projects as well as identify the localized projects.

The results of the planning process and the hard work of the committee led to the mitigation projects presented herein. All of the projects fall within four identifiable strategies:

Enforce…existing rules, regulations, policies and procedures. Communities can reduce future losses not only by pursuing new programs and projects, but also by paying closer attention to what's already "on the books".

Educate…the community to understand what disasters can happen, where disasters might occur, and what they can do to prepare themselves better.

Implement…the projects as appropriate, when funding is available.

Monitor…the availability of funding and grant opportunities,

5.4 Action Plan

The Action Plan presents the mitigation projects identified by the committee to mitigate the occurrence of natural hazards. First, we have described each project and categorized the projects by town. Second, we have the countywide projects. Third, we have prioritized the projects and identified which goal they support.

Part 1 -

Unique Projects Identified by the City of Carbon Hill

Project #1 – Flooding Protection
Project Name: Business and Road Flooding
Project Description: Structural Flood Prevention
Plan for Implementation: Improve drainage of pitch channel, place flood walls, increase culvert size, increase creek flow.
Lead Agency: City of Carbon Hill Public Works, Corps of Engineers
Local Priority: High
Total Cost: Undetermined
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: Flooding
Status: Waiting on funding
Expected Timeframes for completion: 2025
Future Actions: Will apply when funds are available

Project #2 Storm Shelter
Project Description: Adequate Storm Shelter
Plan for Implementation:
Lead Agency: City Hall
Local Priority: Medium
Total Cost: Undetermined
Funding Description: Match Fund Grants, City, County
Hazards Mitigated: Severe Storms, High Winds
Status: Waiting on additional funds to come available
Expected Timeframe for completion: 2025
Future Actions: Will apply when funds are available

Unique Projects identified by the City of Cordova

Project#1--Emergency Storm Shelter
Project Name: Storm Shelters Placement
Project Description: Community Storm Shelters
Plan for Implementation: Build Community Storm Shelters with backup power. Due to the annual recurrence of Tornados in our area and the poor structural and building quality of the structures in our city, our citizens are at risk should a tornado or high winds hit our area. We have several mobile homes, modular homes, government housing, and older low quality homes due to the lack of building codes in their time to provide security from storms. Our plan is to construct 4 Emergency Storm Shelters around our city in strategically located areas to best suit the community.
Lead Agency: City Hall and City Engineer
Local Priority: High
Total Cost: undetermined
Funding Description: Grant fund
Hazard Mitigated: Decreased loss of Life
Status: Due to April 2011 Cordova has received funding for two community shelter but more are needed due to size of the city.
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Project #2—Code Updates
Project Name: City Code Enhancements
Project Description: Adopt and update codes and regulations
Plan for Implementation: Establish a comprehensive plan that includes the adoption or updating of zoning regulations, subdivision regulations, floodplain management regulations, storm water management regulations, building-related codes, fire prevention codes, wetlands protection regulations, water quality regulations, stream-dumping regulations, and the preservation of open space as preventative measures that protect existing and future buildings, infrastructure, and critical facilities.
Lead Agency: City Hall, City Engineer, and Public Works
Local Priority: Medium
Total Cost: undetermined
Funding Description: Grant funds
Hazard Mitigated: All Hazards
Status: Still a priority but funding has not been available.
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Project #3--Local Emergency Notification Siren
Project Name: Emergency Siren
Project Description: Purchase Emergency/Tornado sirens
Plan of Implementation: Purchase Emergency Sirens and distribute around the city in strategic locations for early notification and warning of Tornados and / man-made disasters i.e. derailments, chemical spills, etc. Our city has two high traffic railways spanning several miles of tracks and

several miles of interstate within our city and protection area. When activated, an audible alarm would sound for these disastrous events to assist in notifying the public.
Lead Agency: E911, Walker County EMA
Local Priority: High
Total Cost: undetermined
Funding Description: Grant Funds
Hazard Mitigated: Early Public Warning Systems to notify the citizens
Status: City was able to purchase one siren after April 2011 but more are needed.
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Project #4—Flood Protection
Project Name: Municipal/residential Flooding
Project Description: Flood Mitigation
Plan of Implementation: Protect property by relocating the structures out of flood zones, acquire and clear flood prone property, elevate structures above flood levels as appropriate, place barriers (floodwalls and sewer backup valves) in strategic areas, and retrofit structures for protection.
Lead Agency: Mayor, Walker County EMA, and Corps of Engineers
Local Priority: Medium
Total Cost: undetermined
Funding Description: Grant Funds
Hazard Mitigated: Flooding
Status: Still a priority but funding has not been available.
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Project #5—Flood Protection
Project Name: Municipal/residential Flooding
Project Description: Structural Flood Protection
Plan of Implementation: Improve infrastructure such as wind retrofits, drainage improvements, reservoirs and retention or detention basins which store excess water, levees and floodwalls which place barriers between the sources of flooding and vulnerable properties, modifications to channeling including culverts and bridges, and improve channel flow by keeping streams, ditches, and storage basins clear.
Lead Agency: Mayor, Walker County EMA, and Corps of Engineers
Local Priority: Medium
Total Cost: undetermined
Funding Description: Grant Funds
Hazard Mitigated: Flooding
Status: Still a priority but funding has not been available.
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Project #6--Emergency Call System
Project Name: Mass Notification Systems
Project Description: Telephone and Cellular Phone Notification system

Plan of Implementation: Cordova needs a mass notification system for weather emergencies, hazardous material issues, and other issues relating to the public safety. This system will go out through phone land lines and cellular phone services.
Lead Agency: E911, Walker County EMA
Local Priority: High
Total Cost: Estimated $25000
Funding Description: Grant Funds
Hazard Mitigated: Early public warning system
Status: Will apply when funding is available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Project #7--Emergency Generators
Project Name: Emergency Power
Description: Power for sewer plant, water tank lift stations, and temporary command locations
Plan of Implementation: In the event of a lengthy power outage, generators will be needed to ensure the sewer plant and water supply lift stations are able to continue to operate. If pumps are down for long periods of time it could pose serious health issues. The water tanks must be filled to provide adequate water. And mobile generators will be able to provide power to other needed areas of the city to include temporary incident command locations.
Lead Agency: Water and Gas, City Hall, and Risk Manager
Local Priority: High
Total Cost: Undetermined
Funding Description: Grant Funds
Hazard Mitigated: Power Outage – all Hazards
Status: Waiting on funding
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Project #8--Communications
Project Name: Radio Antenna Tower
Project Description: Provide Backup Radio/Antenna Emergency Services and Public Works
Plan of Implementation: In the event our only radio communication is destroyed by a natural or man-made disaster. It is a priority to reestablish communications thru an alternate means immediately. A back up radio/antennae will be purchased and installed that will serve our community.
Lead Agency: Police/Fire Department and City Engineer
Local Priority: High
Total Cost: $55,000
Funding Description: Grant Funds
Hazard Mitigated: All Hazards
Status: Waiting on funds to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Project #9--Communication Devices

Project Name: Radios
Description: Hand Held Radios for each member and a portable for each vehicle.
Plan of Implementation: Purchase hand held radios and/or Southern Linc's for communications.
Lead Agency: City Hall
Local Priority: High
Total Cost: $50,000
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: All Hazards
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Project #10--Road Flooding/Storm Drains/Erosion
Project Name: Storm Drains
Project Description: Improve storm drainage in various areas that are known to flood and to prevent erosion.
Lead Agency: Water and Gas Department
Priority: High
Total Cost: unknown
Funding Description: City**,** State, County Funds, Grants
Hazards Mitigated: Flooding
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Project #11—Emergency Lighting
Project Name: Emergency Lighting
Project Description: Mobile light plants that produce their own power, has a tall mast with a minimum of 4 flood lights that are adjustable.
Plan of Implementation: Portable Light Plants will be purchased and used in times of prolonged power outages to provide light to a large scale area.
Lead Agency: City Engineer and City Hall
Priority: High
Total Cost: unknown
Funding Description: City, State, County Funds, Grants
Hazard Mitigation: Provide adequate lighting during power outages or to light up large scenes
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Unique Projects identified by the City of Dora

Dora Mitigation Project #1 – Emergency Storm Shelter

Project Name: Storm Shelters
Project Description: Emergency Sheltering from a storm

Plan Implementation: Due to the annual recurrence of Tornados in our area and the poor structural and building quality of the structures in our City our citizens are at risk if several devastation should a tornado or high winds hit by our area. The majority of our houses are either mobile home, government housing or low quality due to lack of building code enforcement and lack of codes ensuring a sturdier structure to provide security from storms. Our plan is to construct 4 Emergency Storm Shelters around our City in strategically located areas, these are at the Golf Course, TS Boyd, Burnwell and Horse Creek areas.
Lead Agency: City of Dora Mayor's Office
Local Priority: High
Total Cost: unknown
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: Decreased loss of Life
Status: Waiting on funds to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Dora Mitigation Project #2--Local Emergency Notification Siren
Project Name: Emergency Siren
Project Description - Purchase Emergency/Tornado sirens
Plan: Purchase 4 Emergency Sirens and distribute around the city in various locations for early notification and warning of Tornado or the more pressing disasters of rail car emergencies due to derailment. Our city has two high traffic railways spanning more than 5 miles of tracks thru our city and protection area. Our plan is to purchase emergency sirens that will double as a Tornado early warning system or in the event of a derailment of Chlorine or other caustic chemicals from the railway citizens would receive an audible alarm and know to either evacuate or shelter in place.
Lead Agency: City of Dora Mayor's Office and Walker County EMA
Local Priority: High
Total Cost: $70,000
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: All Hazards
Status: Waiting on funds to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Dora Mitigation Project #3—Emergency Call System
Project Name - Mass Notification Systems
Project Description – Dora needs a mass notification system for weather emergencies, hazardous material issues, and other issues relating to the public safety.
Lead Agency: City of Dora E911
Local Priority: High
Total Cost: $15000
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: All hazards

Status: Waiting on funds to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Dora Mitigation Project #4--Emergency Power-Civic Center
Project Name -Emergency Power
Description-Power for Civic Center/relief
Plan: In the event of a disaster Tornado, Rail Car Accident, Water Supply, Wild Fire, Hurricane, Natural Gas, Sinkhole or other natural or manmade emergency the Dora Civic Center will serve as a Relief Station for the area. This structure will need emergency backup generator to maintain its operations in the case of a power failure. A permanently installed natural gas generator will serve the needs of this building and provide that backup to the existing public electrical service.
Lead Agency: City of Dora Public Works
Local Priority: High
Total Cost: Undetermined
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: All Hazards
Status: Waiting on funds to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Dora Migration Project #5 Communication
Project Name: Radio Antenna Tower
Description: Provide Backup Radio/Antenna support for Police and Fire radios at Fire Station
Plan: in the event our only radio communication located on top of the water tower is destroyed by a natural disaster or man made malfunction it is a priority to reestablish credible communications thru an alternate means immediately. A back up radio/antennae can be installed at the Fire Station that will serve as a backup to the current radio/antennae and console located in the police dept and antennae on top of the water tank.
Plan for Implementation: Purchase antennae, radio and install at Fire Station
Lead Agency: City of Dora Public Works
Local Priority: High
Total Cost: $50,000
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: All Hazards
Status: Waiting on funds to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Dora Mitigation Project #6- Communication
Project Name –Radios
Lead Agency: City of Dora Public Safety
Total Cost: $50,000

Priority - High
Description --Hand Held Radios for each member and a portable for each vehicle.
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: All Hazards
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Dora Mitigation Project #7 Emergency Weather Radios
Project Name –Weather Alert Radios
Lead Agency: City Hall
Description – Early warning radios for Dora citizens
Funding Description: City, State, County Funds, Grants
Total Cost: $2000
Priority – High
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Dora Mitigation Project #8 Road Flooding/Storm Drains
Project Name –Storm Drains
Description –Improve storm drainage in various areas that are known to flood.
Lead Agency: Water Works Department
Total Cost: unknown
Priority – High
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: Flooding
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Dora Mitigation Project #9--Emergency Command/Operations Vehicle
Project Name - Emergency Command/Operations Vehicle
Project Description: Emergency Command Vehicle
Plan for Implementation: The occurrence and probability of natural and man made disasters are regularly occurring every day in our city. The ability to command and control these incidents without a mobile resource to maintain mapping, resource listings or communications leaves our citizens at risk of not being able to handle an emergency operations task effectively. Our goal is to have the resources available at any moment and on every disaster whether big or small so that even an average emergency doesn't turn into a large scale disaster. The Plan is to purchase a Command Vehicle that will be capable to maintaining the resources in a secure location to set up incident command at any location, such as at railroad emergency, tornado or natural gas leak. This will mitigate the issue of having no available resource to command a disaster
Lead Agency: City Hall
Local Priority: High

Total Cost:$100,000
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: All Hazards
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Dora Mitigation Project #10— Shelter Supplies
Project Name –Sheltering Preparations
Description –Making sure supplies and equipment needed are available to provide food, cots, blankets, water, basic medical supplies, temporary housing, hygiene, etc., for post even displaced individuals.
Lead Agency: Department of Human Resources and Volunteer Agencies Active in Disasters (VOAD)
Total Cost: $7000
Priority – High
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: Tornado
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Dora Mitigation Project #11--City Code Enhancements
Project Name –City Code Enhancements
Description –Adopt and update building, fire safety codes. (NFPA) and regulations
Lead Agency: City Building Inspector and Engineer Department
Total Cost: unknown
Priority – low
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: All Hazards
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Unique Projects identified by the Town of Eldridge

Eldridge Mitigation Project #1 – Power Outage
Project Name: 3 phase Generators with natural gas
Project Description: Purchase portable generators for water tanks and safe places
Plan for Implementation:
Lead Agency: Town Clerk
Local Priority: Medium
Total Cost - $6000.00
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: All Hazards
Status: Waiting on funding to come available

Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Eldridge Mitigation Project #2 – Power Outage
Project Name: Generator Light Towers
Project Description: To assist with storm damage in the event.
Plan for Implementation:
Lead Agency: Town Clerk
Local Priority: Medium
Total Cost: undetermined
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: All Hazards
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Eldridge Mitigation Project #3 - Communication
Project Name: Communications
Project Description: To purchase hand held radios & pagers with back up batteries
Plan for Implementation:
Lead Agency: Town Clerk
Local Priority: Medium
Total Cost: $15,000.00
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: All Hazards
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Eldridge Mitigation Project #4 - Tools
Project Name: Chainsaw
Project Description: To provide man power and equipment to clear roadways after a event.
Plan for Implementation:
Lead Agency: City of Carbon Hill Public Works and VOAD
Local Priority: Low
Total Cost – unknown
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: All hazards
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Unique Projects Identified by The City of Jasper

Project Name: Public Storm Shelter
Project Description:
Construct a public 60 Person Occupancy FEMA Rated Storm Shelter to accommodate the citizens of Jasper. This shelter will be located in the Gay Reed Cemetery area of West Jasper (see attached map). Majority of the individuals residing in this area fall into the low or moderate income bracket, leaving them unable to secure shelter for themselves.

According to NOAA's National Climatic Data Center, Alabama has an average number of 44 tornadoes per year (averaging period 1991-2010). Walker County historical area-adjusted tornado activity is above Alabama state average. It is 4.5 times above overall U.S. average. Jasper-area historical tornado activity is above Alabama state average. It is 291% greater than the overall U.S. average (http://www.city-data.com/county/Walker_County-AL.html#ixzz3LK703rNm). The following are examples of two devastating storms that hit the Jasper area:

- On 11/17/1957, a category F4 (max. wind speeds 207-260 mph) tornado 6.2 miles away from the Jasper city center killed 4 people and injured 15 people and caused between $5000 and $50,000 in damages.
- On 4/8/1998, a category F5 (max. wind speeds 261-318 mph) tornado 29.5 miles away from the city center killed 32 people and injured 259 people and caused $200 million in damages.

Plan for Implementation:
To obtain funds for the construction of a 60 Person Occupancy FEMA Rated Storm Shelter (N.P.C.A. certified manufacturing facility); solid concrete design with steel rebar reinforced high strength concrete to meet FEMA 361 & ICC 500 A-3 Occupancy Standards; Large Missile Impact rated (15lbs, 2x4 at 100mph) per ICC 500; bulletproof (30.06 caliber projectile from 15 feet per UL-752); 2-hour fire rating per UBC; virtually waterproof and maintenance free with internal seals.

The shelter proposed is as follows:
A complete shelter will consist of one (1) concrete module containing two ADA compliant single occupancy restroom areas; overall shelter dimension – 13'8'' WOD x 36' LOD x 8' HID (nominal); estimated weight - 95,000 lbs. per module; exterior finish – textured paint over steel formed & smoothed concrete; low slope (4 direction) concrete roof panel with secondary Duro-Last rubber membrane seal; Seismic rating – Category D.
Conduit / Plumbing Entrances:
Via floor block-out for plumbing and electrical service.
Doors, Windows & Accessories:

- two (2) 3' x 7' exterior cast-in galvanized and painted steel door and frame – FEMA 361 rated with NRP non-corrosive hinges, panic bar three point latching system (as required and tested by FEMA 361), aluminum threshold & sweep, weather stripping, hydraulic closer with hold open feature, drip cap;
- two (2) 3' x 7' interior galvanized and painted steel doors and frame with hardware for restroom areas.

Electrical System & Controls:

- Primary Load Center - 120/240 VAC single phase, 60 Hz operation, 100 amp main breaker;
- required breakers, surface mount PVC conduit, connectors, clamps, wiring, etc.;

- required wall mounted 20 amp duplex convenience receptacles;
- one (1) 2kVA emergency electric power supply system with battery packs.

Heating, Cooling & Ventilation:

- as required appropriately sized fixed ventilation openings with screens and FEMA 361 rated exterior protective hoods.

Interior Finish & Amenities:

- paint over cement board trim at all wall/ceiling/floor joints;
- paint over steel formed & smoothed concrete walls & ceilings;
- floor covering to be 12''x12'' commercial grade vinyl tile with 4'' rubber molded cove base.
- paint over finished gypsum board on wood stud restroom partition walls.

Lighting:

- required 4' dual bulb fluorescent light fixtures with switch and lenses;
- two (2) shelter interior emergency/exit lights (2 head with batteries & charger) at shelter egress/ingress points;
- two (2) 100 watt photocell controlled exterior lights.

Miscellaneous:

- required foundation weld plates.

Plumbing Fixtures & Restroom Facilities:

- two (2) ADA compliant restrooms each with ADA floor mounted rear discharge tank-style toilet with plastic seat, ADA wall mounted single lavatory and faucet, required ADA grab bars, tank-less electric water heating unit, wall mounted mirror with frame, toilet paper dispenser, soap dispenser and paper towel dispenser;
- one (1) 2'' floor drain in each restroom area.

Safety Accessories:

- two (2) 10 person first aid kits;
- one (1) emergency weather alert crank powered radio;
- two (2) safety accessory wall mounted metal shelves.

Signage:

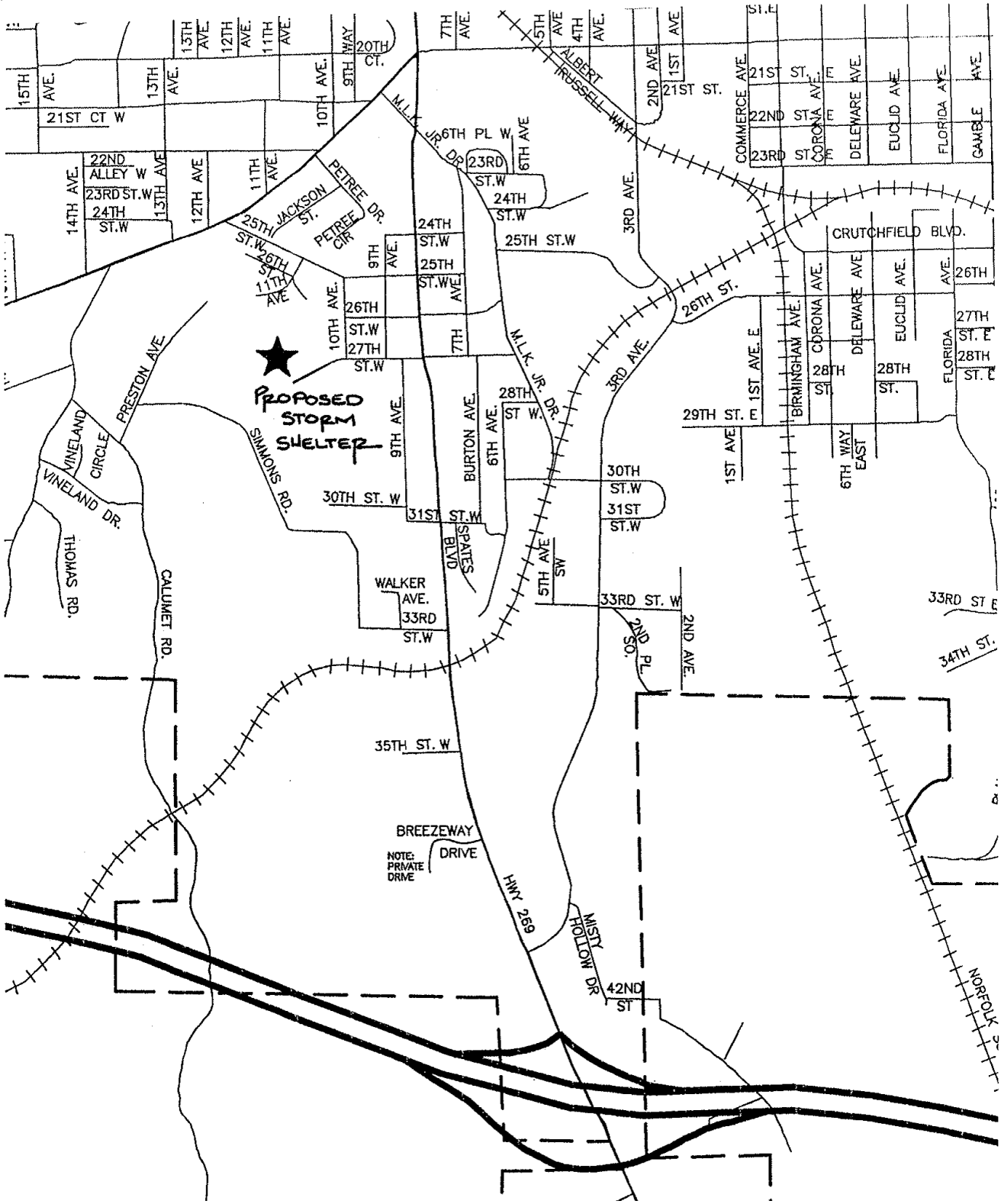
- as required interior and exterior identifying signage per ICC 500.

(Estimated cost $100,000)

Property for the location of the Storm Shelter will be provided in-kind by the City of Jasper, in addition to site preparation, paving and utilities. Furthermore, the City will provide any necessary labor required for construction assistance and maintenance. (Estimated cost $50, 000)

Lead Agency: City of Jasper Public Works
Local Priority: High
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: All Hazards
Total Cost: $150,000
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Vicinity Map



Jasper Mitigation Project – Road Flooding

Project Name: Doctor's Branch - Road Flooding

Project Description: 18th and 19th Street from Highland Avenue to Corona Avenue (see attached map). Doctor's Branch is a tributary running south and west, one of the two main tributaries running through the City of Jasper feeding into Town Creek. There is periodic flooding on Doctor's Branch from Corona Avenue east and north to Highland Avenue. During heavy rainfall events, numerous residences periodically experience flooding (backed-up water), as well as streets being flooded.

Flooding in this area directly impacts approximately 75 residences and businesses, and 225 individuals. However, the indirect impact is substantial. These streets directly access Walker High School (840 students, 200 staff), Bevill State Community College – Jasper (1,500 students), Gamble Park and the downtown Jasper business district. Approximately 11,500 automobiles travel on 19th Street per day, 2,000 on 18th Street per day. Therefore, flooding in this area has an indirect impact on 10,000+ individuals.

The existing WPA Culverts at Corona Avenue, Euclid Avenue and 18th Street are presently restricting flow during heavy rainfall events. The last 1,500 feet of Doctor's Branch empties into a 10 x 10' Box Culvert installed around 1980. The replacing of these structures along with work to Doctor's Branch will eliminate this flooding problem.

Plan for Implementation:

To obtain funds to replace the existing WPA Culverts at Corona Avenue, Euclid Avenue and 18th Street that currently restrict flow during heavy rainfall events, and the 10 x 10' Box Culvert in which the last 1,500 feet of Doctor's Branch empties. Additionally, to conduct work along Doctor's Branch to open and widen the floodway to reduce the speed and volume of run-off.

In the section of Doctor's Branch that runs through Gamble Park, the City of Jasper, at its expense completed a Stream Restoration Project in 2010. This stream restoration opened and widened the floodway and created meanders that have substantially reduced the speed and volume of run-off through the proposed project area. The construction of the proposed project will complement the Stream Restoration Project, to alleviate flooding from Corona Avenue to 18th Street.

This proposed Doctor's Branch drainage rehabilitation and culvert replacement project will entail the following:

ITEM	QTY	UNIT	DESCRIPTION	UNIT PRICE	TOTAL PRICE
1	1	LS	Mobilization	$30,000.00	$30,000.00
2	95	LF	Remove Existing Fence	$5.00	$475.00
3	100	LF	Remove Existing Concrete Curbs & Gutters	$10.00	$1,000.00
4	800	SY	Remove Existing Asphalt Pavement	$12.00	$9,600.00
5	10	SY	Remove Existing Concrete Pavement	$12.00	$120.00
6	1	EA	Remove Existing Light Pole	$1,000.00	$1,000.00
7	100	LF	Remove Existing Culvert & Headwall/Wingwall	$100.00	$10,000.00
8	1	LS	Relocate Air Pump	$1,000.00	$1,000.00

9	1	LS	Clearing/Topsoil Stripping	$2,500.00	$2,500.00
10	1	LS	Unclassified Excavation	$15.00	$15.00
11	500	CY	Borrow Material From Offsite	$25.00	$12,500.00
12	20	CY	Topsoil from Stock Piles	$9.00	$180.00
13	20	CY	Topsoil From Off Site	$15.00	$300.00
14	100	LF	Chain Link Fence	$30.00	$3,000.00
15	100	LF	Concrete Curbs & Gutters	$20.00	$2,000.00
16	1	LS	Paint Striping In Parking Area	$1,200.00	$1,200.00
17	800	SY	Asphalt Pavement in Parking Lot	$30.00	$24,000.00
18	10	SY	Concrete Pavement	$60.00	$600.00
19	1	EA	Light Pole Relocation	$5,000.00	$5,000.00
20	1	EA	Light Pole Foundation	$5,000.00	$5,000.00
21	140	LF	Pre-Cast Box Culvert 5'HX10'W	$650.00	$91,000.00
22	4	EA	Culvert Wing Walls	$1,500.00	$6,000.00
23	1	LS	Erosion Control	$10,000.00	$10,000.00
24	1	LS	Grassing/Site Restoration	$10,000.00	$10,000.00
				BASE BID TOTAL	**$226,490.00**

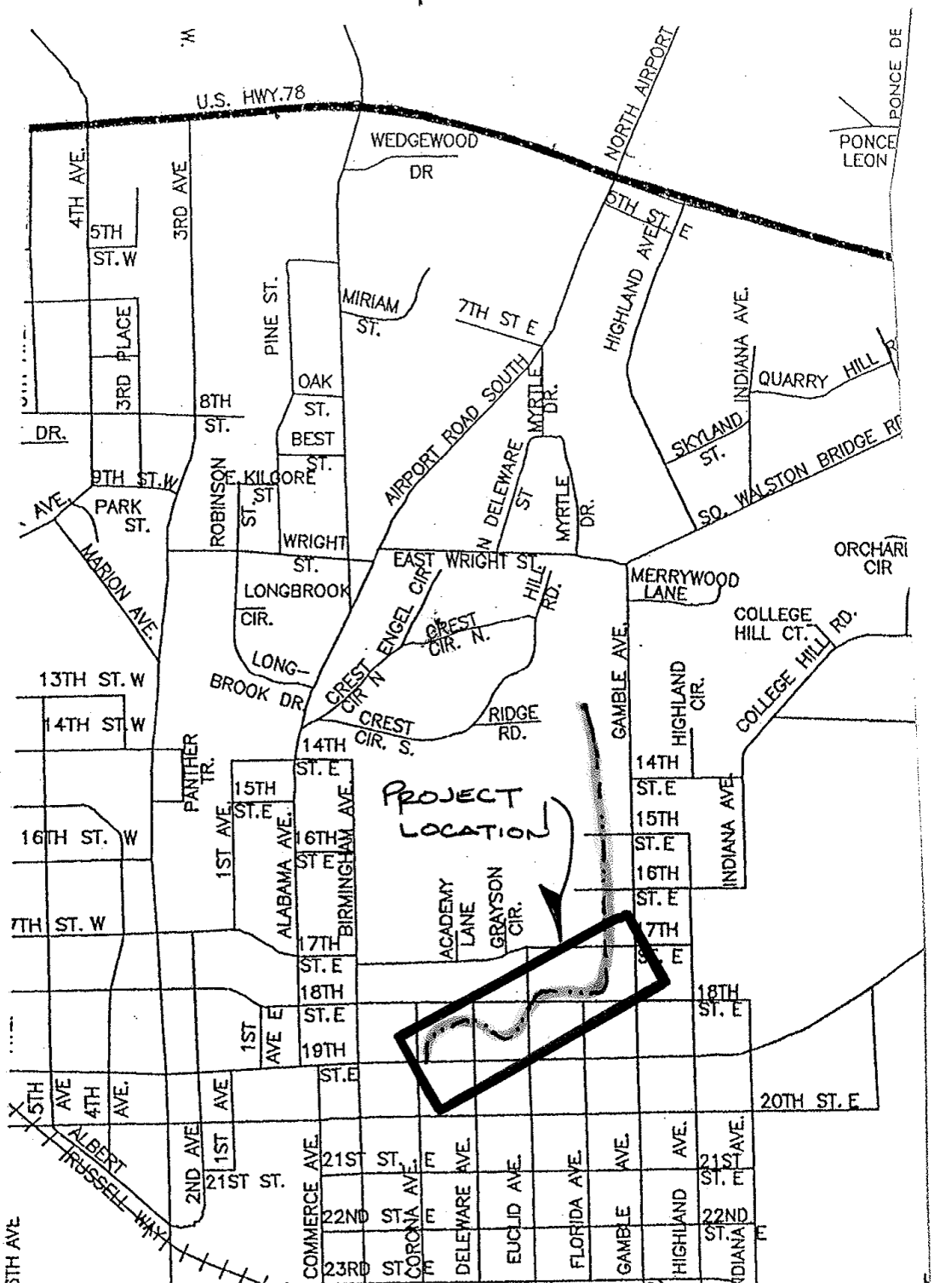
WPA Culvert Replacement

ITEM	QTY	UNIT	DESCRIPTION	UNIT PRICE	TOTAL PRICE
25	2	LS	Remove Existing Grate Over Culvert	$10,000.00	$20,000.00
26	100	LF	Remove Existing Fence	$5.00	$500.00
27	140	LF	Remove Existing Bridge at Corona, Euclid 18th St	$10.00	$14,000.00
28	275	SY	Remove Existing Asphalt Pavement	$12.00	$3,300.00
29	15	SY	Remove Existing Concrete Sidewalk	$12.00	$180.00
30	1	AC	Clearing/Topsoil Stripping	$5,000.00	$5,000.00
31	150	CY	Unclassified Excavation	$15.00	$2,250.00
32	30	CY	Borrow Material From Offsite	$25.00	$750.00
33	20	CY	Topsoil from Stock Piles	$9.00	$180.00
34	100	LF	Chain Link Fence	$30.00	$3,000.00
35	19	SY	Concrete Sidewalk	$45.00	$855.00
36	1	LS	Paint Striping	$3,000.00	$3,000.00
37	275	SY	Asphalt Pavement	$30.00	$8,250.00
38	140	LF	Replace Bridge with 5'HX10'W Pre-Cast Culvert	$650.00	$91,000.00
39	12	EA	Culvert Wing Walls	$1,500.00	$18,000.00
40	2	EA	12'X12' Conc.Lid W/Grate Openings for Surface Drainage	$20,000.00	$40,000.00
41	1	LS	Erosion Control	$15,000.00	$15,000.00
42	1	LS	Grassing/Site Restoration	$15,000.00	$15,000.00
				ALTERNATE BID TOTAL	**$240,565.00**
				CONSTRUCTION TOTAL	**$466,755.00**
				ENGINEERING DESIGN	**$32,673.00**
				GEOTECHNICAL	**$15,000.00**

CONSTRUCTION ENGINEERING/INSPECTION	**$23,000.00**
PROJECT TOTAL	**$537,428.00**

Lead Agency: City of Jasper Public Works
Local Priority: High
Total Cost: $600,000
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

DOCTOR'S BRANCH
VICINITY MAP



Unique Projects Identified by the Town of Kansas

Kansas Mitigation Project #1- Early Warning Systems

Project Name: Early Warning-Siren
Project Description: Additional Early Warning Sirens for Public
Plan for Implementation: Obtain funding for additional early warning sirens
Lead Agency: Local EMA and Town of Kansas Mayor and Council
Local Priority: High
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: Tornado
Total Cost: $25,000.00
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Kansas Mitigation Project #2- Power Outage

Project Name: Emergency Power
Project Description: Power for Town Hall and Water Tank
Plan for Implementation: Obtain funding for emergency power
Lead Agency: Town of Kansas Mayor and Council
Local priority: Medium
Total Cost: $5,000.00
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: All Hazards
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Kansas Mitigation Project #3- Early Warning Systems
Project Name: Weather Alert Radios
Project Description: Early Warning Radios for Town residents
Plan for Implementation: Weather Alert Radios for each household
Local Priority: High
Lead Agency: Town of Kansas Mayor and Council
Total Cost: $4,000.00
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: All Hazards
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025

Future Actions: Will apply when funds are available

Kansas Mitigation Project #4- Communications

Project Name: Radios
Project Description: Handheld radios for the emergency response team
Project for Implementation: To purchase radios for walkie talkies for communication
Lead Agency: Town of Kansas Mayor and Council
Local Priority: Medium
Total Cost: $5,000.00
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: All hazards
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Kansas Mitigation Project #5- Power Outage

Project Name: Free Standing Battery Lights
Project Description: Free standing lights for use in designated areas
Project for Implementation: To purchase free stand lights for use in power outage
Lead Agency: Town of Kansas Mayor and Council
Local Priority: Low
Total Cost: $11,000.00
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: All hazards
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Unique Projects identified by the Town of Nauvoo

Nauvoo Mitigation Project #1 – Road Flooding

Project Name: Replace Street Storm Drains & Culverts
Project Description: Repair storm drainage in street areas that flood during storms & rainstorms. Hwy 11 7 2nd Street, Hwy 11 & 3rd Street, 2nd Street & McDaniel Ave, 3rd Street & McDaniel Ave, 2nd Street & 2nd Ave, 2nd Street & 3rd Ave, 2nd Street & 4th Ave, 3rd Street & 2nd Ave, 3rd Street & 3rd Ave, 2 hundred yards north of intersection of 4th Street & 2nd Ave.
Plan for Implementation: Improve the flow of water through the creek channel. Improve drainage ditches. Keep Nauvoo Rd. open for emergency vehicles and daily traffic.
Lead Agency: Town of Nauvoo City Clerk and Public Works

Local Priority: High
Total Cost: $260,000
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: Flooding
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Nauvoo Mitigation Project #2 – Flooding

Project Name: Improve County Road 11 Hwy Bridges / Drainage Prevent Damage During Storm Flooding
Project Description: Improve storm water drainage and damage through the two bridge crossings on County Road 11 South of Nauvoo / Known as Nauvoo-Carbon Hill Rd
Plan for Implementation: Improve the flow of water through the primary Blackwater Creek Bridge channel (Bridge number 1) & the secondary Blackwater Creek Bridge channel (Bridge number 2) known as Dry Creek. Also improve Road drainage ditches leading to the Bridges. This will keep Nauvoo Road / County Road 11 open for emergency vehicles and daily traffic in a flood situation.
Lead Agency: City Clerk and Public Works
Local Priority: High
Total Cost: $200,000
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: Flooding
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Nauvoo Mitigation Project #3 – Warning Siren Notification

Project Name: Town Limits Emergency Notification Siren
Project Description: Install a Second Emergency Tornado Siren
Plan for Implementation: Install a second emergency siren for early notification warning of tornados or other disaster such as Norfolk Southern railway emergencies due to derailment. Nauvoo has the Norfolk Southern Railroad whose track span the entire western flank of the Nauvoo Town Limits and crosses the Nauvoo Volunteer Fire District. Our plan is to install a second emergency siren that will cover as a Tornado
Lead Agency: Walker County EMA **/** Town of Nauvoo Volunteer Fire Department
Local Priority: Medium / High
Total Cost: $50,000
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: Tornado
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Nauvoo Mitigation Project #4

Project Name: Flood Prevention & Control on Two Bridges Located on Nauvoo's Fourth Street which is Walker County Road 29, (Starting @ Hwy 5 as Walker County Road 29)
Project Description: Improve Bridge Crossings on Fourth Street Bridges (Walker County Road 29) @ Blackwater Creek Main Channel & Blackwater Secondary Channel
Plan for Implementation: Improve the flow of water through the Blackwater Creek channels. Improve drainage ditches leading to the bridges. Keep Fourth Street (County Road 29 Bridges) open for emergency vehicles and daily traffic.
Lead Agency: Walker County Engineers, Walker County Road & Bridges, Town of Nauvoo Municipal Goverment
Local Priority: High
Total Cost: Est. $200,000
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: Flooding
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Nauvoo Mitigation Project # 5 – Emergency Generator Power
Project Name: - Emergency Power to the Nauvoo Town Hall & NVFD
Project Description: Install Backup Generator Power for the Nauvoo Town Hall & Nauvoo Volunteer Fire Department
Plan for Implementation: In the event of a Tornado disaster, Train Railway Accident, Water Supply Interruption, Drought Related Wild Fire, Hurricane Collateral Damage, or other Natural or Manmade emergency the Nauvoo Town Hall & Volunteer Fire Department will serve as a Cooling/Warming/Rest Station for the Nauvoo Area Population. These structures will need an emergency backup generator to maintain Water and Fire operations in the case of an extended power interruption. A permanently installed natural gas generator will serve the needs of these buildings and provide that backup to the existing public utility electrical service. Because of the close proximity of the Town Hall and NVFD one large unit can power both facilities; saving installation funds.
Lead Agency: Town Hall and Nauvoo Volunteer Fire Department
Local Priority: Medium / High
Total Cost: Est. $10,500
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: All hazards
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Nauvoo Mitigation Project # 6 - Emergency Communication Devices

Project Name: –Emergency Radios for Nauvoo Elected Officials & Employees
Project Description: --Hand Held Radios for Mayor, Council, & Town of Nauvoo Employees
Plan for Implementation: Purchase hand held radios or walkie-talkies for emergency communications.
Lead Agency: Town Hall
Local Priority: Medium / High
Total Cost: $8000.00
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: All hazards
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Nauvoo Mitigation Project # 7 Citizen NOAA Emergency Weather Radios
Project Name –NOAA Weather Alert Radios
Project Description – Emergency warning radios for Nauvoo citizens
Plan for Implementation:
Lead Agency: Town Hall
Local Priority: Medium / High
Total Cost: $10,000
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: All hazards
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Unique Projects identified by the Town of Oakman

Oakman Mitigation Project #1 – Flooding

Project Name: Storm drains
Project Description: Improve storm drainage
Plan for Implementation: Drainage study followed by a determination of cost. A benefit to cost ratio will determine viability of this plan.
Lead Agency: County Commission, Corps of Engineers
Local Priority: High
Total Cost: undetermined
Funding Description: county and state funds
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: Flooding
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025

Future Actions: Will apply when funds are available

Unique Projects identified by the Town of Sipsey

Sipsey Mitigation Project #1 – Power Outage

Project Name: Portable Generators
Project Description: Purchase portable generators for town hall and local shelters.
Plan for Implementation: Obtain funding to purchase 3 portable generators
Lead Agency: Town of Sipsey Mayor and council
Local Priority: Medium
Total Cost: $6,000
Funding Description: grants and local funding
Hazards Mitigated: All hazards
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Sipsey Mitigation Project #2 – Hail and High Winds

Project Name: Wind proof and Plexiglas windows
Project Description: To ensure the city hall and main shelters have wind proof and Plexiglas windows to protect against hail and wind damage.
Plan for Implementation: Obtain funding to replace windows.
Lead Agency: Town of Sipsey Mayor and council
Local Priority: Medium
Total Cost: $6,000
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: All hazards
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Sipsey Mitigation Project #3 – Communication Signal

Project Name: Radio Antenna Tower
Project Description: Provide antenna support for police radios
Plan for Implementation: Place a metal tower at back of police station to provide better communication ability for police radios.
Lead Agency: Sipsey Police Department
Local Priority: Medium
Total Cost: $15,000
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: All hazards
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025

Future Actions: Will apply when funds are available

Sipsey Mitigation Project #4 – Communication Devices

Project Name: Radios
Project Description: Hand held radios for each member of the emergency tactical unit
Plan for Implementation: Purchase hand held radios or walkie talkies for communications.
Lead Agency: Town of Sipsey Public Safety
Local Priority: Medium
Total Cost: $4,500
Funding Description: City, State, County Funds, Grants
Hazards Mitigated: All hazards
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available
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Part 2 -

Countywide Adopted Mitigation Projects

Each local disaster team agreed that the following mitigation projects would provide valuable protection for the citizens of Walker County. These projects are low-cost and the number one priority of the mitigation plan. Each municipality will participate.

Countywide Mitigation Project # 1 - Safe Room Project

Project Name: Educational Project – Funding for Safe Rooms
Project Description: Residential safe rooms
Plan for Implementation: Each municipality and the county EMA will have available information for residents who are interested in securing funding to build their own safe room within their home. The “Safe Room and Community Shelters Funding and Initiatives” program through FEMA provides information to individuals and governments about obtaining money to build the safe rooms and FEMA also provides guidance on how to build a safe room.
Lead Agency: Walker County EMA
Local Priority: High
Total Cost: Minimal
Funding Description: FEMA, EMA and local/state funds
Hazards Mitigated: All hazards
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Countywide Mitigation Project # 2 - Emergency Planning Project

Project Name: Are You Ready? An In-depth Guide to Citizen Preparedness
Project Description: Information to all citizens about individual, family and community preparedness. This guide includes information about evacuating and sheltering in place, which will be an important focus of this project. In English and Spanish.
Plan for Implementation: The Walker County EMA will provide brochures and website links to municipalities for distribution to area residents. Residents may also obtain information from the county courthouse, the American Red Cross, or directly from the EMA office.
Lead Agency: Walker County EMA
Local Priority: High
Total Cost: Minimal
Funding Description: FEMA
Funding Description: Federal, State, Grants
Hazards Mitigated: All hazards
Status: We have set up booths at the County Fair, Be Ready Day, and other events and passed out many preparedness brochures.
Expected Timeframe for Completion: Ongoing
Future Actions: We are planning to give out more in upcoming events.

Countywide Mitigation Project # 3 - Identification of Vulnerable Populations

In reviewing Walker County's emergency operations plan, we found that the plan was deficient. We do not know where the vulnerable populations are in the county. An emergency situation can make someone already vulnerable even more so and that is a weakness that must be addressed. A high priority project is to start a program to identify and locate our vulnerable populations. We are to develop a registration form for people with special needs. The form will be simple and one page which identifies name, street address, telephone numbers, and emergency contacts. It will also identify individuals with pets. Many people are concerned about their pets during times of crisis.

The program will be directed to citizens who are dependent on others for routine care; children under the age of 18 without adult supervision; people who are blind, hearing or mobility impaired; people needing medical care; persons requiring treatments like chemotherapy or dialysis; and people dependent on equipment such as wheelchairs.

A confidential registry will be developed and kept at the emergency management office for emergency use only. Our partners in this project will be the Center for Independent Living and the American Red Cross

Countywide Mitigation Project # 4 – Public Education Project

Project Name: Emergency supplies for evacuations and sheltering in place
Project Description: "Grab And Go: Packing An Emergency Preparedness Kit Is Easy - Essential" and "Your Family Needs An Emergency Supply Kit" – brochures distributed to the public.
Plan for Implementation: Provide information to area residents with brochures and area meetings and activities to ensure residents are aware of emergency procedures in the event of a disaster, including evacuation plans and shelter-in-place instructions. Also provide information pertaining to household emergency kits.
Lead Agency: Walker County EMA
Local Priority: High
Total Cost: minimal
Funding Description: FEMA publications
Hazards Mitigated: All hazards
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Countywide Mitigation Project #5 – Early Warning Systems

Project Name: Weather Alert Radios
Project Description: Early warning radios for county residents.
Plan for Implementation: This project proposes the provision of weather alert radios to all households.
Lead Agency: Local EMA
Local Priority: High
Total Cost: undetermined
Funding Description: Hazard Mitigation Grant Funds
Hazards Mitigated: All hazards
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Countywide Mitigation Project #6 – Outdoor Early Warning Systems

Project Name: Outdoor Sirens
Project Description: Outdoor early warning sirens for county residents
Plan for Implementation: This project proposes the provision of outdoor sirens to all households.
Lead Agency: Local EMA
Local Priority: High
Total Cost: undetermined
Funding Description: Hazard Mitigation Grant Funds
Hazards Mitigated: All hazards

Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Countywide Mitigation Project #7 – Call, Text and Email Notification System

Project Name: Notification System
Project Description: To be able to do a mass notification to all users sign up for county alerts through the system.
Plan for Implementation: This project would use a notification system that all county residents could sign up for and receive any notifications through the local ema. The notifications could range from all hazards that the county faces.
Lead Agency: Local EMA
Local Priority: High
Total Cost: undetermined
Funding Description: State/Federal, County Funds, Grants
Hazards Mitigated: All hazards
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Countywide Mitigation Project #8 – Software for Polygon for Outdoor Sirens

Project Name: Polygon Software for Outdoor Sirens
Project Description: We would like to only notify the part of the county that the threat is capable.
Plan for Implementation: We would only activate the sirens where the threat is capable.
Lead Agency: Local EMA
Local Priority: High
Total Cost: undetermined
Funding Description: State, Federal & County Funds, Grants
Hazards Mitigated: Tornado
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Countywide Mitigation Project #9 – Generator Light Towers

Project Name: Generator Light Towers
Project Description: To make the damaged area safe and use equipment if necessary.
Plan for Implementation: Would use generator part to run equipment and lighting to clean debri off roads to make it safe for first responders in the damaged areas.
Lead Agency: Local EMA
Local Priority: High
Total Cost: undetermined

Funding Description: Federal, State, County Funds, Grants
Hazards Mitigated: All hazards
Status: Waiting on funding to come available
Expected Timeframe for Completion: 2025
Future Actions: Will apply when funds are available

Part 3 –

Prioritization of Projects

RANK	MITIGATION PROJECT	CORRESPONDING GOAL
High	Countywide Mitigation Project #1 - Safe Room Project	Goal 2
High	Countywide Mitigation Project #2 - Emergency Planning Project	Goal 1
High	Countywide Mitigation Project #3 - Identification of Vulnerable Populations	Goal 2
High	Countywide Mitigation Project #4 - Public Education Project	Goal 1
High	Countywide Mitigation Project #5 - Early Warning Systems	Goal 2
High	Countywide Mitigation Project #6 - Outdoor Early Warning Systems	Goal 2
High	Countywide Mitigation Project #7 Call,Text & Email Notifcation System	Goal 2
High	City of Carbon Hill Project #1 - Flooding Protection	Goal 3
Medium	City if Carbon Hill Project #2 - Storm Shelter	Goal 2
High	City of Cordova Project #1 - Storm Shelter	Goal 2
Medium	City of Cordova Project #2 - Code Updates	Goal 3
High	City of Cordova Project #3 - Local Emergency Notification Siren	Goal 2
Medium	City of Cordova Project #4 - Flood Protection	Goal 3
High	City of Cordova Project #5 - Flood Protection	Goal 3
High	City of Cordova Project #6 - Emergency Call System	Goal 2
High	City of Cordova Project #7 - Emergency Generators	Goal 3
High	City of Cordova Project #8 - Communications	Goal 2
High	City of Cordova Project #9 - Communication Devices	Goal 2
High	City of Cordova Project #10 - Road Flooding/Storm Drains/ Erosion	Goal 3
High	City of Cordova Project #11 - Emergency Lighting	Goal 3
High	City of Dora Project #1 - Emergency Storm Shelter	Goal 2
High	City of Dora Project #2 - Local Emergency Notification Siren	Goal 2
High	City of Dora Project #3 - Emergency Call System	Goal 2
High	City of Dora Project #4 - Emergency Power	Goal 2
High	City of Dora Project #5 - Communication	Goal 2
High	City of Dora Project #6 - Communication	Goal 2
High	City of Dora Project #7 - Emergency Weather Radios	Goal 2
High	City of Dora Project #8 - Road Flooding/Storm Drains	Goal 3
High	City of Dora Project #9 - Emergency Operations/Operations Vehicle	Goal 3

High	City of Dora Project #10 - Shelter Supplies	Goal 3
Low	City of Dora Project #11 - City Code Enhancements	Goal 3
Medium	Town of Eldridge Project #1 - Power Outage (Generators)	Goal 3
Medium	Town of Eldridge Project #2 - Power Outage (Generator Light Towers)	Goal 3
Medium	Town of Eldridge Project #3 - Communication	Goal 2
Low	Town of Eldridge Project #4 - Tools	Goal 3
High	City of Jasper Project #1 - Public Storm Shelter	Goal 2
High	City of Jasper Project #2 - Road Flooding	Goal 3
High	Town of Kansas Project #1 - Early Warning Systems	Goal 2
Medium	Town of Kansas Project #2 - Power Outage	Goal 3
High	Town of Kansas Project #3 - Early Warning Systems	Goal 2
Medium	Town of Kansas Project #4 - Communicaitons	Goal 2
Low	Town of Kansas Project #5 - Power Outage	Goal 2
High	Town of Nauvoo Project #1 - Road Flooding	Goal 3
High	Town of Nauvoo Project #2 - Flooding	Goal 3
Medium	Town of Nauvoo Project #3 - Warning Siren Notification	Goal 2
High	Town of Nauvoo Project #4 - Flood Prevention & Control	Goal 3
Medium	Town of Nauvoo Project #5 - Emergency Generator Power	Goal 3
Medium	Town of Nauvoo Project #6 - Emergency Communication Devices	Goal 2
Medium	Town of Nauvoo Project #7 - Citizen NOAA Emergency Weather Radios	Goal 2
High	Town of Oakman Project #1 - Flooding	Goal 3
Medium	Town of Sipsey Project #1 - Power Outage	Goal 3
Medium	Town of Sipsey Project #2 - Hail and High Winds	Goal 3
Medium	Town of Sipsey Project #3 - Communication Signal	Goal 2
Medium	Town of Sipsey Project #4 - Communiation Devices	Goal 2

Multi Hazard Mitigation Plan
6.0 Plan Adoption

The Walker County Commission and the city councils of each municipality adopted this Multi-Hazard Mitigation Plan by passing formal resolutions. The Approval of the Walker County Commission is found in a resolution on pages 2-3. Copies of each town resolution are included *in Appendix D*. The Councils' and Commission's resolutions create the Planning Steering Committee and Public Input Advisory Committee described in Section 7, Plan Implementation and Maintenance. The adoption of the resolution complies with Formal Plan Adoption.

Multi-Hazard Mitigation Plan
7.0 Plan Implementation and Maintenance

Implementation and Maintenance of the Plan is critical to the overall success of Hazard Mitigation Planning. Upon adoption, the plan faces the truest test of its worth – plan implementation.

7.1 Plan Implementation – While this plan recommends several worthwhile and high priority actions, the decision about which project to undertake first will be the first issue that the committee faces. Prioritization and funding will be the key factors in this decision. Thus, pursuing low or no-cost high-priority projects will have the greatest likelihood of being the first steps.

Another important implementation mechanism that is highly effective but low-cost is to incorporate the projects and underlying principles of the Plan into other community plans and mechanisms, such as comprehensive planning, capital improvement budgeting, economic development goals and incentives; and/or regional plans. Mitigation is most successful when it is incorporated into the day-to-day functions and priorities of government and development.

The Hazard Mitigation Plan will be used to coordinate development in the cities and county in accordance with land use plans, zoning ordinances, subdivision regulations, the national flood insurance program (NFIP) to ensure that hazard mitigation planning is incorporated for the health, welfare and safety of our citizens.

The EMA Director is the key link in the city and county coordination of planning, policies and procedures. This multi-jurisdictional approach and coordination working with the planning committee will serve as a check-and-balance to maintain, amend and apply the Plan to the community to protect the health, welfare and safety of all citizens.
The planning committee and elected officials will be responsible for incorporating this plan into governmental operations. This integration is accomplished by a constant, prevailing and energetic effort to network among programs, as well as the communities and constituents. This effort will be achieved through monitoring agendas, attending meetings, sending memos, and promoting safe, sustainable communities.

Funding opportunities will be constantly monitored to ensure implementation of some of the more costly actions is possible. This includes creating and maintaining a base of knowledge on how to meet required cost sharing, partnering, and/or other participation requirements. Then when funding does come available, the committee will be in a position to capitalize upon the opportunity. Funding opportunities that will be monitored include special pre- and post-disaster funds, special district budgeted funds, state or federal ear-marked funds, and grant programs; especially those that can serve or support multi-objective applications.

The original planning committee will become a mitigation coordinating committee upon completion of this Plan. This committee, led by city and county officials, will be responsible for:

►Keeping the concept of mitigation in the forefront of community decision-making by identifying action items of this plan when other community goals, plans and activities overlap, influence, or directly affect community vulnerability to disasters;
►Disseminating hazard mitigation ideas and activities to all participants;
►Pursuing the implementation of the high priority, low/no-cost projects;
►Monitoring cost-share opportunities to fund projects;
►Monitoring the implementation of this Plan;
►Reporting on progress
►Informing and soliciting information from the public.

The Committee will not have any powers over County staff; it will be an advisory body only. Its primary duty is to see the Plan is carried out successfully and to report to city and county officials and the public on the status of Plan implementation and mitigation opportunities. Other duties will include reviewing and promoting mitigation proposals, hearing stakeholder concerns about hazard mitigation, passing the concerns on to the appropriate entities, and posting relevant information on the county website.

7.2 Plan Maintenance – implies an ongoing effort to monitor and evaluate the implementation of the plan, and to update the plan as progress, roadblocks, or changing circumstances are recognized.

This monitoring, evaluating and updating will take place through a semi-annual review by the Walker County EMA Office and the Mitigation Coordinating Committee, an annual review and a 5-year written update to be submitted to the state and FEMA Regional Office, unless disasters or other circumstances mandate different time frames.

When the Committee reconvenes for the review they will coordinate with all of the stakeholders that participated in the planning process – or that have since joined the committee – to update and revise the plan. Public participation will be encouraged through web postings, press releases, newspapers and radio stations. The committee chairman is responsible for the monitoring, evaluating, and updating processes. Evaluation can be achieved by monitoring changes in the degree of vulnerability identified in the plan.

Changes in vulnerability can be identified by noting:

• Lessened vulnerability as a result of implementing mitigation projects;
• Increased vulnerability as a result of failed or ineffective mitigation actions; and/or,
• Increased vulnerability as a result of new development (and/or annexation).

The Plan will be updated via written changes and submissions, as the Committee deems appropriate and necessary, and as approved by the City Councils and County Commissioners with input from local stakeholders including business, industry, non-profit organizations and the public.

Appendix A –

Meeting Agendas, Attendees, Notes

February 5, 2014 Initial Planning Meeting

In Attendance: Jill Farris, Walker County Commission, Regina Myers, Walker County EMA, Jackey Cole, Town of Kansas, Pam Fikes, American Red Cross, Billy Luster, Walker County Commission Chairman, Dan Wright, Walker County Commission, Tommy Davis, Walker County EMA, Charles Sandford, EMA Interm. This kickoff meeting was not open to the public.

Agenda:

• Introductions – Tommy Davis, EMA

• What FEMA Requires – Tommy Davis - Handouts

• Planning Team Tasks and Responsibilities – Tommy Davis - Handouts

• Proposed Mitigation Goals – Tommy Davis

• Assign tasks for next meeting – Tommy Davis - hand-out

• Wrap-up, comments, questions, discussion – Tommy Davis

Notes:

Assignments

Jurisdictional Information Needed:

Local teams should complete these tasks before the next county meeting. You will be asked to fax this information prior to the meeting so that it can be compiled. Date of next meeting not yet determined.

Jurisdictional representatives should gather information from a variety of sources including local business leaders, local government agencies, non-profit organizations and concerned citizens in order to provide complete information. Representatives should also review existing plans, ordinances and codes in their communities and should include this information in the local plan.

Task 1. The plan will include a county-wide description containing information about topography, climate, demographics, economy, rivers and watersheds, maps. If you have historical or other data that describes your town, please provide it.

The plan will also describe the resources each area has to offer – such as police, fire, emergency medical, accounting capabilities, engineering, finances, equipment, etc. If you have not already provided this, please begin to gather.

Task 2. Each area should gather/consider/provide zoning ordinance information regarding wastewater, capital improvements, flood control, subdivisions, land use and transportation plans, etc, as this will be included in the jurisdictional descriptions.

Task 3. Consider this comprehensive list of natural and man-made hazards –

Natural Disasters
Dam Failure
Drought
Earthquake
Extreme Cold
Extreme Heat
Flood
Hail
High Wind
Hurricane
Landslides
Sinkhole/Expansive Soils
Tornado
Wildfire
Winter Storm

- and determine which hazards are probable to your area. Each area is equally susceptible to many of these - storms, winds, and tornadoes - but some areas might be more susceptible to wildfires, dam failure or chemical spills. We would like for the jurisdictions to focus on the hazards that might be confined to their area and describe the probable hazard, where it would occur and what it would affect.

Task 4.

a. Identify critical and non-critical facilities by community: Include schools, county and city facilities including warehouses and storage buildings, day cares, nursing centers, hospitals, health department, senior housing, community centers, communication hubs and towers, fire stations, police stations, libraries, churches, bridges, jails, recreation centers, water treatment plant, water towers, etc.

b. Identify commercial facilities by community: List of businesses.

c. Identify hazardous material storage: chlorine, fertilizer, explosives, radioactive materials, chemicals, etc. Anything that could leak and contaminate, or be used by terrorists as a weapon of mass destruction (WMD).

Task 5. Consider proposed Mitigation Goals, develop and expand, and provide ideas at next meeting:

Goal 1. Promote disaster resistant future development.
Goal 2. Promote public understanding, support and demand for hazard mitigation through education.
Goal 3. Support the concept of sustainable communities through a commitment to become less vulnerable to hazards.
Goal 4. Reduce the level of damage and losses to people, critical facilities and other community assets associated with identified hazards.

Task 6. Appoint 1 – 3 members of the local mitigation team to represent the group at the next county meeting (date and time yet to be determined). The representative(s) should be prepared to represent the group, provide information about their tasks, and discuss the items on the next agenda – which will be provided in advance.

March 5, 2014 Meeting

In Attendance: Tommy Davis, Walker EMA, Jill Farris, Walker County Commission, Regina Myers, Walker EMA, Penny Mott, Bevill State Dean, JC Poe, Bevill State Police Chief, Billy Luster, Walker County Commission Chairman.The public was invited to this meeting. This meeting was announced 2 weeks prior to the date of the meeting through public notices in the Daily Mountain Eagle and flyers posted at the local college, town halls and the county courthouse. .

Agenda:

Identifying Hazards

Discuss Continuity of Operation Planning

Sample Mitigation Plans

Developing Goals toward Sustainability

National Flood Insurance Program

Notes:

Before the next meeting, each jurisdiction starting talking about mitigation plans for their area, and look over the proposed goals.

April 15, 2014 Meeting

In Attendance: Keith Sizemore, Town of Nauvoo, Tommy Davis, Walker EMA, Drew Gilbert, City of Cordova Mayor, Dean Harbison, City of Cordova Fire Chief, Regina Myers, Walker EMA, Dwight Byram, Town of Nauvoo Mayor, Jackey Cole, Town of Kansas Clerk, Belinda McCain, Town of Sipsey Mayor. Chris Edwards, City of Dora Fire Chief. This meeting was announced 2 weeks prior to the date of the meeting through public notices in the Daily Mountain Eagle and flyers posted at the local college, town halls and the county courthouse. No public attendees were present.

Agenda:

Assessing Hazards

Hazard Ranking

Calculating Risk

Notes: Representatives worked through the process of calculating risk for each hazard. At the next meeting, the group will identify critical infrastructure

May 19, 2009 Meeting

In Attendance: Tommy Davis, Walker EMA, Bobbie Dodd, Town of Eldridge Mayor, Martha Tittle, Town of Eldridge Council, Ralph Tittle, Town of Eldridge Fire Chief, Bill Hurst, Carbon Hill Utilities, Dennis Welch, Town of Oakman Mayor, David Mize, City of Jasper Police, Jackey Cole, Town of Kansas Clerk, Sharie Fulkerson, Town of Sipsey Fire Dept., Gary Aaron, Town of Sipsey Fire Dept.,Randy Stephens, City of Dora Mayor, Chris Edwards, City of Dora Fire Chief, Regina Myers, Walker EMA, Keith Sizemore, Town of Nauvoo Clerk. This meeting was announced 2 weeks prior to the date of the meeting through public notices in the Daily Mountain Eagle and flyers posted at the local college, town halls and the county courthouse. No one from the public attended this meeting and provided input.

Agenda:

Vulnerability Assessment

Capability Assessment

Goal Setting

Notes:

Vulnerability Assessment –

Once the hazard identification step is complete, the committee must conduct a Vulnerability Assessment to describe the impact that each hazard identified in the preceding section would have on Walker County. The committee will utilize the County Assessor's data to define a baseline against which disaster impacts could be compared. The baseline is the catastrophic, worst-case scenario: the assessed value of the entire county as a whole.

See partial list and complete list of critical facilities in the county, by section.

Include natural resources and cultural resources.

Establish the worth of residential, commercial, utility property by area.

Identify future development by section.

Run HAZUS reports

Capability Assessment

An additional method of evaluating the potential for hazards to adversely impact Walker County, and its municipalities, is by conducting an inventory and analysis of the community's existing mitigation capabilities. Doing so provides an assessment of how well prepared Walker County is presently, and highlights any areas for improvements. The term "mitigation capabilities" is meant to include all existing policies, regulations, procedures, and abilities that contribute to the protection of Walker County.

Identify Goals

Goal 1. Promote disaster resistant future development.

Goal 2. Promote public understanding, support and demand for hazard mitigation.

Goal 3. Build and support local capacity and commitment to become less vulnerable to hazards.

Goal 4. Reduce the level of damage and losses to people, critical facilities and other community assets associated with identified hazards. *(Identify a comprehensive range of specific mitigation actions and projects for each hazard.)*

Identification of Mitigation Measures

Following goal setting, the committee should brainstorm to generate a set of viable alternatives that would support the goals and objectives. The committee should then generate a prioritized list of mitigation actions. The committee should include all previously recommended mitigation actions from existing mitigation plans in its review. This process reinforces the use of the Multi-Hazard Mitigation Plan as an umbrella document for all exiting mitigation plans.

Action Items/Mitigation Projects – include: name and description of project, responsible agency, priority, cost, funding base, hazards to be mitigated. Assign each mitigation action to the corresponding goal.

Proposed Mitigation Projects

See Projects under Action Plan

Implementation Strategy and Analysis of Mitigation Projects. Include how the actions will be prioritized. Address how the actions will be implemented – either with existing or potential future resources, etc. Address how the actions will be administered. Reflect an emphasis on the use of cost-benefit analysis. Note: Multi-jurisdictional Mitigation Strategy. There must be separate, identifiable action items for each jurisdiction requesting FEMA approval or credit of the plan.

June 10, 2014 Meeting

In Attendance: Tommy Davis, Walker EMA, Regina Myers, Walker EMA, Marc Stephens, Walker County Engineer Tech, Glenn Peel, Walker County Assistant Engineer, Ralph Tittle, Town of Eldridge Fire Chief, Martha Tittle, Town of Eldridge Council, Dan Wright, Walker County Commission District 2 Commissioner, Marcy Brown, City of Dora Clerk, John Duchock, City of Dora Police Chief. This meeting was announced 2 weeks prior to the date of the meeting through public notices in the Daily Mountain Eagle and flyers posted at the local college, town halls and the county courthouse. No member of the community attended.

Agenda:

Review Draft Plan – the plan was reviewed for the benefit of the community representative.

Recommendations and/or Changes – there were no recommendations or changes.

Submitting Resolutions – discussed with the mayors the importance of submitting their resolutions timely.

Notes: The purpose of this meeting is to discuss the draft plan with interested members of the community.

August 13, 2014

In Attendance: Tommy Davis, Walker EMA, Regina Myers, Walker EMA, Steve Dutton, Parrish Fire, Keith Sizemore, Town of Nauvoo Clerk, Terry Pickett, Argo Fire Chief.This meeting was announced 2 weeks prior to the date of the meeting through public notices in the Daily Mountain Eagle and flyers posted at the local college, town halls and the county courthouse. No member of the community attended.

Agenda:

Review of the meetings that we have had. We went over projects.

November 11, 2014

In Attendance: Tommy Davis, Walker EMA, Regina Myers, Walker EMA, Dan Wright, Walker County Commission District 2 Commissioner, Jimmie Dill, ARES, Mark Chambers, City of Carbon Hill Mayor, Billie Jenkins, Carbon Hill, Clarence Colbert, Carbon Hill, Keith Sizemore, Town of Nauvoo Clerk, Cecil Canida, Oakman Water Works, David Clark, City of jasper Fire Chief, Jackie Cole, Town of Kansas Clerk. This meeting was announced 2 weeks prior to the date of the meeting through public notices in the Daily Mountain Eagle and flyers posted at the local college, town halls and the county courthouse. No member of the community attended.

Agenda: Review of the meetings that we have had. We went over projects.

Review of the meetings that we have had.

January 29, 2015

In Attendance: Tommy Davis, Walker EMA, Regina Myers, Walker EMA, Cheryl Ganey, Walker County Administrator, Billy Luster, Walker County Commission Chairman, Keith Sizemore, Town of Nauvoo Clerk, Jackie Cole, Town of Kansas Clerk. This meeting was announced 2 weeks prior to the date of the meeting through public notices in the Daily Mountain Eagle and flyers posted at the local college, town halls and the county courthouse. No member of the community attended.

Agenda:

Final day for all the update information was due. Asked for Resolutions to be passed for the plan.

Appendix B –

Documentation of Public Meeting Notices

These notices were run by the local daily newspaper – the Daily Mountain Eagle – one week prior to the meeting dates. Flyers with this information were also posted at the Walker County Courthouse and town halls for two weeks prior to the meeting. Local teams provided meeting information to interested parties in their locale.

Public Notice

The Walker County Hazard Mitigation Planning Committee will meet Monday, February 5th at 9am at the Walker County Commission Boardroom, Jasper. The purpose of this meeting is to discuss local hazard mitigation issues, to identify probable hazards, and to develop projects to alleviate the effects of hazards. The public is invited to attend this important meeting and may provide input.

Walker County EMA
205-384-7233

Public Notice

The Walker County Hazard Mitigation Planning Committee will meet March 5th at 9:30am Walker County Commission Boardroom, Jasper. The purpose of this meeting is to discuss local hazard mitigation issues, to identify probable hazards, and to develop projects to alleviate the effects of hazards. The public is invited to attend this important meeting and may provide input.

Walker County EMA
205-384-7233

Public Notice

The Walker County Hazard Mitigation Planning Committee will meet April 15th at 5:30pm at the Walker County Commission Boardroom, Jasper. The purpose of this meeting is to discuss local hazard mitigation issues, to identify probable hazards, and to develop projects to alleviate the effects of hazards. The public is invited to attend this important meeting and may provide input.

Walker County EMA
205-384-7233

Public Notice

The Walker County Hazard Mitigation Planning Committee will meet May 15th at 5:30 pm at the Walker County Commission Boardroom, Jasper. The purpose of this meeting was the different assessments of the Hazard Mitigation Plan for Walker County.

Walker County EMA
205-384-7233

Public Notice

The Walker County Hazard Mitigation Planning Committee will meet June 10th at 5:30 pm at the Walker County Commission Boardroom, Jasper. The purpose of this meeting was the different assessments of the Hazard Mitigation Plan for Walker County.

Walker County EMA
205-384-7233
Public Notice

Public Notice

The Walker County Hazard Mitigation Planning Committee will meet August 13th at 5:30pm at the Walker County Commission Boardroom, Jasper. The purpose of this meeting was a review of the Hazard Mitigation Plan for Walker County.

Walker County EMA
205-384-7233
Public Notice

Public Notice

The Walker County Hazard Mitigation Planning Committee will meet November 13th at 5:30pm at the Walker County Commission Boardroom, Jasper. The purpose of this

meeting was a review of the previous meetings we had on Hazard Mitigation Plan for Walker County.

Walker County EMA
205-384-7233
Public Notice

Public Notice

The Walker County Hazard Mitigation Planning Committee will meet January 29th at 5:30pm at the Walker County Commission Boardroom, Jasper. The purpose of this meeting was the final day to turn everything in for the Hazard Mitigation Plan for Walker County.

Walker County EMA
205-384-7233
Public Notice

Appendix C –

Historical Disaster Events

NOAA Weather Related Damage Data

Drought – 20 regional events reported between 1-1-50 and 12-31-14
The region indicated includes Walker County. No deaths, injuries or property damage amounts noted.

Location	Date
ALZ011>015 - 021>025 - 027>038 - 041 - 043	07/18/06
ALZ011>015 - 017>050	08/01/06
ALZ011>015 - 017>050	09/01/06

ALZ011 - 013>015 - 017>020 - 023>027 - 030>035 - 039	03/27/07
ALZ011>015 - 017>020 - 022>035 - 039	04/01/07
ALZ011>015 - 017>035 - 039	05/01/07
ALZ011>015 - 017>045 - 047	06/01/07
ALZ011>015 - 017	07/01/07
ALZ011>015 - 017	08/01/07
ALZ011>015 - 017	09/01/07
ALZ011>015 - 017	10/01/07
ALZ011>015 - 017	11/01/07
ALZ011>015 - 017	12/01/07
ALZ011>015 - 017	01/01/08
ALZ011>015 - 017>029 - 032	02/01/08
ALZ011>015 - 017>029 - 032	03/01/08
ALZ011 - 013>015 - 017>021 - 023>029 - 032>038 - 040>045 - 047	04/01/08
ALZ011 - 013>015 - 017>021 - 023>029 - 032>038 - 040>045 - 047	05/01/08
ALZ011 - 013>015 - 017>019 - 021 - 023>029 - 034>038 - 043 - 045>048 - 050	08/01/08
ALZ024 Walker County	10/12/10

Extreme Temperatures – 7 regional events between 1-1-50 and 12-31-14.

Location	Date	Type	Deaths	Injuries	Property Damage	Crop Damage
ALZ001>050	02/03/96	Extreme Cold	0	0	0	0
ALZ001>050	02/23/96	Excessive Heat	0	0	0	0
ALZ001>050	03/07/96	Extreme Cold	0	0	0	52 Mil
ALZ011>015 - 017>050	01/24/03	Extreme Cold	1	0	0	0
ALZ011>015 - 017	08/08/07	Heat	1	17	0	0

AL-Z015 Walker County	06/28/12	Heat	0	0	0	0
AL-Z015 Walker County	07/01/12	Heat	0	0	0	0

Flooding – 29 localized events reported between 1-1-50 and 12-31-14

Location	Date	Deaths	Injuries	Property Damage
Jasper	02/28/97	0	0	$10,000.00
Jasper	06/28/97	0	0	15000
Countywide	01/07/98	0	0	30000
Countywide	03/10/00	0	0	50000
Countywide	03/19/00	0	0	12000
Countywide	04/03/00	0	0	40000
Countywide	04/03/01	0	0	18000
Cordova	07/05/01	0	0	3000
Countywide	04/30/02	0	0	8000
Countywide	05/07/03	0	0	300000
Countywide	02/05/04	0	0	5000
Countywide	02/05/04	0	0	5000
Countywide	12/09/04	0	0	8000
Nauvoo	06/06/05	0	0	3000
Countywide	07/10/05	0	0	4000
Countywide	07/14/05	0	0	150000
Sipsey	12/11/08	0	0	0
Manchester	01/06/09	0	0	200000
Jasper	09/18/09	0	0	5000
Aldridge	09/26/09	0	0	1000
Cordova	09/26/09	0	0	2000
Jasper	03/09/11	0	0	0
Kansas	03/09/11	0	0	0
ENE Jasper	04/04/11	0	0	0
ESE Jasper	04/15/11	0	0	0
NE Oakman	09/05/11	0	0	0
NE Coal Valley	09/05/11	0	0	0
S Jasper	09/05/11	0	1	0
NNW Gamble	01/14/13	0	0	0

Hail – 146 localized events were reported between 1-1-50 and 12-31-14
Property damage not available prior to 1996. No deaths or injuries reported.

Location	Date	Property Damage
Walker County	03/07/56	0
Walker County	05/06/67	0
Walker County	06/15/71	0
Walker County	06/27/72	0
Walker County	06/27/72	0
Walker County	11/27/73	0
Walker County	12/29/73	0
Walker County	04/03/74	0
Walker County	04/04/74	0
Walker County	05/03/74	0
Walker County	03/29/76	0
Walker County	04/23/77	0
Walker County	04/30/78	0
Walker County	04/26/82	0
Walker County	02/22/83	0
Walker County	05/02/84	0
Walker County	06/07/85	0
Walker County	04/25/88	0
Walker County	05/09/88	0
Walker County	03/05/89	0
Walker County	04/04/89	0
Walker County	05/01/90	0
Walker County	04/09/91	0
Walker County	10/10/92	0
Walker County	03/27/94	0
Sipsey	03/27/94	0
Sumiton	04/15/94	0
Jasper	01/27/95	0
Jasper	03/07/95	0
Jasper	03/07/95	0
Saragossa	03/20/95	0
Jasper	04/19/95	0
Sipsey	04/19/95	0
Parrish	05/04/95	0

Parrish	03/05/96	$10,000.00
Jasper	01/24/97	6000
Sumiton	04/22/97	2000
Eldridge	05/02/97	3000
Jasper	07/09/97	3000
Oakman	02/26/98	0
Carbon Hill	03/19/98	3000
Eldridge	04/08/98	0
Good Springs	04/08/98	10000
Gorgas	02/27/99	0
Cordova	03/10/00	3000
Eldridge	03/10/00	10000
Parrish	03/10/00	0
Carbon Hill	04/27/00	0
Cordova	04/27/00	2000
Manchester	05/25/00	2000
Jasper	02/22/01	0
Carbon Hill	04/03/01	0
Jasper	05/24/01	6000
Jasper	06/03/01	0
Quinton	06/03/01	0
Corona	05/02/03	2000
Jasper	05/02/03	75000
Jasper	05/05/03	10000
Cordova	05/16/03	5000
Parrish	05/16/03	5000
Oakman	05/16/03	0
Jasper	11/18/03	0
Gorgas	02/05/04	0
Sumiton	07/04/05	0
Cordova	03/13/05	0
Good Springs	03/30/05	20000
Good Springs	03/30/05	0
Jasper	04/06/05	1000
Townley	04/22/05	1000
Jasper	04/30/05	1000
Carbon Hill	05/20/05	7000

Nauvoo	06/06/05	0
Parrish	12/04/05	0
Dora	04/03/06	0
Carbon Hill	04/07/06	0
Jasper	04/19/06	0
Jasper	04/21/06	0
Jasper	04/21/06	0
Jasper	04/21/06	0
Jasper	03/28/08	0
Sipsey	03/28/08	0
Kansas	04/11/08	0
Kansas	04/11/08	0
Marigold	04/11/08	0
Bradleytown	04/11/08	0
Marigold	08/02/08	0
Dora	08/02/08	0
Gorgas	08/02/08	0
Jasper	08/02/08	0
Coal Valley	08/02/08	0
Manchester	12/10/08	0
Cordova	12/24/08	0
Carbon Hill	04/10/09	0
Townley	04/10/09	0
Saragossa	04/10/09	0
Pocahontas	01/24/10	0
Gamble	01/24/10	0
Carbon Hill	03/12/10	25000
Townley	03/12/10	0
Coal Valley	03/12/10	0
Calumet	04/24/10	0
Cordova	04/24/10	0
McCollum	06/25/10	0
Quinton	10/24/10	0
Kansas	03/26/11	0
Eldridge	03/26/11	0
Saragossa	03/26/11	0
Jasper (Round 1)	03/26/11	750000

N Marigold	03/26/11	0
Jasper (Round 2)	03/26/11	750000
S Jasper	04/04/11	0
E Pocahontas	05/13/11	0
SE Saragossa	05/13/11	1000
NE Marigold	05/13/11	1000
NNW Gamble	05/25/11	0
S Jasper	03/02/12	0
W Sipsey	03/02/12	0
ENE Flat Creek	03/02/12	0
NNE Empire	03/02/12	0
S Jasper	03/02/12	0
WSW Sipsey	03/02/12	0
NE Sumiton	03/02/12	0
E Pocahontas	03/29/12	0
NE Marigold	03/31/12	0
NW Sipsey	03/31/12	0
NW Marigold	03/31/12	0
W Sipsey	03/31/12	0
E Jasper	04/05/12	0
NW Cordova	04/05/12	0
NE Cordova	04/05/12	0
NW Empire	04/05/12	0
SW Coal Valley	05/06/12	0
ESE Marigold	05/07/12	0
NW Gamble	05/21/12	0
S Gamble	05/21/12	0

Hurricane – 6 regional events between 1-1-50 and 12-31-14. Deaths, injuries, property damage and crop damage are for the entire event, all counties.

Location	Date	Type	Deaths	Injuries	Property Damage	Crop Damage
ALZ001>050	**10/04/95**	**Hurricane Opal**	**2**	**0**	**.1 Bil**	**10 Mil**
ALZ051>064	**09/13/04**	**Tropical Storm**	**0**	**0**	**2.5 Bil**	**25 Mil**
ALZ015	**07/10/05**	**Tropical Storm**	**0**	**0**	**55000**	**0**
ALZ011>015 - 017>050	**08/29/05**	**Tropical Storm**	**0**	**8**	**34.9 Mil**	**0**
ALZ011>015 - 017	**08/23/08**	**Tropical Depression**	**0**	**0**	**5000**	**0**
AL-Z015	**11/09/09**	**Tropical Depression**	**0**	**0**	**83000**	**0**

Lightning – 7 events between 1-1-50 and 12-31-14. No deaths or injuries reported.

Location	Date	Property Damage
Jasper	**03/24/94**	**5000**
Jasper	**06/04/94**	**1000**
Dora	**07/27/94**	**5000**
Jasper	**04/20/96**	**90000**
Jasper	**07/22/03**	**50000**
Parrish	**08/05/06**	**20000**
NNW Jasper	**08/09/13**	**78 Million**

Snow and Ice – 11 regional events between 1-1-50 and 12-31-14. The deaths, injuries, property damage and crop damage are for the entire event, all counties.

Location	Date	Type	Deaths	Injuries	Property Damage	Crop Damage
ALZ001>018	03/12/93	Winter Storm	4	0	5 Bil	0
North Alabama	02/11/95	Snow/ice	0	0	0	0
ALZ001>038	01/06/96	Winter Storm	0	0	380000	38000
ALZ001>027 - 030>032 - 034	02/01/96	Winter Storm	0	0	595000	0
ALZ003>015	02/16/96	Winter Storm	0	0	195000	0
ALZ001>008 - 011>017	12/23/98	Ice Storm	1	0	14.4 Mil	0
ALZ001>007 - 009>017	12/21/99	Ice Storm	0	0	0	0
ALZ005 - 007 - 014>017 - 024>027 - 033>037 - 041 - 043	01/28/00	Winter Storm	0	0	227000	0
ALZ-015 Walker County	01/09/11	Winter Storm	0	0	0	0
ALZ-015 Walker County	02/09/11	Heavy Snow	0	0	0	0
ALZ-015 Walker County	01/17/13	Heavy Snow	0	0	0	0

Thunderstorm & High Wind – 177 localized events between 1-1-50 and 12-31-14. Due to the large number of events, only the past 10 years are listed. This link will show the entire list: http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwevent~storms Three deaths and 2 injuries were recorded prior to 1999.

Location	Date	Injuries	Property Damage
ALZ001>005 - 007 - 011>015 - 022>023 - 030>034	**11/02/99**		**55000**
Countywide	**01/03/00**		**4000**
Countywide	**02/13/00**		**30000**

Parrish	**03/10/00**		**50000**
Cordova	**04/27/00**		**2000**
Jasper	**05/25/00**		**1000**
Jasper	**07/12/00**		**2000**
Countywide	**07/20/00**		**60000**
Carbon Hill	**07/31/00**		**7000**
Manchester	**08/10/00**		**2000**
Jasper	**02/09/01**		**2000**
Countywide	**02/16/01**		**55000**
Jasper	**05/24/01**		**3000**
Eldridge	**07/05/01**		**2000**
Jasper	**10/13/01**		**2000**
Countywide	**03/30/02**		**3000**
Nauvoo	**04/08/02**		**10000**
Jasper	**06/13/02**		**8000**
Jasper	**07/02/02**		**2000**
Corona	**05/02/03**		**3000**
Jasper	**05/05/03**		**6000**
Sumiton	**05/05/03**		**25000**
Countywide	**05/07/03**		**20000**
Cordova	**05/16/03**		**3000**
Countywide	**06/11/03**		**10000**
Jasper	**07/22/03**	**2**	**40000**
Saragossa	**07/22/03**		**27000**
Jasper	**11/18/03**		**10000**
Countywide	**03/05/04**		**4000**
Jasper	**07/04/04**		**2000**
Good Springs	**07/07/04**		**7000**
Jasper	**07/12/04**		**0**
ALZ015	**09/16/04**		**225000**
Countywide	**01/13/05**		**10000**
Jasper	**04/06/05**		**5000**
Sipsey	**04/30/05**	**1**	**35000**
Jasper	**05/20/05**		**35000**
Nauvoo	**06/06/05**		**11000**
ALZ013>015 - 017 - 022>025 - 027 - 029>035 - 038>042	**06/11/05**		**104000**
Jasper	**07/14/05**		**2000**

Jasper	**08/06/05**		**4000**
Nauvoo	**11/15/05**		**1000**
Eldridge	**03/09/06**	**1**	**50000**
Sumiton	**07/19/06**		**10000**
Cordova	**07/29/06**		**3000**
Nauvoo	**02/24/07**		**1000**
Cordova	**04/03/07**		**10000**
Gamble	**06/15/07**		**2000**
Manchester	**06/15/07**		**0**
Drifton	**06/15/07**		**3000**
Cordova	**07/14/07**	**2**	**50000**
Kansas	**07/23/07**		**2000**
Jasper/Airport area	**08/27/07**		**25000**
Jasper	**01/10/08**		**8000**
ALZ015	**01/29/08**		**10000**
Jasper	**02/06/08**		**25000**
Cordova	**02/26/08**		**2000**
Nauvoo	**04/11/08**		**25000**
Kansas	**04/11/08**		**0**
Dora	**05/08/08**		**3000**
Sipsey	**05/08/08**		**3000**
Marigold	**05/10/08**		**1000**
Jasper/Airport area	**05/10/08**		**2000**
Saragossa	**07/22/08**		**1000**
Sumiton	**08/02/08**		**1000**
Jasper/Airport area	**12/10/08**		**5000**
Empire	**12/24/08**		**1000**
Marietta	**03/26/09**		**2000**
Bradleytown	**03/26/09**		**5000**
Saragossa	**04/10/09**		**0**
Empire	**10/09/09**		**40000**
Oakman (Bluewater Rd)	**05/28/10**		**2000**
Oakmnan (Bethel Rd)	**05/28/10**		**2000**
Corona	**05/21/10**		**50000**
Eldridge	**06/25/10**		**2000**
ENE Jasper	**08/25/10**		**10000**
McCollum	**10/26/10**		**5000**
NW Prospect	**10/26/10**		**2000**

Marigold	**11/30/10**		**3000**
Cordova	**11/30/10**		**0**
SW Saragossa	**02/24/11**		**2000**
NE Saragossa	**02/24/11**		**3000**
W Corona	**02/24/11**		**2000**
NNE Jasper	**02/24/11**		**10000**
ESE Marigold	**02/24/11**		**2000**
N Sipsey	**02/24/11**		**2000**
NW Sipsey	**02/24/11**		**2000**
NE Gorgas	**02/24/11**		**2000**
NW Drummond	**03/26/11**		**2000**
N Saragossa	**04/04/11**		**5000**
NE Marigold	**04/04/11**		**5000**
SW Corona	**04/04/11**		**5000**
N Jasper	**04/04/11**		**5000**
NE Marigold	**04/11/11**		**6000**
N Corona	**04/27/11**		**8000**
Townley	**04/27/11**		**2000**
S Jasper	**04/27/11**		**15000**
Saragossa	**06/26/11**		**1000**
S Jasper	**06/26/11**		**50000**
N Sumiton	**07/03/11**		**2000**
ESE Gamble	**07/04/11**		**2000**
E Kansas, N Carbon Hill	**07/21/11**		**0**
NW Cordova	**08/07/11**		**1000**
NW Cordova	**09/14/11**		**2000**
SW Jasper	**03/02/12**		**0**
W Sipsey	**03/31/12**		**0**
NW Empire	**04/05/12**		**0**
SW Coal Valley	**05/06/12**		**0**
E Jasper	**05/07/12**		**0**
NE Empire	**05/07/12**		**0**
E Marigold	**05/07/12**		**0**
NW Sipsey	**05/07/12**		**0**
NNW Sipsey	**05/07/12**		**0**
NNW Sipsey	**05/07/12**		**0**
W Goodsprings	**05/21/12**		**0**
S Gorgas	**05/21/12**		**0**

Eldridge	**06/03/12**		**0**
SW Saragossa	**06/03/12**		**0**
SSW McCollum	**06/03/12**		**0**
SE Jasper	**06/03/12**		**0**
W Sipsey	**06/03/12**		**0**
Eldridge	**06/11/12**		**0**
S Jasper	**06/11/12**		**0**
S McCollum	**07/31/12**		**0**
NE Aldridge	**07/31/12**		**0**
N Sumiton	**07/31/12**		**0**
SW Drifton (Tutwiler Area)	**07/31/12**		**0**
Townley	**07/31/12**		**0**
ENE Drifton (Tutwiler Area)	**07/31/12**		**0**
SSW Drifton (Tutwiler Area)	**07/31/12**		**0**
N Saragoosa	**03/18/13**		**0**
S Jasper	**03/18/13**		**0**
NE Marigold	**03/18/13**		**0**

Tornado – 51 events between 1-1-50 and 12-31-14.

Location	Date	Magnitude	Deaths	Injuries	Property Damage
Walker County	01/20/53	F3	0	0	3000
Walker County	02/20/53	F2	0	1	25000
Walker County	11/17/57	F4	4	15	25000
Walker County	03/07/61	F3	0	1	250000
Walker County	03/11/63	F1	0	0	25000
Walker County	03/06/67	F1	0	1	25000
Walker County	03/06/67	F4	2	25	250000
Walker County	05/08/73	F2	0	0	250000
Walker County	04/03/74	F4	0	102	25 Mil
Walker County	02/23/75	F2	0	0	250000
Walker County	12/08/78	F1	0	1	250000
Walker County	02/22/83	F2	0	0	250000
Walker County	11/23/83	F2	0	0	25000
Walker County	08/16/85	F2	1	1	2.5 Mil

Walker County	08/16/85	F2	0	5	2.5 Mil
Walker County	08/16/85	F1	0	0	25000
Walker County	08/16/85	F1	0	0	25000
Walker County	11/26/88	F0	0	0	0
Walker County	11/22/92	F1	0	0	2.5 Mil
Walker County	05/03/93	F0	0	0	0
Walker County	05/03/93	F1	0	0	0
Sumiton	04/22/95	F1	0	0	.3 Mil
Townley	04/16/98	F0	0	0	10000
Jasper	04/16/98	F0	0	0	30000
Sipsey	04/16/98	F1	0	0	130000
Carbon Hill	11/24/01	F3	0	0	25000
Carbon Hill	11/10/02	F3	3	20	2.5 Mil
Townley	11/10/02	F3	7	40	2.5 Mil
Dora	11/10/02	F1	0	0	400000
Townley	05/07/03	F1	0	0	21000
Oakman	11/18/03	F1	0	0	105000
Jasper	04/30/05	F1	0	0	125000
Jasper	03/13/06	F1	0	0	34000
Corona	02/06/08	F2	0	4	200000
Eldridge	05/08/08	F1	0	0	20000
Marigold	05/08/08	F1	0	0	100000
Marigold	05/10/08	F1	0	0	20000
Dilworth	05/10/08	F0	0	0	5000
Eldridge	10/08/08	F0	0	0	15000
Oakman	12/10/08	F1	0	0	215000
Sipsey	12/10/08	F2	0	0	100000
McCollum	12/24/08	F0	0	0	5000
East Jasper	05/06/09	EF-0			
Powellville (Pineywoods)	05/06/09	EF-0			
Corona	04/24/10	EF-1			55000
Aldridge	04/24/10	EF-3			600000
W Sipsey	04/27/11	EF-3	0	20	13.4 Million
NE Dilworth	04/27/11	EF-4	9	40	12 Billion
Nauvoo	01/30/13	EF-0			
NNE Kansas	04/11/13	EF-1	0	0	
Boldo	04/28/14	EF-1	0	0	

Subsidence and Sinkholes – 110 events between 1987 and 2008

Date of Report	Location	Cause
01/22/87	Carbon Hill	Underground mine
12/12/88	Jones	Underground mine
07/17/89	Goodsprings	Underground mine
03/08/91	Dora North	Underground mine
07/23/91	Dora Junction	Underground mine
11/20/91	Tubbs Hill	Underground mine
03/06/92	Sumiton	Underground mine
03/06/92	McCollum	Underground mine
06/01/92	Black Avenue, Dora	Underground mine
02/08/93	Carbon Hill Site A	Underground mine
02/08/93	Carbon Hill Site B	Underground mine
07/14/94	Spelunker Hollow	Underground mine
08/19/94	Gorgas Highlands	Underground mine
02/23/95	Steward Subsidence	Underground mine
03/15/95	Mill Creek	Underground mine
09/20/95	Bush Tower	Underground mine
10/16/95	Carbon Hill, East	Underground mine
01/09/96	Fourth Ave	Underground mine
01/11/96	Carbon Hill NE	Underground mine
03/05/96	5th Court NE	Underground mine
03/05/96	Commerce Ave	Underground mine
04/09/96	Cordova Slide	Underground mine
05/08/96	NE 10th Street I	Underground mine
09/30/96	East Side Park	Underground mine
10/29/96	Fast Lane Car Wash	Underground mine
01/29/97	Church Street	Underground mine
01/31/97	NE 10th Street II	Underground mine
03/11/97	Baird Apartments	Underground mine
04/07/97	Lorton	Underground mine
04/14/97	Homewood COG	Underground mine

05/16/97	NE 10th Street III	Underground mine
07/11/97	NE 10th Street IV	Underground mine
07/11/97	4th Ave NE	Underground mine
07/11/97	Lorton II	Underground mine
04/28/98	Slick Lizard	Underground mine
05/14/98	Sunlight	Underground mine
07/01/98	Lorton III	Underground mine
02/12/99	NW 11th Ave	Underground mine
02/12/99	East Side Park	Underground mine
02/17/99	Old Settlement Rd	Underground mine
03/26/99	Old Settlement Rd II	Underground mine
05/04/99	Lorton IV	Underground mine
05/13/99	NE 10th Street V	Underground mine
09/24/99	Nauvoo	Underground mine
12/07/99	Main Street	Underground mine
12/09/99	Burton Rd	Underground mine
04/12/00	Widow's Lane	Underground mine
04/12/00	NW 5th Ave	Underground mine
07/24/00	Commerce Ave	Underground mine
08/07/00	Dora West	Underground mine
08/15/00	NE 10th Street VI	Underground mine
08/15/00	Carbon Hill #21	Underground mine
08/15/00	Carbon Hill #22	Underground mine
08/15/00	NW 11th Ave II	Underground mine
08/31/00	Maple Street	Underground mine
09/26/00	Commerce Ave III	Underground mine
09/28/00	Dora Junction	Underground mine
09/30/00	Carbon Hill # 23	Underground mine
11/16/00	Carbon Hill #24	Underground mine
11/20/00	Cordova Fire Station	Underground mine
11/22/00	Old Settlement Rd III	Underground mine
03/08/01	Aldridge	Underground mine
03/16/01	Carbon Hill #25	Underground mine
03/22/01	Dora Junction II	Underground mine
03/22/01	Carbon Hill #26	Underground mine
03/28/01	Carbon Hill #27	Underground mine

05/31/01	Branch Street	Underground mine
06/11/01	Carbon Hill Portals	Underground mine
09/24/01	Commerce Ave IV	Underground mine
09/27/01	McCollum II	Underground mine
01/03/02	Carbon Hill #28	Underground mine
05/15/02	Carbon Hill #29	Underground mine
07/10/02	Carbon Hill #30	Underground mine
12/13/02	Tubbs Hill	Underground mine
12/20/02	Carbon Hill #31	Underground mine
01/09/03	Main Street West	Underground mine
01/20/03	Carbon Hill #32	Underground mine
02/17/03	Oakman	Underground mine
02/17/03	Hatt	Underground mine
03/05/03	Dixie Mine Rd	Underground mine
03/25/03	Doliska Rd	Underground mine
04/30/03	High Street	Underground mine
05/20/03	McCollum West	Underground mine
06/05/03	Carbon Hill #33	Underground mine
06/10/03	Hatt II	Underground mine
07/16/03	Carbon Hill #34	Underground mine
07/16/03	Carbon Hill #35	Underground mine
09/26/03	Carbon Hill #36	Underground mine
03/19/04	Carbon Hill #37	Underground mine
05/11/04	Sutton Ave	Underground mine
07/19/04	McCollum III	Underground mine
07/21/04	Old Settlement Rd IV	Underground mine
11/30/04	Main Street West II	Underground mine
03/07/05	Cut and Curl	Underground mine
03/25/05	Carbon Hill #38	Underground mine
10/28/05	Doraton	Underground mine
01/13/06	Carbon Hill #39	Underground mine
01/13/06	Carbon Hill #40	Underground mine
03/12/06	Doraton	Underground mine
03/20/06	Commerce Ave V	Underground mine
04/07/06	Carbon Hill #41	Underground mine
08/31/06	Carbon Hill #42	Underground mine

09/14/06	McCrary Circle	Underground mine
09/28/06	Carbon Hill #43	Underground mine
10/12/06	Doraton II	Underground mine
02/09/07	Trinity Rd	Underground mine
11/16/07	Carbon Hill #44	Underground mine
05/26/08	Carbon Hill #45	Underground mine
05/26/08	Carbon Hill #46	Underground mine
05/26/08	Black Ave II	Underground mine
08/28/08	Homewood Church of God II	Underground mine

Appendix D –

Resolutions

This Multi Hazard Mitigation Plan for Walker County, Alabama was formally adopted by the Walker County Commission on March 2, 2015 and signed by the County Commissioners and the Director of the Walker County EMA on the same date. Likewise, a representative of each individual municipality adopted this Plan and copies of the resolutions from each town can be found in Appendix D.

Before the Walker County Commission, Alabama

March 2, 2015

Resolution No. _____

"A RESOLUTION APPROVING AND ADOPTING THE CITIES OF CARBON HILL, CORDOVA, DORA, ELDRIDGE, JASPER, KANSAS, NAUVOO, OAKMAN, PARRISH, SIPSEY AND SUMITON AND WALKER COUNTY, ALABAMA, HAZARD MITIGATION PLAN."

WHEREAS, our lives, residential and commercial property, businesses, and infrastructure are at risk from a variety of natural hazards, including floods, thunderstorms, earthquakes, wildfire and tornadoes; and,

WHEREAS, Hazard Mitigation Planning will create an operational framework for reducing losses from these hazards in a cost-effective, environmentally sound, manner; and,

WHEREAS, a Hazard Mitigation Planning process was undertaken in order to maintain eligibility for multiple sources of Federal Mitigation Funding Programs that support loss-reduction activities; and,

WHEREAS, a Hazard Mitigation Planning Committee did analyze the hazards that threaten our community, have determined our vulnerability to those hazards and evaluated alternatives to minimize or eliminate their impact; and,

WHEREAS, the Walker County Commission has adopted policies and regulations that must be implemented following any incident that results in significant damages and that would impact rebuilding and redevelopment; and,

WHEREAS, as a benefit of being enrolled in the Community Rating System within the National Flood Insurance Program, formally establishing our Hazard Mitigation Plan contributes towards lowering the cost of flood insurance across the entire community.

NOW, THEREFORE, BE IT RESOLVED by the Walker County Commission, meeting in regular session on this the 2nd day of March 2015, with a lawful quorum of said Commission being present and with a majority of said Commission voting in the affirmative as follows:

1. Walker County Commission does hereby approve and adopt a Hazard Mitigation Plan that identifies protective and mitigation measures that will lessen the County's

exposure to future hazard losses, while contributing to other community goals and objectives as identified in other community plans, policies and regulations.

2. The Walker County Commission did solicit public input throughout the development of the Hazard Mitigation Plan.

3. The Walker County Commission desires to keep the County in good standing in the National Flood Insurance Program (NFIP) and the NFIP's Community Rating System which reduces the cost of flood insurance for our constituents that either are required or desire to purchase it.

4. This Resolution shall be effective from and after its adoption.

Walker County Commission

By: _____
Commission Chair

_____
EMA Coordinator

_____
Commissioner

_____
Commissioner

_____
Commissioner

_____
Commissioner

ATTEST:

_____
County Administrator

03-02-15
Date

State of Alabama
County of Walker

City of Carbon Hill
P.O. Box 519
Carbon Hill, Alabama 35549

RESOLUTION 003-2015

A Resolution approving and adopting the City of Carbon Hill, Walker County, Alabama Hazard Mitigation Plan

WHEREAS, our lives, residential and commercial property. businesses and infrastructure are at risk from a variety of natural hazards, including floods, thunderstorms, earthquakes, wildfire and tornadoes; and

WHEREAS, Hazard Mitigation planning will create an operational framework for reducing losses from these hazards in a cost effective, environmentally sound manner; and

WHEREAS, a Hazard Mitigation planning process was undertaken in order to maintain eligibility for multiple sources of Federal Mitigation Funding Programs that support loss reduction activities; and

WHEREAS, A Hazard Mitigation Planning Committee did analyze the hazards that threaten our community and have determined our vulnerability to those hazards and evaluated alternatives to minimize or eliminate their impact; and

WHEREAS, the City of Carbon Hill has adopted policies and regulations that must be implemented following any incident that results in significant damages and that would impact rebuilding and redevelopment; and

WHEREAS, as a benefit of being enrolled in the Community Rating System within the National Flood Insurance Program, formally establishing our Hazard Mitigation Plan contributes to lowering the cost of Flood Insurance across the entire community.

NOW THEREFORE, BE IT RESOLVED by the City of Carbon Hill, meeting in regular session on this, the 28th day of February 2015, with a lawful quorum of said Commission being present and with a majority of said Commission voting in the affirmative as follows:

1. City of Carbon Hill does hereby approve and adopt a Hazard Mitigation Plan that identifies protective and mitigation measures that will lessen the City's exposure to future hazard losses while contributing to other community goals and objectives as identified in other community plans, policies and regulations.

2. The City of Carbon Hill did solicit public input throughout the development of the Hazard Mitigation Plan.

3. The City of Carbon Hill desires to keep the City in good standing in the National Flood Insurance Program (NFIP) and the NFIP's Community Rating System which reduces the cost of flood insurance for our constituents that either are required or desire to purchase it.

4. This Resolution shall be effective after its adoption.

Adopted and approved:

By _____
Mark Chambers, Mayor

Attest _____ **Date** Feb. 13, 2015
Janice L. Pendley, City Clerk

City of Cordova

3885 North Massachusetts Ave
Cordova, AL 35550

Resolution 003-2015

"A RESOLUTION APPROVING AND ADOPTING THE CITY OF CORDOVA, WALKER COUNTY, ALABAMA, HAZARD MITIGATION PLAN."

WHEREAS, our lives, residential and commercial property, businesses, and infrastructure are at risk from a variety of natural hazards, including floods, thunderstorms, earthquakes, wildfire and tornadoes; and,

WHEREAS, Hazard Mitigation Planning will create an operational framework for reducing losses from these hazards in a cost-effective, environmentally sound, manner; and,

WHEREAS, a Hazard Mitigation Planning process was undertaken in order to maintain eligibility for multiple sources of Federal Mitigation Funding Programs that support loss-reduction activities; and,

WHEREAS, a Hazard Mitigation Planning Committee did analyze the hazards that threaten our community, have determined our vulnerability to those hazards and evaluated alternatives to minimize or eliminate their impact; and,

WHEREAS, the City of Cordova has adopted policies and regulations that must be implemented following any incident that results in significant damages and that would impact rebuilding and redevelopment; and,

WHEREAS, as a benefit of being enrolled in the Community Rating System within the National Flood Insurance Program, formally establishing our Hazard Mitigation Plan contributes towards lowering the cost of flood insurance across the entire community.

NOW, THEREFORE, BE IT RESOLVED by the City of Cordova, meeting in regular session on this the 24th day of February 2015, with a lawful quorum of said Commission being present and with a majority of said Commission voting in the affirmative as follows:

1. **City of Cordova does hereby approve and adopt a Hazard Mitigation Plan that identifies protective and mitigation measures that will lessen the City's exposure to future hazard losses, while contributing to other community goals and objectives as identified in other community plans, policies and regulations.**
2. **The City of Cordova did solicit public input throughout the development of the Hazard Mitigation Plan.**
3. **The City of Cordova desires to keep the City in good standing in the National Flood Insurance Program (NFIP) and the NFIP's Community Rating System which reduces the cost of flood insurance for our constituents that either are required or desire to purchase it.**
4. **This Resolution shall be effective from and after its adoption.**

Adopted and approved:

By: Drew Gilbert

Drew Gilbert, Mayor

ATTEST:

Leanne Dawkins 2/24/15

City Clerk **Date**

State of Alabama
Walker County
City of Dora
February 24, 2015

City of Dora

RESOLUTION #3-2015

A RESOLUTION APPROVING AND ADOPTING THE CITY OF DORA, "HAZARD MITIGATION PLAN."

WHEREAS, our lives, residential and commercial property, businesses, and infrastructure are at risk from a variety of natural hazards, including floods, thunderstorms, earthquakes, wildfire and tornadoes; and,

WHEREAS, Hazard Mitigation Planning will create an operational framework for reducing losses from these hazards in a cost-effective, environmentally sound, manner; and,

WHEREAS, a Hazard Mitigation Planning process was undertaken in order to maintain eligibility for multiple sources of Federal Mitigation Funding Programs that support loss-reduction activities; and,

WHEREAS, a Hazard Mitigation Planning Committee did analyze the hazards that threaten our community, have determined our vulnerability to those hazards and evaluated alternatives to minimize or eliminate their impact; and,

WHEREAS, the City of Dora has adopted policies and regulations that must be implemented following any incident that results in significant damages and that would impact rebuilding and redevelopment; and,

WHEREAS, as a benefit of being enrolled in the Community Rating System within the National Flood Insurance Program, formally establishing our Hazard Mitigation Plan contributes towards lowering the cost of flood insurance across the entire community.

NOW, THEREFORE, BE IT RESOLVED by the City of Dora, meeting in regular session on this the 24th day of February 2015, with a lawful quorum of said Council Members being present and with a majority of said Council voting in the affirmative as follows:

1. City of Dora does hereby approve and adopt a Hazard Mitigation Plan that identifies protective and mitigation measures that will lessen the County's exposure to future hazard losses, while contributing to other community goals and objectives as identified in other community plans, policies and regulations.

2. The City of Dora did solicit public input throughout the development of the Hazard Mitigation Plan.

3. The City of Dora desires to keep the County in good standing in the National Flood Insurance Program (NFIP) and the NFIP's Community Rating System which reduces the cost of flood insurance for our constituents that either are required or desire to purchase it.

4. This Resolution shall be effective from and after its adoption.

NOW THEREFORE BE IT RESOLVED, by the City Council of the City of Dora, Alabama, at a regular meeting, duly assembled, a quorum being present that the Mayor is hereby authorized to execute the agreement with the Alabama Department of Transportation.

ADOPTED, this the 24th day of February, 2015.

Randy Stephens, Mayor

ATTEST: Marcy Brown, City Clerk

Before the City Council of the City of Eldridge, AL

Regular Meeting 2-26-2015

Resolution No. 105

"A RESOLUTION APPROVING AND ADOPTING THE CITIES OF CARBON HILL, CORDOVA, DORA, ELDRIDGE, JASPER, KANSAS, NAUVOO, OAKMAN, PARRISH, SIPSEY AND SUMITON AND WALKER COUNTY, ALABAMA, HAZARD MITIGATION PLAN."

WHEREAS, our lives residential and commercial property, businesses, and infrastructure are at risk from a variety of natural hazards, including floods, thunderstorms, earthquakes, wildfire and tornadoes; and,

WHEREAS, Hazard Mitigation Planning will create an operational framework for reducing losses from these hazards in a cost-effective, environmentally sound, manner; and,

WHEREAS, a Hazard Mitigation Planning process was undertaken in order to maintain eligibility for multiple sources of Federal Mitigation Funding Programs that support loss-reduction activities; and,

WHEREAS, a Hazard Mitigation Planning Committee did analyze the hazards that threaten our community, have determined our vulnerability to those hazards and evaluated alternatives to minimize or eliminate their impact; and,

WHEREAS, the City of Eldridge has adopted policies and regulats that must be implemented following any incident that results in significant damages and that would impact rebuilding and redevelopment; and,

WHEREAS, as a benefit of being enrolled in the Community Rating System within the National Flood Insurance Program, formally establishing our Hazard Mitigation Plan contributes towards lowering the cost of flood insurance across the entire community,

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Eldridge, meeting in regular session on this the 26 day of Feb 2015 with a lawful quorum of said Council being present and with a majority of said Council voting in the affirmative as follows:

1. The City of Eldridge does hereby approve and adopt a Hazard Mitigation Plan that identifies protective and mitigation measures that will lessen the City's exposure to future hazard losses, while contributing to other community goals and objectives as identified in other community plans, policies and regulations.
2. The City of Eldridge solicit public input throughout the development of the Hazard Mitigation Plan.
3. The City of Eldridge desires to keep the City in good standing in the National Flood Insurance Program (NFIP) and the NFIP's Community Rating System which reduces the cost of flood insurance for our constituents that either are required or desire to purchase it.
4. This Resolution shall be effective from and after its adoption.

PREPARED BY ME AND
APPROVED AS TO FORM:

03/03/2015 17:46 (FAX) P.002/003

City of Eldridge

By: Bobbie Jean Dodd
Bobble Jean Dodd, Mayor

ATTEST:

Martha Tittle
Martha Tittle, Mayor, Pro-Tem

Sue Piotrowski
Sue Piotrowski, Clerk

James Denver Jones
James Denver Jones, Councilman

Margaret Tucker
Margaret Tucker, Councilwoman

Margaret Smothers
Margaret Smothers, Councilwoman

Donald J. Tucker
Don Tucker, Councilman

RESOLUTION NO. 2015 - 19

"A RESOLUTION APPROVING AND ADOPTING THE JASPER, ALABAMA HAZARD MITIGATION PLAN."

WHEREAS, our lives, residential and commercial property, businesses, and infrastructure are at risk from a variety of natural hazards, including floods, thunderstorms, earthquakes, wildfire and tornadoes; and,

WHEREAS, Hazard Mitigation Planning will create an operational framework for reducing losses from these hazards in a cost-effective, environmentally sound, manner; and,

WHEREAS, a Hazard Mitigation Planning process was undertaken in order to maintain eligibility for multiple sources of Federal Mitigation Funding Programs that support loss-reduction activities; and,

WHEREAS, a Hazard Mitigation Planning Committee did analyze the hazards that threaten our community, have determined our vulnerability to those hazards and evaluated alternatives to minimize or eliminate their impact; and,

WHEREAS, the Jasper City Council has adopted policies and regulations that must be implemented following any incident that results in significant damages and that would impact rebuilding and redevelopment; and,

WHEREAS, as a benefit of being enrolled in the Community Rating System within the National Flood Insurance Program, formally establishing our Hazard Mitigation Plan contributes towards lowering the cost of flood insurance across the entire community.

NOW, THEREFORE, BE IT RESOLVED by the Jasper City Council, meeting in regular session on this the 17th day of February 2015, with a lawful quorum of said Council being present and with a majority of said Council voting in the affirmative as follows:

1. The Jasper City Council does hereby approve and adopt a Hazard Mitigation Plan that identifies protective and mitigation measures that will lessen the City's exposure to future hazard losses, while contributing to other community goals and objectives as identified in other community plans, policies and regulations.

2. The Jasper City Council did solicit public input throughout the development of the Hazard Mitigation Plan.

3. The Jasper City Council desires to keep the City in good standing in the National Flood Insurance Program (NFIP) and the NFIP's Community Rating System which reduces the cost of flood insurance for our constituents that either are required or desire to purchase it.

4. This Resolution shall be effective from and after its adoption.

ADOPTED this 17th day of February, 2015.

Danny Gambrell, Council President

Jed Daniel, Councilmember

Gary Cowen, Councilmember

Jennifer W. Smith, Councilmember

Sandi Sudduth, Councilmember

ATTEST:

Kathy Chambless, City Clerk

Before the Council of The Town of Kansas

March 2, 2015

Resolution No. 3-2-15A

"A RESOLUTION APPROVING AND ADOPTING THE CITIES OF CARBON HILL, CORDOVA, DORA, ELDRIDGE, JASPER, KANSAS, NAUVOO, OAKMAN, PARRISH, SIPSEY AND SUMITON AND WALKER COUNTY, ALABAMA, HAZARD MITIGATION PLAN."

WHEREAS, our lives, residential and commercial property, businesses, and infrastructure are at risk from a variety of natural hazards, including floods, thunderstorms, earthquakes, wildfire and tornadoes; and,

WHEREAS, Hazard Mitigation Planning will create an operational framework for reducing losses from these hazards in a cost-effective, environmentally sound, manner; and,

WHEREAS, a Hazard Mitigation Planning process was undertaken in order to maintain eligibility for multiple sources of Federal Mitigation Funding Programs that support loss-reduction activities; and,

WHEREAS, a Hazard Mitigation Planning Committee did analyze the hazards that threaten our community, have determined our vulnerability to those hazards and evaluated alternatives to minimize or eliminate their impact; and,

WHEREAS, the Town of Kansas has adopted policies and regulations that must be implemented following any incident that results in significant damages and that would impact rebuilding and redevelopment; and,

WHEREAS, as a benefit of being enrolled in the Community Rating System within the National Flood Insurance Program, formally establishing our Hazard Mitigation Plan contributes towards lowering the cost of flood insurance across the entire community.

NOW, THEREFORE, BE IT RESOLVED by the Kansas Town Council, meeting in regular session on this the 2nd day of March 2015, with a lawful quorum of said Council being present and with a majority of said Council voting in the affirmative as follows:

1. The Town of Kansas Council does hereby approve and adopt a Hazard Mitigation Plan that identifies protective and mitigation measures that will lessen the County's exposure to future hazard losses, while contributing to other community goals and objectives as identified in other community plans, policies and regulations.

2. The Town of Kansas did solicit public input throughout the development of the Hazard Mitigation Plan.

3. The Town of Kansas desires to keep the County in good standing in the National Flood Insurance Program (NFIP) and the NFIP's Community Rating System which reduces the cost of flood insurance for our constituents that either are required or desire to purchase it.

4. This Resolution shall be effective from and after its adoption.

Town of Kansas Council

By: Sheila Clark

Mayor

Lyle Tittle

Councilmember

Brenda Darty

Councilmember

Jim Martin

Councilmember

Cindy Wright

Councilmember

ATTEST:

Ashley Cole

Town Clerk

3-2-15

Date

State of Alabama

County of Walker

Town of Kansas

Town Of Nauvoo
176 McDaniel Avenue
P.O. Box 186
Nauvoo, Alabama 35578
Telephone/Fax (205) 697-5890
Email: nauvootownof@tds.net

Resolution before the Town of Nauvoo, Town Council, Nauvoo Alabama

March 3, 2015

Resolution No: 1-2015

"A RESOLUTION APPROVING AND ADOPTING THE TOWN NAUVOO, WALKER COUNTY, ALABAMA, HAZARD MITIGATION PLAN."

WHEREAS, our lives, residential and commercial property, businesses, and infrastructure are at risk from a variety of natural hazards, including floods, thunderstorms, earthquakes, wildfire and tornadoes; and,

WHEREAS, Hazard Mitigation Planning will create an operational framework for reducing losses from these hazards in a cost-effective, environmentally sound, manner; and,

WHEREAS, a Hazard Mitigation Planning process was undertaken in order to maintain eligibility for multiple sources of Federal Mitigation Funding Programs that support loss-reduction activities; and,

WHEREAS, the Town of Nauvoo did analyze the hazards that threaten our community, have determined our vulnerability to those hazards and evaluated alternatives to minimize or eliminate their impact; and,

WHEREAS, the Town of Nauvoo has adopted policies and regulations that must be implemented following any incident that results in significant damages and that would impact rebuilding and redevelopment; and,

WHEREAS, as a benefit of being enrolled in the Community Rating System within the National Flood Insurance Program, formally establishing our Hazard Mitigation Plan contributes towards lowering the cost of flood insurance across the entire community.

NOW, THEREFORE, BE IT RESOLVED by the NAUVOO TOWN COUNCIL, meeting in regular session on this the 3rd day of March 2015, with a lawful quorum of said COUNCIL being present and with a majority of said COUNCIL voting in the affirmative as follows:

1. The NAUVOO TOWN COUNCIL does hereby approve and adopt a Hazard Mitigation Plan that identifies protective and mitigation measures that will lessen the Town of Nauvoo's exposure to future hazard losses, while contributing to other community goals and objectives as identified in other community plans, policies and regulations.

2. The Town of Nauvoo, Town Council did solicit Public input throughout the development of the Hazard Mitigation Plan.

3. The Town of Nauvoo, Town Council desires to keep the Town of Nauvoo in good standing in the National Flood Insurance Program (NFIP) and the NFIP's Community Rating System which reduces the cost of flood insurance for our constituents that either are required or desire to purchase it.

4. This Resolution shall be effective from and after its adoption.

Town Of Nauvoo
176 McDaniel Avenue
P.O. Box 186
Nauvoo, Alabama 35578
Telephone/Fax (205) 697-5890
Email: nauvootownof@tds.net

Town of Nauvoo, Mayor and Town Council

By: Dwight A. Byram
Nauvoo Mayor, Dwight A. Byram

Mary Helen Mote
Council One, Mary Helen Mote

Denise Hall
Council Two, Denise Hall

Aaron Hopson
Council Three, Aaron Hopson

Eugene McDaniel
Council Four, Eugene McDaniel

Deborah Barton
Council Five, Deborah Barton

ATTEST:

Keith G. Sizemore — March 3, 2015
Nauvoo Town Clerk: Keith G. Sizemore — Date

State of Alabama
County of Walker

TOWN OF OAKMAN

February 23, 2015

Resolution No. 22315

"A RESOLUTION ADOPTING THE TOWN OF OAKMAN'S HAZARD MITIGATION PLAN"

WHEREAS, our lives, residential and commercial property, businesses, and infrastructure are at risk from a variety of natural hazards, including floods, thunderstorms, earthquakes, wildfire and tornadoes: and,

WHEREAS, Hazard Mitigation Planning will create an operational framework for reducing losses from these hazards in a cost-effective, environmentally sound, manner; and,

WHEREAS, a Hazard Mitigation Planning process was undertaken in order to maintain eligibility for multiple sources of Federal Mitigation Funding Programs that support loss-reduction activities; and,

WHEREAS, a Hazard Mitigation Planning Committee did analyze the hazards that threaten our community, have determined our vulnerability to those hazards and evaluated alternatives to minimize or eliminate their impact, completed this plan and submitted said plan to proper authorities.

NOW, BE IT RESOLVED by the Oakman City Council in its' regular meeting on February 23, 2015 approve and adopt this Hazard Mitigation Plan to be in effect from this date of adoption.

Dessie Weed Mayor

Rhonda Millwood Councilmember

Chrystal Lewis Councilmember

Marion C. Constant - Council member

Layah Woods - Council member

Attest:
DeAnna Woods
Town Clerk

Town of Parrish
PO Box 89
Parrish, Al 35580

RESOLUTION 4-14-15

A Resolution approving and adopting the Town of Parrish, Walker County, Alabama Hazard Mitigation Plan

WHEREAS, our lives, residential and commercial property, business and infrastructure are at risk from a variety of natural hazards, including floods, thunderstorms, earthquakes, wildfires and tornadoes; and

WHEREAS, Hazard Mitigation planning will create an operational framework for reducing losses from these hazards in a cost effective, environmentally sound manner; and

WHERAS, a Hazard Mitigation planning process was undertaken in order to maintain eligibility for multiple sources of Federal Mitigation Funding Funding Programs that support loss reduction activities; and

WHEREAS, A Hazard Mitigation Planning Committee did analyze the hazards that threaten our community and have determined out vulnerability to thoose hazards and evaluated alternatives to minimize or eliminate their impact; and

WHEREAS, the Town of Parrish has adopted policies and regulations that must be implemented following any incident that results in significant damages and that would impact rebuilding and redevelopment; and

WHEREAS, as a benefit of being enrolled in the Community Rating System within the National Flood Insurance Program, formally establishing our Hazard Mitigation Plan contributes to lowering the cost of Flood Insurance across the entire community.

NOW THEREFORE, BE IT RESOLVED by the Town of Parrish, meeting in regular session on this, the 14th day of April 2015, with a lawful quorum of said Council being present and with a majority of said Council voting in the affirmative as follows:

1. Town of Parrish does hereby approve and adopt a Hazard Mitigation Plan that identifies protective and mitigation measures that will lessen the Town's exposure to future hazards losses while contributing to other community goals and objectives as identified in other community plans, policies and regulations.

2. The Town of Parrish did solicit public input throughout the development of the Hazard Mitigation Plan.

3. The Town of Parrish desires to keep the Town in good standing in the National Flood Insurance Program (NFIP) and the NFIP's Community Rating System which reduces the cost of flood insurance for our constituents that either are required or desire to purchase it

4. This Resolution shall be effective after its adoption.

Adpoted and Approved:

Cedrick Ramsey, Mayor

DeBran Sudduth, Town Clerk
Attest

William Smith, Mayor Pro-Tem
District 1

Alice McBee, District 2

Heather Hall, Dist. 3

Jackie Shanklin, Dist. 4

Kathryn Thomas, Dist 5

Notarized

This 28th Day 20 April 2015

My Commission Expires on May 12, 2018

Before the Council of the Town of Sipsey, AL

Meeting: Special Call Meeting ***Date: April 15, 2015***

Adopting: Resolution No.: 2015-02

Replacing: Resolution No.: 092409

"A RESOLUTION APPROVING AND ADOPTING THE CITIES OF CARBON HILL, CORDOVA, DORA, ELDRIDGE, JASPER, KANSAS, NAUVOO, OAKMAN, PARRISH, SIPSEY AND SUMITON AND WALKER COUNTY, ALABAMA, HAZARD MITIGATION PLAN."

WHEREAS, our lives, residential and commercial property, businesses, and infrastructure are at risk from a variety of natural hazards, including floods, thunderstorms, earthquakes, wildfire and tornadoes; and,

WHEREAS, Hazard Mitigation Planning will create an operational framework for reducing losses from these hazards in a cost-effective, environmentally sound, manner; and,

WHEREAS, a Hazard Mitigation Planning process was undertaken in order to maintain eligibility for multiple sources of Federal Mitigation Funding Programs that support loss-reduction activities; and,

WHEREAS, a Hazard Mitigation Planning Committee did analyze the hazards that threaten our community, have determined our vulnerability to those hazards and evaluated alternatives to minimize and/or eliminate their impact; and,

WHEREAS, the Town of Sipsey has adopted policies and regulations that must be implemented following any incident that results in significant damages and that would impact rebuilding and redevelopment; and,

WHEREAS, as a benefit of being enrolled in the Community Rating System within the National Flood Insurance Program, formally establishing our Hazard Mitigation Plan contributes towards lowering the cost of flood insurance across the entire community.

NOW, THEREFORE, BE IT RESOLVED by the Council of the Town of Sipsey, meeting in a special call meeting session on this the 15th day of April 2015, with a lawful quorum of said Council being present and with a majority of said Council voting in the affirmative as follows:

1. The Council of the Town of Sipsey does hereby approve and adopt a Hazard Mitigation Plan that identifies protective and mitigation measures that will lessen the Town's exposure to future hazard losses, while contributing to other community goals and objectives as identified in other community plans, policies and regulations.

2. The Town of Sipsey did solicit public input throughout the development of the Hazard Mitigation Plan.

3. The Town of Sipsey desires to keep the Town in good standing in the National Flood Insurance Program (NFIP) and the NFIP's Community Rating System which reduces the cost of flood insurance for our constituents that either are required or desire to purchase it.

4. This Resolution shall be effective from and after its adoption, and shall replace any and/or all Resolutions referencing the Hazard Mitigation Plan prior to its adoption.

Town of Sipsey Council:

By:_____
Mayor, Rev. Belinda McCain

_____
Mayor Pro-Tem, Councilmember Michael Harris

LaTronda Hagler
Councilmember LaTronda Hagler

Stephanie Sanders
Councilmember Stephanie Sanders

Freda E. Vann
Councilmember Freda E. Vann

Willie Wiley
Councilmember Willie Wiley

ATTEST:

Carla R Williams 04/15/2015
Clerk Date

State of Alabama
County of Walker
Town of Sipsey

Sworn to and subscribed before me this 15th Day of April, 2015,
Notary Public: Carla R Williams My Commission Expires: _____

MY COMMISSION EXPIRES JUNE 14, 2017

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RESOLUTION NO. 2014-2015-03

WHEREAS, the City Council of the City of Sumiton, Alabama realizes the necessity of the Walker County Hazard Mitigation Plan and;

WHEREAS, the City Council of the City of Sumiton realizes the benefit of creating operational framework for reducing losses from a variety of natural hazards in a cost effective, environmentally sound manner;

NOW, THEREFORE BE IT RESOLVED by the City Council of the City of Sumiton, Alabama, to adhere to the guidelines set out in the Walker County Commission Hazard Mitigation Plan as outlined in the in Resolution No. _____ adopted in the regular session February 17, 2015.

APPROVED this the 3rd. day of March, 2015.

Mayor, City of Sumiton, Alabama

City Clerk

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