

**Macon County  
Missouri  
Natural Hazards Mitigation Plan  
Five Year Update**

**Section 1**

# Macon County, Missouri Natural Hazards Mitigation Plan Five Year Update

## Section 1

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# Natural Hazards Mitigation Plan Macon County, Missouri Five Year Update

## Introduction

Following the severe weather, tornado, and flood disaster that were declared in the spring of 2002 (DR-1412), Missouri's State Emergency Management Agency (SEMA) received flood buyout project proposals from 23 communities across the state. Fortunately, they were able to help some of these communities with federal mitigation grant funding provided through the Federal Emergency Management Agency (FEMA).

After November 1, 2004, communities like these will still be eligible for federal disaster public assistance and individual assistance, but will not be eligible for mitigation assistance unless they have an approved hazard mitigation plan on file. For the nearly 1,000 cities and 114 counties in Missouri, mitigation plans will be required for all Federally declared disasters such as flood, earthquake, dam failure, severe winter weather, tornado and windstorms, drought and extreme heat, and wildfire. Under the new rules for federal mitigation funding, local governments will be required to have Federal Emergency Management Agency (FEMA) approved hazard mitigation plans in place as a condition to receiving federal mitigation grant funding as of the 2004 deadline.

Under the initiative set forth by SEMA, the Missouri Association of Councils of Government (MACOG) agreed to meet the challenge of developing county and municipal plans throughout the state. The 19 regional planning commissions of MACOG provide an effective way for local governments to work together to share technical staff and address common problems in need of an area-wide approach. They also can effectively deliver programs that might be beyond the resources of an individual county or municipal government. The intent of the regional planning commissions in Missouri is to be of service to their member counties and municipalities and to bring an organized approach to addressing a broad cross-section of area-wide issues. They also are available to assist their member entities in coordinating the needs of the area with state and federal agencies or with private companies or other public bodies. SEMA's initiative further states that, due to time and funding limitations, the plans developed by Missouri's regional planning commissions should cover natural hazards only. Manmade and/or technological hazards are not addressed in this plan, except in the context of cascading damages.

Citizens and public organizations have participated in the process. This effort will be sustainable over the long term because it enjoys grassroots support that stems from a sense of local and individual ownership. Through SEMA's Scope of Work, Macon County contracted with Mark Twain Regional Council of Governments (MTRCOG) and participated fully in the preparation of the plan. Once this plan is approved, Macon County and cities within the County will be eligible for future mitigation assistance from FEMA and will be able to more effectively carry out mitigation activities to lessen the adverse impact of future disasters within Macon County.

Most of the RPC (Regional Planning Commissions) in Missouri were formed under Chapter 251 of the Revised Statutes of the State of Missouri. All regional councils in Missouri operate as "quasi-governmental" entities. In Missouri, regional planning commissions are advisory in nature, and county and municipal governments hold membership on a voluntary basis. The role of a regional planning commission varies across the state, depending upon the desires of the member counties and municipalities and their representatives. Nonetheless, the primary role of the regional planning commission is to provide a technical staff capable of providing sound advice to its membership and working for coordination of various planning and infrastructure needs among the various counties and municipalities, as appropriate.

The staff of the Mark Twain Regional Council of Governments (MTRCOG) prepared the Macon County Natural Hazard Mitigation Plan. Governor Warren E. Hearnes created MTRCOG, a member of MACOG, in 1968. The MTRCOG serves the counties of Marion, Ralls, Pike, Shelby, Monroe, Audrain, Macon, and Randolph as well as the incorporated municipalities within those counties.

## Assurance statements of compliance with Federal Regulations

This county/city mitigation plan complies with SEMA’s and FEMA’s planning guidance; Federal regulations, rules, guidelines, and checklists; Code of Federal Regulations; and existing Federal and State laws; and such other reasonable criterion as the President/Governor, Federal/State congresses and SEMA/FEMA may establish in consultation with city/county governments while the plan is being developed. This plan also meets the minimum planning requirements for all FEMA mitigation programs, such as the Flood Mitigation Assistance (FMA) Program, the Pre-Disaster Mitigation (PDM) Program, and the Hazard Mitigation Grant Program (HMGP), and where appropriate, other FEMA mitigation related programs such as the National Earthquake Hazards Reduction Program (NEHRP), the National Flood Insurance Program (NFIP) and the Community Rating System (CRS).

## Basis for planning authority

Section 322 of the Robert T. Stafford Relief and Emergency Assistance Act (Stafford Act), 42 U.S.C. 5165, as amended by the Disaster Mitigation Act of 2000 (DMA) (P.L. 106-390), provides for States, Tribes and local governments to undertake a risk-based approach to reducing risks to natural hazards through mitigation planning. FEMA has implemented the various hazard mitigation planning provisions through regulations at 44 CFR Part 201. These reflect the need for States, Tribal and local governments to closely coordinate mitigation planning and implementation efforts and describes the requirement for a State Mitigation Plan as a condition of pre- and post-disaster assistance, as well as the mitigation plan requirement for local and Tribal governments as a condition of receiving FEMA hazard mitigation assistance.

## Adoption by local governing bodies

Participation of local governing bodies as stakeholders is critical to successful mitigation implementation. Therefore, MTRCOG has collaborated with each local government and the six school districts within Macon County to assure participation and sense of ownership among local government officials. Members of each of the Hazard Mitigation Committees are listed below. Resolutions adopted by each of the local government bodies and the six school districts for Macon County are found in Section 5.

## Participants in Developing the Plan

The Macon County Natural Hazards Mitigation Action Plan is the result of a collaborative effort. The Hazard Mitigation Committees guided the process of developing the plan. Since Macon County has no university or college within its boundary, only county, city and school district committees were formed. The six school districts in the county participated in the county meetings. The communities of Atlanta, Ethel, and New Cambria elected to not participate in the Hazard Mitigation Plan.

## Participants Five Year Update

Participant	Worksheets/ Mitigation Action Items	Meetings	Email	Meetings with MTRCOG staff
Macon County	Yes	Yes	Yes	Yes
Bevier	Yes	Yes	Yes	Yes
Callao	Yes	Yes	Yes	Yes
Elmer	Yes	Yes	Yes	Yes
La Plata	Yes	Yes	Yes	Yes
Macon	Yes	Yes	Yes	Yes
South Gifford	Yes	Yes	Yes	Yes
Atlanta C-3 SD	Yes	Yes	Yes	Yes
Bevier C-4 SD	Yes	Yes	Yes	Yes
Callao C-8 SD	Yes	Yes	Yes	Yes
La Plata R-2 SD	Yes	Yes	Yes	Yes
Macon R-1 SD	Yes	Yes	Yes	Yes
Macon R-4 SD	Yes	Yes	Yes	Yes

Meetings with the Hazard Mitigation Committees served as the method to obtain input and identify priorities in developing goals for reducing risk and preventing loss from natural hazards in Randolph County. Articles in the local papers informed the public that hazard mitigation planning was occurring in their communities and they were invited to let their concerns be known. In accordance with Missouri’s “sunshine law” (RSMo 610.010, 610.020, 610.023, and 610.024), the public and neighboring communities were notified each time the Hazard Mitigation Committees met and the plan, or sections of the plan, was presented for review. Input from the general public was solicited through media outlets and various reminders at public gatherings. Several citizens attended the various jurisdictional meetings to give their input and feedback. (see committee members listed below.)

Prior to the first meeting with each jurisdiction, an e-mail and an attachment describing the process was sent to commissioner, mayor, chairman of the board or school superintendent. A request was made in that e-mail that a Hazard Mitigation Committee be set up for that jurisdiction, along with a committee chairman who would **send out notices to stakeholders and adjacent communities of all upcoming Hazard Mitigation meetings**. A copy of the e-mail and attachment, "The Process", can be found in Section 6. In addition, notices of meetings were posted in newspapers in the planning area. Also meeting times and places were posted on [www.talleyconsultants.com](http://www.talleyconsultants.com)

The planning committee was composed of members drawn from local entities, city and county representatives as well as citizens from each jurisdiction. Representatives worked to provide information about their jurisdictions through worksheets and meeting attendance which was utilized in the plan update. Input from the general public was also solicited prior to each meeting by the committee chairperson. Every effort was made by the Hazard Mitigation committees to include more individuals in the Five Year review and updating process. The Hazard Mitigation Committees met to determine action items that would address each of the plans goals, determine which organizations or groups within the county would be responsible for the action, an estimated timeline for the action, and to prioritize the action items. Meeting sign-in sheets can be found in Section 6. The names of committee members and the jurisdictions represented in the planning process are on the following pages.

In addition, the Hazard Mitigation Committees for the cities of Bevier, Callao, Elmer, La Plata, Macon city, and South Gifford, Atlanta C-3 School District, Bevier C-4 School District, Callao C-8 School District, La Plata R-1 School District, Macon R-1 School District and Macon R-4 School Districts determined mitigation items specific to their communities. The cities of New Cambria, Ethel, and Atlanta elected not to participate in the Macon County Hazard Mitigation Plan.

## **Participants and jurisdictions represented.**

### **Macon County**

Michael Shivley	Emergency Management Director
Joe Ivy	Manager of Operations
Ross Dutton	Fire Chief
Drew Belt	County Commissioner
Alan Wyatt	County Commissioner
Jon Duggins	County Commissioner
Michael Pickett	Terminal Manager
Brett Ponting	NEA Operator
Judy Rhuston	Macon County Health Dept.
Cindy Malloy	Macon County Health Dept.
Kevin Shoemaker	Sheriff Dept.

### **School Districts**

John Dunham	Macon R-4 SD School District Superintendent
Charles M. Stockton	Macon R-1 School District Superintendent
Craig W. Noah	La Plata R-2 School District Superintendent
Pamela Halstead	Callao C-8 SD School District Superintendent
Joan C. Patrick	Bevier C-4 SD School District Superintendent
William W. Perkins	Atlanta C-3 SD School District Superintendent

**Bevier**

Bill Cosby	Mayor
Trinette Paukert	City Clerk
Spencer Hendricks	Street Dept.
Wayne McGe	Supt Water and Sewer

**Callao**

Joyce Snodgrass	Mayor
Amanda Faith	City Clerk
Kathleen Ashenfelder	City Treasurer
Cawin Vose	Maintenance
Jim Walker	Past Mayor
Gayle Craig	Past Treasurer
Shirley Wright	Business Owner
Tom Summerfeldt	Fire Dept.
Grady Reed	Maintenance.
Cody Blackford	Police Officer

**Elmer**

Robert Aldinger	Fire Marshall
Crystal Allen	City Clerk
John Howe	Citizen
<b>Larry Fletcher</b>	Citizen
Lana Allen	Citizen
Cindy Koonce	Post master

**La Plata**

Lois Bragg	Mayor
Bobbie Jacques	City Clerk
Trent Perry	Alderman
Susan Walker	Alderwoman

**Macon**

Dale Begley	Mayor
Allan Muncy	City Administrator
Vicky McLeland	City Clerk
Roger rector	Assistant GM
Stephanie Wilson	General Manager Utilities
Renita Waldron	Office Manager
John Neel	Citizen
Larry Stutler	Environmental Health
Joe Evans	Code Enforcement Officer
Jim Steven	Radio Club
Scott Lucas	MMU
Mike Brittingham	MMU
Corey Blackford	Fire Dept.
Ross Dutton	Fire Dept.
Jeff Brown	Police Dept.
Gerald Pillard	Street Dept.
Jim McCann	Street Dept.
Jerry Chezam	ARES Emergency Coordinator
Mike Chambers	Samaritan Hospital
Olin Roper	Fire Dept.
Greg Young	Community Development
Ronny smith	MMU
Keith Carter	MMU
Steve Olinger	Police Dept.
Barry Perkins	Operator

Benjamin Miles	Operator
Ed Samel	Operator
Jeff Corbin	Operator
Jack Austin	Supervisor Water and Wastewater
Barbara Primm	Loch Haven
Virginia Lucas	NECAC
Mark Truitt	Macon Utility

### South Gifford

Dean Ahalt	Mayor
Tina Hubbard	Citizen
Larry Cassady	Citizen
Steve Jare	Citizen
Neil Vauhab	Citizen
Neva Attabery	Citizen
Lakota Attebery	Citizen

## Planning Process

Meetings with the Hazard Mitigation Committees served as the method to obtain input and identify priorities in developing goals for reducing risk and preventing loss from natural hazards in Macon County. Articles in the local papers informed the public that hazard mitigation planning was occurring in their communities and they were invited to let their concerns be known. The Hazard Mitigation Committees met to determine action items that would address each of the plans goals, determine which organizations or groups within the county would be responsible for the action, an estimated timeline for the action, and to prioritize the action items.

In accordance with Missouri's "sunshine law" (RSMo 610.010, 610.020, 610.023, and 610.024), the public was notified each time the Hazard Mitigation Committees met and the plan, or sections of the plan were presented for review. Meeting dates and locations were also posted on [www.talleyconsultants.com](http://www.talleyconsultants.com). Input from the general public was solicited through media outlets and various reminders at public gatherings. Prior to the first meeting with each jurisdiction, an e-mail and an attachment describing the process was sent to commissioner, mayor, chairman of the board or college president. A request was made in that e-mail that a Hazard Mitigation Committee be set up for that jurisdiction, along with a committee chairman who would **send out notices to stakeholders and adjacent communities of all upcoming Hazard Mitigation meetings**. A copy of the e-mail and attachment, "The Process", can be found in Section 6

The planning committee was composed of members drawn from local entities, city and county representatives as well as citizens from each jurisdiction. Representatives worked to provide information about their jurisdictions through worksheets and meeting attendance which was utilized in the plan update. Input from the general public was also solicited prior to each meeting by the committee chairperson. Every effort was made by the Hazard Mitigation committees to include more individuals in the Five Year review and updating process. Meeting sign-in sheets can be found in Section 6.

## 5 Year Review, Update and Revision Process

All Hazard Mitigation Plans are required to be revised every five years after initial approval by FEMA. The first Macon County Multi-Jurisdiction Natural Hazard Mitigation Plan was finalized in April 2006. Macon County and the cities of Atlanta, Bevier, Callao, Elmer, Ethel, La Plata, Macon city, and South Gifford, Atlanta C-3 School District, Bevier C-4 School District, Callao C-8 School District, La Plata R-1 School District, Macon R-1 School District and Macon R-4 School District were contacted to form Hazard Mitigation Committees.

Three committee meetings were held with each jurisdiction to review and update the 2006 plan. These meetings were held in April through December, 2011 and November 2013 through September 2014. A final meeting was held in September 2014 to discuss the plan maintenance and implementation and a review of the entire plan.

At the **initial meeting**, the committee reviewed and discussed the applicability of each section in the original Hazard Mitigation Plan and opted to update all sections of the plan and re-organize and simplify the plan.

**Section 1** will be updated with new dates, new Hazard Mitigation Committee Members, and the process to update and review the original plan for this Five Year Update. Also the committees completely revamped the Goals and Objectives to be met by this plan.

**Section 2** will be updated with the county profile as needed along with storm history updated for the last five years.

**Section 3** will be updated to include the hazards of Levee Failure, and Sinkholes. The original Hazard Profiles Worksheets will be reviewed and updated, new Hazard Profile Worksheets will be created for the new hazards considered. Also the repetitive losses were updated, and Vulnerability Worksheets will be updated.

**Section 4** contains the Mitigation Action Items that the original Hazard Mitigation Committee developed for, the County; these action items will be reviewed in detail and revised and updated as needed.

**Section 5** will be updated with a signed Resolution from the County, each of the cities, and the six school districts.

**Section 6** will be updated with new storm history from the national weather service.

At the **first meeting**, March 14, 2011, the committee members were given a questionnaire and map and asked to provide updated information on critical response capabilities and assets within their communities for the next meeting.

At the **second committee meeting**, April 5, 2011, the committee reviewed the Introduction, Hazard Risk and Assessment, and Profile sections. Utilizing the committee's information and suggestions, these portions of the plan were updated. The hazards of Sinkholes, and Levee Failure were added to the hazards discussion in this revision and this section was updated with historical data as well as the latest storm and hazard records. The Profile section was updated the most recent U.S. Census data. The committee also reviewed and updated the information on all capabilities and vulnerabilities.

The **third meeting** and final meetings, August 2011 and again in December 2013 through July 2014 2014, was held to discuss the mitigation action items developed in the 2006 plan and if they were completed, needed revision or were to be deleted, and any new action items that the committee felt were needed. The result of those meetings is summarized in the 5 Year Mitigation Action Matrix. The committee 'was focused on plan maintenance and implementation and review of the entire plan. Annual assessments will be conducted by the County's Emergency Management Director and will be open to the public. Press releases in local newspapers will encourage public participation in the assessment process. Plan copies will be publicly accessible in each local jurisdiction for review and comment by county citizens.

When the drafts of the final plan was submitted to SEMA and FEMA for review the draft of the plan was also posted on the website [www.talleyconsultants.com](http://www.talleyconsultants.com) and each committee was notified by phone and/or e-mail. Additional comments, corrections or additions were solicited from each committee. All changes, corrections or additions received from the committee members were then included in the plan and re-submitted to SEMA / FEMA. Additional comments and feedback were again requested from the public, however, no additional feedback was given by the public.

## Five-Year Action Plan Matrix

The Mitigation Plan contains a five-year action plan matrix, background on the purpose and methodology used to develop the mitigation plan, a profile of Macon County, sections on the natural hazards that occur within the county, profiles Macon County and the cities of Atlanta, Bevier, Callao, Elmer, Ethel, La Plata, Macon city, and South Gifford, Atlanta C-3 School District, Bevier C-4 School District, Callao C-8 School District , La Plata R-1 School District , Macon R-1 School District and Macon R-4 School District hazard mitigation actions developed by each of the those incorporated communities.

The Macon County Natural Hazards Mitigation Action Plan includes resources and information to assist county residents, public and private sector organizations, and others interested in participating in planning for natural hazards. The action items address multi-hazard issues, as well as activities for flood, tornadoes, severe thunderstorms, severe winter weather, earthquake, dam failure, extreme heat, drought, levee failure, sinkholes, and wildfire hazards.

## Evaluation of Action Items

The mitigation action items are classified as ongoing or given a specified timeline. The plan covers actions planned for the next five (5) years. The Hazard Mitigation Committees will meet on a regular basis to monitor progress on the Mitigation Actions within their communities. This plan will be updated and re-evaluated at the end of the first five years.

## Timeframe for preparation of Five Year Update

Starting in April 2011 meetings were held with the County Commissioners and the City Councils to explain the process of preparing the Hazard Mitigation Plan for Macon County. At those initial meetings, the Hazard Mitigation Committees were formed. News articles were published in the local papers, the Macon Chronicle Herald and the LaPlata Press describing the format and process of preparing the Hazard Mitigation Plan. Meeting dates and location were also posted on [www.talleyconsultants.com](http://www.talleyconsultants.com) Regular meetings were held with the Hazard Mitigation Planning Committees to discuss the hazards, their effects on the communities, and possible mitigation ideas.

## The plan timeline included the following:

- Hazard identification, risk, capability and vulnerability assessments by August 2011
- Mitigation goals, objectives, actions and strategies by December 2013
- Rough Draft submitted to SEMA by September 2014\*\*\*
- Finalized plan submitted to SEMA
- Plan approved by SEMA/FEMA

\*\*\* Delay in plan revisions due to health problems of author.

## EXECUTIVE SUMMARY

### The Hazard Mitigation Plan Mission Statement

This plan will not deal with those events that happen on a daily basis, which do not cause widespread problems and are handled routinely by the county and city officials. However, this plan will deal with the natural disasters of flooding, earthquakes, drought and extreme heat, severe winter weather, severe storms and tornados, dam failure, wildfires, levee failure, landslide, and sinkholes. However, this plan will deal with the natural disasters of flooding, earthquakes, drought and extreme heat, severe winter weather, severe storms and tornados, dam failure, wildfires, levee failure, landslide, and sinkholes. The occurrence of any of the above could create needs and cause suffering that the victims cannot alleviate without assistance, and that requires a commitment of governmental resources.

The mission of the Macon County Natural Hazards Mitigation Plan is to promote sound public policy designed to protect citizens, critical facilities, infrastructure, private property, and the environment from natural hazards. This can be achieved by increasing public awareness, documenting the resources for risk reduction and loss-prevention, and, identifying activities to guide the county towards building a safer, more sustainable community.

### Definition of Mitigation

Mitigation is defined as "...sustained (long-termed) action that reduces or eliminates long-term risk to people and property from natural hazards and their effects." It describes the ongoing effort at the Federal, State, local and individual levels to lessen the impact of disasters upon our families, homes, communities and economy. (HMP Handbook p.15)

### Multi-Hazard Mission, Goals, Objectives, Action Items and Strategies

This section describes the framework that focuses the plan on developing successful mitigation strategies. The framework is made up of four parts: the **Mission, Goals, Objectives and Action Items and Strategies**.

**Mission:** The mission of the Macon County Natural Hazards Mitigation Plan is to promote sound public policy designed to protect citizens, critical facilities, infrastructure, private property, and the environment from natural hazards. This plan will work in conjunction with plans in place listed at the end of the community profiles.

**Goals:** The plan goals describe the overall direction that Macon County agencies, organizations, and citizens can take to minimize the impacts of natural hazards. The goals are stepping-stones between the broad direction of the mission statement and the specific recommendations that are outlined in the action items.

**Objectives:** The plan objectives are significant results that contribute to the achievement of the plan goals. The objectives will be fulfilled by a combination action items and strategies that will be completed within a specific time frame.

**Action Items and Strategies:** The action items are a listing of activities in which county agencies and citizens can be engaged to reduce risk. Each action item includes an estimate of the timeline and strategies for implementation. When developing mitigation strategy, the planning committee followed several guidelines for selection of action items. They looked for action items that were socially acceptable, technically feasible, admistratively executable by local communities, politically acceptable, legally implemented by county, economically feasible and environmentally sound (STAPLEE). The planning committee eliminated no action items after the STAPLEE guidelines were followed.

## Mitigation Plan Goals/ Objectives

**Goal 1** Public Awareness—Using a variety of communications avenues to increase the citizens' awareness of and promote education about the natural hazards that they may face, their vulnerability to these hazards, and how to lessen the effect of future natural hazards.

Objective 1 Provide informational brochures, websites and programs to educate the public about hazards that may affect them in the future.

Objective 2 Publicize appropriate mitigation measures for future natural hazards.

Objective 3 Develop and implement education and outreach programs to increase public awareness of the risks associated with natural hazards.

**Goal 2** Strengthen communication and coordination between local governments, emergency personnel, public agencies, and citizens to mitigate the effects of future natural hazards.

Objective 1 Build and support local partnerships to lessen the effects of natural hazards.

Objective 2 Encourage active participation and responsibility of elected officials and emergency personnel in mitigation planning and activities.

Objective 3 Balance watershed planning, natural resource management, and land use planning with natural hazard mitigation to protect life, property and the environment.

**Goal 3.** Investigate, implement, maintain, and enforce mitigation policies and programs that limit the impact of natural hazards: on the loss of life; on new and existing properties; on natural resources; on infrastructure; and on the local economy.

Objective 1 Incorporate mitigation procedures and planning into the community.

Objective 2 Encourage private involvement in mitigation activities.

Objective 3 Pass and/or adopt ordinances, codes and standards to enforce mitigation activities.

## Organization of the Mitigation Action Items

The mitigation plan identifies action items developed through data collection and research. Action items were determined that pertained to all the natural hazards that face Macon County. To help ensure active implementation, each action item includes information on the timeline and coordinating organizations. Upon implementation, the coordinating organizations may look to partner organizations for resources and technical assistance.

- **Coordinating Organization.** The coordinating organization is the organization that is willing and able to organize resources, find appropriate funding, or oversee activity implementation, monitoring, and

evaluation. Coordinating organizations may include local, county, or regional agencies that are capable of or responsible for implementing activities and programs.

- **Timeline.** Action items include both short and long-term activities. Each action item includes an estimate of the timeline for implementation.
- **Funding Sources.** Local funding or Federal or state grants.
- **Priority.** The Mitigation Action Items and Strategies are listed in this section in order of priority for each hazard and summarized in a Five Year Matrix at the end of this section.

## **Economic Analysis of Mitigation Projects--Cost Benefit Review**

**Cost-Benefit Review** – takes into account the monetary and non-monetary costs and benefits associated with each action. Conducting a benefit/cost review for a mitigation activity can assist communities in determining whether a project is worth undertaking now, in order to avoid disaster-related damages later. Determining the economic feasibility of mitigating natural hazards can provide decision makers with an understanding of the potential benefits and costs of an activity, as well as a basis upon which to compare alternative projects.

Utilizing the previous Natural Hazards Mitigation Plan, the Macon County Hazard Mitigation Committee has a comprehensive list of possible hazards and ways to mitigate their impact. The benefit/cost is determined by considering the number of citizens served by the action, the long-term effects of said action, and a number of other factors.

The Cost-Benefit Review was a very important step in the prioritization of mitigation actions found in this plan. Each jurisdiction looked at each mitigation action they discussed and answered a few questions:

- How many people in various demographics could be affected by the Hazard that the action addresses?
- What is the extent or the degree that a natural hazard event could affect a particular area?
- How much property damage might occur and what will be the resulting monetary cost?
- How many properties or physical assets might have loss of use?
- How many people might lose their life?
- How many people might be injured?
- How can each action item be implemented?
- What are the possible sources of funding available for the implementation?

The information needed to answer these questions effectively can be found throughout the plan. This information assisted each jurisdiction in answering these questions. Once they used this procedure, each jurisdiction was able to prioritize their mitigation actions. Once jurisdictions had completed the Cost-Benefit Review, they then had to take into account other variables such as the ability to implement actions and funding considerations to complete the prioritization process.

## **Continued Public Involvement**

Macon County is dedicated to involving the public directly in the continual review and updates of the Hazard Mitigation Plan. Copies of the plan will be catalogued and kept at all of the public libraries in the county as well as on [www.talleyconsultants.com](http://www.talleyconsultants.com). The existence and location of these copies will be publicized quarterly in the county newspapers, the Macon Chronicle Herald and the LaPlata Press. The plan also includes the members of the Hazard Mitigation Committee who are responsible for keeping track of public comments on the Plan.

## History of Macon County Hazard Mitigation Plan

In 2006, the first Hazard Mitigation Plan was approved by FEMA making Macon County eligible to apply for pre-disaster mitigation grants and the mitigation portion of post-disaster grant funds.

The Macon County Hazard Mitigation Plan 2006 was written to be a working document to guide participating jurisdiction in Macon County to work to mitigate potential hazards. The plan was publically available on two websites; <http://www.marktwaincog.com> and <http://www.talleyconsultants.com>. The maintenance of the original plan called for annual reviews by the Hazard Mitigation Committee. These formal meetings did not take place for various reasons of scheduling, timing, lack of personnel and time. While the annual reviews did not occur, many activities were implemented since the adoption of the original plan. Some of the mitigations actions are listed below are identified as completed. (See Section 4 for a complete listing)

- Warning sirens have been installed in every incorporated city in the county and tested monthly.
- An off-site secure storage was built for county records.
- A second EOC was established and equipped.
- Ordinance was passed to not allow development in floodplains.
- All burning must be coordinated by Fire Departments and/ or 911.
- EAS (Early Alert System) Code Red was established throughout the county.
- Hiring of full time EMD (Emergency Management Direction) to coordinate mitigation activities.

The following are among the mitigation actions due to their nature will continue as ongoing actions:

- Maintain Mutual Aid agreements
- Establish formal agreements with appropriate shelter locations throughout the county
- Participate in Table-top exercises.
- Develop public education with respect to hazard awareness.
- Ensure that all school buses have two-way communication.
- Promote the use of NOAA radios

## Implementation, Monitoring, and Evaluation, and Revision

The Macon County Hazard Mitigation Committees will be responsible for coordinating implementation of Plan action items and undertaking the formal review process and producing a plan revision every five years. The Hazard Mitigation Committees will ensure that the Macon County Natural Hazards Mitigation Plan remains an active and relevant document.

Each summer the county EMD (Emergency Management Director) will conduct annual review and evaluation of the Macon County Natural Hazards Mitigation Plan. Attending the meeting will be the EMDs for all the communities in Macon County and representatives from the school Districts. It will be a public meeting announced on the county website and all interested citizens will also be invited to attend and voice their opinions and concerns. The plan will be evaluated on an annual basis to determine the effectiveness of programs, and to reflect changes in land development or programs that may affect mitigation priorities. The evaluation process includes a firm schedule and timeline, and identifies the local agencies and organizations participating in plan evaluation. The Hazard Mitigation Committee members will be responsible for contacting and organizing the annual meeting. Committee members also will be responsible for monitoring and evaluating the progress of the mitigation strategies in the Plan.

To ensure that the Macon County Natural Hazards Mitigation Plan remains and active and relevant document, the following process will be implemented. Each spring prior to the annual county-wide meeting, the emergency management director for each jurisdiction will hold a review and update meeting within their jurisdiction prior to the county-wide hazard mitigation meeting, The planning committee directed to review the plan shall be composed of representatives from various governmental agencies, County officials, City employees,

utility service employees, emergency responders and planners, regional planners, and any concerned county residents. This committee shall evaluate of the effectiveness and appropriateness of the plan, and will recommend, as appropriate, any required changes or amendments to the plan.

The EMD will be responsible for monitoring and evaluating the progress of the mitigation strategies in the plan. They will review each goal and objective to determine their relevance to changing situations in the county, as well as changes in State and Federal policy, and to ensure they are addressing current and expected conditions. They also will review the risk assessment portion of the plan to determine if this information should be updated or modified. The parties responsible for the various implementation actions will report on the status of their projects and will include which implementation process worked well, any difficulties encountered, how coordination efforts were proceeding, and which strategies should be revised. Hazard mitigation actions included for each goal and objective will be reviewed on an annual basis by the EMD. All meetings of the Hazard Mitigation committee are public and posted per the Sunshine Law of the State of Missouri. The Mark Twain Regional Council of Governments will continue to host any hazard mitigation announcements or information, as well as a copy of the latest plan available at all times.

## **Incorporation into Existing Planning Mechanisms**

Macon County currently utilizes comprehensive land use planning, capital improvements planning to guide and control development within the county. After Macon County officially adopts the Hazard Mitigation Plan, these existing mechanisms will have mitigation strategies integrated into them.

Upon adoption of the Macon County Natural Hazards Mitigation Plan, the plan will serve as a baseline of information on the natural hazards that impact Macon County and the cities of Macon County and the cities of Atlanta, Bevier, Callao, Elmer, Ethel, La Plata, Macon city, and South Gifford, Atlanta C-3 School District, Bevier C-4 School District, Callao C-8 School District , La Plata R-1 School District , Macon R-1 School District and Macon R-4 School District. These mitigation goals and objectives will help local governments and other organizations in the Macon County plan for natural hazard mitigation in their own planning documents. The meetings of the Hazard Mitigation Committees will provide an opportunity for committee members to report back on the progress made on the integration of mitigation planning into the county and city planning documents and procedures.

Below is a listing of some of the current planning documents that will be used:

**Macon County Comprehensive Plan**

**Macon County Local Emergency Operations Plan**

**Macon County Emergency Operations Plan,**

**Hazardous Materials Response, LEPC**

**Building Codes**            City of Macon

**Crisis Management Plan**    Atlanta C-3 School District, Bevier C-4 School District, Callao C-8 School District , La Plata R-1 School District , Macon R-1 School District and Macon R-4 School District

## **Mitigation Programs**

Mitigation entails taking actions to reduce or eliminate injury, loss of life, and property damage from natural hazards. The first Macon County Natural Hazards mitigation plan was implemented in 2006. Through public involvement and planning, the county has adopted this policy. Though the focus remains on rescue and response, a number of mitigation efforts have been implemented.

- Macon County's Emergency Plan and LEPC contain mitigation measures.
- Macon County receives NWS warnings, and the sheriff's office is staffed on a 24-hour basis by dispatch personnel. Additionally, the county has implemented the use of a text messaging warning system through cell phones. For those outside of incorporated areas, this measure has increased both awareness and the effectiveness of the county's warning system. However, large-scale warning equipment (sirens, etc.) is still limited to the county's municipalities and the means used to alert each respective community varies. The use of local media remains prevalent as an effective warning system.
- Macon County works collaboratively with all municipalities in identifying key sites in each incorporated area as well as sharing information regarding any/all natural threats with those entities that are interested in hazard response and mitigation.
- Macon County works conjunctively with local media (newspapers, radio, cable providers, and Internet service providers) to both provide information to the public and highlight mock disasters in an effort to raise public awareness about natural hazards and the planned responses. Various trainings, including weather spotting courses, have been offered to help mitigate the effects of severe weather upon the county's citizenry.
- All Macon County schools have written and compiled an all-hazards plan which includes mitigation measures for natural disasters.
- The Emergency Management Director keeps a working reference library of all materials regarding disaster response, natural hazard mitigation, and rescue/evacuation plans. The reference material is freely shared with the public as well as interested municipal official
- Code Red EAS has been implemented countywide and all citizens are encouraged to sign up for alerts.
- EMDs and emergency personnel, police, and firefighters from all communities are encouraged to participate in the several table-top exercises and drills that the county and state conducts each year