

**Pike County
Missouri
Natural Hazard Mitigation Plan
Five Year Update**

Section 6

Louisiana

Pike County, Missouri

Table of Contents

Section 6 Louisiana

City Profile	1
History of Louisiana	1
Form of Government	1
Existing Community Plans	2
Floodplain Map	4
Population and Demographics	6
Utilities	6
Employment	7
Education	8
Vulnerabilities	9
Public and Critical Facilities	9
Health Care Facilities	9
Long Term Care/Nursing Homes/Senior Housing	9
Licensed Child Care	10
Schools	10
Trailer Courts	10
Hazardous Materials	10
Map	11
Capabilities	12
Public and Critical Facilities	12
Law Enforcement and Fire Departments	12
Health Care Facilities	12
Emergency Operations Centers	12
Shelters	13
Emergency Services	13
In-Place Plans	14
Map	15
Mitigation	16
Definition of Mitigation	16
Multi-hazard Mission, Goals, Objectives, Action Items & Strategies	16
Mission Statement	17
Mitigation Plan Goals	17
Mitigation Plan Objectives	17
Mitigation Action Items And Strategies	19
Organization of Mitigation Items	19
Economic Analysis	19
Public Participation	20
5 Year Review, Update, and Revision Process	20
Hazard Mitigation Committee Members	21
Staplee Evaluation of Action Items	22
Five Year Matrix Mitigation Action Summary Sheets	26

City Profile----

History of Louisiana

Louisiana, Missouri, the oldest town in Pike County, is located in the hills of the eastern part of Pike County on the Mississippi River. The town's National Register of Historic Places business district nestles in the hills, which gently rises from the Mississippi. Louisiana has a variety of Victorian commercial buildings that date to its heyday in the mid to late 19th century. These treasures of Victorian architecture are said to make up the most intact historic business district in Missouri. Louisiana also excels in early to late Victorian domestic architecture. There are a wide variety of homes from simple cottages to antebellum Greek Revival and Italianate mansions to late Victorian showplaces. Several of these homes are individually listed on the National Register of Historic Places.

People from North and South Carolina, Virginia, and Kentucky first settled Louisiana in 1811. The town was laid out in 1818 with wide streets and square blocks for homes and businesses. In 1819 Louisiana was designated the County Seat for Pike County and a courthouse and jail were constructed, however, in 1821 the County Seat was moved twelve miles to the west to the town of Bowling Green. The town's population grew to over 4000 by the 1880's.

Early in its life the town of Louisiana benefited from its location on the Mississippi. Commerce and trade were abundant until the demise of the river traffic brought on by the rapid growth in the railroads. Louisiana maintained several thriving industries. More than a dozen companies were involved in the production of tobacco products up until the particular tobacco grown in the region fell out of favor. A button factory that harvested clams from the Mississippi and turned their shells into pearl buttons was also an active business.

Louisiana's most famous business is the Stark Brothers Nursery. The Stark nursery business can trace its beginnings to the early 19th century when Judge James Hart Stark of Kentucky settled on land at the western edge of Louisiana and began grafting scions he carried from Kentucky onto native crabapple trees. Stark Brothers Nursery introduced the famous red delicious and yellow delicious apple varieties, which became two of the most widely grown apples in the world. Stark Brothers one of the oldest nurseries in the country is still a thriving enterprise and the pride of Louisiana.

Louisiana's historic domestic and commercial architecture is a treasure recognized by its citizens. Efforts are ongoing in the restoration and the preservation of one of the loveliest towns on the Mississippi. The aesthetic and commercial value of its architectural legacy is a significant asset of the city of Louisiana.

Form of Government

Louisiana is a Third Class City governed under RSMo Title VII-Section 77 with four wards, and two Councilpersons elected from each ward by the qualified voters thereof, one member being elected each year, a Mayor, who is elected by the qualified voters of the city Of Louisiana every four years and a City Superintendent, who is employed at will and appointed by the Major and confirmed by the City Council annually.

In-Place Plans

Upon adoption of the Pike County Natural Hazards Mitigation Plan, the plan will serve as a baseline of information on the natural hazards that impact Pike County and the city of Louisiana. These mitigation goals and objectives will help local governments and other organizations in the Pike County plan for natural hazard mitigation in their own planning documents. The meetings of the Hazard Mitigation Committee will provide an opportunity for committee member 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:

Zoning

Subdivision

Land Use Management Plans

Building Codes----BOCA / ICC

Louisiana Emergency Operations Plan:

The EOP is a multi-hazard, functional plan, broken into three components:

1. A basic plan that serves as an overview of the jurisdiction's approach to emergency management.
2. Annexes that address specific activities critical to emergency response and recovery.
3. Appendices that support each annex and contain technical information, details, and methods for use in emergency operations.

The plan also defines lines of succession for continuity of government during a disaster as well as preservation of records and the logistics of administrative functions such as procedures for obtaining temporary use of facilities. The EOP is reviewed annually and revised as needed.

Floodplain Development Procedures:

The purpose of this ordinance is to promote the public health, safety and general welfare, minimize losses, and to establish and maintain the city's eligibility for participation in the National Flood Insurance Program (NFIP). The Louisiana Floodplain Map is on following page.

Mitigation Programs

Mitigation entails taking actions to reduce or eliminate injury, loss of life, and property damage from natural hazards. Because of Pike County’s location on the Mississippi River, the majority of its mitigation efforts focus on floodplain management regulations and participation in the National Flood Insurance Program. The first Pike County Natural Hazards mitigation plan was implemented in 2004. 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.

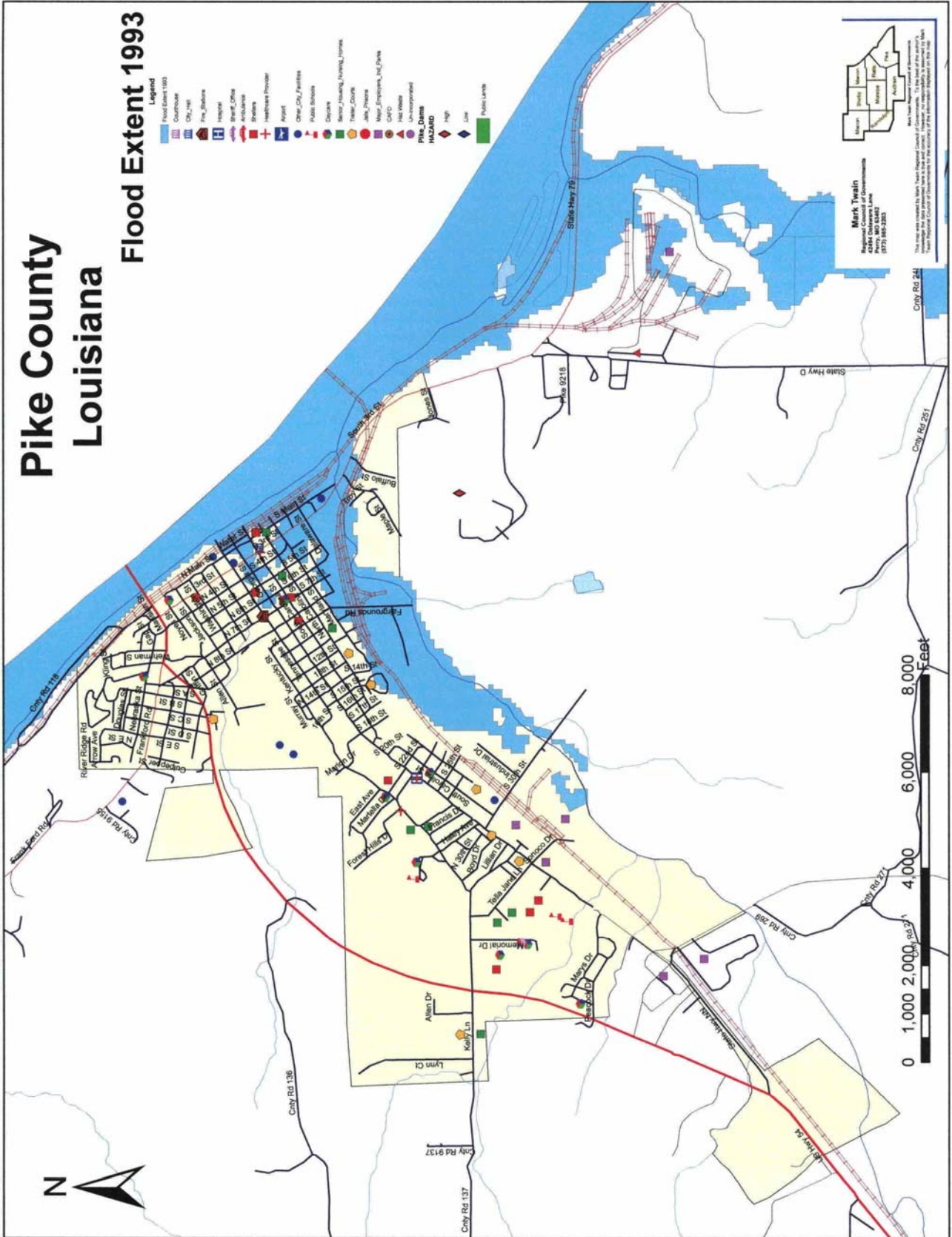
- The County participated in a federally funded property acquisition program following the 1993 flood. Those residents who previously resided in the floodplain were offered financial incentives to move out of the floodplain through a buy-out process of their property.
- Pike County is currently cooperating with the U.S. Corps of Engineers regarding levee systems along the Mississippi River to determine what actions are needed to recertify the levees and keep those areas affected in the National Flood Insurance Program (NFIP).
- Pike County’s Emergency Plan and LEPC contain mitigation measures.
- Pike 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.
- Pike 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.
- The 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 Louisiana 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 officials.

Louisiana’s Participation in NFIP (National Flood Insurance Program)

	Date joined NFIP	Policies in Force	Insurance in Force	Number of claims	Total Payments 1978-2009
Louisiana	2/8/74	50	\$3,610,200	--	--

Pike County Louisiana

Flood Extent 1993



Population and Demographics

Louisiana has a diverse population by age. The median age in Louisiana is 39.6 years. The population under the age of five years is 6.4%. Senior citizens, those over the age of 65, constitute 21.5% of Louisiana’s total population compared to 13.5% for the state of Missouri. These two groups, along with the children of school age will be given special consideration when planning mitigation actions for Louisiana.

City of Louisiana Population Density	2000 Census	
	Number	Percent
Total Persons	3,863	100
Number of Households	1,590	xx
Average Household Size	2.35	xx
Source: 2000 U.S. Census		

City of Louisiana Population by Age Group	2000 Census	
	Number	Percent
Under 5 years	247	6.4
Between 5 and 19 years	792	20.5
Between 20 and 64 years	1992	51.6
65 years and over	832	21.5
Median age	39.6 years	xx
Source: 2000 U.S. Census		

Utilities

Water	Supplied by: City of Louisiana
Wastewater	Supplied by: City of Louisiana
Electricity	Supplied by: AmerenUE
Gas	Supplied by: AmerenUE
Cable TV	Supplied by: U.S. Cable

Employment

Louisiana has a diverse work force as seen in the table below. The 2000 Census records show that Louisiana had an unemployment rate of 5.8% out of total work force of 1812 persons. These workers had a mean travel time to work of 20.9 minutes and their median household income was \$30,467. The statistics show that over 24% of the work force is professional or management. An additional 36% is in service, sales and office employment. Construction, maintenance, production and transportation account for an additional 38%. Louisiana has seven major employers (over 50 employees) within or near the city limits. Many workers commute to other parts of Pike, Lincoln, and Ralls counties.

City of Louisiana	2000 Census	
Occupation	Number	Percent
Management, Professional	416	24.3
Service occupations	288	16.9
Sales and office occupations	322	18.9
Farming, fishing, and forestry	35	2.1
Construction and maintenance	149	8.7
Production and transportation	496	29.1
Total civilians employed	1,706	xx
Unemployment rate	106	5.8
Mean Travel time to work	20.9 minutes	xx
Median Household Income	\$30,467	xx
Persons below poverty level	783	20.4
Source: 2000 U.S. Census		

Major Employers

Employer	# of Persons Employed	City of Employment
Stark Bros, Horticulture	200	Louisiana
Stark Bros. Fulfillment	300	Louisiana
Dyno-Nobel / Hercules	238	Louisiana
Pike County Memorial Hospital	180	Louisiana
Arrow Industries, Inc.	130	Louisiana
Home Products Industries	130	Louisiana
Allparts, Inc.	100	Louisiana

Education

The tables below show Louisiana's education profile. At least 70 % of those over 25 years of age have at least earned their high school diploma. Thirty percent of those have gone on to obtain an Associate, Bachelor, or advanced college degree.

City of Louisiana	2000 Census	
Education Profile	Number	Percent
Total Persons over 25 years old	2,622	100
Less than High School Degree	779	29.7
High School Graduate	1,055	40.2
Some college	374	14.3
Associate or Bachelor Degree	295	11.2
Post-graduate or Professional Degree	119	4.5
Source: 2000 U.S. Census		

City of Louisiana	2000 Census	
Educational Enrollment	Number	Percent
Total Persons enrolled in school	834	100
Nursery, pre-school	63	7.6
Kindergarten	37	4.4
Elementary (1 – 8)	390	46.8
High School (9 – 12)	255	30.6
College or graduate school	89	10.7
Source: 2000 U.S. Census		

Louisiana has one public elementary school, one middle school, one high school and one private school. In addition there is an alternative education facility at 110 Frankford Road.

Schools

Name	Location	Students	Staff
Louisiana #2			
Louisiana Elementary	500 Haley Ave., Louisiana	371	36
Louisiana Middle	3321 W. Georgia, Louisiana	197	24
Louisiana High	3321 W. Georgia, Louisiana	237	27
Alternative Education	110 Frankford Rd., Louisiana	20	2
Faith Baptist	2101 W. Georgia, Louisiana	20	4

Vulnerabilities

Public and Critical Facilities

Name	Location	City
U.S. Facilities		
U.S. Post Office	522 Georgia	Louisiana
Missouri Facilities		
MODOT Maintenance	Highway 54	Louisiana
Pike County Facilities		
Road Maintenance Shed	201 N. 5 th St.	Louisiana
City Of Louisiana Facilities		
Louisiana City Hall	202 S. 3 rd St.	Louisiana
Louisiana Police Department	202 S. 3 rd St.	Louisiana
Louisiana Fire Department	619 Tennessee.	Louisiana
Louisiana Street Department	205 S. 30 th St.	Louisiana
Louisiana Library	121 N. 3 rd St.	Louisiana

Health Care Facilities

Name	Location	# Units
Pike County Memorial Hospital	2305 W. Georgia, Louisiana	45 beds
Louisiana Health Clinic	2305 W. Georgia, Louisiana	xx
Pike Medical Group	S. 3 rd St., Louisiana	xx

- Other Hospitals---Hannibal Regional Hospital, Hannibal.
Lincoln County Hospital, Troy

Long Term Care and / or Nursing Homes / Senior Housing

Name	Location	# Beds
Lynn's Heritage House	800 Kelly, Louisiana	44 units
Maple Grove Lodge	2407 Kentucky, Louisiana	90 units
Smith-Barr Manor	Louisiana---currently vacant---	xx
Field Village	1000 N. Carolina, Louisiana	30 units
Swisher Village	7 th St., Louisiana	22 units
Waltman Village	Tella-Jane Ave., Louisiana	20 units
Thomas Apartments	207 S. 5 th St., Louisiana	16 units
Thomas apartments	207 S. Main St., Louisiana	20 units

Licensed Child Care Facilities

Name	Location	Capacity
DSC Head Start	130 Memorial Dr., Louisiana	40
Rita Baker	3519 Hickory Dr., Louisiana	10
Janet Edwards	2415 N. Carolina, Louisiana	10
Glenda Francis	2215 Kentucky St., Louisiana	10
Irene Mitts	207 Noyes, Louisiana	10
Ewe Care Wee Care	610 Nebraska St., Louisiana	20
First Baptist Nursery	7 th and South Carolina, Louisiana	20

Schools

Name	Location	Students	Staff
Louisiana #2			
Louisiana Elementary	500 Haley Ave., Louisiana	371	36
Louisiana Middle	3321 W. Georgia, Louisiana	197	24
Louisiana High	3321 W. Georgia, Louisiana	237	27
Alternative Learning	110 Frankford Rd., Louisiana	20	2
Faith Baptist	2101 W. Georgia, Louisiana		

Trailer Courts

Name	Location	# Units
Lynn's Trailer Park	Kelly Lane, Louisiana	29 units
McCarty Trailer Park	Kelly Lane, Louisiana	30 units
Osborn's Trailer Park	26 th and North Carolina, Louisiana	10 units
Champ Clark Trailer Park	Halley and Tennessee, Louisiana	6 units
1500 N. Carolina Trailer Park	1500 North Carolina, Louisiana	17 units
Rich's Trailer Park	Daughtery Pike, Louisiana	5 units
Sippy's Trailer Park	1400 N. Carolina, Louisiana	5 units
Dagger's Trailer Park	Sonoco Road, Louisiana	2 units

Hazardous Materials

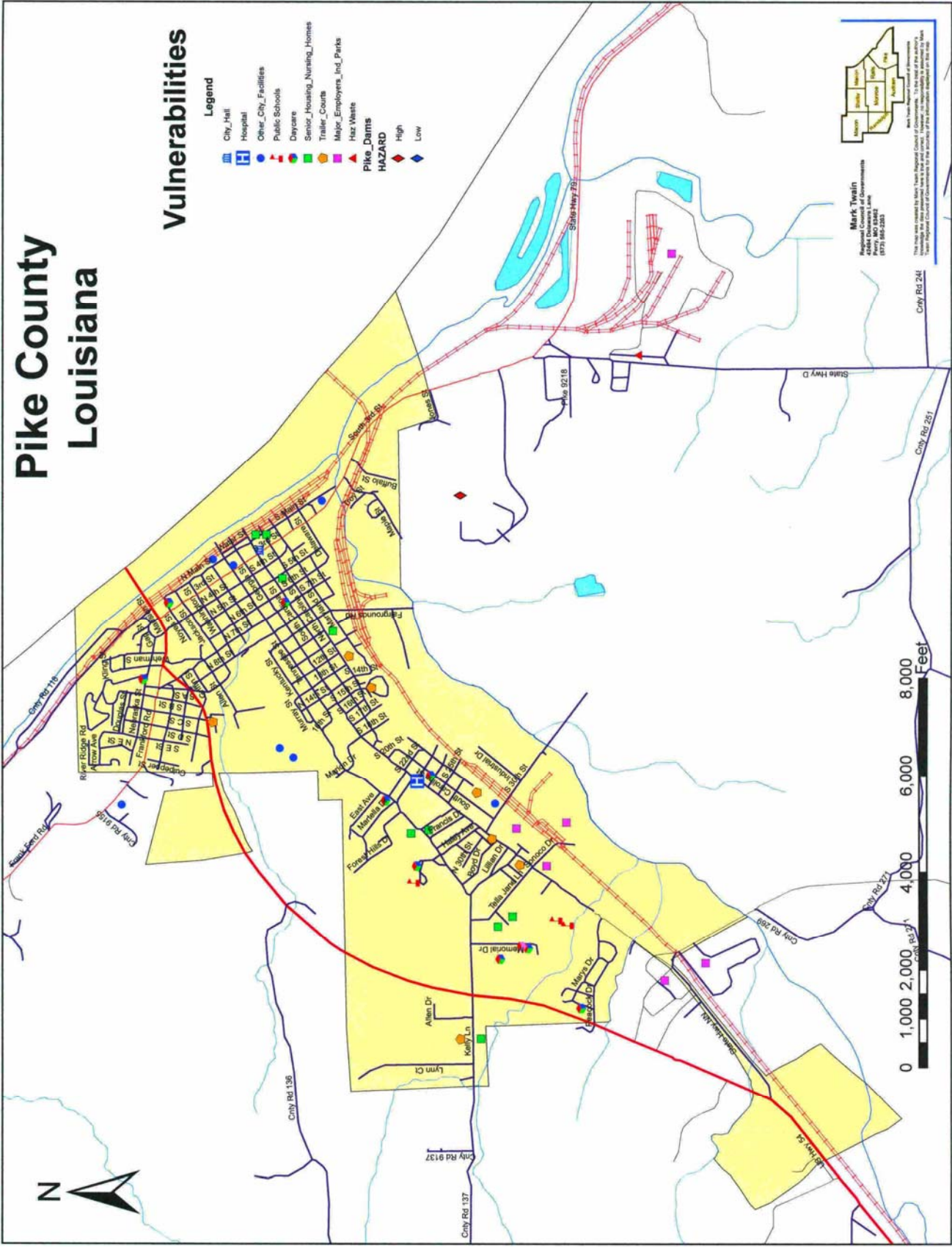
The local Pike County LEPC handles any emergencies involving hazardous materials. It is important to know the location of hazardous material because of the cascading effect from a natural hazard. Addresses of the hazardous material locations in the county can be found in the Pike County Emergency Operations Plan—Hazardous Materials Response—LEPC manual. The Hazard Mitigation Committee recommends that a comprehensive map of these locations be made available to all emergency personnel in the event of a natural hazard.

Of special concern to the citizens of Louisiana is the Dyno-Nobel and Hercules complex just to the south of Louisiana at Hwy 79 and County Road D. This complex has several extremely hazardous substances.

Pike County Louisiana

Vulnerabilities

- Legend**
- City_Hall
 - Hospital
 - Other_City_Facilities
 - Public_Schools
 - Daycare
 - Senior_Housing_Nursing_Homes
 - Trailer_Courts
 - Major_Employers_Ind_Parks
 - Haz_Waste
 - Pike_Dams
 - HAZARD**
 - High
 - Low



Mark Twain
 Regional Council of Governments
 1200 West 10th Street
 Perry, MO 64676
 (573) 792-2221

This map was created by Mark Twain Regional Council of Governments. It is the property of Mark Twain Regional Council of Governments. It is not to be used, copied, or reproduced in any form without the written permission of Mark Twain Regional Council of Governments.

Capabilities

Public and Critical Facilities

Name	Location	City
U.S. Facilities		
U.S. Post Office	522 Georgia	Louisiana
Missouri Facilities		
MODOT Maintenance	Highway 54	Louisiana
Pike County Facilities		
Road Maintenance Shed	201 N. 5 th St.	Louisiana
City Of Louisiana Facilities		
Louisiana City Hall	202 S. 3 rd St.	Louisiana
Louisiana Police Department	202 S. 3 rd St.	Louisiana
Louisiana Fire Department	619 Tennessee.	Louisiana
Louisiana Street Department	205 S. 30 th St.	Louisiana
Louisiana Library	121 N. 3 rd St.	Louisiana

Law Enforcement and Fire Departments

Name	Location	Staff
Louisiana Police Dept.	202 S. Third St., Louisiana	12 officers
Louisiana Volunteer Fire Dept.	619 Tennessee, Louisiana	19 firefighters

Health Care Facilities

Name	Location	# Units
Pike County Memorial Hospital	2305 W. Georgia, Louisiana	45 beds
Louisiana Health Clinic	2305 W. Georgia, Louisiana	xx
Pike Medical Group	S. 3 rd St., Louisiana	xx

- Other Hospitals---Hannibal Regional Hospital, Hannibal.
Lincoln County Hospital, Troy

Emergency Operations Louisiana

Name	Location
Pike County Sheriff's Office	Bus. Hwy 54, Bowling Green
Louisiana Fire Department	619 Tennessee, Louisiana
Louisiana Police Dept.	202 S. Third St., Louisiana

Shelters (Temporary Emergency Housing)

Name	Location
Louisiana Elementary	500 Haley Ave.
Louisiana Middle	3321 W. Georgia
Louisiana High	3321 W. Georgia
First Baptist Church	608 South Carolina
Methodist Church	701 South Carolina
Presbyterian Church	121 S. 8 th St.
Catholic Church	508 N. 3 rd St.
YMCA	614 Kelly Lane
Elks Club	120 N. 5 th St.
Trimble House	200 S. Main
American Legion Post 370	420 Kelly Lane
Assembly of God Church	900 N. Carolina
Calvary Episcopal Church	704 Georgia
Emmanuel Baptist Church	
Faith Baptist Church	2101 W. Georgia
Louisiana City Hall	202 S. 3rd
Louisiana Fire House	201 N. 7th
Louisiana Street Department	205 s. 30th
Louisiana Evangelical Outreach	313 Georgia
New Jerusalem Tabernacle	1600 S. Carolina
Provenance Art Center	121 N. 7th
The Old school	515 Jackson
Trinity Lutheran Church	3405 W. Georgia
Louisiana Meriwether School	110 Frankford Road

Emergency services

911 Center

Emergency 911 calls that are generated within the city limits of Louisiana (with the exception of those from cell phones) are directly routed directly to the Louisiana Municipal 911 Center, located in the Louisiana City Hall Basement. The City of Louisiana Municipal 911 Center then dispatches ambulance, fire, and law enforcement that service the city of Louisiana. Emergency 911 calls from cell phones and outside of the city limits of Louisiana are directed to the Pike County 911 Center located in the Sheriff's Department in Bowling Green. The 911 Center then dispatches ambulance, fire and law enforcement departments that serve the county.

Pike County Health Department takes steps to prevent contamination and other health concerns in emergencies and disasters.

In addition Louisiana maintains Agreements of Mutual Assistance with all the surrounding communities.

In-Place Plans

Hazardous Material Response Plan LEPC

Pike County

Emergency Operations Plans (EOP)

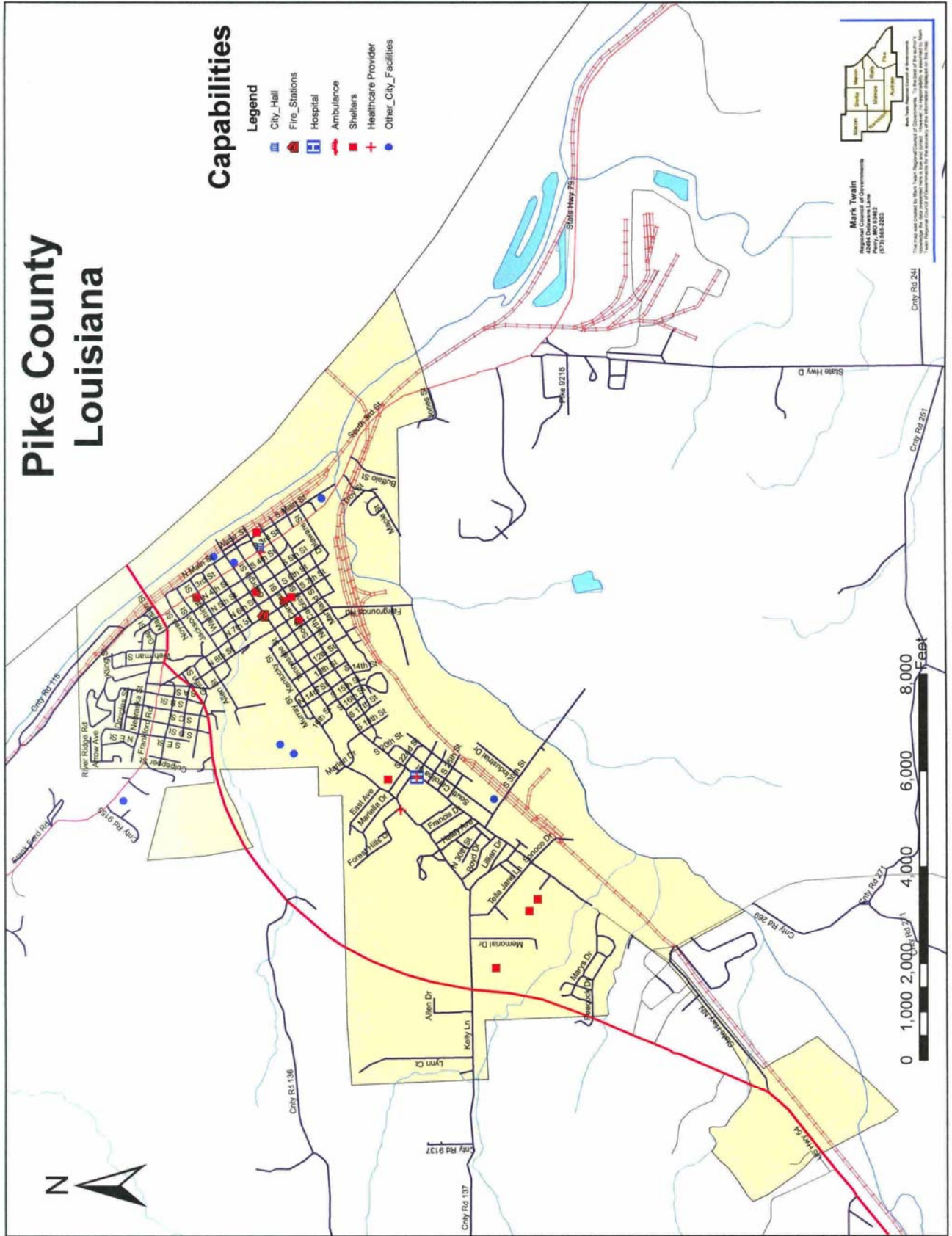
Pike County EOP

City of Louisiana EOP , Incorporated into and adopted the Pike County EOP, including all the updates.

Pike County Louisiana

Capabilities

- Legend**
-  City_Hall
 -  Fire_Stations
 -  Hospital
 -  Ambulance
 -  Shelters
 -  Healthcare Provider
 -  Other_City_Facilities



Mitigation

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 Louisiana 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.

Goals

The plan goals describe the overall direction that Louisiana 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, administratively 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. A summary of the STAPLEE guidelines for each action item can be found at the end of this section.

Mission Statement

The mission of the Louisiana-Pike 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. This plan will work in conjunction with plans in place listed at the end of the community profiles.

Mitigation Goals

The three goals of natural hazard mitigation for Louisiana are:

- A. Protect the lives and livelihoods of all the citizens
- B. Decrease the impact of natural hazards
- C. Ensure continued operation of government and emergency functions in a disaster.

Mitigation Plan Objectives

The Plan objectives help to guide direction of future activities aimed at reducing risk and preventing loss from natural hazards. The objectives listed here serve as checkpoints as agencies and organizations begin implementing mitigation action items.

1. Protect Life and Property

- Implement activities that assist in protecting lives by making homes, businesses, infrastructure, critical facilities, and other property more resistant to natural hazards.
- Reduce losses and repetitive damages for chronic hazard events while promoting insurance coverage for catastrophic hazards.
- Improve hazard assessment information to make recommendations for discouraging new development and encouraging preventative measures for existing development in areas vulnerable to natural hazards.

2. Public Awareness

- Develop and implement education and outreach programs to increase public awareness of the risks associated with natural hazards.
- Provide information on tools, partnership opportunities, and funding resources to assist in implementing mitigation activities.

3. Natural Systems

- Balance watershed planning, natural resource management, and land use planning with natural hazard mitigation to protect life, property, and the environment.
- Preserve, rehabilitate, and enhance natural systems to serve natural hazard mitigation functions.

4. Partnerships and Implementation

- Strengthen communication and coordinate participation among and within public agencies, citizens, non-profit organizations, business, and industry to gain a vested interest in implementation.
- Encourage leadership within public and private sector organizations to prioritize and implement local, county, and regional hazard mitigation activities.

5. Emergency Services

- Establish policy to ensure mitigation projects for critical facilities, services, and infrastructure.
- Strengthen emergency operations by increasing collaboration and coordination among public agencies, non-profit organizations, business, and industry.
- Coordinate and integrate natural hazard mitigation activities, where appropriate, with emergency operations plans and procedures.

Mitigation Action Items and Strategies

Action Items and Strategies were developed for each of the seven natural hazards that may face the citizens of Louisiana. Timeframe for completion, strategies to complete each action item and the coordinating organizations were determined for each action.

The action items addressed by the Louisiana Hazard Mitigation Committee included:

- **Prevention.** Prevention actions are intended to keep a hazard risk problem from getting worse. Using prevention actions, future development can be guided away from hazards, while maintaining other community goals.
- **Property Protection.** Property protection actions are used to modify buildings subject to hazard risk, rather than to prevent the hazard from occurring. These actions directly protect people and property at risk.
- **Natural Resource Protection.** Natural resource protection actions are intended to reduce the intensity of hazard effects as well as to improve the quality of the

environment and wildlife habitats. Conservation agencies usually implement these activities.

- **Emergency Services.** Emergency services actions protect people before and after a hazards event. Most counties have emergency management offices to coordinate warning, response, and recovery during a disaster.
- **Structural.** Structural actions involve construction of man-made structures to control hazards. Examples are levees, floodwalls, and storm sewers.
- **Public Information.** Public information activities inform and remind people about hazardous areas and the measures necessary to avoid potential damage and injury.

Organization of 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 (AH) that face Louisiana, and then determined specific action items for each of the seven natural hazards. To help ensure activity 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.
- **Ideas for Implementation.** Each action item includes ideas for implementation and potential resources, which may include grant programs or human resources.
- **Plan Objectives Addressed.** The plan objectives addressed by each action item are included as a way to monitor and evaluate how well the mitigation plan is achieving its goals once implementation begins.
- **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 Louisiana 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.

Public Participation

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 Louisiana. 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 plan objectives, 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.

5 Year Review, Update and Revision Process 2009

All Hazard Mitigation Plans are required to be revised every five years after initial approval by FEMA. The first Pike County Multi-Jurisdiction Natural Hazard Mitigation Plan was finalized in December 2004. The city of Louisiana was contacted to form a Hazard Mitigation Committee.

At the initial meeting, the committee reviewed and discussed the applicability of each portion in the original Hazard Mitigation Plan and opted to update all sections of the plan, though in varying degrees. Committee members were asked to provide updated information on critical response capabilities and assets within their communities for the next meeting.

At the next committee meeting 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, Landslides, 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 next meetings were held to discuss the mitigation action items developed in the 2004 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 found at the end of the Mitigation section for each jurisdiction. The 2004 Action Items are presented followed by the revision and comments highlighted in yellow.

The committee's final meeting 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.

The 2004 Action Items and the 2009 revisions are also analyzed using **STAPLEE** (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**)). A summary of the **STAPLEE** guidelines for each action item can be found at the end of this section just before the 5 Year Mitigation Action Matrix. The 2004 action items are listed, and the **2009 revisions and new action items are in bold print.**

City of Louisiana Hazard Mitigation Committee 2009

Bob Jenne	City Superintendent
Kent Adams	Building Inspector
Al Murray	Emergency Management Director
	Fire Chief

Staplee Evaluation of Action Items.

		S	T	A	P	L	E	E
	Action Item	Social	Technical	Administrative	Political	Legal	Economic	Environmental Considerations
****	The 2004 action items are listed, and the 2009 revisions and new action items are in bold print.							
AH #1	Evaluate and upgrade as needed the current emergency response communication infrastructure. -- All emergency personnel have digital radios and are now on same frequency. New repeater tower (city owned) has been installed. Ongoing—Maintain current technology. “Group Cast” instant notification via phones to all citizens within city as needed.	✓	✓	✓	✓	✓	✓	NA
AH #2	Maintain and replace missing street signs. -- Ongoing. Street signs are currently being updated per Missouri standards mandate. City ordinance in place and enforce requiring all homes and buildings have 4” numbers displayed.	✓	✓	✓	✓	✓	✓	NA
AH #3	Obtain sufficient back-up generators for designated “after the event” shelters. -- Have 100 KW and 150KW portable generators available as needed.	✓	✓	✓	✓	✓	✓	NA
AH #4	Education, brochures, provided to citizens. -- Packet of brochures was delivered to each household in the city in 2008. CERT teams are active within the city.	✓	✓	✓	✓	✓	✓	NA
AH #5	Promote NOAA radio use and investigate possible funding to obtain NOAA radios at large gatherings. -- NOAA radios not promoted because city is covered by “Group Cast”. City also has “Skywarn” and sufficient weather spotters.	✓	✓	✓	✓	✓	✓	NA
AH #6	Maintain transportation infrastructure. -- Ongoing	✓	✓	✓	✓	✓	✓	NA
AH #7	Participate in regularly scheduled Table-top exercises and mock emergency exercises. -- Ongoing participation in county exercises (1-7 per year)	✓	✓	✓	✓	✓	✓	NA
AH #8	Maintain Mutual Aid Agreements and update on regular schedule. -- Ongoing and current	✓	✓	✓	✓	✓	✓	NA
AH #9	Include information on hazard mitigation on the city website. -- City website is currently being re-vamped and will include hazard mitigation information.	✓	✓	✓	✓	✓	✓	NA
AH #10	Strongly encourage the installation of “Safe Rooms” at all the trailer parks. -- Ongoing--Ordinance in place to require all new trailer parks to install a “safe Room” on the premises. Encourage the existing trailer parks to provide safe rooms.	✓	✓	✓	✓	✓	✓	NA
AH #11	Encourage local businesses to incorporate their own EOP (Emergency Operations Plan). -- All major employers have written EOP plans	✓	✓	✓	✓	✓	✓	NA
AH #12	Investigate the possible need for additional generators to power public communications. -- Have 100 KW and 150KW portable generators available as needed	✓	✓	✓	✓	✓	✓	NA

**** WW -- Winter Weather / Ice Storms T -- Tornados/ Storms F -- Flooding, EQ -- Earthquake
 WF -- Wildfire DF -- Dam Failure EHD -- Extreme Heat/ Drought LS--Landslide
 SH -- Sinkhole LF -- Levee Failure AH -- All Hazards

Staplee Evaluation of Action Items.

		S	T	A	P	L	E	E
	Action Item	Social	Technical	Administrative	Political	Legal	Economic	Environmental Considerations
****	The 2004 action items are listed, and the 2009 revisions and new action items are in bold print.							
AH #13	Regularly test the EAS (Emergency Alert System) on the local cable channels. -- Ongoing	✓	✓	✓	✓	✓	✓	NA
AH #14	Water and waste water depts. have fixed back-up generators. Portable generator at water intake.	✓	✓	✓	✓	✓	✓	✓
T #1	Conduct regularly scheduled training for weather spotters. -- Ongoing Sufficient weather spotter trained for city, both firefighters and private citizens	✓	✓	✓	✓	✓	✓	NA
T #2	Promote use of NOAA radios in schools, nursing homes, businesses, private homes, and large gatherings. -- NOAA radios not promoted because city is covered by “Group Cast”. City also has “Skywarn” and sufficient weather spotters. DELETE	✓	✓	✓	✓	✓	✓	NA
T #3	Update and maintain list of buildings that are “after the event” shelters, distribute list. -- Ongoing Updated at least annually.	✓	✓	✓	✓	✓	✓	NA
T #4	Encourage mobile home parks to have on-site storm shelter. -- Ongoing--Ordinance in place to require all new trailer parks to install a “safe Room” on the premises. Encourage the existing trailer parks to provide safe rooms.	✓	✓	✓	✓	✓	✓	NA
T #5	Educational brochures on what to do during a tornado or severe storm. – Packet of brochures was delivered to each household in the city in 2008. CERT teams are active within the city.	✓	✓	✓	✓	✓	✓	NA
T #6	Revise and update the mobile home ordinance, no mobile homes older than 20 years old. -- Investigate passing an ordinance requiring mobile homes to have 4-ground wires	✓	✓	✓	✓	✓	✓	NA
T #7	Test the four in-place warning sirens monthly. Investigate need for additional sirens as city grows. -- Installed additional siren for city, now 5 sirens. Tested monthly	✓	✓	✓	✓	✓	✓	NA
T #8	Establish committee to study if an ordinance should be passed to require new developments to place utilities underground. -- AmerenUE (utility company) is scheduled to put all utilities within the city underground.	✓	✓	✓	✓	✓	✓	NA
F #1	Maintain, enforce, and update as needed---Floodplain Ordinance. -- Ongoing	✓	✓	✓	✓	✓	✓	✓
F #2	Work with FEMA and Army Corp of Engineers to update Floodplain map as needed. -- FEMA is currently remapping Pike County Floodplain maps.	✓	✓	✓	✓	✓	✓	✓
F #3	Conduct engineering study on the storm water drainage problem areas. -- Will be incorporated into the Missouri Dream Initiative for the downtown area	✓	✓	✓	✓	✓	✓	✓

**** WW -- Winter Weather / Ice Storms T -- Tornados/ Storms F -- Flooding, EQ -- Earthquake
 WF -- Wildfire DF -- Dam Failure EHD -- Extreme Heat/ Drought LS--Landslide
 SH -- Sinkhole LF -- Levee Failure AH -- All Hazards

Staplee Evaluation of Action Items.

		S	T	A	P	L	E	E
	Action Item	Social	Technical	Administrative	Political	Legal	Economic	Environmental Considerations
****	The 2004 action items are listed, and the 2009 revisions and new action items are in bold print.							
F # 4	Provide for additional debris management in the event of a major weather event. -- Compost area for city and DNR has given city waiver to burn yard trimmings	✓	✓	✓	✓	✓	✓	✓
F # 5	Update ordinance to require a water flow engineering study for all new developments with respect to effects on rest of city. -- Storm water/water district has a 5 year plan in place to repair or replace as needed.	✓	✓	✓	✓	✓	✓	✓
F # 6	Monitor and update as needed the flood wall around the city wastewater treatment plant. -- Ongoing	✓	✓	✓	✓	✓	✓	✓
F # 7	Looking into obtaining floodgates on south side of city near Noix Creek as funds become available through SEMA/FEMA in conjunction with some city funds.	✓	✓	✓	✓	✓	✓	✓
F # 8	City has two designated areas for disposal of used sandbags, that also can be used to infill low lying areas.	✓	✓	✓	✓	✓	✓	✓
WW #1	Remove trees from power line easements in addition to current trimming program. -- Ongoing	✓	✓	✓	✓	✓	✓	NA
WW #2	A winter storm emergency can be declared by the mayor and snow routes are designated and posted on the streets. -- Ongoing. Notify using “Group Cast”	✓	✓	✓	✓	✓	✓	NA
EQ #1	Encourage schools to conduct programs on earthquake safety. -- Ongoing	✓	✓	✓	✓	✓	✓	NA
EQ #2	Informational brochures available to public, newspaper articles. -- Packet of brochures was delivered to each household in the city in 2008	✓	✓	✓	✓	✓	✓	NA
EQ #3	Participate in regularly scheduled training exercises. -- Ongoing	✓	✓	✓	✓	✓	✓	NA
EQ #4	Continued enforcement of building codes. -- Ongoing -- City has full time CEO (Code Enforcement Officer)	✓	✓	✓	✓	✓	✓	NA
EHD #1	Establish cooling centers. -- Ongoing at existing shelters as needed	✓	✓	✓	✓	✓	✓	NA
EHD #2	Encourage Drought resistant yard watering practices. -- City has ordinance in place to declare a watering ban as needed.	✓	✓	✓	✓	✓	✓	✓

**** WW -- Winter Weather / Ice Storms T -- Tornados/ Storms F -- Flooding, EQ -- Earthquake
 WF -- Wildfire DF -- Dam Failure EHD -- Extreme Heat/ Drought LS--Landslide
 SH -- Sinkhole LF -- Levee Failure AH -- All Hazards

Five Year Matrix Mitigation Action Summary Sheets

Natural Hazards Considered for Mitigation

Tornados and Thunderstorms
Flooding
Winter Weather/ Ice Storms
Extreme Heat / Drought
Earthquake
Wildfire
Dam Failure
Sinkholes
Landslides
Levee Failure

Action Items that pertain to All Hazards.

The Mitigation Action Items are listed in order of priority for each hazard.

Action Items updated in 2009 are in yellow shaded rows.

Natural Hazard	Action Item and Strategy	Coordinating Organization	Timeline	N—New R—Revision O—Ongoing	Funding	Goals			Objectives					
						Protect lives and livelihoods	Decrease Impact of Hazards	Cont'd operation of government & emergency functions	Protect life and Property	Public Awareness	Natural Systems	Partnerships	Emergency Service	Structural **
All hazards AH #1	Evaluate and upgrade as needed the current emergency response communication infrastructure.	HMC, Police, Fire	Ongoing			✓	✓	✓	✓			✓	✓	
2009 Update	All emergency personnel have digital radios and are now on same frequency. New repeater tower (city owned) has been installed. Ongoing—Maintain current technology “Group Cast” instant notification via phones to all citizens within city as needed.	HMC, Emergency personnel	Ongoing	O	LF F-S-G	✓	✓	✓	✓	✓		✓	✓	E
All hazards AH #2	Maintain and replace missing street signs.	Street Dept	Ongoing					✓		✓		✓	✓	
2009 Update	Ongoing. Street signs are currently being updated per Missouri standards mandate. City ordinance in place and enforce requiring all homes and buildings have 4” numbers displayed.	HMC, Street Dept.	Ongoing	O	LF	✓			✓	✓		✓	✓	E N
All hazards AH #3	Obtain sufficient back-up generators for designated “after the event” shelters.	HMC	1-3 years			✓	✓					✓	✓	
2009 Update	Have 100 KW and 150KW portable generators available as needed.	HMC, Emergency personnel	Ongoing	O	LF	✓	✓		✓			✓	✓	
All hazards AH #4	Education, brochures, provided to citizens.	HMC, media, Public TV channel 11	6 mo --2 years			✓	✓			✓		✓		
2009 Update	Packet of brochures was delivered to each household in the city in 2008. CERT teams are active within the city.	HMC, CERT	Ongoing	O	LF	✓	✓		✓	✓		✓		

EOC---Emergency Operations Center
HMC—Hazard Mitigation Committee

LF---Local Funding
EMD—Emergency Management Director

N/A Not Applicable

F-S-G Federal / State Grants
MODOT—Missouri Dept of Trans

** E = Existing Buildings N = New Buildings

The Mitigation Action Items are listed in order of priority for each hazard.

Action Items updated in 2009 are in yellow shaded rows.

Natural Hazard	Action Item and Strategy	Coordinating Organization	Timeline	N—New R—Revision O—Ongoing	Funding	Goals			Objectives					
						Protect lives and livelihoods	Decrease Impact of Hazards	Cont'd operation of government & emergency functions	Protect life and Property	Public Awareness	Natural Systems	Partnerships	Emergency Service	Structural **
All hazards AH #5	Promote NOAA radio use and investigate possible funding to obtain NOAA radios at large gatherings.	HMC, newspaper	2-3 years			✓	✓			✓		✓		
2009 Update	NOAA radios not promoted because city is covered by “Group Cast”. City also has “Skywarn” and sufficient weather spotters.	DELETE	X											
All hazards AH #6	Maintain transportation infrastructure.	Street Dept. MODOT	Ongoing			✓	✓	✓				✓	✓	
2009 Update	Ongoing	Street Dept. MODOT	Ongoing	O	LF F-S-G	✓	✓	✓				✓	✓	
All hazards AH #7	Participate in regularly scheduled Table-top exercises and mock emergency exercises.	Emer. Operation personnel, police and fire Dept., HMC, city officials	Ongoing			✓	✓	✓	✓			✓	✓	
2009 Update	Ongoing participation in county exercises (1-7 per year)	HMC, Emergency personnel	Ongoing	O	LF	✓	✓	✓	✓			✓	✓	
All hazards AH #8	Maintain Mutual Aid Agreements and update on regular schedule.	Law enforcement, Fire Dept., HMC	Ongoing			✓	✓	✓	✓			✓	✓	
2009 Update	Ongoing and current	Law enforcement, Fire Dept., HMC	Ongoing	O	LF									

EOC—Emergency Operations Center
HMC—Hazard Mitigation Committee

LF—Local Funding
EMD—Emergency Management Director

N/A Not Applicable

F-S-G Federal / State Grants
MODOT—Missouri Dept of Trans

** E = Existing Buildings N = New Buildings

The Mitigation Action Items are listed in order of priority for each hazard.

Action Items updated in 2009 are in yellow shaded rows.

Natural Hazard	Action Item and Strategy	Coordinating Organization	Timeline	N—New R—Revision O—Ongoing	Funding	Goals			Objectives					
						Protect lives and livelihoods	Decrease Impact of Hazards	Cont'd operation of government & emergency functions	Protect life and Property	Public Awareness	Natural Systems	Partnerships	Emergency Service	Structural **
All hazards AH #9	Include information on hazard mitigation on the city website.	HMC, city website	1 year			✓	✓		✓	✓		✓	✓	
2009 Update	City website is currently being re-vamped and will include hazard mitigation information.	HMC, city website	6 months	R	LF	✓	✓		✓	✓			✓	
All hazards AH #10	Strongly encourage the installation of “Safe Rooms” at all the trailer parks.	HMC, Trailer Parks	1 year			✓	✓		✓	✓		✓	✓	
2009 Update	Ongoing--Ordinance in place to require all new trailer parks to install a “safe Room” on the premises. Encourage the existing trailer parks to provide safe rooms.	HMC, Trailer Parks	Ongoing	O	LF	✓	✓		✓	✓			✓	N
All hazards AH #11	Encourage local businesses to incorporate their own EOP (Emergency Operations Plan).	HMC, EMD, local businesses	1-3 years			✓	✓		✓	✓		✓	✓	
2009 Update	All major employers have written EOP plans	HMC, EMD, local employers	Ongoing	O	LF	✓	✓		✓	✓		✓	✓	
All hazards AH #12	Investigate the possible need for additional generators to power public communications.	HMC, EMD, police and fire departments	6 mo 1 year			✓	✓	✓	✓			✓	✓	
2009 Update	Have 100 KW and 150KW portable generators available as needed.	HMC, Emergency personnel	Ongoing	O	LF	✓	✓	✓	✓			✓	✓	

EOC---Emergency Operations Center
HMC—Hazard Mitigation Committee

LF---Local Funding
EMD—Emergency Management Director

N/A Not Applicable
F-S-G Federal / State Grants
MODOT—Missouri Dept of Trans

** E = Existing Buildings N = New Buildings

The Mitigation Action Items are listed in order of priority for each hazard.

Action Items updated in 2009 are in yellow shaded rows.

Natural Hazard	Action Item and Strategy	Coordinating Organization	Timeline	N—New R—Revision O---Ongoing	Funding	Goals			Objectives					
						Protect lives and livelihoods	Decrease Impact of Hazards	Cont'd operation of government & emergency functions	Protect life and Property	Public Awareness	Natural Systems	Partnerships	Emergency Service	Structural *
All hazards AH #13	Regularly test the EAS (Emergency Alert System) on the local cable channels.	HMC, EMD, U.S. Cable	Ongoing			✓	✓		✓	✓		✓	✓	
2009 Update	Ongoing	HMC, EMD, U.S. Cable	Ongoing	O	LF	✓	✓		✓	✓		✓	✓	
2009 Update All hazards AH #14	Water and waste water depts. have fixed back-up generators. Portable generator at water intake.	HMC, Water and Wastewater Depts	Ongoing	N	LF	✓	✓	✓	✓				✓	E
Tornados/ Storms T #1	Conduct regularly scheduled training for weather spotters.	HMC, fire dept.	Ongoing			✓	✓	✓	✓				✓	
2009 Update	Ongoing Sufficient weather spotter trained for city, both firefighters and private citizens	HMC, Fire Dept.	Ongoing	O	LF	✓	✓		✓	✓			✓	
Tornados/ Storms T #2	Promote use of NOAA radios in schools, nursing homes, businesses, private homes, and large gatherings.	HMC	1-2 years						✓	✓		✓	✓	
2009 Update	NOAA radios not promoted because city is covered by “Group Cast”. City also has “Skywarn” and sufficient weather spotters.	DELETE	X											

EOC---Emergency Operations Center
HMC---Hazard Mitigation Committee

LF---Local Funding
EMD---Emergency Management Director

N/A Not Applicable

F-S-G Federal / State Grants
MODOT---Missouri Dept of Trans

** E = Existing Buildings N = New Buildings

The Mitigation Action Items are listed in order of priority for each hazard.

Action Items updated in 2009 are in yellow shaded rows.

Natural Hazard	Action Item and Strategy	Coordinating Organization	Timeline	N—New R—Revision O—Ongoing	Funding	Goals			Objectives					
						Protect lives and livelihoods	Decrease Impact of Hazards	Cont'd operation of government & emergency functions	Protect life and Property	Public Awareness	Natural Systems	Partnerships	Emergency Service	Structural **
Tornados/ Storms T #3	Update and maintain list of buildings that are “after the event” shelters, distribute list.	HMC, police and fire departments, media	Ongoing				✓		✓	✓		✓	✓	
2009 Update	Ongoing Updated at least annually.	HMC, Emergency personnel	Ongoing	O	LF	✓	✓		✓	✓		✓		
Tornados/ Storms T #4	Encourage mobile home parks to have on-site storm shelter.	HMC	6 months			✓	✓		✓	✓		✓	✓	
2009 Update	Ongoing--Ordinance in place to require all new trailer parks to install a “safe Room” on the premises. Encourage the existing trailer parks to provide safe rooms.	HMC, Trailer Parks	Ongoing	O	LF	✓	✓		✓	✓		✓		N
Tornados/ Storms T #5	Educational brochures on what to do during a tornado or severe storm.	City website, HMC, media	1-2 years			✓	✓		✓	✓				
2009 Update	Packet of brochures was delivered to each household in the city in 2008. CERT teams are active within the city.	HMC, CERT	Ongoing	O	LF	✓	✓		✓	✓			✓	
Tornados/ Storms T #6	Revise and update the mobile home ordinance, no mobile homes older than 20 years old.	HMC, Ordinance Committee	1-3 years			✓	✓		✓	✓		✓	✓	
2009 Update	Investigate passing an ordinance requiring mobile homes to have 4-ground wires	HMC, Ordinance Committee	1-5 years	R	LF	✓	✓		✓	✓		✓		E N

EOC---Emergency Operations Center
HMC---Hazard Mitigation Committee

LF---Local Funding
EMD---Emergency Management Director

N/A Not Applicable

F-S-G Federal / State Grants
MODOT---Missouri Dept of Trans

** E = Existing Buildings N = New Buildings

The Mitigation Action Items are listed in order of priority for each hazard.

Action Items updated in 2009 are in yellow shaded rows.

Natural Hazard	Action Item and Strategy	Coordinating Organization	Timeline	N—New R—Revision O—Ongoing	Funding	Goals			Objectives					
						Protect lives and livelihoods	Decrease Impact of Hazards	Cont'd operation of government & emergency functions	Protect life and Property	Public Awareness	Natural Systems	Partnerships	Emergency Service	Structural **
Tornados/ Storms T #7	Test the four in-place warning sirens monthly. Investigate need for additional sirens as city grows.	HMC, EMD	Ongoing			✓	✓	✓	✓	✓		✓		
2009 Update	Installed additional siren for city, now 5 sirens. Tested monthly	HMC, EMD	Ongoing	R	LF	✓	✓		✓	✓		✓	✓	
Tornados/ Storms T #8	Establish committee to study if an ordinance should be passed to require new developments to place utilities underground.	HMC, Ordinance Committee, utility companies	1-3 years			✓	✓					✓	✓	
2009 Update	AmerenUE (utility company) is scheduled to put all utilities within the city underground.	HMC, AmerenUE	5 years	N	LF F-S-G	✓	✓	✓	✓			✓		N
Flooding F #1	Maintain, enforce, and update as needed-- Floodplain Ordinance.	Floodplain manager, HMC	Ongoing			✓	✓		✓	✓	✓	✓		
2009 Update	Ongoing	Floodplain manager, HMC	Ongoing	O	LF	✓	✓		✓	✓		✓		E N
Flooding F #2	Work with FEMA and Army Corp of Engineers to update Floodplain map as needed.	Floodplain manager	1-5 years						✓		✓	✓		
2009 Update	FEMA is currently remapping Pike County Floodplain maps.	Floodplain manager, HMC	Ongoing	O	LF F-S-G	✓	✓		✓	✓		✓		

EOC---Emergency Operations Center
HMC---Hazard Mitigation Committee

LF---Local Funding
EMD---Emergency Management Director

N/A Not Applicable
MODOT---Missouri Dept of Trans

** E = Existing Buildings N = New Buildings

The Mitigation Action Items are listed in order of priority for each hazard.

Action Items updated in 2009 are in yellow shaded rows.

Natural Hazard	Action Item and Strategy	Coordinating Organization	Timeline	N—New R—Revision O—Ongoing	Funding	Goals			Objectives					
						Protect lives and livelihoods	Decrease Impact of Hazards	Cont'd operation of government & emergency functions	Protect life and Property	Public Awareness	Natural Systems	Partnerships	Emergency Service	Structural **
Flooding F # 3	Conduct engineering study on the storm water drainage problem areas.	HMC, Street and Alley Committee	3-5 years				✓	✓	✓		✓	✓	✓	
2009 Update	Will be incorporated into the Missouri Dream Initiative for the downtown area	HMC, Street & Alley Committee, DREAM Initiative Committee	1-2 years	R	LF F-S-G		✓	✓	✓		✓	✓		N
Flooding F # 4	Provide for additional debris management in the event of a major weather event.	HMC	1 – 3 years			✓	✓	✓	✓		✓	✓		
2009 Update	Compost area for city and DNR has given city waiver to burn yard trimmings	HMC, DNR	Ongoing	O	LF		✓		✓	✓	✓	✓		
Flooding F # 5	Update ordinance to require a water flow engineering study for all new developments with respect to effects on rest of city.	HMC, Ordinance Committee	3-5 years			✓	✓		✓		✓	✓		
2009 Update	Storm water/water district has a 5 year plan in place to repair or replace as needed.	HMC, Ordinance Committee	Ongoing 5 years	O R	LF F-S-G	✓	✓	✓	✓		✓	✓		N
Flooding F # 6	Monitor and update as needed the flood wall around the city wastewater treatment plant.	HMC, Water Committee	Ongoing			✓	✓	✓	✓		✓	✓	✓	
2009 Update	Ongoing	HMC, Floodplain Manager, Water Committee	Ongoing	O	LF F-S-G	✓	✓		✓		✓		✓	E

EOC---Emergency Operations Center
HMC---Hazard Mitigation Committee

LF---Local Funding
EMD---Emergency Management Director

N/A Not Applicable
MODOT---Missouri Dept of Trans

** E = Existing Buildings N = New Buildings

The Mitigation Action Items are listed in order of priority for each hazard.

Action Items updated in 2009 are in yellow shaded rows.

Natural Hazard	Action Item and Strategy	Coordinating Organization	Timeline	N—New R—Revision O---Ongoing	Funding	Goals			Objectives					
						Protect lives and livelihoods	Decrease Impact of Hazards	Cont'd operation of government & emergency functions	Protect life and Property	Public Awareness	Natural Systems	Partnerships	Emergency Service	Structural **
2009 Update Flooding F # 7	Looking into obtaining floodgates on south side of city near Noix Creek as funds become available through SEMA/FEMA in conjunction with some city funds.	HMC, Floodplain Manager,	1- 5 years	N	LF F-S-G	✓	✓		✓			✓	✓	N
2009 Update Flooding F # 8	City has two designated areas for disposal of used sandbags, that also can be used to infill low lying areas.	HMC, Floodplain Manager,	Ongoing	N	LF	✓	✓		✓			✓		E
Winter Weather/ Ice Storm WW #1	Remove trees from power line easements in addition to current trimming program.	Street Dept., Utility Company, HMC AmerenUE	Ongoing			✓	✓	✓	✓	✓		✓	✓	
2009 Update	Ongoing	HMC AmerenUE	Ongoing	O	LF	✓	✓	✓	✓	✓			✓	
Winter Weather/ Ice Storm WW #2	A winter storm emergency can be declared by the mayor and snow routes are designated and posted on the streets.	Mayor, Street Department	Ongoing			✓	✓	✓	✓	✓		✓	✓	
2009 Update	Ongoing. Notify using “Group Cast”	Mayor, Street Department, Group Cast	Ongoing	O R	LF	✓	✓	✓	✓	✓			✓	

EOC---Emergency Operations Center
HMC---Hazard Mitigation Committee

LF---Local Funding N/A Not Applicable
EMD---Emergency Management Director

F-S-G Federal / State Grants
MODOT---Missouri Dept of Trans

** E = Existing Buildings N = New Buildings

The Mitigation Action Items are listed in order of priority for each hazard.

Action Items updated in 2009 are in yellow shaded rows.

Natural Hazard	Action Item and Strategy	Coordinating Organization	Timeline	N—New R—Revision O---Ongoing	Funding	Goals			Objectives					
						Protect lives and livelihoods	Decrease Impact of Hazards	Cont'd operation of government & emergency functions	Protect life and Property	Public Awareness	Natural Systems	Partnerships	Emergency Service	Structural **
Earthquake EQ #1	Encourage schools to conduct programs on earthquake safety.	HMC Schools	Ongoing			✓	✓			✓		✓		
2009 Update	Ongoing	HMC Schools	Ongoing	O	LF	✓	✓			✓		✓		
Earthquake EQ #2	Informational brochures available to public, newspaper articles.	HMC, city web page	1 year			✓	✓		✓	✓		✓		
2009 Update	Packet of brochures was delivered to each household in the city in 2008	HMC, city web page	Ongoing	O	LF	✓	✓			✓		✓		
Earthquake EQ #3	Participate in regularly scheduled training exercises.	HMC, EMD Fire Dept. Law Enforcement	Ongoing			✓	✓	✓	✓			✓	✓	
2009 Update	Ongoing	HMC, EMD, Emergency personnel	Ongoing	O	LF	✓	✓	✓	✓			✓	✓	
Earthquake EQ #4	Continued enforcement of building codes.	HMC, Building Inspector	Ongoing			✓	✓		✓	✓		✓		
2009 Update	Ongoing -- City has full time CEO (Code Enforcement Officer)	HMC, Code Enforcement Officer	Ongoing	O	LF	✓	✓		✓	✓		✓		E N

EOC---Emergency Operations Center
HMC---Hazard Mitigation Committee

LF---Local Funding
EMD---Emergency Management Director

N/A Not Applicable
F-S-G Federal / State Grants
MODOT---Missouri Dept of Trans

** E = Existing Buildings N = New Buildings

The Mitigation Action Items are listed in order of priority for each hazard.

Action Items updated in 2009 are in yellow shaded rows.

Natural Hazard	Action Item and Strategy	Coordinating Organization	Timeline	N—New R—Revision O---Ongoing	Funding	Goals			Objectives					
						Protect lives and livelihoods	Decrease Impact of Hazards	Cont'd operation of government & emergency functions	Protect life and Property	Public Awareness	Natural Systems	Partnerships	Emergency Service	Structural **
Extreme Heat/ Drought EHD #1	Establish cooling centers.	HMC, Pike Co. Health Dept.	Ongoing			✓	✓		✓	✓		✓		
2009 Update	Ongoing at existing shelters as needed	HMC, Pike Co. Health Dept.	Ongoing	O	LF	✓	✓		✓	✓		✓		
Extreme Heat/ Drought EHD #2	Encourage Drought resistant yard watering practices.	HMC University Outreach	Ongoing				✓			✓	✓	✓		
2009 Update	City has ordinance in place to declare a watering ban as needed.	HMC, City	Ongoing	O	LF	✓	✓		✓	✓	✓			
2009 Update	Burning bans issued by County commission and fire dept.	County Commission, Fire Dept.	Ongoing	O	LF	✓	✓		✓	✓	✓			
2009 Update	NA		X											

EOC---Emergency Operations Center
HMC---Hazard Mitigation Committee

LF---Local Funding N/A Not Applicable
EMD---Emergency Management Director

F-S-G Federal / State Grants
MODOT---Missouri Dept of Trans

** E = Existing Buildings N = New Buildings

The Mitigation Action Items are listed in order of priority for each hazard.

Action Items updated in 2009 are in yellow shaded rows.

Natural Hazard	Action Item and Strategy	Coordinating Organization	Timeline	N—New R—Revision O---Ongoing	Funding	Goals			Objectives						
						Protect lives and livelihoods	Decrease Impact of Hazards	Cont'd operation of government & emergency functions	Protect life and Property	Public Awareness	Natural Systems	Partnerships	Emergency Service	Structural **	
2009 Update Levee Failure	NA		X												
2009 Update Sinkhole	NA		X												
2009 Update Landslide	NA		X												
2009 Update															

EOC---Emergency Operations Center
HMC---Hazard Mitigation Committee

LF---Local Funding N/A Not Applicable
EMD---Emergency Management Director

F-S-G Federal / State Grants
MODOT---Missouri Dept of Trans

** E = Existing Buildings N = New Buildings