

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

Section 4

Pike County, Missouri Natural Hazard Mitigation Plan

Section 4

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Section 4 Vulnerabilities & Capabilities

Vulnerabilities And Critical Facilities

Vulnerabilities are those properties and people that may be at risk in the event of a natural hazard event. Critical facilities include medical facilities, schools, long-term care facilities, day care centers, and government structures. These facilities represent resources for care and shelter as well as populations requiring a higher level of care and installations critical to community services.

Below are several tables identifying special areas of vulnerabilities of, schools, child cares facilities, senior housing, nursing homes, trailer courts, apartment complexes, campgrounds, and hotels. Also large scheduled gathering and the approximate number of attendees are listed.

In addition to the above, the public buildings and critical facilities within the county and the incorporated cities are listed. These facilities will be necessary to provide services and relief in the event of a natural hazard within Pike County.

All the Vulnerabilities and Critical Facilities are located on the Vulnerabilities and Critical Facilities Map shown on the last page. The maps for the incorporated cities of Bowling Green, Louisiana, Clarksville, Eolia, Frankford, Curryville, Paynesville, and Annada will show these facilities in detail. These maps can be found in Sections 5, 6 ,7 ,8 ,9 ,10 ,11,and 12 respectively.

Pike County Public and Critical Facilities

Name	Location	City
U.S. Facilities		
U.S. Post Office		Bowling Green
U.S. Post Office	522 Georgia	Louisiana
U.S. Post Office		Frankford
U.S. Post Office	2 nd Street	Eolia
U.S. Post Office		Clarksville
U.S. Post Office	Central and Main (Hwy. 54)	Curryville
U.S. Post Office	Hwy 79	Annada
Missouri Facilities		
Northeast Correctional Center	13698 Airport Road	Bowling Green
MODOT Maintenance	Highway 61	Eolia
MODOT Maintenance	Highway 61	Frankford
MODOT Maintenance	Highway 54	Louisiana
MODOT Maintenance	Bus. Highway 54	Bowling Green

Name	Location	City
Pike County Facilities		
Pike County Courthouse	115 W. Main	Bowling Green
911 Center	115 W. Main	Bowling Green
Sheriff and County Jail	Hwy 54 W.	Bowling Green
Pike County Health Department	5 E. Church	Bowling Green
Pike County Highway Department		Bowling Green
City of Bowling Green Facilities		
Bowling Green City Hall	16 W. Church	Bowling Green
Bowling Green Police Department	16 W. Church	Bowling Green
Bowling Green Fire Department	W. Church	Bowling Green
Bowling Green Library	201 W. Locust	Bowling Green
Bowling Green Street Dept.		Bowling Green
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	201 N. 5th Street	Louisiana
Louisiana Library	121 N. 3 rd St.	Louisiana
City Of Frankford Facilities		
Frankford City Hall	Main St.	Frankford
Frankford Fire Department	Main St.	Frankford
Village Of Eolia Facilities		
Eolia City Hall	Elsom St.	Eolia
Eolia Police Department	Elsom St.	Eolia
Eolia Volunteer Fire Department	2 nd St.	Eolia
City Of Clarksville Facilities		
Clarksville City Hall	111 Howard	Clarksville
Clarksville Fire Department	113 Marmac Dr.	Clarksville
City Of Curryville Facilities		
Curryville City Hall	100 City Hall St.	Curryville
Curryville Police Department	100 City Hall St.	Curryville
Curryville Volunteer Fire Department	Central and Main	Curryville
Village Of Paynesville Facilities		
-----No City Facilities	xx	Paynesville
Village Of Annada Facilities		
Annada City Hall	232 Arlington Ave.	Annada

Health Care Facilities

Name	Location	# Units
Pike County Health Dept.	5 E. Church, Bowling Green	xx
Pike County Memorial Hospital	2305 W. Georgia, Louisiana	45 beds
Louisiana Health Clinic	2305 W. Georgia, Louisiana	xx
Pike Medical Group	S 3 rd street, Louisiana	xx
Bowling Green Health Clinic	214 W. Church, Bowling Green	xx
Clarksville Clinic	Main Cross, Clarksville	xx
Hannibal Clinic	710 Bus. 61 S., Bowling Green	xx

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

Long Term Care and / Nursing Homes / Senior Housing

Name	Location	# Beds
Lynn's Heritage House	800 Kelly, Louisiana	
Maple Grove Lodge	2407 Kentucky, Louisiana	60
Moore-Pike Nursing Home	300 S. St. Charles, Bowling Green	65
Smith-Barr Manor	Louisiana---currently vacant---	69
Country View Nursing Facility	2106 W. Main, Bowling Green	60
Sidewell Retirement	119 W. Centennial, Bowling Green	20
Towers Senior Citizens Complex	510 W. Champ Clark, Bowling Green	
Swettman Building	1 st and Mississippi, Clarksville	
Jameson Building	1 st and Lewis, Clarksville	
Field Village	1000 N. Carolina, Louisiana	30 units
Swisher Village	7 th St., Louisiana	24 units
Waltman Village	Tella-Jane Ave., Louisiana	
Thomas Apartments	207 S. 5 th St., Louisiana	
Thomas apartments	207 S. Main St., Louisiana	
Eolia Senior Housing	S. Main St., Eolia	10 units
Frankford Senior Housing	King St., Frankford	18 units

Licensed Child Care Facilities

Name	Location	Capacity
DSC Head Start	1903 W. Locust, Bowling Green	94
The Learning Center	805 N. Bus. Hwy 61, Bowling Green	50
Cheryl Green	912 Bus. Hwy 61, Bowling Green	10
Kaye Bowen	1705 W. Adams, Bowling Green	10
Karen Hale	501 N. St. Charles, Bowling Green	10
Kristy Cannon	420 McWard, Bowling Green	10
Karen Edwards	220 N. Main Cross, Bowling Green	10
Rosemary Conrow	416 S. 15 th St., Bowling Green	10
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 Motts	207 Noyes, Louisiana	10
Ewe Care Wee Care	610 Nebraska St., Louisiana	20
First Baptist Nursery	7 th and Carolina, Louisiana	20
Clopton Preschool	28176 Highway WW, Clarksville	25
Barbara Cohea	419 N. Main, Eolia	10

Pike County Schools

Name	Location	Students	Staff
Bowling Green R-I			
Bowling Green Elementary	700 W. Adams, Bowling Green	475	44
Curryville Elementary	203 E. Maple, Curryville	81	14
Frankford Elementary	500 School St., Frankford	81	14
Bowling Green Middle	700 W. Adams, Bowling Green	369	29
Bowling Green High	700 W. Adams, Bowling Green	485	39
Clopton # 3			
Clopton Elementary	28176 Hwy WW, Clarksville	313	29
Clopton High School	28176 Hwy WW, Clarksville	283	27
Pike/Lincoln Tech. Ctr.	430 Vo-Tech Rd, Eolia	205	17
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
Boncl # 5			
Boncl Elementary	23526 Pike 9247, Louisiana	46	12
Private			
St. Clements	Hwy 161, St. Clements	100	
Amish Schools	Southwest of Bowling Green		
Faith Baptist	2101 W. Georgia, Louisiana	20	4

Trailer Courts

Name	Location	# Units
Sally Jane's	Curryville	13 Units
Lynn's Trailer Park	Louisiana	29 units
McCarty Trailer Park	Louisiana	30 units
Osborn's Trailer Park	Louisiana	10 units
Champ Clark Trailer Park	Louisiana	6 units
1500 N. Carolina Trailer Park	Louisiana	17 units
Town and Country	817 Bus. Hwy 61 N, Bowling Green	14 units
Lamplighter	S. 20 th St., Bowling Green	24
Shirley's Mid-Town	701 N. 15 th St., Bowling Green	30
Dempsey's	1800 W. Church, Bowling Green	5
Matt's	S. 20 th St., Bowling Green	14

Campgrounds

Edward Anderson Wildlife Area
 Dupont Reservation Conservation Area
 Ranacker Wildlife Area
 Ted Shanks Wildlife area

See map for locations of the Conservation areas.

Hotels

Name	Location	# Units	Convention Capacity
Super 8 Motel	1216 E. Champ Clark, Bowling Green	215	xx
Trivoli Hills Resort	25795 Hwy N., Clarksville		1000
Clarksville Inn	Hwy 79, Clarksville		
Heartland Inn	1400 Bus. Hwy. 54 W., Bowling Green	35	xx
Rivers Edge Motel	Hwy 79 and Hwy 54, Louisiana		

Apartments

Name	Location	Capacity
Bowling Green Apts.	1800 W. Main, Bowling Green	24
Brookstone	W. Adams, Bowling Green	30
Housing Authority	S. High St., Bowling Green	76
Creekside	100 Creekside, Bowling Green	24
Johnson and Dudley	S. High St., Bowling Green	32
Westside	Bus. Hwy. 54 West, Bowling Green	9
H. Schwadron	800 Church, Bowling Green	12
Ingram	S. 12th St., Bowling Green	8

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.

Two natural gas pipelines run through the county; the Panhandle Eastern and the UE Union Electric Company. Because of homeland security issues the location of these pipelines is not included in this plan.

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.

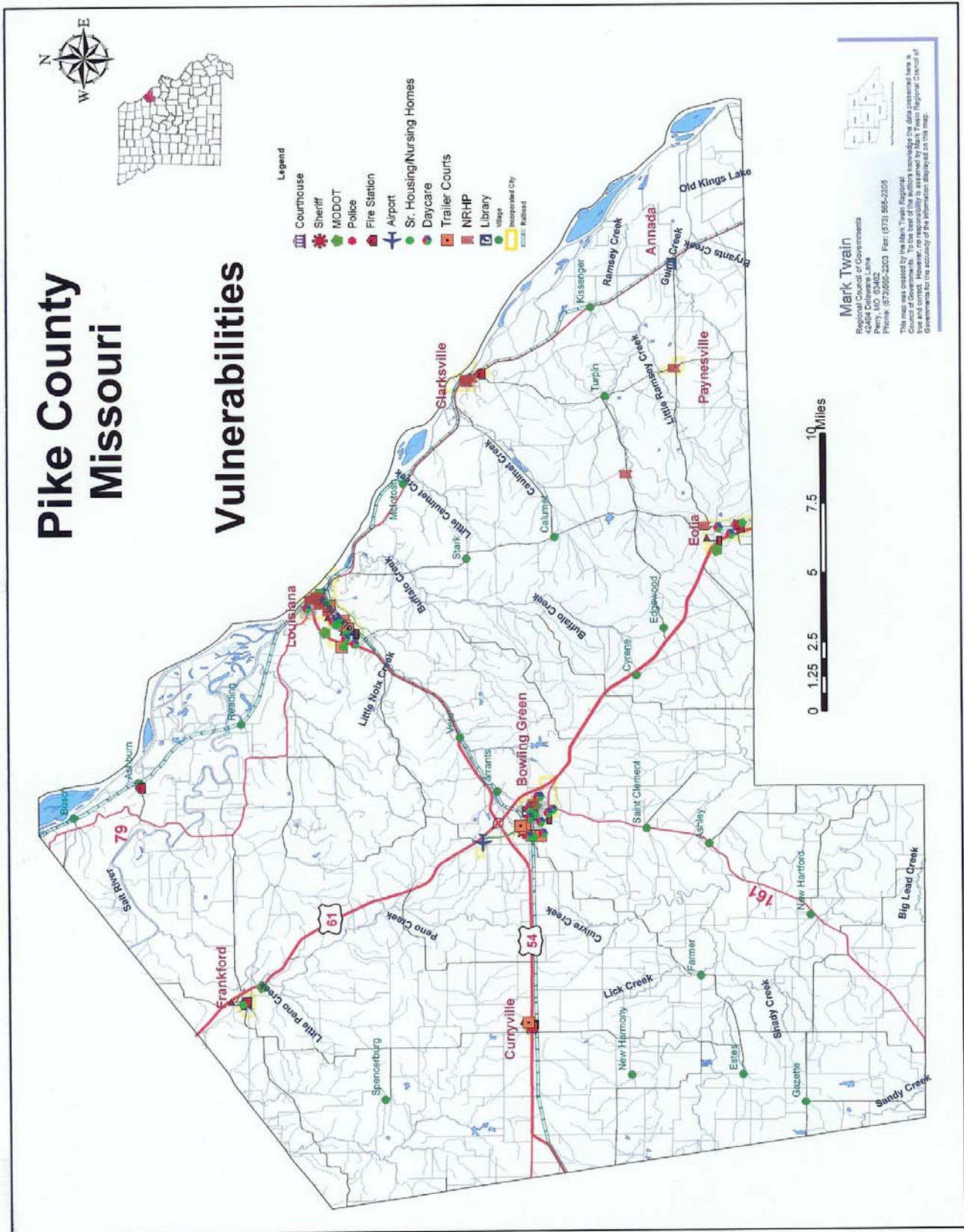
Transportation

In addition to the roads and bridges maintained by the State of Missouri (MODOT), the Pike County Highway Department is responsible for the maintenance of all county roads (blacktop and gravel) and county bridges and winter snow and ice removal. The Highway Department maintains a twenty-four hour emergency-call status.

The cities of Bowling Green and Louisiana are responsible for the maintenance of their city streets through their street departments. Snow and ice removal from city streets is also their responsibility.

Pike County Missouri

Vulnerabilities



Capabilities

Capabilities are those people and facilities that are available for utilization during and following a natural hazard event.

Law Enforcement and Fire Departments

Name	Location	Staff
Bowling Green Police Dept.	16 W. Church, Bowling Green	6 officers
Bowling Green Volunteer Fire Dept.	W. Church, Bowling Green	15 firefighters
Louisiana Police Dept.	202 S. Third St., Louisiana	12 officers
Louisiana Volunteer Fire Dept.	619 Tennessee, Louisiana	19 firefighters
Curryville Volunteer Fire Dept.	Main and Central, Curryville	8 firefighters
Curryville Police Dept	100 City Hall St., Curryville	2 officers
Clarksville Volunteer Fire Dept.	113 Marmac, Clarksville	17 firefighters
Frankford Volunteer Fire Dept.	Main Street, Frankford	7 firefighters
Eolia Volunteer Fire Dept.	2 nd St., Eolia	20 firefighters
Eolia Police Dept.	Elsom St., Eolia	2 officers PT
Ashburn Rural Fire Dept.	Village of Ashburn	15 firefighters
Pike County Sheriff	Bus. Hwy 54, Bowling Green	8 officers

Health Care Facilities

Name	Location	# Units
Pike County Health Dept.	5 E. Church, Bowling Green	xx
Pike County Memorial Hospital	2305 W. Georgia, Louisiana	45 beds
Louisiana Health Clinic	2305 W. Georgia, Louisiana	xx
Pike Medical Group	S 3 rd . street, Louisiana	xx
Bowling Green Health Clinic	214 W. Church, Bowling Green	xx
Clarksville Clinic	Main Cross, Clarksville	xx
Hannibal Clinic	710 Bus. 61 S., Bowling Green	xx

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

Emergency Operations Centers

Name	Location
Pike County Sheriff's Office	Bus. Hwy 54, Bowling Green
Louisiana Fire Department	619 Tennessee., Louisiana

Pike County Public and Critical Facilities

Name	Location	City
U.S. Facilities		
U.S. Post Office		Bowling Green
U.S. Post Office	522 Georgia	Louisiana
U.S. Post Office		Frankford
U.S. Post Office	2 nd Street	Eolia
U.S. Post Office		Clarksville
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MODOT Maintenance	Bus. Highway 54	Bowling Green
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911 Center	115 W. Main	Bowling Green
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Pike County Health Department	5 E. Church	Bowling Green
Pike County Highway Department		Bowling Green
City of Bowling Green Facilities		
Bowling Green City Hall	16 W. Church	Bowling Green
Bowling Green Police Department	16 W. Church	Bowling Green
Bowling Green Fire Department	W. Church	Bowling Green
Bowling Green Library	201 W. Locust	Bowling Green
Bowling Green Street Dept.		Bowling Green
City Of Louisiana Facilities		
Louisiana City Hall	202 S. 3rd St.	Louisiana
Louisiana Police Department	202 S. 3rd St.	Louisiana
Louisiana Fire Department	619 Tennessee	Louisiana
Louisiana Street Department	201 N. 5th Street	Louisiana
Louisiana Library	121 N. 3rd St.	Louisiana
City Of Frankford Facilities		
Frankford City Hall	Main St.	Frankford
Frankford Fire Department	Main St.	Frankford
Village Of Eolia Facilities		
Eolia City Hall	Elsom St.	Eolia
Eolia Police Department	Elsom St.	Eolia
Eolia Volunteer Fire Department	2nd St.	Eolia

Name	Location	City
City Of Clarksville Facilities		
Clarksville City Hall	111 Howard	Clarksville
Clarksville Fire Department	113 Marmac Dr.	Clarksville
City Of Curryville Facilities		
Curryville City Hall	100 City Hall St.	Curryville
Curryville Police Department	100 City Hall St.	Curryville
Curryville Volunteer Fire Department	Central and Main	Curryville
Village Of Paynesville Facilities		
-----No City Facilities	xx	Paynesville
Village Of Annada Facilities		
Annada City Hall	232 Arlington Ave.	Annada

Emergency services

911Center

The Pike County 911 Center located in the Pike County Courthouse basement. All 911 emergency calls are routed through the Pike County Sheriffs Department that dispatches ambulance, fire and law enforcement departments that serve Pike County. See maps in Section 1 for areas of coverage for the ambulance and fire departments.

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

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

In-Place Plans

Upon adoption of the Pike County Natural Hazards Mitigation Plan, this plan will serve as a baseline of information on the natural hazards that impact Pike County and the cities of Bowling Green, Louisiana, Clarksville, Eolia, Frankford, Curryville, Paynesville, and Annada. 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:

Hazardous Material Response Plan LEPC

Pike County

Emergency Operations Plans (EOP)

Pike County EOP

Floodplain Ordinance

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 Pike 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 officials.

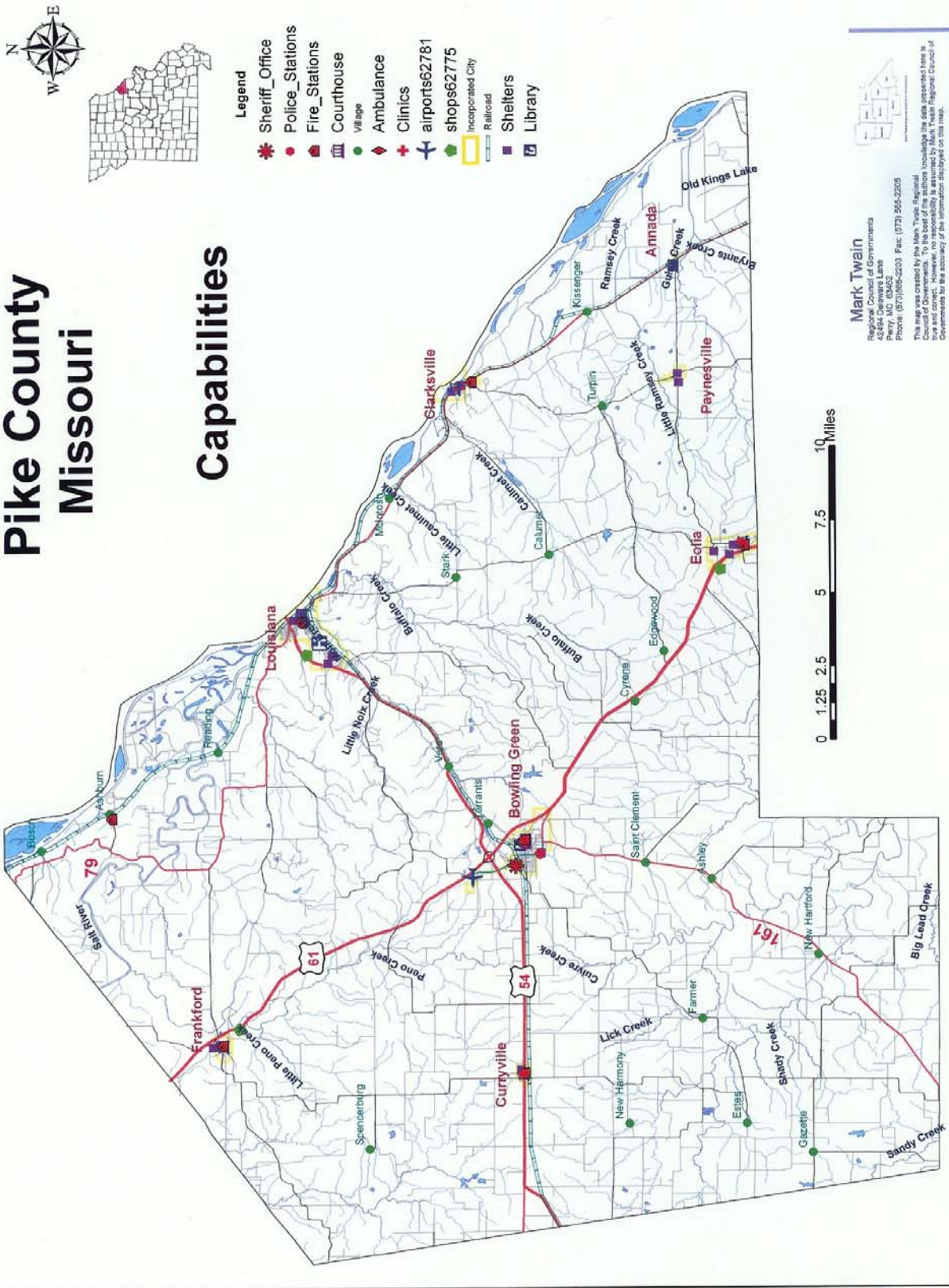
Shelters

Name	Location
Bowling Green Elementary	700 W. Adams, Bowling Green
Curryville Elementary	203 E. Maple, Curryville
Frankford Elementary	500 School St., Frankford
Bowling Green Middle	700 W. Adams, Bowling Green
Bowling Green High	700 W. Adams, Bowling Green
Clopton Elementary	28176 Hwy WW, Clarksville
Louisiana Elementary	500 Haley Ave., Louisiana
Louisiana Middle	3321 W. Georgia, Louisiana
Louisiana High	3321 W. Georgia, Louisiana
Boncl Elementary	23526 Pike 9247, Louisiana

In addition to the above listed shelters, most of the churches in the County can be used as temporary shelters in the event of a natural hazard. See the maps of the individual communities for a complete list of shelters.

Pike County Missouri

Capabilities



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 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 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 Pike 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. 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 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.

Mitigation Plan Goals

The three goals of natural hazard mitigation for Pike County 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 Pike County. Timeframe for completion, strategies to complete each action item and the coordinating organizations were determined for each action. The action items addressed by the Pike County 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 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 (AH) that face Pike County, and then determined specific action items for each of the ten natural hazards. 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.
- **Plan Goals and Objectives Addressed.** The plan goals and 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 Pike 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.

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 Pike 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 was 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.

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.

The Hazard Mitigation Committees for the cities of Bowling Green, Louisiana, Clarksville, Eolia, Frankford, Curryville, Paynesville, and Annada determined mitigation items specific to their communities and they are listed in Sections 5, 6, 7, 8, 9 10, 11, and 12 of this plan.

Determining the cost-effectiveness of mitigation programs

Cost-effectiveness is considered on a case-by-case basis, dependent upon the scope of damages, estimated savings in future hazard events, the type of mitigation project, and the probable hazard to human life in future events. For example, FEMA-funded mitigation projects must meet the benefit/cost analysis criteria required by FEMA.

Mitigation funding options including current and potential sources of federal, state, local, private

The county and incorporated areas have historically relied upon federal disaster declarations in cases of heavy widespread damages. Sources have included FEMA, SEMA, the Missouri Department of Natural Resources and Department of Economic Development (DED), and various other grant programs. In addition, investments in infrastructures that have mitigating effects have been funded from sources such as local tax revenues. Other funding options being considered for the future include the grant sources identified in SEMA's Regional Planning Commission Hazard Mitigation Planning Guide – 2002.

How county government meets requirements for hazard mitigation funding programs

The county's EOP, floodplain ordinance, and zoning ordinance include various measures addressing floodplain development, sewer and water installations, roadway construction and zoning regulations that encourage concentration of infrastructures.

Priority of Action items

The Mitigation Action Items are listed in this section. Each action item includes an estimate of the timeline for implementation and are listed in order of priority within each hazard category, based on a combination of determining factors funding, impact of hazard, and practicality of implementation

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 PikeCounty Multi-Jurisdiction Natural Hazard Mitigation Plan was finalized in December 2004. PikeCounty, and the cities of New London, Center, Perry, and Rensselaer were contacted to form Hazard Mitigation Committees.

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.**

Pike County---Hazard Mitigation Committee- 2009

Stephen Korte	Sheriff Dept.
Rhonda Stunbaugh	Pike County Interim Administrator
Brett Siefert	Regional Response Planner
Al Murray	Pike County EMD
Pamela Tipton	PLTC-PN Coordinator
John Butler	Fire Chief, Frankford
Mel Meyer	Fire Chief, Bowling Green
Darrell Van Hooser	Fire Dept, Frankford
Curt Mitchell	PikeCounty Commissioner
Dan Miller	Pike County Commissioner
Roy Sisson	Pike County Commissioner
Frank Schwencherman	Mechanic
Phil Renner	Pike County EMS Director
LaDon Atkinson	Pike County Hwy Dept.
Ryan Chitman	Asst 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. -- Ongoing and current. Primary EOC at Sheriff's Office in BG Secondary EOC at Fire Station in Louisiana	✓	✓	✓	✓	✓	✓	NA
AH #2	Maintain and replace missing county road signs. -- Ongoing	✓	✓	✓	✓	✓	✓	NA
AH #3	Evaluate the need for back-up generators for "after the event" shelters and obtain generators as funds become available. -- List of shelters (designated and after the event) is updated and list is maintained in the county EOP. Upgrade shelter hook-ups for generators 6 months	✓	✓	✓	✓	✓	✓	NA
AH #4	Obtain sufficient back-up generators to maintain communications for all emergency personnel. -- Ambulances at Louisiana and Bowling Green have portable generators. Sheriff Dept is currently in process of obtaining one additional backup generator	✓	✓	✓	✓	✓	✓	NA
AH #5	Education, brochures to be made available to citizens via the media. -- Completed. Task force distributed brochures county-wide	✓	✓	✓	✓	✓	✓	NA
AH #6	Promote NOAA radio Use. -- Group Cast will provide weather alerts to county 1 year	✓	✓	✓	✓	✓	✓	NA
AH #7	Maintain transportation infrastructure. -- Ongoing	✓	✓	✓	✓	✓	✓	NA
AH #8	Evaluated and update as needed the Emergency operations Center, communications systems. -- Ongoing. Primary EOC at Sheriff's Office in BG. Secondary EOC at Fire Station in Louisiana	✓	✓	✓	✓	✓	✓	NA
AH #9	Training and certification of Emergency Management Director. --- Ongoing and up to date	✓	✓	✓	✓	✓	✓	NA
AH #10	Participate in regularly scheduled Table-top exercises and mock emergency exercises. -- Participate in 5-6 annually. Also participate in pandemic exercises.	✓	✓	✓	✓	✓	✓	NA
AH #11	Maintain Mutual Aid Agreements and update on regular schedule. -- Ongoing and current	✓	✓	✓	✓	✓	✓	NA
AH #12	Update Emergency Operating Plan on a regular schedule. -- Updated annually	✓	✓	✓	✓	✓	✓	NA
AH #13	Investigate the construction of secure storage facility for all county records. -- DELETE County has several locations for secure storage in place	✓	✓	✓	✓	✓	✓	NA
AH # 14	Incorporate the Hazard Mitigation Committee meetings with the LEPC Committee meetings. -- Ongoing	✓	✓	✓	✓	✓	✓	NA
AH # 15	Develop a sustainable process for monitoring countywide mitigation activities. Regular schedule of meetings. -- Ongoing and addressed in the county EOP	✓	✓	✓	✓	✓	✓	NA
AH # 16	Looking into construction a shelter at the county fairgrounds (housing up to 1000 people) if funds become available	✓	✓	✓	✓	✓	✓	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.							
T # 1	Conduct regularly scheduled training for weather spotters. Meet with all fire departments to set up training and contacts. Investigate expanding the program. -- Fire fighters throughout the county participate in weather spotter training. 31 new weather spotters trained Summer 2009	✓	✓	✓	✓	✓	✓	NA
T # 2	Promote use of NOAA radios in schools, nursing homes, businesses, private homes, and large gatherings. -- Information on county and Health Dept. websites—6 months Check that all schools are included in the Group Cast notification systems 6 months	✓	✓	✓	✓	✓	✓	NA
T # 3	Update and maintain list of buildings that are designated as shelters, distribute list. -- List of shelters (designated and after the event) is updated and list is maintained in the county EOP	✓	✓	✓	✓	✓	✓	NA
T # 4	Distributed information on how to retrofit windows in schools, daycares, and nursing homes. -- Completed. Task force distributed brochures county-wide.	✓	✓	✓	✓	✓	✓	NA
T # 5	Educational brochures on what to do during a tornado or severe storm. -- Completed. Task force distributed brochures county-wide	✓	✓	✓	✓	✓	✓	NA
F # 1	Maintain, enforce, and update as needed---Floodplain Ordinance (Revised 2003) Establish a Floodplain Management Committee (FMC). -- FMC includes the floodplain manager, EMD, commissioners and county clerk	✓	✓	✓	✓	✓	✓	✓
F # 2	Work with FEMA and Army Corp of Engineers to update Floodplain map as needed. -- Currently working with FEMA to update floodplain maps	✓	✓	✓	✓	✓	✓	✓
F # 3	Maintain, enforce, and update as needed---Land Use Ordinance. -- Revise-- No zoning in the county, no building permits required except in floodplain	✓	✓	✓	✓	✓	✓	✓
F # 4	Maintain eligibility to be included in Flood Buyout Program. -- DELETE matching funds (25%) are not available	✓	✓	✓	✓	✓	✓	✓
F # 5	Engage field inspector to look for new construction within the floodplain. Establish process to correct violations. -- Floodplain manager and sheriff dept handle inspections and enforcement	✓	✓	✓	✓	✓	✓	✓
F # 6	Identify repetitive damage properties. -- Started keeping records in 2008	✓	✓	✓	✓	✓	✓	✓
F # 7	Identify surface water drainage obstructions, bridge improvements, and bank stabilizations. -- Ongoing	✓	✓	✓	✓	✓	✓	✓
F # 8	Inspect and maintain levees. -- County inspects and issues permits for levees, but all levees in county are private and maintained by the landowners and levee districts (Districts 6-8).	✓	✓	✓	✓	✓	✓	✓

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 SH -- Sinkhole LF -- Levee Failure AH -- All Hazards

Staplee Evaluation of Action Items.

		S	T	A	P	L	E	E
	Action Item							
****	The 2004 action items are listed, and the 2009 revisions and new action items are in bold print.	Social	Technical	Administrative	Political	Legal	Economic	Environmental Considerations
WW # 1	Remove trees from power line easements in addition to current trimming program. -- Ongoing	✓	✓	✓	✓	✓	✓	NA
WW # 2	Maintain snow plowing and removal equipment. -- Ongoing and upgrade as needed	✓	✓	✓	✓	✓	✓	NA
WW # 3	Insure that county school buses are outfitted with two –way radios. -- Recommend that community school buses are outfitted with two-way radios. Ongoing	✓	✓	✓	✓	✓	✓	NA
WW # 4	Provide a stockpile location for refuse at the Rock quarry. -- Location has been determined	✓	✓	✓	✓	✓	✓	NA
WW # 5	Provide a standby crew for road clearing during winter months. -- Ongoing	✓	✓	✓	✓	✓	✓	NA
WW # 6	Shelters are available and list of shelters is updated and maintained in the county EOP-	✓	✓	✓	✓	✓	✓	NA
EQ # 1	Encourage schools to conduct programs on earthquake safety. -- Ongoing	✓	✓	✓	✓	✓	✓	NA
EQ # 2	Make Design Construction Awareness brochures available. -- Available through the Health Dept. 1 year	✓	✓	✓	✓	✓	✓	NA
EQ # 3	Informational brochures available to public, newspaper articles. -- Completed. Task force distributed brochures county-wide	✓	✓	✓	✓	✓	✓	NA
EQ # 4	Participate in regularly scheduled training exercises. --- Ongoing	✓	✓	✓	✓	✓	✓	NA
EQ # 5	Have a speaker available to conduct programs on earthquake safety. -- Ongoing	✓	✓	✓	✓	✓	✓	NA
EHD # 1	Encourage Drought resistant farming practices. -- Ongoing	✓	✓	✓	✓	✓	✓	✓
EHD # 2	Establish cooling centers. -- Shelters are available and list of shelters is updated and maintained in the county EOP-	✓	✓	✓	✓	✓	✓	NA
WF # 1	Burning Bans issued by Rural Fire Departments as needed. -- Burning and Fireworks bans issued as needed by Commission	✓	✓	✓	✓	✓	✓	✓
DF # 1	Encourage Landowners to inspect and maintain their dams according to Dept. of Natural Resources standards. -- Ongoing	✓	✓	✓	✓	✓	✓	✓
DF # 2	Work with Army Corps of Engineers on Dam Safety on Lock and Dam #24 and Clarence Cannon Dam (Mark Twain Lake). Participate in regularly scheduled Dam Failure exercises. -- County has representatives at meetings	✓	✓	✓	✓	✓	✓	✓

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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

