

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

Section 12

Annada

Pike County, Missouri

Table of Contents

Section 12 Annada

Village Profile	1
History of Annada	1
Form of Government	1
Floodplain Map	2
Population and Demographics	4
Utilities	4
Employment	5
Education	5
Vulnerabilities	7
Public and Critical Facilities	7
Health Care Facilities	7
Long Term Care/Nursing Homes/Senior Housing	7
Licensed Child Care	7
Schools	7
Trailer Courts	7
Hazardous Materials	7
Capabilities	8
Public and Critical Facilities	8
Law Enforcement and Fire Departments	8
Health Care Facilities	8
Emergency Operations Centers	8
Shelters	8
Emergency Services	8
In-Place Plans	8
Map	11
Mitigation	12
Definition of Mitigation	12
Multi-hazard Mission, Goals, Objectives, Action Items & Strategies	12
Mission Statement	13
Mitigation Plan Goals	13
Mitigation Plan Objectives	13
Mitigation Action Items And Strategies	14
Organization of Mitigation Items	15
Economic Analysis	15
Public Participation	16
5 Year Review, Update, and Revision Process	16
Hazard Mitigation Committee Members	17
Staplee Evaluation of Action Items	18
Five Year Matrix Mitigation Action Summary Sheets	20

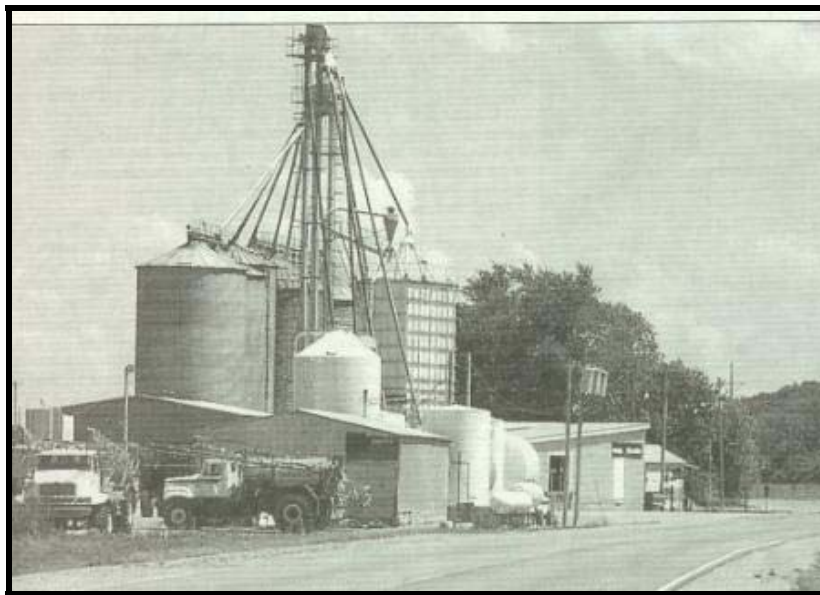
Village Profile--Annada

History of Annada

Annada was established in 1837 on the floodplains of the Mississippi River in southeast Pike County. Karen Schwadron, county historian, plainly states, “ Annada is a railroad town. That owes its existence to the coming of the railroad.” The Annada grain elevator located adjacent to the tracks is the busiest place in town.

Although its location makes it susceptible to the floodwaters of the Mississippi this modest little town of 48 residents has an incredible view of the scenic Salt Petre Bluffs rising 489 feet above the plain to the west. Annada is the southern most town in Pike County on the Scenic River Road, Hwy 79.

The Floodplain map for the area around Annada is on the following page. This map also shows the large floodplain area to the east of Annada and the location of the Clarence Cannon National Wildlife Refuge.



Elevator at Annada

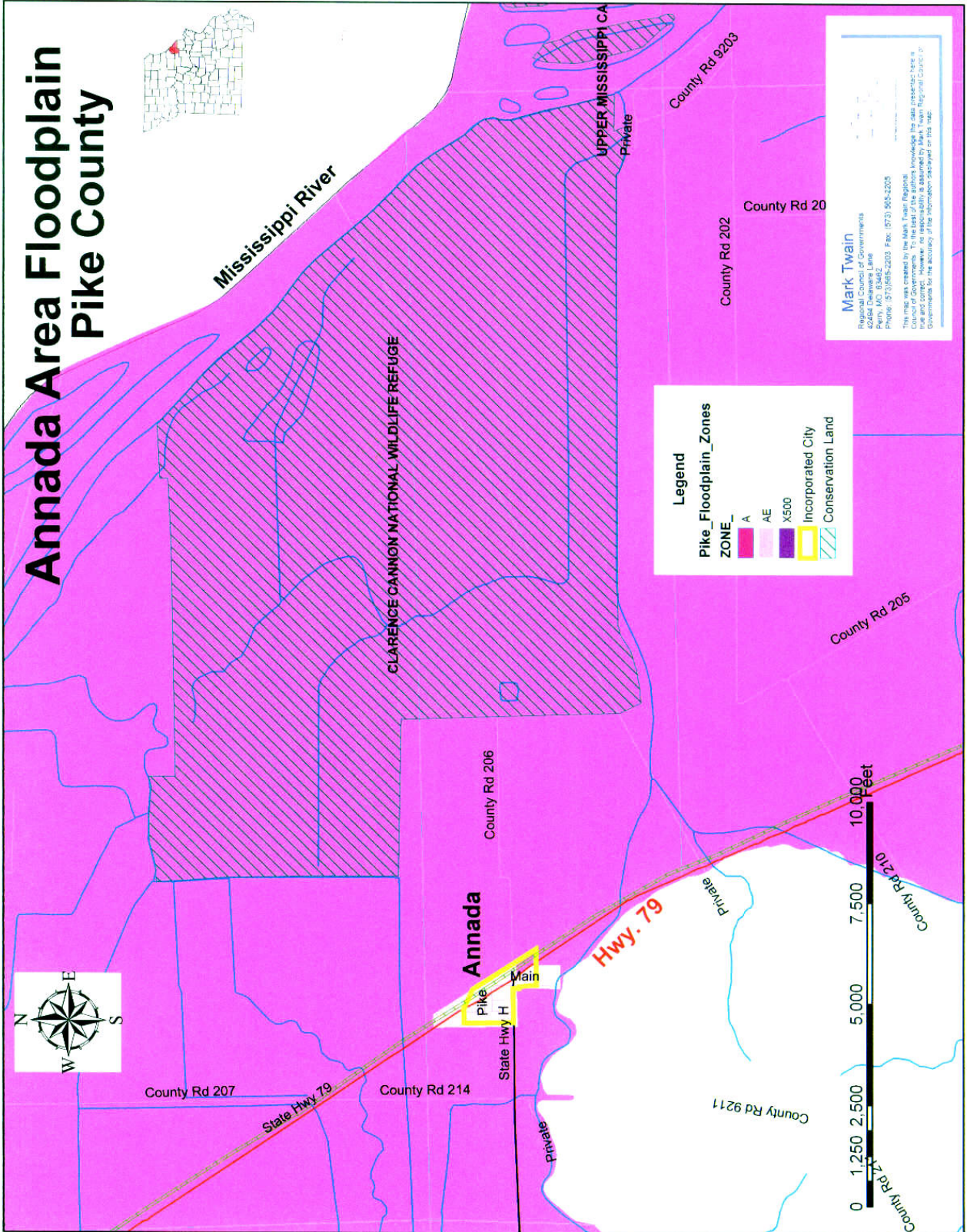
Form of Government

Annada’s village government is Chairman and four members on the Board of Trustees. The Board of Trustees meets monthly. Annada was incorporated in 1912.

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

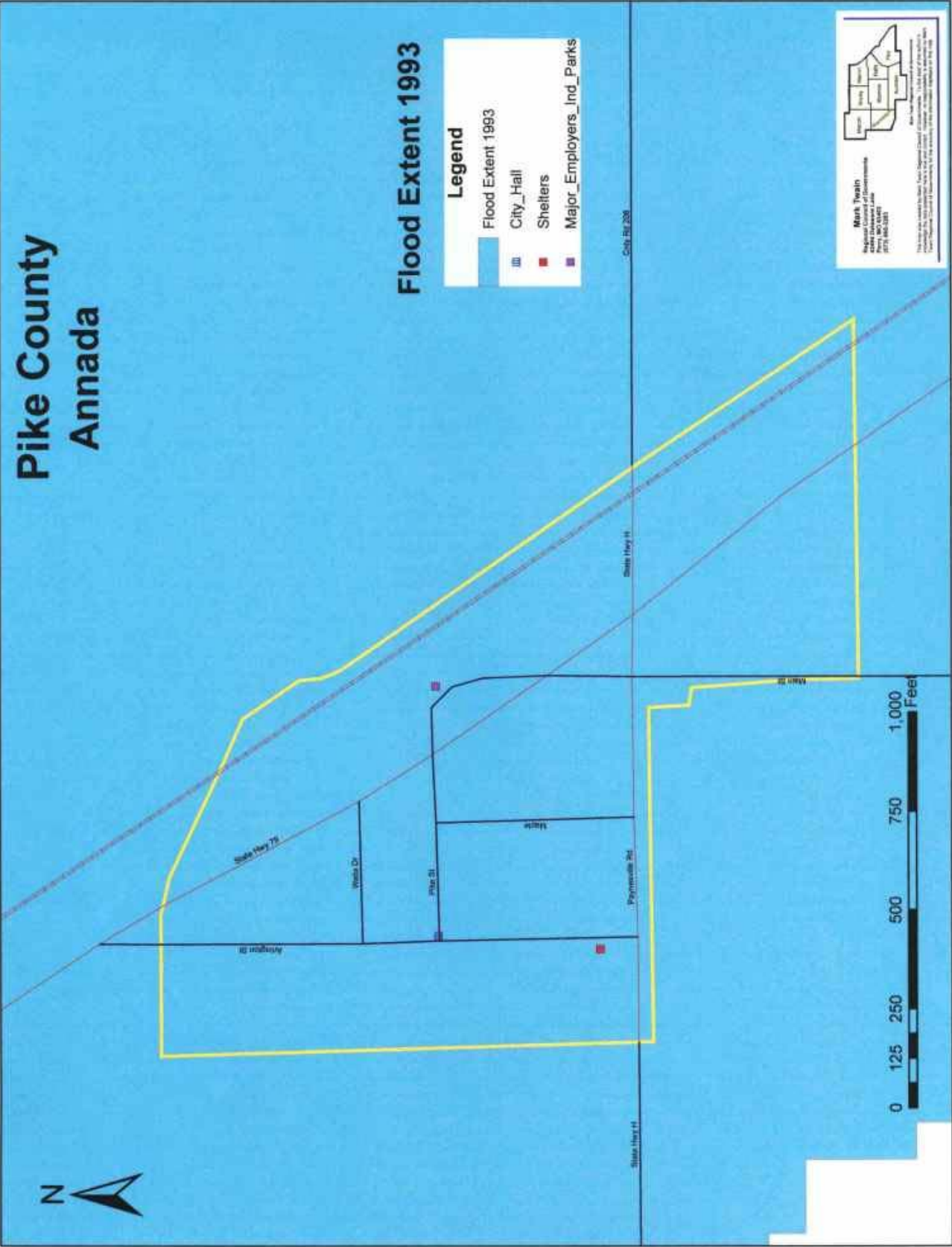
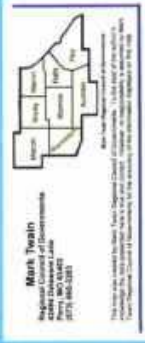
	Date joined NFIP	Policies in Force	Insurance in Force	Number of claims	Total Payments 1978-2009
Annada	11/19/1986	22	\$866,900	60	\$545,273

Annada Area Floodplain Pike County



Pike County Annada

Flood Extent 1993



Population and Demographics

Annada has a diverse population by age. The median age in Annada is 40.4 years. The population under the age of five years is 6.3%. Senior citizens, those over the age of 65, constitute 18.7% of the Annada 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 Annada.

Village of Annada	2000 Census	
Population Density	Number	Percent
Total Persons	48	100
Number of Households	22	xx
Average Household Size	2.18	xx
Source: 2000 U.S. Census		

Village of Annada	2000 Census	
Population by Age Group	Number	Percent
Under 5 years	3	6.3
Between 5 and 19 years	12	25.0
Between 20 and 64 years	24	50.0
65 years and over	9	18.7
Median age	40.4 years	xx
Source: 2000 U.S. Census		

Utilities

Water	Supplied by: Bowling Green Water District # 1
Wastewater	Supplied by: Individual septic systems
Electricity	Supplied by: AmerenUE
Gas	None, individual propane tanks

Employment

Annada has a diverse work force. The 2000 Census records show that Annada had an unemployment rate of 0.0% out of total work force of 16 persons. These workers had a mean travel time to work of 31.8 minutes and their median household income was \$25,500. The statistics show that over 18% of the work force is professional or management. An additional 19% is in sales and office employment. Farming, fishing and forestry account for nearly 13%. Construction, maintenance, production and transportation account for an additional 50%.

Village of Annada	2000 Census	
Occupation	Number	Percent
Management, Professional	3	18.8
Service occupations	0	0.0
Sales and office occupations	3	18.8
Farming, fishing, and forestry	2	12.5
Construction and maintenance	2	12.5
Production and transportation	6	37.4
Total civilians employed	16	xx
Unemployment rate	0	0.0
Mean Travel time to work	31.8 minutes	xx
Median Household Income	\$25,500	xx
Persons below poverty level	6	15.4
Source: 2000 U.S. Census		

Annada has no major employers (over 100 employees) within the village limits. Most workers commute to other parts of Pike, Ralls, and Lincoln counties and the St. Louis area.

Education

The tables below show Annada's education profile. At least 80 % of those over 25 years of age have at least earned their high school diploma. Over 26 % of those have gone on to obtain an Associate, Bachelor, or advanced college degree.

Village of Annada	2000 Census	
Education Profile	Number	Percent
Total Persons over 25 years old	30	100
Less than High School Degree	6	20.0
High School Graduate	11	36.7
Some college	5	16.7
Associate or Bachelor Degree	6	20.0
Post-graduate or Professional Degree	2	6.6
Source: 2000 U.S. Census		

Village of Annada	2000 Census	
Educational Enrollment	Number	Percent
Total Persons enrolled in school	9	100
Nursery, pre-school	0	0.0
Kindergarten	0	0.0
Elementary (1 – 8)	5	55.6
High School (9 – 12)	4	44.4
College or graduate school	0	0.0
Source: 2000 U.S. Census		

Students in Annada are in the Clopton School District # 3. The Clopton Schools are located at 28176 Hwy WW a few miles to the northwest of Annada.

Name	Location	Students	Staff
Clopton # 3			
Clopton Elementary	28176 Hwy WW	313	29
Clopton High School	28176 Hwy WW	283	27
Pike/Lincoln Tech. Ctr.	430 Vo-Tech Rd, Eolia	205	17

Vulnerabilities

Public and Critical Facilities

Name	Location	Village
U.S. Facilities		
U.S. Post Office	Hwy 79	Annada
Village Of Annada Facilities		
Annada Village Hall	232 Arlington Ave.	Annada

Health Care Facilities—none located within village limits

Long Term Care and / or Nursing Homes / Senior Housing
none located within village limits

Licensed Child Care Facilities-- none located within village limits

Schools-- none located within village limits

Trailer Courts—none within the village limits

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.

Capabilities

Public and Critical Facilities

Name	Location	Village
U.S. Facilities		
U.S. Post Office	Hwy 79	Annada
Village Of Annada Facilities		
Annada Village Hall	232 Arlington Ave.	Annada

Law Enforcement and Fire Departments --none located within village limits

Health Care Facilities—none located within village limits

Emergency Operations Centers-- none located within village limits

Shelters

The Annada Christian Community Church on Arlington Ave. is used for a shelter for all severe weather with the exception of flooding. During a major flooding the residents seek shelter outside of the village limits.

Emergency services

911Center

The 911 Center at the Pike County Sheriff's Office takes emergency calls and then dispatches ambulance, fire and law enforcement departments that serve Annada.

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

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 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 Management

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.

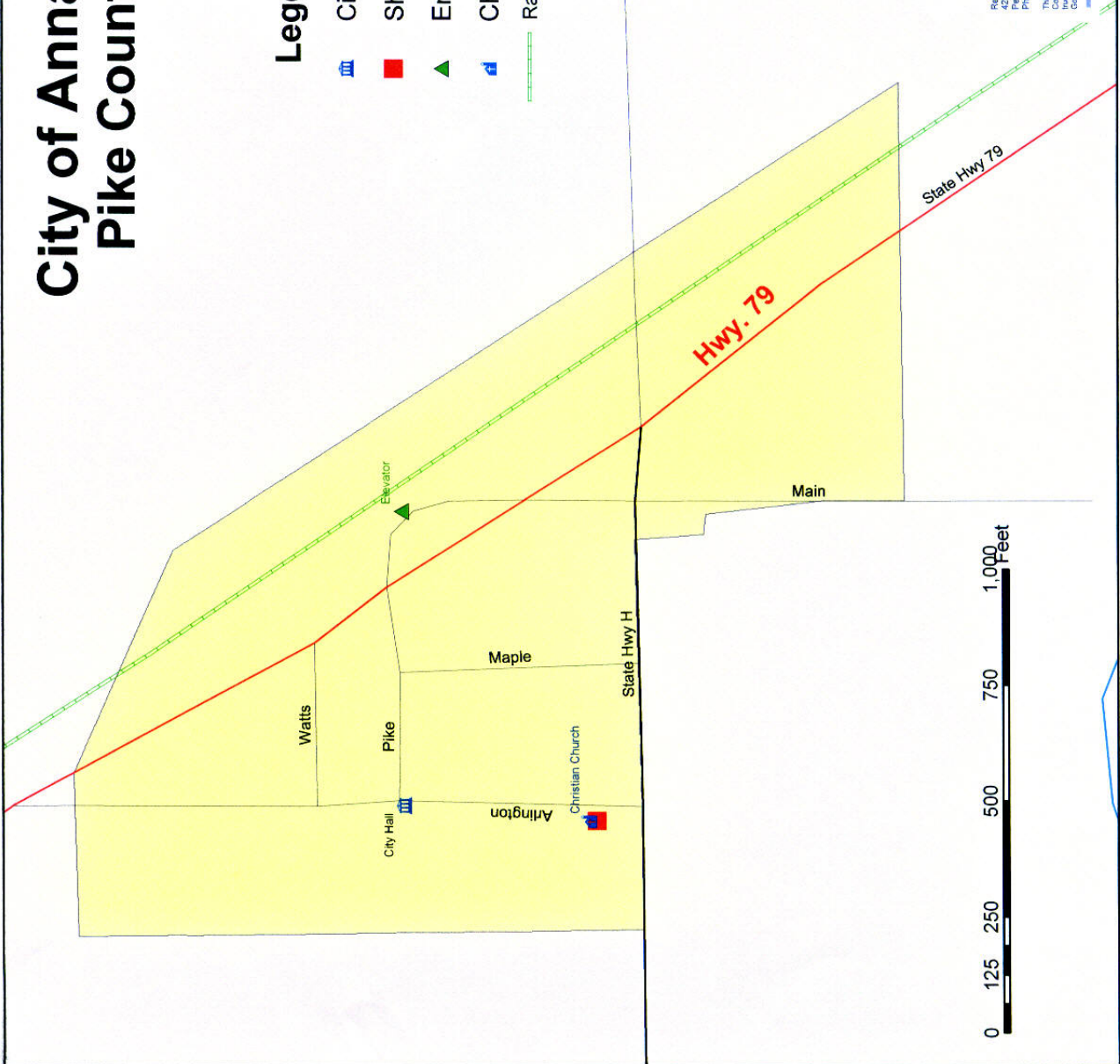
City of Annada Pike County



Legend

-  City_Hall
-  Shelters
-  Employers
-  Churches
-  Railroads

County Rd 206



Mark Twain
Regional Council of Governments
42404 Delaware Lane
Perry, MD 21551
Phone: (301) 985-2200 Fax: (301) 985-2205

This map was created by the Mark Twain Regional Council of Governments. We acknowledge the data presented here is true and correct. However, no responsibility is assumed by Mark Twain Regional Council of Governments for the accuracy of the information displayed on this map.

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 Annada 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 Annada 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 **s**ocially acceptable, **t**echnically feasible, **a**dministratively executable by local communities, **p**olitically acceptable, **l**egally implemented by county, **e**conomically feasible and **e**nvironmentally 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 Annada-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 Annada 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 Annada. Timeframe for completion, strategies to complete each action item and the coordinating organizations were determined for each action.

The action items addressed by the Annada 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 Annada, 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 Annada 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 Annada. 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.

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 village of Annada 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.**

Village of Annada---Hazard Mitigation Committee 2009

Denny Watts	Chairman of the Board
Ron Gilmore	Board Member
Dorothy Watts	Citizen
_____	Citizen
_____	Citizen

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. -- Investigate getting included in “Call Quest” through the Pike County 911. Note: cell phone service is sporadic.	✓	✓	✓	✓	✓	✓	NA
AH #2	Maintain and replace missing street signs. -- Ongoing	✓	✓	✓	✓	✓	✓	NA
AH #3	Obtain back-up generator for designated shelter. -- DELETE Not needed, shelter has generator.	✓	✓	✓	✓	✓	✓	NA
AH #4	Education, brochures, provided to citizens. -- Post brochures on the bulletin board by the mailboxes.	✓	✓	✓	✓	✓	✓	NA
AH #5	Promote NOAA radio Use. -- Post brochures on the bulletin board by the mailboxes. Police/sheriff scanners also work within the city limits.	✓	✓	✓	✓	✓	✓	NA
AH #6	Annada is a small community and everyone in town notifies their neighbors and help their neighbors to evacuate as needed.	✓	✓	✓	✓	✓	✓	NA
F #1	Maintain, enforce, and update as needed---Floodplain Ordinance. -- Ongoing	✓	✓	✓	✓	✓	✓	✓
F #2	Work with FEMA to update Floodplain map as needed. -- Pike County floodplain maps are currently being updated and will go into effect 2010	✓	✓	✓	✓	✓	✓	✓
F #3	Maintain and clean as need the local drainage culverts. -- MODOT maintains culverts on Hwy H and Hwy 79	✓	✓	✓	✓	✓	✓	✓
EQ #1	Informational brochures available to public. -- Post brochures on the bulletin board by the mailboxes.	✓	✓	✓	✓	✓	✓	NA
EQ #2	Participate in regularly scheduled training exercises. -- DELETE. No emergency personnel within city.	✓	✓	✓	✓	✓	✓	NA
EHD #1	Establish cooling centers. -- Cooling center at the shelter as needed	✓	✓	✓	✓	✓	✓	NA
EHD #2	Encourage Drought resistant yard watering practices. -- DELETE. 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	Promote use of NOAA radios in senior housing , private homes, and large gatherings. -- Post brochures on the bulletin board by the mailboxes. Police/sheriff scanners also work within the city limits.	✓	✓	✓	✓	✓	✓	NA
T #2	Update and maintain list of buildings that are designated as shelters, distribute list. -- One shelter in city is the shelter and is available at all times.	✓	✓	✓	✓	✓	✓	NA
T #3	Educational brochures on what to do during a tornado or severe storm. -- Post brochures on the bulletin board by the mailboxes.	✓	✓	✓	✓	✓	✓	NA
T #4	Investigate opportunities to obtain warning siren. -- Develop plan to ring church bells in lieu of trying to acquire a warning siren	✓	✓	✓	✓	✓	✓	NA
T #5	Establish a plan to warn citizens until a warning siren can be obtained. -- Work with Pike county sheriff to establish a contact list to warn citizens of impending storms.	✓	✓	✓	✓	✓	✓	NA
WW #1	Coordinate with utility company to trim or remove trees from power line easements. -- Ongoing	✓	✓	✓	✓	✓	✓	NA
WW# 2	Develop snow removal plan. -- State highways are cleared by MODOT. An individual in town clears the city streets.	✓	✓	✓	✓	✓	✓	NA
WF # 1	Burning bans to be issued by county commission and fire department as needed. -- Ongoing	✓	✓	✓	✓	✓	✓	✓
LF #1	Levees on the Ramsy Creek to the north of the city and Gunns Creek to the south of the city are maintained by the Army Corp of Engineers and monitored by townspeople to prevent flash flooding during heavy rains.	✓	✓	✓	✓	✓	✓	✓
LF #2	The railroad to the east of town also acts as a levee and is maintained by the railroad to help prevent flash flooding during heavy rains.	✓	✓	✓	✓	✓	✓	✓
SH	NA							
LS								
DF	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

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, Pike County Sheriff's Department	6 months			✓	✓	✓	✓			✓	✓	
2009 Update	Investigate getting included in "Call Quest" through the Pike County 911. Note: cell phone service is sporadic.	HMC, Pike County 911	1-5 years	N	LF F-S-G	✓		✓	✓	✓		✓	✓	✓
All hazards AH #2	Maintain and replace missing street signs.	Pike County 911, HMC	Ongoing					✓		✓		✓	✓	
2009 Update	Ongoing	HMC, Pike County 911	Ongoing	O	LF	✓	✓		✓		✓	✓		✓
All hazards AH #3	Obtain back-up generator for designated shelter.	HMC	1-2 years			✓	✓		✓			✓	✓	
2009 Update	DELETE Not needed, shelter has generator.			X										
All hazards AH #4	Education, brochures, provided to citizens.	HMC, media	1-2 years			✓	✓			✓				
2009 Update	Post brochures on the bulletin board by the mailboxes.	HMC	3 months	R	LF	✓			✓	✓			✓	

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 **	
All hazards AH #5	Promote NOAA radio Use.	HMC, media	1 year			✓	✓			✓					
2009 Update	Post brochures on the bulletin board by the mailboxes. Police/sheriff scanners also work within the city limits.	HMC	Ongoing	R		✓	✓		✓	✓					
2009 Update All hazards AH #6	Annada is a small community and everyone in town notifies their neighbors and help their neighbors to evacuate as needed.	HMC	Ongoing	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 F-S-G	✓	✓		✓	✓	✓	✓			E
Flooding F #2	Work with FEMA to update Floodplain map as needed.	Floodplain manager, FEMA	1-5 years					✓	✓		✓	✓			
2009 Update	Pike County floodplain maps are currently being updated and will go into effect 2010	Floodplain manager, FEMA	6 months	R	LF F-S-G	✓	✓		✓	✓	✓	✓			

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 **
Flooding F #3	Maintain and clean as need the local drainage culverts.	HMC, Street Dept.	6 months – 1 year			✓	✓		✓	✓		✓		
2009 Update	MODOT maintains culverts on Hwy H and Hwy 79	MODOT	Ongoing.	O	LF	✓	✓		✓	✓		✓		
Earthquake EQ #1	Informational brochures available to public.	HMC	1 year			✓	✓		✓	✓		✓		
2009 Update	Post brochures on the bulletin board by the mailboxes.	HMC	3 months	R	LF	✓	✓		✓	✓				
Earthquake EQ #2	Participate in regularly scheduled training exercises.	HMC	Ongoing			✓	✓	✓	✓			✓	✓	
2009 Update	DELETE. No emergency personnel within city.		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 **
Extreme Heat/ Drought EHD #1	Establish cooling centers.	HMC, Pike Co. Health Dept.	Ongoing			✓	✓	✓	✓	✓		✓		
2009 Update	Cooling center at the shelter as needed.	HMC	Ongoing	O	LF	✓	✓		✓	✓		✓		E
Extreme Heat/ Drought EHD #2	Encourage Drought resistant yard watering practices.	HMC University Outreach	Ongoing				✓			✓	✓	✓		
2009 Update	DELETE. NA		X											
Tornados/ Storms T #1	Promote use of NOAA radios in senior housing , private homes, and large gatherings.	HMC, media	1 – 2 years			✓	✓		✓	✓		✓	✓	
2009 Update	Post brochures on the bulletin board by the mailboxes. Police/sheriff scanners also work within the city limits.	HMC	Ongoing	O	LF	✓	✓		✓	✓				
Tornados/ Storms T #2	Update and maintain list of buildings that are designated as shelters, distribute list.	HMC	Ongoing			✓	✓		✓	✓		✓	✓	
2009 Update	One shelter in city is the shelter and is available at all times.	HMC	Ongoing	O	LF	✓	✓		✓	✓			✓	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 **	
Tornados/ Storms T #3	Educational brochures on what to do during a tornado or severe storm.	HMC, media	1 year			✓	✓		✓	✓					
2009 Update	Post brochures on the bulletin board by the mailboxes.	HMC	3 months	R	LF	✓	✓		✓	✓					
Tornados/ Storms T #4	Investigate opportunities to obtain warning siren.	HMC	1-2 years			✓	✓	✓	✓				✓		
2009 Update	Develop plan to ring church bells in lieu of trying to acquire a warning siren.	HMC	Ongoing	R	LF	✓	✓		✓	✓		✓	✓		
Tornados/ Storms T #5	Establish a plan to warn citizens until a warning siren can be obtained.	HMC, Pike County Sheriff's Department	6 months			✓	✓	✓	✓	✓		✓	✓		
2009 Update	Work with Pike county sheriff to establish a contact list to warn citizens of impending storms.	HMC, Pike County Sheriff's Department	3 months	R	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 **
Winter Weather/ WW #1	Coordinate with utility company to trim or remove trees from power line easements.	Utility Company, HMC	Ongoing			✓	✓	✓	✓	✓		✓	✓	
2009 Update	Ongoing	Ameren UE, HMC	Ongoing	O	LF	✓	✓		✓			✓	✓	
Winter Weather/ WW # 2	Develop snow removal plan.	HMC, MODOT, County Hwy Dept.	Ongoing			✓	✓	✓	✓				✓	
2009 Update	State highways are cleared by MODOT. An individual in town clears the city streets.	HMC, MODOT, County Hwy Dept.	Ongoing	O	LF	✓	✓		✓	✓			✓	
Wildfire WF # 1	Burning bans to be issued by county commission and fire department as needed.	HMC	Ongoing			✓	✓	v	✓	✓	✓		✓	
2009 Update	Ongoing	HMC, Commission, Fire Depts.	Ongoing	O	LF	✓	✓		✓	✓	✓	✓		

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 Levee Failure LF #1	Levees on the Ramsy Creek to the north of the city and Gunns Creek to the south of the city are maintained by the Army Corp of Engineers and monitored by townspeople to prevent flash flooding during heavy rains.	HMC, Army Corp of Engineers	Ongoing	O	LF F-S-G	✓	✓		✓	✓	✓	✓		
2009 Update Levee Failure LF #2	The railroad to the east of town also acts as a levee and is maintained by the railroad to help prevent flash flooding during heavy rains.	HMC, Railroad	Ongoing	O	LF F-S-G	✓	✓		✓	✓		✓		
2009 Update Sinkholes	NA		X											
2009 Update Landslide	NA		X											
2009 Update Dam Failure	NA		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