
SECTION 4

Definition of hazard mitigation

“Hazard Mitigation” means to permanently reduce or alleviate the loss of life, injuries, and property resulting from natural and human-made hazards through long-term strategies.

Categories of hazard mitigation

Long-term strategies include planning, policy changes, programs, projects, and other activities. Mitigation is the responsibility of individuals, private businesses, and industries; state, local and federal governments. In general, all of these activities fall into one of the following broad categories of mitigation.

1. Prevention:

Preventative activities are intended to keep hazard problems from getting worse. They are particularly effective in reducing a community’s future vulnerability, especially in areas where development has not occurred or capital improvements have not been substantial. Examples of preventative activities include:

- a) Planning and Zoning
- b) Open space preservation
- c) Floodplain regulations
- d) Storm water management
- e) Capital improvements programming

2. Property Protection:

Property protection measures protect existing structures by modifying the building to withstand hazardous events, or removing structures from hazardous locations. New buildings should be constructed with property protection modifications.

Examples include:

- a) Acquisition
- b) Relocation
- c) Building elevation
- d) Critical facilities protection
- e) Retrofitting (i.e., wind proofing, flood proofing, seismic design standards, etc.)

-
- f) Insurance
 - g) Safe rooms

3. Natural Resource Protection:

Natural resource protection activities reduce the impact of natural hazards by preserving or restoring natural areas and their mitigative functions. Such areas include floodplains and wetlands. Parks, recreation or conservation agencies and organizations often implement these measures. Examples include:

- a) Floodplain protection
- b) Riparian buffers
- c) Fire resistant landscaping
- d) Fuel Breaks
- e) Erosion and sediment control
- f) Wetland preservation and restoration
- g) Habitat preservation
- h) Slope stabilization

4. Structural Projects:

Structural mitigation projects are intended to lessen the impact of a hazard by modifying the environmental natural progression of the hazard event. They are usually designed by engineers and managed or maintained by public works staff. Examples include:

- a) Reservoirs
- b) Levees/floodwalls
- c) Diversions / Detention / Retention
- d) Channel modification
- e) Storm sewers

5. Emergency Services:

Although not typically considered a “mitigation technique,” emergency service measures do minimize the impact of a hazard event on people and property. These commonly are actions taken immediately prior to, during, or in response to a hazard event. Examples include:

- a) Warning systems

-
- b) Evacuation planning and management
 - c) Sandbagging for flood protection
 - d) Installing shutters for wind protection

6. Public Information and Awareness:

Public Information and awareness activities are used to advise residents, business owners, potential property buyers, and visitors about hazards, hazardous areas, and mitigation techniques they can use to protect themselves and their property. Examples of measures to educate and inform the public include:

- a) Outreach projects
- b) Speaker series / demonstration events
- c) Hazard map information
- d) Real estate disclosure
- e) Library materials
- f) School children education
- e) Hazard expositions

Mitigation versus preparedness, response, and recovery

Comprehensive emergency management is a widely used approach at the local, state and federal levels to deal with the inevitability of natural hazards and their potential to cause disasters in a given community. The components of a comprehensive emergency management system include:

1. Preparedness activities, which are undertaken to improve the ability to respond quickly in the immediate aftermath of an incident. Preparedness activities include development of response procedures, design and installation of warning systems, exercises to test emergency operational procedures, and training of emergency personnel.

2. Response activities occur during or immediately following the disaster, and include such time-sensitive items as search and rescue operations, evacuation, emergency medical care, food, and shelter programs. Response activities are designed to meet the urgent needs of disaster victims.

3. Recovery activities are emergency management actions which begin after the disaster, as urgent needs are met. These actions are designed to put the community back together, and include repairs to roads, bridges, and other public facilities, restoration of

power, water, and other municipal services, and other activities that help restore normal operations to a community.

4. Mitigation activities reduce or eliminate the damages from hazardous events. These activities can occur before, during, and after a disaster, and overlap all phases of emergency management. Structural mitigation pertains to actions such as dam and levee projects to protect against flooding, constructing disaster-resistant structures, retrofitting existing structures to withstand events, etc. Non-structural mitigation activities include development of land use plans, zoning ordinances, subdivision regulations and tax incentives and disincentives to discourage development in certain high-hazard areas. Mitigation also includes education programs for members of the public about the hazards to which their community is vulnerable, as well as the importance of mitigation and how to prepare their property to withstand a disaster.

Mitigation Plan Benefits

Mitigation planning offers many benefits that include saving lives and property, speeding recovery following disasters, and insuring the community has full access to both pre-disaster and post-disaster federal/state funding. Mitigation planning will potentially reduce the loss of essential services, critical facilities and economic hardship.

More importantly, mitigation planning has the potential to produce long-term and recurring benefits by breaking the repetitive cycle of disaster loss. A core assumption of mitigation is that current dollars invested in mitigation practices will significantly reduce the demand for future dollars by lessening the amount needed for emergency recovery, repair and reconstruction.

Mitigation planning will also lead to benefits that go beyond solely reducing hazard vulnerability. Measures such as the acquisition or regulation of land in known hazard areas can help achieve multiple community goals, such as preserving open space, maintaining environmental health and natural features, and enhancing recreational opportunities. Many of these common goals will become increasingly evident as a community begins to walk through the local mitigation planning process.

County Hazard Mitigation Goals and Strategy

Goals are statements or desirable future conditions that are to be achieved. Actions are more tangible and specific than goals, and may be quantified. Joint meetings between the Bootheel Regional Planning Commission staff, local public officials and the steering committee for New Madrid County developed the original 2004 Plan goals.

To re-evaluate the 2004 goals and actions for the 2011 Plan Update, the following public participation occurred. (See documents below)

- A questionnaire was mailed to each participating jurisdiction, including the school districts on July 22, 2009. The purpose was to up-date goals and actions and to up-date information on mitigation activities since the previously approved 2004 plan. The document below is a sample of the questionnaire.

Bootheel

Questions to be answered for five-year update of Natural Hazard Mitigation Plan

Does your city have the following?

Emergency Operations Plan Yes No
 Zoning Ordinances Yes No
 Building Codes Yes No
 Earthquake Codes Yes No
 Seismicity Regulations Yes No
 Stormwater Regulations Yes No
 Floodplain Regulations Yes No
 Outdoor Warning Siren Yes No How Many? _____
 Participate in the National Flood Insurance Program Yes No

Since 2004 Missouri has been impacted by 16 declared natural disasters. Seven of those have impacted most of the Bootheel counties. What has your city done to protect (mitigate) your citizens from injury or property damage? Some examples might be new building codes, better drainage, tree trimming, portable generators, designate safe areas for tornadoes, warm spaces for power outages, better training for emergency workers, or public meetings to better inform citizens. List those your city has done.

Our city has acquired new building codes, 2009 international building codes, better drainage with larger culverts and is putting in lift pumps for storm water, trees were trimmed all over the city this year. The City has some generators on hand now, but is in the process of getting new generators. The City does has public meetings to inform citizens, a program for training for emergency workers such as C.E.R.T. and warm spaces for power outages. However, the City does not have a safe area for tornadoes.

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- Bootheel staff met with the New Madrid County Floodplain Manager on August 27, 2009 to discuss mitigation efforts to minimize property damage due to flooding.

August 20, 2009

New Madrid County Hazard Mitigation Plan Update

Met with Charles Ice, New Madrid County Floodplain Manager

Topic of meeting included:

County participation in NFIP
Restrictions on structures in Floodplain
Mitigation activities in New Madrid County

Signed C. W. Ice

Date 8-27-09

- Bootheel staff met with the New Madrid County Commission in New Madrid, Missouri, County Clerk, County Assessor, and County Floodplain Manager on August 27, 2009. The document below briefly summarizes what occurred at this meeting and identifies those who attended.

August 20, 2009

New Madrid County Hazard Mitigation Plan Update

Met with New Madrid County Commissioners

Topics of meeting included:

Discussion of Plan Updates
Reviewed Importance of Plans
Reviewed Goals & Objectives
Discussed Pre-Mitigation Grant Program
Discussed County Jurisdictions Involved in Plan

Signed John W. Hines Date 8-27-09
Don Day Date 8-27-09
Clément Carone - County Clerk Date 8/27/09

- Bootheel staff met with Local Emergency Planning Committee in Dexter, Mo. on October 27, 2009 which was attended by New Madrid County personnel.

PROPOSED AGENDA Bootheel L.E.P.C. 105 East North Main Dexter, MO. 63841 573-624-4104 October 27, 2009 Stoddard County Fairgrounds Dexter, MO. 6:30 PM	
A.	Call to Order
B.	Adoption of Agenda
C.	Routine Matters <ol style="list-style-type: none"> 1. Approval of last meeting minutes 2. Financial Reports
D.	Old Business <ol style="list-style-type: none"> 1. Trailer/Equipment Committee (Generator update) 2. Training Committee-Upcoming training 3. Reports from DNR, MERC, SEMA, Region E Fire, EMS, Law, WMD Teams
E.	New Business <ol style="list-style-type: none"> 1: Steve Duke (Hazard Mitigation Plan) 2: LEPC Membership 3: New Members 4: Next Meeting (January 26, 2010) 5: Bills to be paid (Including today's meal) 6: 2009 HazMat Symposium (Lake of the Ozarks – December 9 – 12, 2009) 7: Motion to adjourn

MEMBERS/ASSOCIATE MEMBERS/GUESTS						
October 27, 2009						
	Steve Starkey	2720 Madison Ave Friedland, MO 63845		573-621-4104		ststarkey@bootheel.com
	Jim Stuetz	911 1/2 Row 304 Chester, MO 63834	Cargill, Inc.			
	Taylor Varnness	518 Harding Dexter, MO 63871		573-671-7101	215-284-0100	bootheel@bootheel.com
	Marvin Warren	P O Box 240 Dexter, MO 63801	Cargill, Inc.			
	Kevin Jackson	721 Logan Lane Sikeston, MO 63881		573-624-8400	573-624-1001	
	Jerry Latham	828 West Woodford Sikeston, MO 63881	New Madrid County Health Department	573-621-8004		latham@bootheel.com
	Carol Linnar	104 1/2 Elm Portageville, MO 63873	Portageville Fire Department	573-624-1114	573-624-1001	
	Art Goodin	2125 N Woodwood Papier Mill, MO 63801	DNR-CDR	573-719-4400		art@bootheel.com
	Josh Williamson	2122 N Woodwood Papier Mill, MO 63801	DNR-CDR	573-719-4400	573-624-1001	williamson@bootheel.com
	GUESTS					
	Steve Duke	105 E. North Main Dexter, MO 63841	Bootheel RPC	573-624-4104		stduke@bootheel.com
	Connie Duke	105 E. North Main Dexter, MO 63841	Bootheel RPC	573-624-4104		cduke@bootheel.com
	Robert Housh	P O Box 851 St. James, MO 64501	St. James Fire		573-624-4104	rhoush@bootheel.com
	David McClary	Box 888 Stoddard, MO 63882	Stoddard Fire Department	573-624-1001	573-624-1001	dmccclary@bootheel.com

- Bootheel staff met with Tri-County School Superintendents on November 18, 2009 at Hayti, Missouri to discuss participation in Mitigation Plan. Information was sent to those superintendents not in attendance. The document below is the sign-in sheet from that meeting.

Tri-County Superintendents		
November 18, 2009, Hayti R-II School District		
New Madrid County Schools		
District Name	Representative/Title	Telephone/E-Mail
New Madrid Co R-I		
Gideon C-37	David Hollingshead, Superintendent	573-448-3901 dhollingshead@gideon
Portageville	Tom Hill, Superintendent	573-379-2455 thill@portageville.k12.mo.us
Risco R-II		
Pemiscot County Schools		
Caruthersville R-18	J.P. Bullington	573-333-6100 ext. 3 jbullington@cps18.c
Hayti R-II	Frank Hinkle, Superintendent	573-359-6500 fhinkle@hayti.k12.mo.us
South Pemiscot R-V	Johnny Thompson, Superintendent	573-695-4426 johnny@southpem.k12.mo.us
North Pemiscot R-I	Ferry R. Northman, Superintendent	573-628-5471 ferry@northpem.k12.mo.us
Delta C-7	Dutch Williams, Superintendent	573-757-6648 DWilliams@delta.c
Cooter R-IV	Will Brown, Superintendent	573-695-3322 wbrown@cooter.k12.mo.us
Pemiscot R-III	Anthony Hartstield, Superintendent	573-333-1856 anthony@p3.k12.mo.us
Dunklin County Schools		
Campbell R-II	Jay Thornton, Superintendent	573-242-2133 jay@campbell.k12.mo.us
Clarkton C-4		
Holcomb R-III	Jim Bullard, Superintendent	572-792-3113 jbullard@holcomb.k12.mo.us
Kennett 39		
Malden R-I	W. H. Cook, Superintendent	573-276-3744 Wcook@malden.k12.mo.us
Senath-Hornersville C-8	Larry Wood, Superintendent	573-738-2669 lwood@shs.k12.mo.us
Southland C-9		
Other Representatives		
Missouri Dept. of Education		
Pemiscot Co. Sp. School Dist.	Sandra Manley, Superintendent	573-359-0021 smanley@pcssd.k12.mo.us
EAST PRAIRIE R-II	Scott Downing, Superintendent	573-649-8562 g110 sdowning@epairie.k12.mo.us
Area Supvo. of Just	Richard Trent	573-651-2863 richard.trent@jst.m

- Bootheel Regional Planning Commission had published in the New Madrid County Weekly Record an article requesting comments on the Commission’s website. This article is another example of how public participation was solicited.

AFFIDAVIT OF PUBLICATION
Made By
THE WEEKLY RECORD LLC

STATE OF MISSOURI
COUNTY OF NEW MADRID

I, Edward E. Thomason, being duly sworn according to law, state that I am the publisher of The Weekly Record, a weekly newspaper of general circulation in the County of New Madrid, where located; which has been admitted to the Post Office as periodical class matter in the City of New Madrid, Missouri; which newspaper has been published regularly and consecutively for a period of three years and has a list of bona fide subscribers voluntarily engaged as such who have paid or agreed to pay a stated price for a subscription for a definite period of time, and that such newspaper has complied with the provisions of Section 493.020, R.S.Mo., 2002, as amended, and Section 59.310, R.S.Mo., 2002, as amended.

The affixed notice appeared in said newspaper on the following consecutive weeks (issues).

First Insertion
Vol. 144 No. 48, 27 day of Nov., 2009

Second Insertion
Vol. No. day of , 20

Third Insertion
Vol. No. day of , 20

Fourth Insertion
Vol. No. day of , 20

Edward E. Thomason
EDWARD E. THOMASON
Publisher of The Weekly Record

Subscribed and sworn to before me on date: November 24, 2009

Witness my hand and official seal.

LINDA K. THOMASON
Notary Public - Notary Seal
STATE OF MISSOURI
New Madrid County
My Commission Expires
May 3, 2013
Commission #09404678

Linda K. Thomason
LINDA K. THOMASON - Notary Public
My commission expires May 3, 2013

Publication Fee \$ 30.00

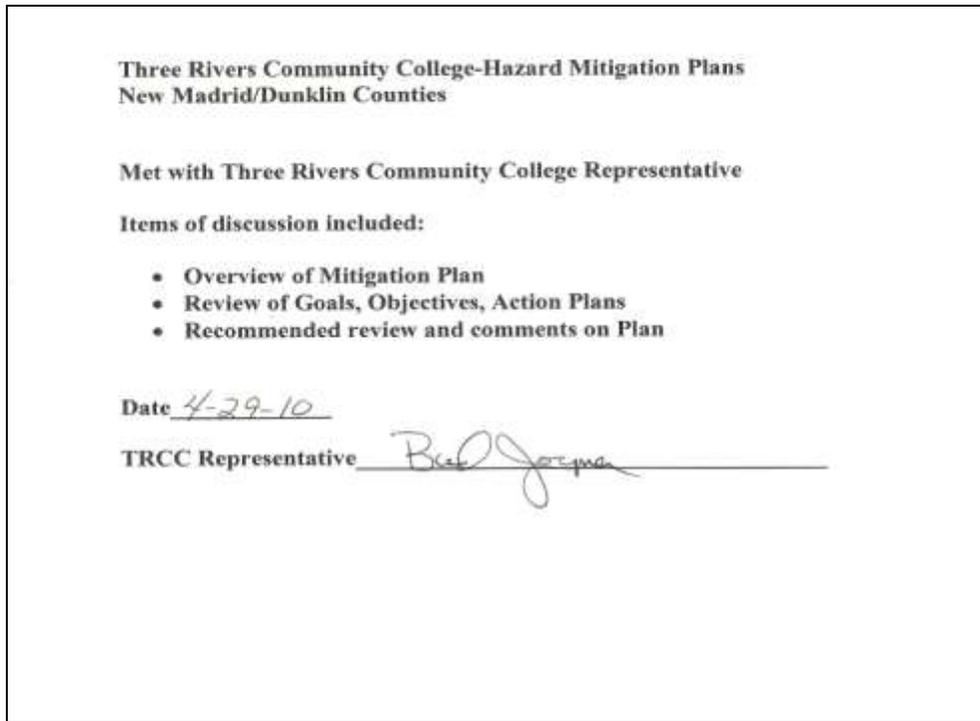
PUBLIC NOTICE

The Bootheel Regional Planning Commission is currently updating the Natural Hazard Mitigation Plan for New Madrid County. All businesses, utilities, media, public officials, and general public from New Madrid County and surrounding areas are invited to comment on the Plan. The New Madrid County Natural Hazard Mitigation Plan can be accessed by logging on the Commission's website at www.booeprc.com. All comments and suggestions are welcomed.

- Bootheel staff met with New Madrid County Mayors on April 29, 2010 to discuss final draft plan. The document below is the sign-in sheet from the meeting.

New Madrid County Mayors, Commissioners, Administrators Hazard Mitigation Meeting April 29, 2010 New Madrid, Missouri		
Name	Position	Address
Nathan Edwards	Chairman	Blue, MO
Wm. Lancaster	City Clerk	Rice, MO
Angi Durran	City Clerk	Moberly, MO
John Gilbert	City Administrator	New Madrid
Donald Cook	Mayor	Canalton, MO
Hebeana Hadley	Mayor	Marion, MO
Don Clay	Mayor	N. M. Co. Mayor
Jesse Van	Mayor	Howardsville MS
Ernie Bremer	Alderman	Partridge, MO
Randall Ramsey	Mayor	PARMA
Don Lancaster	Mayor	RICE
Donnie Brown	Mayor	New Madrid
Leonard Thomas	Mayor	North - Callahan

- Bootheel staff met with representative from Three Rivers Community College to discuss New Madrid County Hazard Mitigation Plan.



Evaluation of the Goals and Actions

All mitigation goals and actions were re-evaluated at the mitigation workshops. Participants reviewed the approved original goals and actions, determined them to remain effective and valid, or recommended changes. They also assessed whether the goals and actions lead to mitigation projects or policy changes. Following are the goals and actions from the previously approved 2004 Plan.

Goal 1. Eliminate loss of life, minimize injuries and reduce property damage caused by *tornadoes and severe thunderstorms.*

Action 1.1: Adopt building codes that require new structures built after July 1, 2006, to have BOCA-approved roof rafter to plate fastening schedule to withstand an F-1 tornado.

Action 1.2: Adopt policies for new mobile home parks and recreational facilities that provide shelters within 100 yards of any resident or participant by July 1, 2006.

Action 1.3: Host workshops annually for business owners and public facilities administrators to develop plans for the occupants should severe storms threaten.

Goal 2. Minimize property damage due to *flooding* of streams.

Action 2.1: Develop design criteria for drainage structures on roads within the county's jurisdiction to be effective July 1, 2005—Adopt AASHTO design criteria for cross road drainage structures on local roads.

Action 2.2: Implement erosion control measures on all county highway projects constructed after July 1, 2006.

Action 2.3: Develop a floodplain management program for county highway department to be implemented on July 1, 2006. Contact University of Missouri about developing a "Pipe Culvert Installation" workshop for county highway departments.

Goal 3. Minimize injuries and property damage due to *seismic events*.

Action 3.1: Adopt BOCA seismic design building codes for future construction of critical facilities effective July 1, 2006. Document site plan and seismic building design approvals for construction of critical facilities.

Action 3.2: Designate an Emergency Operations Center and conduct an annual coordination exercise with all county officials effective July 1, 2006.

Action 3.3: Co-sponsor with appropriate school boards an earthquake public awareness program for local public schools—Print earthquake preparedness brochures and distribute to libraries, city halls and county courthouse for public education.

Goal 4. Minimize the impact to resources caused by *drought and/or heat wave*.

Action 4.1: Adopt "best practices" policy in conjunction with the Soil and Water Conservation Commission to be implemented by July 1, 2006. Print brochures for "best practices" on water and electrical power conservation and make available at public locations.

Action 4.2: Meet with public electric utility companies to develop "best practices" for power conservation during periods of drought and heat waves to be implemented July 1, 2006.

Action 4.3: Sponsor annual safety meetings for county employees to address heat stress beginning July 1, 2006.

Goal 5. Maintain public services to minimize the risk and reduce property damage caused by *severe winter weather*.

Action 5.1: Create an emergency snow route map for the county road system to be distributed by July 1, 2006. Meet annually with state and local officials to coordinate snow removal activities in September of each year.

Action 5.2: Meet annually with critical facilities administrators to develop severe winter weather strategies beginning July 1, 2006. Distribute brochures on proper tree trimming to reduce the risk of property damage during ice storms.

Action 5.3: Educate the public utility end user on preventive measures to reduce the risk to public and private property by July 1, 2006. Meet with health care officials and local veterinarians to develop “best practices” brochure on severe cold weather and power outages.

After reviewing the goals and actions from the 2004 Plan, the Planning Committee determined that all goals and actions remained current and valid. The Planning Committee did decide to re-word Actions 1.1 and 1.2. The chart below illustrates for New Madrid County and its participating jurisdictions the results of local efforts to achieve the 2004 goals and actions.

2011 Evaluation of 2004 Goals and Actions

Jurisdiction	Goal 1	Act 1.1	Act 1.2	Act 1.3	Goal 2	Act 2.1	Act 2.2	Act 2.3	Goal 3	Act 3.1	Act 3.2	Act 3.3	Goal 4	Act 4.1	Act 4.2	Act 4.3	Goal 5	Act 5.1	Act 5.2	Act 5.3
New Madrid County	Green	Pink	Pink	Cyan	Green	Cyan	Cyan	Cyan												
Morehouse	Green	Pink	Pink	Cyan	Green	Cyan	Cyan	Cyan												
Gideon	Green	Pink	Pink	Cyan	Green	Cyan	Cyan	Cyan												
Lilbourn	Green	Pink	Pink	Cyan	Green	Cyan	Cyan	Cyan												
Tallapoosa	Green	Pink	Pink	Cyan	Green	Cyan	Cyan	Cyan												
Portageville	Green	Pink	Pink	Cyan	Green	Cyan	Cyan	Cyan												
New Madrid	Green	Pink	Pink	Cyan	Green	Cyan	Cyan	Cyan												
Howardville	Green	Pink	Pink	Cyan	Green	Cyan	Cyan	Cyan												
Canalou	Green	Pink	Pink	Cyan	Green	Cyan	Cyan	Cyan												
Risco	Green	Pink	Pink	Cyan	Green	Cyan	Cyan	Cyan												
Matthews	Green	Pink	Pink	Cyan	Green	Cyan	Cyan	Cyan												
Marston	Green	Pink	Pink	Cyan	Green	Cyan	Cyan	Cyan												
Catron	Green	Pink	Pink	Cyan	Green	Cyan	Cyan	Cyan												
Parma	Green	Pink	Pink	Cyan	Green	Cyan	Cyan	Cyan												
N. Lilbourn	Green	Pink	Pink	Cyan	Green	Cyan	Cyan	Cyan												

<p>Green Goal valid and partially completed</p> <p>Pink New or revised Action</p> <p>Cyan Actions valid and partially completed</p>

Multi-Hazard Mitigation Plans, based upon approved goals and actions are designed to encouraged counties and local jurisdictions to implement policies or actions that will decrease property damage and reduce loss of life or injury. Based upon public meetings with county and other local officials, and information from questionnaires, the chart below lists the effects of the 2004 goals and actions on local policies and plans.

2004 Goals and Actions that led to Mitigation Plans or Policy Changes																					
Jurisdiction	Goal 1	Act 1.1	Act 1.2	Act 1.3	Goal 2	Act 2.1	Act 2.2	Act 2.3	Goal 3	Act 3.1	Act 3.2	Act 3.3	Goal 4	Act 4.1	Act 4.2	Act 4.3	Goal 5	Act 5.1	Act 5.2	Act 5.3	
New Madrid County	PC			MP	MP	MP	MP	MP			MP	MP	MP						MP		
Morehouse									PC	PC									MP		
Gideon	PC				PC	MP		MP											MP		
Lilbourn					PC			PC	PC	PC									MP		
Tallapoosa																					
Portageville					PC	MP		MP	PC	PC	MP								PC	PC	
New Madrid	PC	PC		PC	MP			MP											PC	PC	PC
Howardville																					
Canalou	MP																		MP		
Risco					MP			MP	PC	PC									MP		
Matthews	MP				MP			MP	PC	PC											
Marston																					
Catron	MP																		MP		
Parma	MP				MP			PC													
N. Lilbourn																					

MP Goals or Actions that lead to Mitigation Plans for County or Jurisdictions
PC Goals or Actions that lead to Policy Changes for County or Jurisdictions

The chart below shows the mitigation activities each jurisdiction initiated as a result of natural weather occurrences and strategies designated in the adopted 2004 Hazard Mitigation Plan.

Jurisdictions	Catron	Canalou	New Madrid County	Gideon	Parma	Lilbourn	New Madrid	Portageville	Matthews	Risco	Morehouse	Marston	Howardville	Tallapoosa
Grants-Fire Stations, Community Centers	X													
Tree Trimming		X		X		X	X	X		X				
Drainage				X		X	X	X	X	X				
Generators			X	X	X	X		X	X		X			
Warm Spaces					X	X	X	X			X			
Special Training for Emergencies Workers						X		X						
Public Meetings								X						
Update Emergency Operations Plan			X											
Co-ordinate County Resources			X											
New Building Codes								X		X				
Stormwater Pumps								X						
Weather Sirens									X					

2011 Plan Update Goals and Actions

After consultation with county officials, and a review of 2004 actions and activities, the Planning Committee determined that change was not necessary for most items before they are carried over into the 2011 Plan Update. Progress has been made in partially meeting some goals and actions. Due to the cost, time constraints, and varying intensities

and severity of natural weather patterns, completing the mitigation action will continue to be an ongoing process. The fact that all goals and actions may not have been met does not preclude their viability.

“Brainstorming” sessions also led to additional wording in the 2011 Plan Update to effectuate some of the actions. This additional wording is in italics in the listing of proposed strategy below. The Planning Committee decided to add a fourth action under the second goal, in addition to the existing strategy. This new action will provide for coordination with the USACE concerning levee and flooding issues. The final difference between the actions in the previously approved 20004 Plan and the 2011 Update is that actions have been added for the school districts that had not participated in the 2004 Plan. These new school district actions are bolded in the list below.

Goal 1. Eliminate loss of life, minimize injuries and reduce property damage caused by tornadoes and severe thunderstorms.

Action 1.1: Encourage construction codes on new buildings to withstand high winds and a possible F1 tornado.

Action 1.2: Encourage construction of tornado safe rooms. *Schedule meetings with jurisdictions seeking grant funds for construction of safe rooms.*

Action 1.3: Host workshops annually for business owners and public facilities administrators to develop plans for the occupants should severe storms threaten. *Invite SEMA representatives and professional architects and engineers to workshops to help businesses and public facilities administrators.*

Goal 2. Minimize property damage due to flooding.

Action 2.1: Develop design criteria for drainage structures on roads within the jurisdictions. *Adopt AASHTO design criteria for cross road drainage structures on local roads.*

Action 2.2: Implement erosion control measures on all county highway projects. *Contact University of Missouri about developing a “Pipe Culvert Installation” workshop for county highway departments.*

Action 2.3: Continue compliance and implementation of NFIP requirements to reduce flood risks within flood hazard areas. *Schedule meetings with jurisdictions who seek grant funds for flood buyouts, elevation projects, etc. Revise building permit system to include site plan and elevations with submittal approval.*

Action 2.4: Coordinate with Memphis District Corps of Engineers to determine effects of levee failure.

Action 2.5: Identify actions to mitigate effects of flooding on school day.

Goal 3. Minimize injuries and property damage due to seismic events.

Action 3.1: Adopt BOCA seismic design building codes for future construction of critical facilities. *Revise policies to include seismic designs on future construction of critical facilities.*

Action 3.2: Designate an Emergency Operations Center and conduct an annual coordination exercise with all county officials.

Action 3.3: Co-sponsor with appropriate school boards an earthquake public awareness program for local public schools. Print earthquake preparedness brochures and distribute to libraries, city halls and county courthouse for public education.

Action 3.4: Designate a School Emergency Operations Center and conduct quarterly coordination exercises with school and local emergency management officials.

Action 3.5: Inform parents of school children regarding crisis plan and how it affects their students in case of a disaster.

Goal 4. Minimize the impact to natural and human resources caused by drought and/or heat wave.

Action 4.1: In conjunction with the Soil and Water Conservation Commission, jurisdictions should adopt and print “best practices” policy on water and electrical power and make available at public locations. *Schedule annual meetings with city mayors to discuss power and water conservation practices.*

Action 4.2: Meet with public electric utility companies to develop “best practices” for power conservation during periods of drought and heat waves.

Action 4.3: Sponsor annual safety meetings for county employees to address heat stress. *Invite a Red Cross trainer to county safety meetings to discuss preventive measures for heat stress.*

Action 4.4 Take actions during periods of extreme heat to safeguard the health of students and staff by altering school activities.

Goal 5. Maintain public services to minimize the risk and reduce property damage caused by severe winter weather.

Action 5.1: Create an emergency snow route map for the county road system, and coordinate snow removal activities with state and local officials in September of each year. *Schedule meetings with county highway foreman, city street directors, and state highway engineer to discuss snow removal, route closures, and general safety procedures.*

Action 5.2: Meet annually with critical facilities administrators to develop severe winter weather strategies. *Arrange for distribution of brochures on tree trimming to reduce the risk of property damage during ice storms.*

Action 5.3: Educate the public utility end user on preventive measures to reduce the risk to public and private property. *Meet with health care officials and local veterinarians to develop “best practices” brochures on techniques to protect human life and domesticated animals during periods of severe cold weather and power outages.*

Action 5.4: Develop school policies to protect students and staff during severe winter weather. Policies could cover topic such as setting priorities for snow removal, canceling classes and informing parents, determining when road conditions are dangerous.

The above actions are strategies for reducing disaster damages. They include implementing activities that create partnerships and will have secondary and tertiary benefits. The above action items, when implemented, will create policies and activities that lead to projects for the region that mitigate natural hazards risk with public involvement and support.

Prioritizing the Updated Actions

The following table provides the criteria used to evaluate and prioritize the countys’ and jurisdictions’ proposed 2011 mitigation strategy. Each action was reviewed using STAPLEE criteria as set forth in Federal Emergency Management Agency (FEMA) guidelines. STAPLEE criteria include: social, technical, administrative, political, legal, economic and environmental considerations. The planning team considered the following criteria and answered the following questions in prioritizing the proposed action.

Social -- The public must support the overall implementation strategy and specific mitigation actions. The following questions were considered:

- Will the proposed action adversely affect a segment of the population?
- Will the action disrupt established neighborhoods, break up voting districts, or cause the relocation of lower income people?
- Is the action compatible with present and future community values?
- Will the actions affect adversely cultural values or resources?

Technical - - Determine if the proposed action is technically feasible, will help to reduce

loss in the long term, and has minimal secondary impacts. The following questions were considered:

How effective is the action in avoiding or reducing future losses?
Will it create more problems than it solves?
Does it solve the problem or only the symptom?

Administrative - - Examine the anticipated staffing, funding, and maintenance required for the action. The following questions were considered:

Does the jurisdiction have the capability to implement the action?
Can the community provide the necessary maintenance?
Can it be accomplished in a timely manner?

Political - - Proposed mitigation actions sometimes fail because of lack of political acceptance. The following questions were considered:

Is there political support to implement and maintain this action?
Have political leaders participated in the planning process?
Is local leadership available?
Who are the stakeholders in the proposed action?
Is there enough public support to ensure the success of the action?

Legal - - Legal authority must be granted to implement the action. The following questions were considered:

Does the local jurisdiction have the legal authority to implement the action?
Is there a technical, scientific, or legal basis for the mitigation action?
Are the proper laws, ordinances, and resolutions in place to implement the action?
Are there any potential legal consequences?

Economic - - Budget constraints should not impede action implementation. The following questions were considered:

Are funds available to implement the actions?
What benefits will the action provide?
Is the cost reasonable for the size of the problems?
What outside sources of funding are available?

Environmental - - Mitigation actions must not negatively impact the environment. The following questions were considered:

How will this action affect land, water, and endangered species?
Will this action comply with local, state, and federal environmental regulations?
Is the action consistent with community environmental goals?

The following table provides the results of the Planning Team’s analysis of the proposed mitigation actions. Each action was reviewed according to the Social, Technical, Administrative, Political, Legal, Economic and Environmental (STAPLEE) criteria. An “X” under the appropriate column indicates the listed element questions posed on the preceding page would go towards the feasibility of the proposed action. No “X” in a box indicates this element is not foreseen to be impacted by the proposed action.

2011 New Madrid County Proposed Strategy Evaluation							
Criteria	S	T	A	P	L	E	E
Goal.1 Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes and severe thunderstorms							
Action 1.1: Encourage construction codes on new buildings to withstand high winds and a possible F1 tornado	X	X	X	X	X	X	X
Action 1.2: Encourage construction of tornado safe rooms	X	X	X	X	X	X	X
Action 1.3: Host workshops annually for business owners and public facilities administrators	X	X		X			
Goal 2. Minimize property damage due to flooding.							
Action 2.1: Develop design criteria for drainage structures on roads within the county’s jurisdiction.	X	X	X			X	X
Action 2.2: Implement erosion control measures on all county highway projects.	X	X				X	X
Action 2.3: Continue compliance and implementation of the requirements for NFIP and reduce the flood risks within hazard area.	X	X	X	X	X	X	X
Action 2.4: Coordinate with Memphis District Corps of Engineers to study effects of levee failure.	X	X	X	X	X	X	X
Action 2.5: Identify actions to mitigate effects of flooding on school days	X	X	X	X	X	X	X
Goal 3. Minimize injuries and property damage due to seismic events.							
Action 3.1: Consider BOCA seismic design building codes for future construction	X	X	X	X	X	X	X
Action 3.2: Designate an Emergency Operations Center and conduct annual coordination exercises.	X		X	X			
Action 3.3: Co-sponsor with appropriate school boards an earthquake public awareness program for local schools.	X		X	X			
Action 3.4: Designate an Emergency Operations Center and conduct quarterly coordination exercises with school and local emergency management officials.	X	X	X	X	X	X	X
Action 3.5: Inform parents of crisis plan and how it affects their students in case of a disaster.	X	X	X	X	X	X	X
Goal 4. Minimize the impact to natural and human resources caused by drought and/or heat wave.							
Action 4.1: Adopt “best practices” policy in conjunction with the Soil and Water Conservation Commission.	X	X	X	X			X
Action 4.2: Meet with Public Electric Utility Companies to develop “best practices” for power conservation.	X		X	X			

Action 4.3: Sponsor annual safety meeting for county employees	X	X	X	X			
Action 4.4: Take actions during extreme heat to safeguard the health of students and staff by altering school activities	X	X	X	X	X	X	X
Goal 5. Maintain public services to minimize the risk and reduce property damage caused by severe winter weather.							
Action 5.1: Create an emergency snow route for county roads.	X	X	X	X		X	
Action 5.2: Meet annually with critical facilities administrators to develop severe winter weather strategies.	X	X	X	X	X	X	
Action 5.3: Educate the public utility end user on preventive measures to reduce the risk to property.	X	X	X	X	X	X	X
Action 5.4: Develop school policies to protect students and staff during severe winter weather.	X	X	X	X	X	X	X

Those actions with the most “X’s” in the table above were considered higher priority than those with fewer “X’s.” The priority as established above is reflected in the time table set for accomplishing these strategies. The time table is set forth in the plan section that follows.

Detailed Analysis of Mitigation Strategy

This plan has identified the natural hazards that pose the greatest risk to the citizens of New Madrid County and the cities, towns and villages, school districts and colleges within its boundaries. The New Madrid County Commission promotes and supports development of local hazard mitigation plans, projects, and activities by acting as the lead agency in the goals established in this document. The goals and actions place an emphasis on prevention and education. Mitigation measures have been identified that will yield the highest return on the investment of the tax-paying community.

New Madrid County’s Mitigation Plan Update encompasses several jurisdictions. To reduce overall damage in the county, information was used from the planning committee, state/local officials, and comments from public meetings. Although these strategies are aimed at reducing overall damage in the county, each jurisdiction will be responsible for pursuing the actions that are relevant to that jurisdiction. The jurisdictions, along with the specific actions they will pursue, are listed as follows on the following pages.

The mitigation plan identifies projects developed through data collection and research. These projects are important community mitigation actions. Mitigation plan activities may be considered for funding through various local, state, and federal programs. To insure implementation of mitigation activities, each action item in each jurisdiction will be assigned timelines and responsible organizations. Definitions follow:

- Goal: A state of affairs that a plan is intended to achieve.
- Action: The state or process of acting or doing to effectuate the goals.
- Project Status: All actions from the 2004 Plan were carried over into the 2011 Update. An action that is designated “new” is one that was not in the previously approved 2004 Plan. A designation of “ongoing” means that the action was in the 2004 Plan and is in the 2011 Update, and activity on the proposed action ongoing. A designation of “not yet implemented” is an action from the 2004 Plan upon which no activity has been initiated.
- Progress: The progress of the project if it is ongoing from the previously approved 2004 Plan.
- Responsible Agency: The organization that will gather resources, locate funding, or oversee project activity, implementation, monitoring and evaluations.
- Economic Analysis: The feasibility of a project by weighing its cost/benefit.
- Estimated Cost: Cost of project if known
- Source of Funds: Funding sources such a local money, grants, or loans.
- STAPLEE: Evaluation of action item based elements of STAPLEE. A letter not listed indicates that particular element of STAPLEE not met.
- Priority Rank: High, Medium, Low defined as follows:

Low-to be initiated in five3 or more years
 Medium-to initiated in three to five years
 High-to be initiated immediately

- Timeline: Action items can be characterized as long or short term. Short term is consider two years or less; long term two or more years
- Type of Strategy: Prevention, Property Protection, Natural Resource Protection, Structural Projects, Emergency Services, Public Information and Awareness.
- Hazard Addressed Tornadoes, Severe Thunderstorms, Flooding, Seismic Events, Drought and Extreme Heat, Severe Winter Weather.
- Evaluation: The determining event that provide validation that the objective is met.

Where possible, actions were combined for this more detailed analysis. This was done for the purpose of economy and to increase the efficiency of the presentation.

Mitigation Action Analysis for New Madrid County

Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes and severe thunderstorms.

Action 1.1: Encourage construction codes on new buildings to withstand high winds and possible F1 tornado	
Action 1.2: Seek grant funds for construction of safe rooms	
Action 1.3: Host workshops annually for business owners and public facilities administrators	
Project Status	Ongoing
Progress	N/A
Responsible Agency	New Madrid County Commission, School Administrators
Economic Analysis	Cost will save money for insurers/owners
Estimated Cost	Unknown
Source of Funds	Local Match, Private, State and Government Grants
STAPLEE	STAPL-E
Priority Rank	Medium to High
Timeline	1-5 years
Type of Strategy	Prevent, Life and Property Protection
Hazards Addressed	Tornadoes and Severe Thunderstorms
Evaluation	Funding approved and construction completed

Goal 2: Minimize property damage due to flooding

Action 2.1: Develop design criteria for drainage structures on roads within the county’s jurisdiction	
Action 2.2 Implement erosion control measures on all county highway projects	
Action 2.4 Coordinate with USACE on impacts of levee failure (new action in 2011 Update)	
Project Status	Ongoing
Progress	N/A
Responsible Agency	New Madrid County Commission
Economic Analysis	Cost will save money for insurers/owners
Estimated Cost	Unknown
Source of Funds	Local
STAPLEE	STA-EE
Priority Rank	Medium
Timeline	1-2 years
Type of Strategy	Prevention, Life and Property
Hazards Addressed	Flooding
Evaluation	Implementation of new permits

Action 2.3: Continue compliance and implementation of NFIP requirements to reduce flood risks within flood hazard areas by seeking grant funds for flood buyouts, elevation projects, etc.	
Project Status	Action is modified from the 2004 Plan and is ongoing
Progress	N/A
Responsible Agency	New Madrid County Commission, School Administrators
Economic Analysis	Cost will justify outcome/save lives
Estimated Cost	Unknown
Source of Funds	Local Match, Private, State and Government Grants
STAPLEE	STAPL-E
Priority Rank	Medium to High
Timeline	1-5 years
Type of Strategy	Prevent, Life and Property Protection
Hazards Addressed	Flooding
Evaluation	Funding approved and construction completed

Goal 3: Minimize injuries and property damage due to seismic events.

Action 3.1: Consider BOCA seismic design building codes for future construction	
Action 3.2: Designate an Emergency Operations Center and conduct annual coordination exercises	
Action 3.3: Co-sponsor with appropriate school boards and earthquake public awareness programs for local schools	
Project Status	On-going
Progress	New construction in county now adhere to building codes for seismic events
Responsible Agency	New Madrid County Commission
Economic Analysis	Cost of construction will save lives
Estimated Cost	\$500.00
Source of Funds	Local
STAPLEE	ST-LEE
Priority Rank	Medium-High
Timeline	1-5 years
Type of Strategy	Property Protection, Structural Projects
Hazards Addressed	Earthquakes
Evaluation	Completed policies

Goal 4: Minimize the impact to natural and human resources caused by drought and/or heat wave.

Action 4.1: Adopt “best practices” policy in conjunction with the Soil and Water Conservation Commission	
Action 4.2: Meet with public electric utility companies to develop “best practices” for power conservation	
Action 4.3: Sponsor annual safety meeting for county employees	
Project Status	Ongoing
Progress	N/A
Responsible Agency	New Madrid County Commissioners
Economic Analysis	Cost increases effectiveness of practices
Estimated Cost	\$500.00
Source of Funds	Local
STAPLEE	ST-EE
Priority Rank	Medium
Timeline	1-3 years
Type of Strategy	Emergency Services, Public Information and Awareness
Hazards Addressed	Drought/Heat Wave
Evaluation	Minutes of meeting

Goal 5: Maintain public services to minimize the risk and reduce property damage caused by severe winter weather.

Action 5.1: Create an emergency snow route for county roads	
Action 5.2: Meet annually with critical facilities administrators to develop severe winter weather strategies	
Action 5.3: Educate the public utility end user on preventive measures to reduce the risk to property	
Project Status	On-going
Progress	County and local officials participate more readily in mutual agreements
Responsible Agency	New Madrid County Commission
Economic Analysis	Cost justified because of decrease of economic loss
Estimated Cost	\$200.00
Source of Funds	Local
STAPLEE	STAP-E
Priority Rank	Medium
Timeline	1-2 years
Type of Strategy	Emergency Services, Public Information and Awareness
Hazards Addressed	Drought/Heat Wave
Evaluation	Minutes of meetings

Mitigation Action Analysis for Cities of Canalou, Catron, Gideon, Howardville, Lilbourn, Marston, Matthews, Morehouse, New Madrid, Parma, Portageville, Risco, Tallapoosa, and North Lilbourn

Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes and severe thunderstorms.

Action 1.1: Encourage construction codes on new buildings to withstand high winds and possible F1 tornado	
Action 1.2: Seek grant funds for construction of safe rooms	
Action 1.3: Host workshops annually for business owners and public facilities administrators	
Project Status	Ongoing
Progress	N/A
Responsible Agency	Mayor, City Council, EMD
Economic Analysis	Cost saves lives
Estimated Cost	Unknown
Source of Funds	Local Match, Government Grants
STAPLEE	STAPLEE
Priority Rank	Medium-High
Timeline	1-2 years
Type of Strategy	Prevention, Property Protection
Hazards Addressed	Tornadoes/Severe Thunderstorms
Evaluation	Meeting minutes

Goal 2: Minimize property damage due to flooding

Action 2.1: Develop design criteria for drainage structures on roads within the county’s jurisdiction	
Action 2.2 Implement erosion control measures on all county highway projects	
Action 2.4 Coordinate with USACE on impacts of levee failure	
Project Status	Not yet implemented
Progress	N/A
Responsible Agency	Mayor, City Council, EMD
Economic Analysis	Cost equates to less loss due to flooding
Estimated Cost	Unknown
Source of Funds	Local
STAPLEE	STAPL
Priority Rank	Medium
Timeline	1-2 years
Type of Strategy	Prevention, Property Protection
Hazards Addressed	Tornadoes, Severe Thunderstorms
Evaluation	New permits

Action 2.3: Continue compliance and implementation of NFIP requirements to reduce flood risks within flood hazard areas by seeking grant funds for flood buyouts, elevation projects, etc.	
Project Status	Modified from the 2004 Plan and is ongoing
Progress	N/A
Responsible Agency	Mayor, City Councils, EMDs, School Administrators
Economic Analysis	Cost will justify outcome/save lives
Estimated Cost	Unknown
Source of Funds	Local Match, Private, State and Government Grants
STAPLEE	STAPL-E
Priority Rank	Medium to High
Timeline	1-5 years
Type of Strategy	Prevent, Life and Property Protection
Hazards Addressed	Flooding
Evaluation	Funding approved and construction completed

Goal 3: Minimize injuries and property damage due to seismic events.

Action 3.1: Consider BOCA seismic design building codes for future construction	
Action 3.2: Designate an Emergency Operations Center and conduct annual coordination exercises	
Action 3.3: Co-sponsor with appropriate school boards and earthquake public awareness programs for local schools	
Project Status	On-going
Progress	New construction in public buildings now BOCA standard
Responsible Agency	Mayor, City Council, EMD
Economic Analysis	Cost of standard equates to loss of lives and property
Estimated Cost	Unknown
Source of Funds	Local
STAPLEE	ST-P-L
Priority Rank	High
Timeline	1-2 years
Type of Strategy	Prevention, Property Protection, Public Information/Awareness
Hazards Addressed	Earthquakes
Evaluation	Completion of policies

Goal 4: Minimize the impact to natural and human resources caused by drought and/or heat wave.

Action 4.1: Adopt “best practices” policy in conjunction with the Soil and Water Conservation Commission	
Action 4.2: Meet with public electric utility companies to develop “best practices” for power conservation	
Action 4.3: Sponsor annual safety meeting for county employees	
Project Status	Not yet implemented
Progress	N/A
Responsible Agency	Mayor, City Council, EMD
Economic Analysis	Cost minimal
Estimated Cost	\$200
Source of Funds	Local
STAPLEE	STAPLEE
Priority Rank	Medium
Timeline	1-3 years
Type of Strategy	Property Protection, Natural Resource Protection
Hazards Addressed	Drought/Heat Wave
Evaluation	Minutes of meeting

Goal 5: Maintain public services to minimize the risk and reduce property damage caused by severe winter weather.

Action 5.1: Create an emergency snow route for county roads	
Action 5.2: Meet annually with critical facilities administrators to develop severe winter weather strategies	
Action 5.3: Educate the public utility end user on preventive measures to reduce the risk to property	
Project Status	On-going
Progress	County and local officials participate more readily in mutual agreement
Responsible Agency	Mayor, City Council, EMD
Economic Analysis	Cost may lead to less personal injury
Estimated Cost	\$500.00
Source of Funds	Local
STAPLEE	ST-L-E
Priority Rank	Medium
Timeline	1-3 years
Type of Strategy	Property Protection, Emergency Services
Hazards Addressed	Severe Winter Weather
Evaluation	Minutes of meeting

Mitigation Action Process for New Madrid County R-I, Gideon C-37, Risco R-II, and Portageville School District, and Three Rivers Community College

Goal 1: Eliminate loss of life, minimize injuries, and reduce property damage caused by tornadoes and severe thunderstorms.

Action 1.1: Encourage construction codes on new buildings to withstand high winds and possible F1 tornado	
Action 1.2: Seek grant funds for construction of safe rooms	
Action 1.3: Host workshops annually for business owners and public facilities administrators	
Project Status	Ongoing
Progress	N/A
Responsible Agency	Board of Ed., Supt., Building Principals, Local EM
Economic Analysis	Avoid potential for death/injury of students/staff
Estimated Cost	Unknown
Source of Funds	Local match, State and Federal Grants, Levy Increase
STAPLEE	STAPLEE
Priority Rank	High
Timeline	1-2 years
Type of Strategy	Prevention, Property Protection
Hazards Addressed	Tornadoes, Severe Thunderstorms
Evaluation	Application process, records of emergency drills

Goal 2: Minimize property damage due to flooding

Action 2.5 Identify actions to mitigate effects of flooding on school day, such as seeking funds for storm water control, altering bus routes and school schedule to accommodate flooded bus routes, inform parents of effects of school day due to flooding.	
Project Status	New
Progress	N/A
Responsible Agency	Board of Education, School Adm., EMD, Police/Fire
Economic Analysis	Cost has potential to avoid injury and disruption of school day
Estimated Cost	\$200
Source of Funds	Local funds, Levy Increase, State and Federal Grants
STAPLEE	STAPLEE
Priority Rank	Medium-High
Timeline	1-2 years
Type of Strategy	Prevention, Property Protection, Emergency Services
Hazards Addressed	Flooding
Evaluation	New school policies

Goal 3: Minimize injuries and property damage due to seismic events.

Action 3.1: Consider BOCA seismic design building codes for future construction.	
Action 3.4: Designate an Emergency Operations Center and conduct quarterly coordinated exercise with school and local emergency management officials	
Action 3.5: Inform parents of crisis plan and how it affects their students in case of a disaster (new action in 2011 Update)	
Project Status	Ongoing
Progress	N/A
Responsible Agency	Board of Education, School Adm., Local Emergency Officials
Economic Analysis	Avoidance of potential student/staff injury/death
Estimated Cost	\$500
Source of Funds	Local, Levy Increase, State and Federal Grant Funds, Loans
STAPLEE	STAPLEE
Priority Rank	Medium-High
Timeline	1-2 years
Type of Strategy	Property Protection, Emergency Services, Public Awareness
Hazards Addressed	Earthquakes
Evaluation	Update crisis plan

Goal 4: Minimize the impact due to extreme heat.

Action 4.4: Take actions during periods of extreme heat to safeguard the health of students and staff by altering school activities	
Project Status	New
Progress	N/A
Responsible Agency	School Board, School Adm., Emergency Responders
Economic Analysis	Avoidance of heat related injuries
Estimated Cost	\$500
Source of Funds	Local
STAPLEE	STAPLEE
Priority Rank	Low-Medium
Timeline	1-2 years
Type of Strategy	Emergency Services, Public Awareness
Hazards Addressed	Drought, Extreme Heat Wave
Evaluation	Change in school activities

Goal 5: Minimize risk to students and staff and reduce property damage caused by severe winter weather.

Action 5.4: Develop school policies to protect students and staff during severe winter weather, such as meeting with officials to set priorities for snow removal, canceling classes and informing parents when road conditions are dangerous	
Project Status	New
Progress	N/A
Responsible Agency	School Administrators, Local road officials
Economic Analysis	Avoidance of injury to students/staff
Estimated Cost	\$200
Source of Funds	Local
STAPLEE	STAPLEE
Priority Rank	Medium-High
Timeline	Prior to winter
Type of Strategy	Emergency Services, Public Awareness
Hazards Addressed	Severe Winter Weather
Evaluation	New or update policies

Plan Maintenance Process

Plan Monitoring, Evaluating and Updating

The New Madrid County Commission has total responsibility for the implementation and monitoring process. They have oversight capabilities to provide timeframes and support the work of the professional staff and volunteers in their mitigation efforts. The New Madrid County Emergency Manager shall monitor and document the progress of the recommended mitigation action throughout the year. Quarterly meetings, chaired by the Emergency Manager, with the mayors to assess the validity and progress of the Action Plans for each city should be scheduled.

The Planning Team will be involved in the monitoring process. The plans effectiveness will be evaluated as to whether the identified mitigation strategies do in fact protect lives and property. After the plan is approved, the four basic tasks required are:

1. Prepare to update the plan (every five years or after a disaster).

2. Examine your community for changes.
3. Examine the current plan.
4. Incorporate the necessary revisions into the plan.

The following items should be addressed in future updates.

- New U.S. Census data
- Unemployment rates
- Higher education facilities mapping and enrollment information
- Other county demographic information
- Better mapping for school districts
- Jurisdiction specific information concerning vulnerability and potential loss
- Vulnerability to land by breach of levees in the county

The hazard mitigation plan is a dynamic document that needs to be revised and reviewed for its validity, adopted by the governing body, and new initiatives implemented.

Incorporation of Mitigation Strategy into the Local Planning Mechanisms

The Hazard Mitigation Plan for the county and its jurisdictions is a fluid document and must be re-evaluated periodically. The process by which local governments in New Madrid County will incorporate mitigation strategies into other planning mechanisms can be described as follows: Natural hazards as identified in the Mitigation Plan have and will continue to cause damage to life and property in New Madrid County. Historical and recent natural events have occurred in the county, have caused damage, and in all probability will continue. Local government officials recognize the dangers and have in the past participated in and will continue to participate in developing mitigation strategies to lessen the dangers.

Local officials have met and will continue to meet with county emergency management personnel, local mayor's associations, county commissioners, and other county officials to update or apply to their local plans those mitigation strategies defined in the Plan. Recent natural occurrences, culminating in natural disaster declarations, have allowed

local officials to realize the importance of defined mitigation strategies, and have prompted them to incorporate those strategies into their local plans.

The New Madrid County Hazard Mitigation Plan will be integrated into the New Madrid County Emergency Operations Plan when it is updated. The EOP update is the responsibility of the Emergency Management Director and staff. The Emergency Operations Plan covers all jurisdictions within New Madrid County.

Specific information on integration of the plan into other planning mechanisms in the participating jurisdictions is shown in the chart below.

Integration of Mitigation Actions into Other Planning Mechanisms	
Participating Jurisdiction	Plan for Integration
New Madrid County	Prior to issuing any permits to determine proximity to designated floods areas, the Flood Plane Manager will determine the suitability of the proposed site. Codes and regulations will be review and updated. Staff training will be a priority. Enhanced mutual aid agreements with county jurisdictions will be reviewed.
North Lilbourn	The City of North Lilbourn will review its ordinances and policies to evaluate their impact on the risks or consequences of the occurrences of natural disasters. The City will review and strengthen its mutual aid agreement with New Madrid Co.
Morehouse	The Mitigation Plan will be reviewed and incorporated in the city’s codes and ordinances. Specific emphasis will be placed on zoning and building codes.
Gideon	Gideon will strengthen its Emergency Management Plan with specific emphasis on Flood Plain management and watershed protection and implementation of activities for continued compliance with NFIP. Other emphasis will be on staff training to counter the effects of natural hazards.
Lilbourn	Lilbourn will provide staff review of planned actions, ordinances, and formally review the consequences with the occurrence of natural disasters.
Tallapoosa	Being a very small jurisdiction with few local resources, Tallapoosa will strengthen its mutual aid agreement with the New Madrid County. A review of its emergency management plan specific to natural hazards will occur.
Portageville	Portageville will review its storm water management plan and flood plain management plan. Emphasis will be on mitigation actions such as tree trimming, storm and warming shelters, and continued staff training.
New Madrid	New Madrid will strengthen its EOP; continue with staff training and mutual aid commitments with other jurisdictions. Particular emphasis will be shown toward mitigation activities identified in the Plan as it relates to flooding, levee protection, and storm water control
Howardville	Howardville will provide continued staff training, enhance its fire protection and other emergency services to combat natural hazards as identified in the County Plan.
Canalou	Canalou will review and strengthen its storm water management plan, building codes, and mutual aid agreement with New Madrid County.

Risco	Risco will strengthen its mitigation activities such as tree trimming, warm and cooling shelters, watershed protection plan, and mutual aid agreement plan.
Mathews	Mathews will review its mitigation policies as they relate to natural occurring hazards. Emphasis will be placed on building design to combat seismic events. Subdivision and building codes will be reviewed to address those parts of town subject to flooding.
Marston	Marston will review its policies on site locations for new buildings, increase codes enforcement as it relates to seismic events and continue to develop programs to encourage compliance with NFIP.
Catron	Due to its relative size, Catron will enhance its mutual aid agreement with New Madrid County and continue work on a local emergency management plan to meet the threats of natural disasters as outlined in the Mitigation Plan.
Parma	Parma will review its emergency management plan and provide continued staff training.
New Madrid R-I	Due to its location in an earthquake and flood prone area, the district will continue to strengthen its emergency preparedness plans and exercises. A review of bus routes to avoid effects of natural hazards will be addressed. Building codes to address seismic events will be reviewed. Tornado safe rooms will be considered and prioritized in the general planning process.
Gideon C-37	Plans to address the natural hazards listed in the Mitigation Plan are ongoing. Emphasis will be placed on earthquakes, flooding, power outages, heat and severe winter weather. Tornado safe room construction should be discussed.
Risco R-II	Tornado safe room construction should be prioritized as well as continued and expansion of preparedness plans and exercises.
Portageville SD	Tornado safe room construction should be prioritized. A review of all natural hazards as listed in the Mitigation Plan should be reviewed and appropriate plan put in place to mitigate those hazards. Examples should include new building codes, emergency drills, bus routes changes, emergency parent notification procedures, and periods of extended power outages.
Three Rivers Community College-Portageville	Three Rivers Community College has a satellite campus located in Portageville which is covered by the New Madrid County Mitigation Plan. The location of the college makes it susceptible to the natural hazards as outlined in the Plan. The College has in place an emergency management plan and should continue with and expand its exercises with the city of Sikeston. Staff should receive training in response to natural emergencies. The College should consider tornado safe areas as well as a response to seismic events.

Incorporation of Previously Approved Plan Strategies

Mitigation planning is an on-going process designed to safeguard counties and local jurisdictions from damages caused by natural hazards. The chart below specifies how the local jurisdictions incorporated the strategies of the mitigation plan into other planning mechanisms.

Integration of Mitigation Actions into Other Planning Mechanisms																					
	Three Rivers CC	New Madrid R-I	Gideon C-37	Risco R-II	Portageville	North Lilbourn	New Madrid Co	Morehouse	Gideon	Lilbourn	Tallapoosa	Portageville	New Madrid	Howardville	Canalou	Risco	Matthews	Marston	Catron	Parma	
Local Comprehensive Plan		X	X	X	X				X			X			X						
Capital Improvement Plan																			X		
Watershed Protection																					
Flood Plain Mitigation Plan							X	X	X			X				X				X	
Emergency Management Plan							X	X	X	X			X		X	X	X			X	
Zoning Ordinance								X				X	X			X	X			X	
Subdivision Regulations								X	X			X	X			X				X	
Building Codes								X		X		X	X			X	X			X	
Storm Water Management									X	X		X	X				X				
Mutual Aid Agreement	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Community Involvement Plan							X			X		X	X								
Community Disaster Preparation Plan	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Evacuation Plans	X	X	X	X	X																
Severe Weather Route Plans	X	X	X	X	X																
Earthquake Plans	X	X	X	X	X																
Safe Room Construction	X	X	X	X	X																

Public Involvement during Plan Maintenance and Updating

The New Madrid County Emergency Management Director will coordinate mitigation strategies within the respective county and local jurisdictions. The New Madrid County Mayor's Association, which meets monthly, will remain the main focus of local jurisdictional involvement. Emergency preparedness meetings will be held as required to discuss potential damages from natural hazards such as storms, tornadoes, winter storms, and earthquakes. Local officials and citizens will be notified using the press and local radio stations. The New Madrid County Emergency Management Director will facilitate presenting the entire plan to interested groups within the county such as:

- Health Department Personnel
- City Fire and Rural Fire Protection Districts
- City Elected Officials/Administrators
- Educational Personnel
- Local Emergency Planning Committees
- Local Police/Sheriff Department Personnel
- New Madrid County Commissioners/Directors
- Public Safety Committee Meetings

Defined mitigation strategies and new features will be emphasized to the public in order to provide them with information necessary to protect them from loss of property and injury.

Monitoring, Evaluating, and Updating Within Five Years

The New Madrid County Hazard Mitigation Plan will be monitored and evaluated on a yearly basis during the months of July and August, beginning in the year following approval and adoption. This would mean there would be four monitoring/evaluation periods (July/August 2011, July/August 2012, July/August 2013, and July/August 2014). The last monitoring and evaluation in 2014 will lead into the 5-year update process.

The monitoring and evaluation will be facilitated through the Bootheel Regional Planning Commission. It will consist of the following:

- Surveys will be sent to all participating jurisdictions for information that might suggest changes in priorities and mitigation actions due to recent natural hazard events, changes in key personnel, and progress made toward implementing major elements of the Plan.
- Planners at the Bootheel Regional Planning Commission will collect survey information.
- Meetings of the Hazard Mitigation Steering Committee will be convened by the Bootheel Regional Planning Commission to discuss any changes as they related the Plan.
- A yearly report will be written and included as an addition to the update process

Assuming approval and adoption of the current plan, the New Madrid County Hazard Mitigation Plan will need to be updated and re-approved by FEMA in the summer of 2015. A proposed schedule for the update is shown below:

Proposed Schedule for 5-year Update of Hazard Mitigation Plan		
Activity	Timeline to Begin	Responsible Party
Preliminary update of data	Yearly during maintenance and review of plan	BRPC
Prepare cost estimates for update of plan and submit to SEMA	PED-13	BRPC
Receive Memorandum of Agreement for SEMA for update	PED-11	SEMA
Review data for any additional updates	PED-11	BRPC
Steering Committee presents updates from jurisdictions	PED-10	BRPC
Jurisdictions surveyed for changes	PED-10	BRPC
Meetings to conduct preliminary review and update plan	PED-9	Steering Committee
Public meeting for comment and input on draft update	PED-9	BRPC/Steering Committee
Draft of update due at SEMA	PED-6	BRPC

Participating jurisdictions hold meetings to discuss plan and mitigation actions	PED-6	Jurisdictions
Public meeting #2 for comment and input of final update	PED-4	BRPC/Steering Committee
Final plan due at SEMA for review before submission to FEMA	PED-3	BRPC
Plan reviewed by SEMA	PED-3	SEMA
Required changes and additions	PED-2	BRPC
Plan submitted to FEMA	PED-2	SEMA
Jurisdictions adopt approved plan	PED-1	Jurisdictions
PED = Plan Expiration Date		