
SECTION 4

Introduction to Mitigation

Definition of hazard mitigation

Hazard Mitigation means to permanently reduce or alleviate the losses 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, industries, and 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) Stormwater 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 (wind proofing, flood proofing, seismic design standards)
- 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 and Participating Jurisdictions’ Hazard Mitigation Strategy

Goals are broad general 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 Scott County developed the original goals in 2005 Plan. To re-evaluate the goals and actions for the 2010 Update, the following public participation occurred (See example of public participation) A questionnaire was mailed to each participating jurisdiction on September 9, 2009 to up-date goals and actions and to up-date information on mitigation activities in their communities. An example of the questionnaire is included below.

Chaffee

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

Subdivision Regulations Yes No

Stormwater Regulations Yes No

Floodplain Regulations Yes No

Outdoor Warning Sirens Yes No How Many? 1

Participate in the National Flood Insurance Program Yes No

Water Service NRD

Sewer Service NRD

Electric Service NRD

Fire Service NRD

Ambulance Service NRD - North Scott County Ambulance

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, purchase 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.

Bootheel Staff met with the Scott County Commissioners in Scott County, Missouri on December 10, 2009. The document below briefly summarizes what occurred at this meeting and identifies those who attended.

December 1, 2009

Scott County Hazard Mitigation Plan Update

Met with Scott 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 Jammy [Signature] PRESIDING COMM Date 12/10/09

Dennis Ziegenhans 1st Dist Comm Date 12/10/09

Dennis [Signature] 2nd Dist Comm Date 12/10/09

Rita [Signature] Date 12-10-09

Bootheel Staff met with Scott County Emergency Management Director on December 10, 2009.

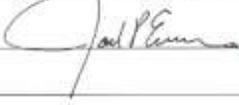
December 9, 2009

Scott County Hazard Mitigation Plan Update

Met with Scott County Emergency Management Leader

Topic of meeting included:

Discussion of Plan updates
Reviewed goals and objectives
Discussed co-ordination of Hazard Mitigation Plan countywide

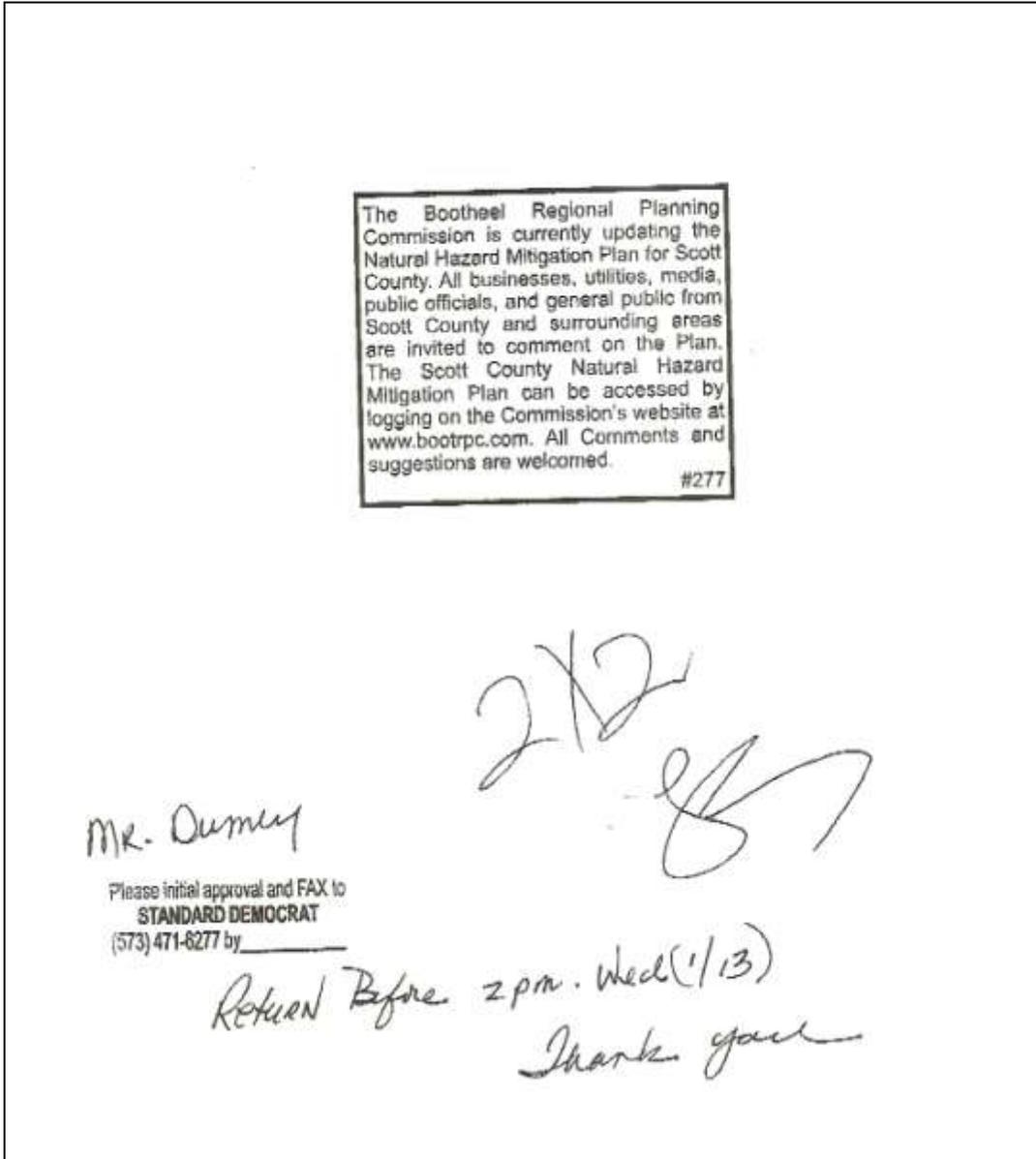
Signed  _____

Date 10 Dec 09

Bootheel Planning Commission Staff reviewed up-dated plan with the major Scott County newspaper Standard Democrat on December 11, 2009. This is another example of how public participation was solicited.



An article appeared in the Scott County newspaper Standard Democrat requesting comments on updates.



Bootheel staff met with Scott-Mississippi County Superintendents on January 26, 2010 at Sikeston, Mo. and discussed mitigation update. The document below is the sign-in sheet from that meeting.

Scott-Mississippi County Superintendents		
January 26, 2010 Sikeston Country Club		
Mississippi County Schools		
District Name	Representative/Title	Telephone/E-Mail
Charleston R-I		
East Prairie R-II	Scott Downing / Supt	573-649-3562 sdownin@eprairie.k12.mo.us
Scott County Schools		
Scott County Central	Pat DeFene / Supt	573-471-2686 pdefene@sc.k12.mo.us
Sikeston R-VI		
Oran R-III	Mitch Wood / Supt	573-262-2330 mwood@oran.k12.mo.us
Scott City R-I	Diann Bradshaw-Wilmer	573-264-2381 ddiann@sc.k12.mo.us
Kelso C-7	Bill Regier	573-545-3257 bregier@kelso-c-7.k12.mo.us
Chaffee R-II	Ken Latham / Superintendent	573-897-3532 klatham@chaffee.k12.mo.us
Scott County R-IV	Don Moore / Superintendent	573-545-3887 dmoore@kelly.k12.mo.us
Other Representatives		

Bootheel staff met with representative from Southeast Missouri State University to discuss Scott County Hazard Mitigation Plan.

Southeast Missouri State University-Hazard Mitigation Plans
Scott/Dunklin counties.

Met with Southeast Missouri State University Representative

Items of discussion included:

- Overview of Mitigation Plan
- Relevance to College
- Review of Goals, Objectives, Action Plans
- Recommended review and comments on Plan
- Discussed Resolution Adoption

Date 6/2/10

Southeast Missouri State University Representative

Judy Buck, Director
Sikeston Campus

Bootheel staff met with county officials, University of Missouri, and Department of Economic Development officials to discuss mitigation planning for all counties in the Bootheel. The sign-in sheet below documents the identity of those in attendance.

Meeting Attendance Record

Date: June 8, 2010 Type of Meeting: Web Time: 12:00

Name	Representing	Address	Phone & Email
John Paine	Carroll		
Frank Sifford	Scott County	6225 P.O. Box 258 Bloomfield Mo.	670-582-3322 frank@sifford.com
AL-BANKEN ✓	Dexter Fire Dept.	201 Cooper Drive Dexter MO 63841	637-627-3425 fax 637-627-1557 dexterfire@att.net
Ken Eskew ✓	City of Scott City	215 Chestnut Ave	264-2157
John Steiner ✓	Boiler Co (PA)	P.O. Box 624 Bloomfield 63916	589-4400 jstc@disc.com
Joe Weissen	City of Drexler	708 Sprinkler Spn Rd	624-5141
JANET COLEMAN ✓	Dexter Chamber	P.O. Box 21 Dexter 63841	637-7658 info@dexterchamber.com
Ann Collins	Dunklin County	P.O. Box 619 Kennett Mo 63857	571-887-7100 ann@15c-eps.com
Hannah Ramsey	City of Parma	P.O. 668 Parma MO 63870	major@parma@brk.net
Dani Hill	North Pole	Bluefield, MO	571-568-5307
William Joseph	City of Cantonville	200 W. 3rd Canton Mo	william@cantontowncity.com
Tom Rushing ✓	City of Cantonville	200 West 3rd Canton Mo 63830	1324 for P.O. Cantonville Mo cantonville@cantontowncity.com
Chantal Jones ✓	City of Cantonville	104 E. 2nd St Cantonville MO	627-332-2252
John Ferguson ✓	Il		
Shirley Barken	City of East Prairie	219 N. Washington	administrator@eastprairie-mo-ill 573-649-3057
Paul Combs ✓	Scott County	P.O. Box 188 Benton MO	rc@scottco-ty.mo.gov
Blair St. John	City of Ma-Columb	304 Cornwell Hall, Columbia	stjohn@missouri.edu
Michael J. Murrin	Dept of Econ Dev.	201 W. High Street Joplin City	murrin@ed.mo.gov

We are up-dating our records continuously, please complete the attendance record. Thank you for your cooperation.

Second meeting with county officials, University of Missouri, and Department of Economic Development was held to discuss mitigation plans for all of the Bootheel counties.

Bootheel Regional Planning & Economic Development Commission
Meeting Attendance Record

Recording - Respond Mike Hodge - 877
Alan W. Hodge - 810-Columbia

Date: June 15, 2010 Type of Meeting: RED Time: 12:00

Name	Representing	Address	Phone & Email
Patricia Hodges	Dunkin County Transit	PO Box 293 610 N. Douglas Malden, MO 63863	detmalden@stccglobal.net
TED BELLERS	CITY OF MALDEN	201 S. MADISON, MALDEN, MO 63863	ted@bellers.com ASE 620-394-5555 520-1557 DENTAL PLAN 414-250-0000, POA. Charles Jones VA 2027 Mail, Va 573-337-2253
AL-BANKEN	DEXTER F.D E.M.	301 COWPER DR Dexter, MO 63841	
Charlie Jones	City of Caruthersville	104 E. 24th St Caruthersville, MO 63830	
Glenda Miller	City of Dudley	12377 Center St	573-624-3821
Mary Dwyer	City of Dudley	12377 Center St	573-624-3831
John F. Hines	Carroll		
Jessie Newsom	City of Howardville	102 Howard Howardville, MO	573-688-2137
James Skidmore	City of Canton	219 N Washington E. Canton	649-3057
John P. Ems	Scott County	PO Box 438 Benton MO 63716	(573)545 3549
JESSIE NEWSOM	←		Howardville jessie B Newsom
Michael Hodge	PRR	105 E. NORTH MAIN Dexter	573-624-3831

We are up-dating our records continuously, please complete the attendance record. Thank you for your cooperation.

Bootheel staff met with Scott County Commissioners, mayors, city administrators, school superintendents, Missouri Department of Transportation officials, and other business officials to discuss final draft of Scott County mitigation plan.

Bootheel Regional Planning & Economic Development Commission Meeting Attendance Record			
Date: June 22, 2010 Time: 12:00 PM Type of Meeting: <u>Hazard Mitigation</u> Place: Scott City, Scott Co.			
Name	Position	Address	Phone & E-Mail
PILL PERSON	PLANNING MANAGER-MDOT	P.O. BOX 160, Sikeston, MO	573-472-6621 WILLIAM PERSON (PILLER) MO. GOV
ERIC KRAPP	MODOT PROJECT MANAGER	"	573/472-5261 ERIC.KRAPP@MODOT.MO.GOV
HAROLD GRAVETT	MAYOR OF VANDUSER-MO.	P.O. Box 195 63784-VANDUSER-MO	573-471-8093
Mark Peaberton	Mayor Diehlstadt	++	573-576-9160
JANIE BURGER	P.O. BOX 188	BRANTON MO	545-5549
Earl Erbura	PO BOX 313	Diehlstadt	683-2181
Bill Rogers	superintendent Kelsco C-7	181657 Hwy A Benton MO	573-545-3357
Don Moore	supt. - Kelly	4035 State Hwy 77 Benton, MO 63736	director@kelly.k12.mo.us 545-3887
Mitch Wood	Supt - Oran R-3	P.O. Box 250 Oran 63771	mwood@oran.k12.mo.us 262-2330
TOM WRAHMAN	MAYOR ORAN MO	ORAN 63771 P.O. BOX 454	262-2446

Donnie Kiesel	Scott Co. Commissioner	1572 P.O. Box 186 Branton MO.	545-3549
ED WAT	CITY OF SIKESTON	129 N. NEW WOODS ST SIKESTON	471-2790
DOUG FRIEND	CITY OF SIKESTON	105 E Center St	471-2512
Jerry Miller	City of Branton	15 oak meadow	471-7897
Donnie Ziegler	Scott Co. Commissioner	118 N. Morgan Sikeston	471-3112
Ron Eskew	Scott City	215 chert	264-2157
Joel Evans	Scott Co. County Developer	P.O. Box 431 Branton MO 63736	545 3549

Evaluation

All mitigation goals, actions, and strategies from the 2005 Plan were reevaluated at the mitigation workshops. Participants reviewed the approved original goals and actions,

determined them to remain effective and valid or recommended changes and assessed whether the goals and actions lead to mitigation projects or policy changes.

For the 2010 Hazard Mitigation Plan Update, the Planning Committee and workshop participants assessed progress made on the 2005 Scott County strategy. The chart below illustrates the findings of the planning committee. Following the chart is a listing of the goals and actions that comprised the 2005 strategy.

2005 Plan Strategy-Hazard Mitigation 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
Scott County	Green	Red	Red	Red	Green	Red	Red	Red	Green	Red	Yellow	Yellow	Green	Yellow	Yellow	Yellow	Green	Yellow	Yellow	Yellow
Sikeston	Green	Red	Red	Red	Green	Red	Red	Red	Green	Red	Yellow	Yellow	Green	Yellow	Yellow	Yellow	Green	Yellow	Yellow	Yellow
Miner	Green	Red	Red	Red	Green	Red	Red	Red	Green	Red	Yellow	Yellow	Green	Yellow	Yellow	Yellow	Green	Yellow	Yellow	Yellow
Commerce	Green	Red	Red	Red	Green	Red	Red	Red	Green	Red	Yellow	Yellow	Green	Yellow	Yellow	Yellow	Green	Yellow	Yellow	Yellow
Diehlstadt	Green	Red	Red	Red	Green	Red	Red	Red	Green	Red	Yellow	Yellow	Green	Yellow	Yellow	Yellow	Green	Yellow	Yellow	Yellow
Vanduser	Green	Red	Red	Red	Green	Red	Red	Red	Green	Red	Yellow	Yellow	Green	Yellow	Yellow	Yellow	Green	Yellow	Yellow	Yellow
Haywood City	Green	Red	Red	Red	Green	Red	Red	Red	Green	Red	Yellow	Yellow	Green	Yellow	Yellow	Yellow	Green	Yellow	Yellow	Yellow
Blodgett	Green	Red	Red	Red	Green	Red	Red	Red	Green	Red	Yellow	Yellow	Green	Yellow	Yellow	Yellow	Green	Yellow	Yellow	Yellow
Chaffee	Green	Red	Red	Red	Green	Red	Red	Red	Green	Red	Yellow	Yellow	Green	Yellow	Yellow	Yellow	Green	Yellow	Yellow	Yellow
Scott City	Green	Red	Red	Red	Green	Red	Red	Red	Green	Red	Yellow	Yellow	Green	Yellow	Yellow	Yellow	Green	Yellow	Yellow	Yellow
Kelso	Green	Red	Red	Red	Green	Red	Red	Red	Green	Red	Yellow	Yellow	Green	Yellow	Yellow	Yellow	Green	Yellow	Yellow	Yellow
Benton	Green	Red	Red	Red	Green	Red	Red	Red	Green	Red	Yellow	Yellow	Green	Yellow	Yellow	Yellow	Green	Yellow	Yellow	Yellow
Morley	Green	Red	Red	Red	Green	Red	Red	Red	Green	Red	Yellow	Yellow	Green	Yellow	Yellow	Yellow	Green	Yellow	Yellow	Yellow
Oran	Green	Red	Red	Red	Green	Red	Red	Red	Green	Red	Yellow	Yellow	Green	Yellow	Yellow	Yellow	Green	Yellow	Yellow	Yellow

(Green) Goal valid and partially completed
 (Red) The action was not fully completed before the update, and was included in the update in a revised form
 (Yellow) Action valid and partially completed, included in the update without revisions

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 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 occupant 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.
- 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, including workshops, for county highway departments to be implemented on July 1, 2006, adopting AASHTO design criteria or cross road drainage structures.

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.
- 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 Scott County Courthouse for public education.

Goal 4. Minimize the impact to natural and human resources caused by *drought/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
- Action 4.2: Meet with Public Electric Utility Companies to develop "best practices" for power conservation during periods of drought and heat waves to implemented July 1, 2006.
- Action 4.3: Sponsor annual safety meetings for county employees to address heat stress and conservation strategies 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.
- Action 5.2: Meet annually with Critical Facilities Administrators to develop severe winter weather strategies beginning July 1, 2006.
- Action 5.3: Educate the public and private utility end user on preventive measures to reduce the risk to public and private property by July 1, 2006.

The table below illustrates the results of the 2005 strategy.

Goals and Actions in the 2005 Plan that lead 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	
Scott County		MP									MP									MP	
Sikeston		PC	PC					MP						PC		MP				PC	MP
Miner											MP	MP								MP	MP
Oran																				PC	
Commerce																				PC	
Diehlstadt																				PC	
Vanduser											MP	MP								MP	MP
Haywood City																					
Blodgett											MP										
Chaffee			MP			PC					MP			PC						MP	
Scott City			MP																	MP	
Kelso																				MP	
Benton						PC															
Morley											MP										MP

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

Further results of the communities’ mitigation activities are shown in the table below. It shows the mitigation activities each jurisdiction has initiated as a result of natural weather occurrences. Although not all activities were specifically enumerated in the previously approved plan, all further the goals of hazard mitigation.

Jurisdictions	Scott County	Sikeston	Miner	Oran	Diehlstadt	Vanduser	Haywood City	Blodgett	Chaffee	Scott City	Kelso	Benton	Morley
rants-Fire Stations, Community Centers													
Tree Trimming		x					x		x				x
Drainage		x											
Generators	x	X	x			x	x			x			
Warm Spaces		x	x	x	x	x	x		x	x		x	x
Special Training for Emergencies Workers	x	x	x			x	x		x	x	x	x	x
Public Meetings	x	x					x			x			
Update Emergency Operations Plan								x					
Co-ordinate County Resources	x	x	x	x	x	x	x	x	x	x	x	x	x
New Building Codes													
Stormwater Pumps													
Weather Sirens			x										

Updated February 2010

The planning committee and workshop participants reviewed the goals and actions of the previously approved Hazard Mitigation Plan. They determined not to eliminate any of the goals or actions, but rather to restate some of the goals and actions. In addition, several

new actions were proposed, which were related to actions in the previously approved plan. Failure to complete actions from 2005 plan does not mean that those actions were invalid. Due to the cost, time constraints, and varying intensities and severity of natural weather patterns, completed mitigation will continue to be an ongoing process.

The committee endorsed the list below for the 2010 Plan Update. The action items that are new to the Update are indicated in parentheses. This is the complete list of actions considered by the planning committee and workshop participants.

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

- Action 1.1: Schedule meetings with jurisdictions who seek grant funds for construction of safe rooms, flood buyouts, elevation projects, etc.(New to update)
- Action 1.2: Encourage construction codes on new buildings to withstand high winds and a possible F1 tornado(Restated from the 2005 Plan)
- Action 1.3: Encourage construction of tornado safe rooms. (This is essentially Action 1.2 from the 2005 Plan)
- Action 1.4: Host workshops annually for business owners and public facilities administrators to develop plans for the occupants should severe storms threaten. (Unchanged from 2005 Plan)

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

- Action 2.1: Revise building permit application process to include site plan and elevations with submittal approval(New to update)
- Action 2.2: Develop design criteria for drainage structures on roads within the county's jurisdiction projects(Unchanged from 2005 Plan)
- Action 2.3: Implement erosion control measures on all county highway projects(Unchanged in 2005 Plan)
- Action 2.4: Continue compliance and implementation of the requirements for NFIP and reduce the flood risks within hazard area(Restated from Action 2.3 of the 2005 Plan)

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

- Action 3.1: Revise policies to include seismic designs on future construction of critical facilities(New to update)
- Action 3.2: Consider BOCA seismic design building codes for future construction of critical facilities.(Unchanged from 2005 Plan)
- Action 3.3: Designate an Emergency Operations Center and conduct an annual coordination exercise with all county officials.(Unchanged from 2005 Plan)
- Action 3.4: Co-sponsor with appropriate school boards an earthquake public awareness program for local public schools(Unchanged from 2005 Plan)

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

- Action 4.1: Schedule annual meetings with city mayors to discuss power and water conservation practices(New to 2010 Plan)
- Action 4.2: Adopt “best practices” policy in conjunction with the Soil and Water Conservation Commission(Unchanged from 2005 Plan)
- Action 4.3: Meet with public electric utility companies to develop “best practices” for power conservation during periods of drought and heat waves(Restated from 2005 Plan)
- Action 4.4: Sponsor annual safety meetings for county employees to address heat stress(Unchanged from 2005 Plan)

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

- Action 5.1: Schedule meetings with county highway foreman, city street directors, and state highway engineer to discuss snow removal, route closures, and general safety procedures(New to 2010 update)
- Action 5.2: Create an emergency snow route map for the county road system(Unchanged from 2005 Plan)
- Action 5.3: Meet annually with critical facilities administrators to develop severe winter weather strategies(Unchanged from 2005 Plan)
- Action 5.4: Educate the public utility end user on preventive measures to reduce the risk to public and private property(Unchanged from 2005 Plan)

The planning committee/workshop participants then prioritized the updated goals and actions. Each action was reviewed using the STAPLEE criteria. The STAPLEE methodology involves evaluation of each action’s social, technical, administrative, political, legal, economic, and environmental considerations. The STAPLEE analysis uses the following criteria.

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 adversely affect 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 be accomplished in a timely manner?

Political - - Proposed mitigations objectives 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 law, 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?

A critical component of selecting mitigation goals, actions and strategies to reduce the community’s risk of hazards is ensuring the criteria are consistent with and complementary to other community programs.

The following table provides an analysis of the area’s 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 action would play a factor in mitigation actions. No “X” in a box indicates this area is not impacted.

Scott County 2010 Update Mitigation Action 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: Schedule meetings with jurisdictions who seek grant funds for construction of safe rooms, flood buyouts, elevation projects, etc.	X	X	X	X	X	X	X
Action 1.2: Encourage construction codes on new buildings to withstand high winds and a possible F1 tornado	X	X	X	X	X	X	X
Action 1.3: Encourage construction of tornado safe rooms	X	X	X	X	X	X	X
Action 1.4: Host workshops annually for business owners and public facilities administrators to develop plans for the occupants should severe storms threaten.	X	X		X			
Goal 2. Minimize property damage due to flooding.							
Action 2.1: Revise building permits to include site plan and elevations with submittal approval.	X	X	X	X	X	X	X
Action 2.2: Develop design criteria for drainage structures on roads within the county’s jurisdiction.	X	X	X			X	X
Action 2.3: Implement erosion control measures on all county highway projects.	X	X				X	X
Action 2.4: Continue compliance and implementation of the requirements for NFIP and reduce the flood risks within hazard area.	X	X	X	X	X	X	X
Goal 3. Minimize injuries and property damage due to seismic events.							
Action 3.1: Revise policies to include seismic designs on future construction of critical facilities.	X	X	X	X	X	X	X
Action 3.2: Consider BOCA seismic design building codes for future construction of critical facilities.	X	X	X	X	X	X	X
Action 3.3: Designate an Emergency Operations Center and conduct annual coordination exercises with all county officials.	X		X	X			
Action 3.4: Co-sponsor with appropriate school boards an earthquake public awareness program for local schools.	X		X	X			
Goal 4. Minimize the impact to natural and human resources caused by drought and/or heat wave.							
Action 4.1: Schedule annual meetings with city mayors to discuss power	X	X	X	X	X	X	X

and water conservation practices.							
Action 4.1: Schedule annual meetings with city mayors to discuss power and water conservation practices.	X	X	X	X	X	X	X
Action 4.2: Adopt “best practices” policy in conjunction with the Soil and Water Conservation Commission.	X	X	X	X			X
Action 4.3: Meet with public electric utility companies to develop “best practices” for power conservation during periods of drought and heat waves	X		X	X			
Action 4.4: Sponsor annual safety meeting for county employees to address heat stress	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: Schedule meetings with county highway foreman, city street directors, and state highway engineer to discuss snow removal, route closures, and general safety procedures.	X	X	X	X	X	X	X
Action 5.2: Create an emergency snow route for county roads	X	X	X	X		X	
Action 5.3: Meet annually with critical facilities administrators to develop severe winter weather strategies.	X	X	X	X	X	X	
Action 5.4: Educate the public utility end user on preventive measures to reduce the risk to property.	X	X	X	X	X	X	X

This plan has identified the natural hazards that pose the greatest risk to the citizens of Scott County and the cities, towns and villages, school districts and colleges within its boundaries. The Scott 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 measure have been identified that will yield the highest return to the investment of the tax-paying community

Further Analysis of Proposed Mitigation Projects

The planning committee applied the STAPLEE analysis to the list of possible goals and actions beginning on page 186. The process allowed the individual jurisdictions participating in the Plan Update to choose the actions on which to concentrate efforts. Those choices are listed by jurisdiction on the following pages. The listing includes a more in-depth analysis of those actions chosen from the list beginning on page 186. These actions are considered to be 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. The analysis of the actions on the following pages will involve these terms, which are defined as follows:

- Goal: A state of affairs that a plan is intended to achieve.
- Action: The action identified in the preceding pages for the plan update.
- Project Status: Some 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 is ongoing. A designation of “not yet implemented” is an action from the 2004 Plan upon which no activity has been initiated.
- Progress: How much has been achieved towards completion of the action.
- Responsible Agency: The organizations that will gather resources, locate applicable funding, or oversee project activity, implementation, monitoring and evaluations.
- Economic Analysis: The feasibility of a project arrived at by quantifying its cost versus the benefit of achieving the strategy.
- Estimated Cost: Estimated cost of project, if known.
- Source of Funds: Possible funding sources such as local money, grants, or loans.
- Priority Rank: High, Medium, Low, based on the STAPLEE analysis

Low-to be initiated in 5 or more years

Medium-to be initiated in three to five years

High-to be initiated immediately

- 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 provides validation that the objective is met.

Mitigation Actions for Scott County

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

Action 1.1: Schedule meetings with jurisdictions who seek grant funds for construction of safe rooms, flood buyouts, elevation projects, etc.	
Project Status	New
Progress	N/A
Responsible Agency	Scott County Commission, School Administrators
Economic Analysis	Schedule meetings will involve only administrative costs. Low cost is balanced against the desired goal of mitigation against flood damage.
Estimated Cost	Unknown
Source of Funds	Local
Priority Rank	Medium to High
Type of Strategy	Prevent, Life and Property Protection
Hazards Addressed	Tornadoes and Severe Thunderstorms
Evaluation	Funding approved and construction completed

Action 1.2: Encourage construction codes on new buildings to withstand high winds and possible F1 tornado	
Project Status	Restated from the 2005 Plan
Progress	Ongoing
Responsible Agency	Scott County Commission, School Administrators
Economic Analysis	Although some cost will be incurred by builders, it would not cost the government to change codes
Estimated Cost	Unknown
Source of Funds	Local
Priority Rank	High
Type of Strategy	Prevention, Life and Property
Hazards Addressed	Tornadoes and Severe Thunderstorms
Evaluation	Implementation of new permits

Action 1.3: Encourage construction of tornado safe rooms	
Project Status	Restated from the 2005 Plan
Progress	Ongoing
Responsible Agency	Scott County Commission, School Administrators
Economic Analysis	Encouraging construction costs nothing
Estimated Cost	Unknown

Source of Funds	Local
Priority Rank	Medium-High
Type of Strategy	Prevent, Life and Property Protection
Hazards Addressed	Tornadoes and Severe Thunderstorms
Evaluation	Funding approved and some construction completed

Action 1.4: Host workshops annually for business owners and public facilities administrators	
Project Status	Restated from the 2005 Plan
Progress	Not yet implemented
Responsible Agency	Scott County Commissioners, School Administrators
Economic Analysis	Low cost, administrative costs only
Estimated Cost	Unknown
Source of Funds	Local
Priority Rank	Medium to High
Type of Strategy	Prevent, Life and Property Protection
Hazards Addressed	Tornadoes and Severe Thunderstorms
Evaluation	Funding approved and some construction completed

Goal 2: Minimize property damage due to flooding

Action 2.1: Revise building permit system to require submittal of site plans and elevations	
Project Status	New
Progress	N/A
Responsible Agency	Scott County Commission
Economic Analysis	Low cost, high benefits to the general public
Estimated Cost	Unknown
Source of Funds	Local
Priority Rank	Medium
Type of Strategy	Prevention, Life and Property
Hazards Addressed	Flooding
Evaluation	Implementation of new requirements for building permit approval

Action 2.2: Develop design criteria for drainage structures on roads within the county's jurisdiction	
Project Status	Not yet implemented
Progress	N/A
Responsible Agency	Scott County Commission
Economic Analysis	Cost will save money for insurers/owners
Estimated Cost	Unknown
Source of Funds	Local

Priority Rank	Medium
Type of Strategy	Prevention, Life and Property
Hazards Addressed	Flooding
Evaluation	Implementation of new permits

Action 2.3: Implement erosion control measures on all county highway projects	
Project Status	Not yet implemented
Progress	N/A
Responsible Agency	Scott County Commission
Economic Analysis	Cost will save money for insurers/owners
Estimated Cost	Unknown
Source of Funds	Local
Priority Rank	Medium
Type of Strategy	Prevention, Life and Property
Hazards Addressed	Flooding
Evaluation	Implementation of new erosion requirements

Action 2.4: Continue compliance and implementation of the requirements of NFIP and reduce the flood risk within hazard area	
Project Status	Restated from Action 2.3 in the 2005 Plan
Progress	Participating jurisdictions continue to participate, awareness of the benefits of NFIP participating has increased
Responsible Agency	Scott County Commission
Economic Analysis	Low cost to the government, will save money for insurers/owners
Estimated Cost	Unknown
Source of Funds	Local
Priority Rank	Medium
Type of Strategy	Prevention, Life and Property
Hazards Addressed	Flooding
Evaluation	Implementation of new permits

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

Action 3.1: Revise policies to include seismic designs on future construction of critical facilities	
Project Status	New to update
Progress	N/A
Responsible Agency	Scott County Commission
Economic Analysis	Development of new policies will involve only administrative cost to the governments and benefit many
Estimated Cost	0 upfront costs
Source of Funds	Local

Priority Rank	Medium-high
Type of Strategy	Property Protection, Structural Projects
Hazards Addressed	Earthquakes
Evaluation	Completed policies

Action 3.2: Consider BOCA seismic design building codes for future construction	
Project Status	On-going
Progress	New construction in county now adheres to building codes for seismic events
Responsible Agency	Scott County Commission
Economic Analysis	Development of new policies will involve only administrative costs to the governments and benefit many
Estimated Cost	0 upfront costs
Source of Funds	Local
Priority Rank	Medium-High
Type of Strategy	Property Protection, Structural Projects
Hazards Addressed	Earthquakes
Evaluation	Completed policies

Action 3.3: Designate an Emergency Operations Center and conduct annual coordination exercises	
Project Status	On-going
Progress	On-going
Responsible Agency	Scott County Commission
Economic Analysis	Cost of construction will save lives
Estimated Cost	\$500
Source of Funds	Local
Priority Rank	Medium-High
Type of Strategy	Property Protection, Structural Projects
Hazards Addressed	Earthquakes
Evaluation	Completed EOC and annual exercises

Action 3.4: Co-sponsor with appropriate school boards an earthquake public awareness program for local schools	
Project Status	On-going
Progress	Public awareness program in place
Responsible Agency	Scott County Commission
Economic Analysis	Cost of construction will save lives
Estimated Cost	\$500
Source of Funds	Local
Priority Rank	Medium-High
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: Schedule annual meeting with city mayors to discuss power and water conservation practices	
Project Status	New
Progress	N/A
Responsible Agency	Scott County Commission
Economic Analysis	No cost other than administrative cost vs. hazard mitigation
Estimated Cost	\$0
Source of Funds	Local
Priority Rank	Medium
Type of Strategy	Emergency Services, Public Information and Awareness
Hazards Addressed	Drought/Heat Wave
Evaluation	Minutes of meeting

Action 4.2 Adopt “best practices” policy in conjunction with the Soil and Water Conservation Commission	
Project Status	Same as in the 2005 Plan
Progress	Not yet implemented
Responsible Agency	Scott County Commission
Economic Analysis	Not cost other than administrative costs, while assisting in the goal of hazard mitigation
Estimated Cost	\$0
Source of Funds	Local
Priority Rank	Medium
Type of Strategy	Emergency Services, Public Information and Awareness
Hazards Addressed	Drought/Heat Wave
Evaluation	Minutes of meeting, new policies adopted

Action 4.3 Meet with public electric utility companies to develop “best practices” for power conservation	
Project Status	Same as in the 2005 Plan
Progress	Not yet implemented
Responsible Agency	Scott County Commission
Economic Analysis	Not cost other than administrative costs for government and agencies involved, while assisting in the goal of hazard mitigation
Estimated Cost	\$0
Source of Funds	Local
Priority Rank	Medium
Type of Strategy	Emergency Services, Public Information and Awareness
Hazards Addressed	Drought/Heat Wave
Evaluation	Minutes of meeting

Action 4.4 Sponsor annual safety meeting for county employees	
Project Status	New
Progress	Not yet implemented
Responsible Agency	Scott County Commission
Economic Analysis	Cost increases effectiveness of practices
Estimated Cost	No cost other than administrative costs for government and agencies involved, while assisting in the goal of hazard mitigation
Source of Funds	\$0
Priority Rank	Medium
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: Schedule meetings with county highway foreman, city street directors, and state highway engineer to discuss snow removal, route closures, and general safety procedures.	
Project Status	New
Progress	County and local officials participate more readily in mutual agreements
Responsible Agency	Mayor, City Council, EMP
Economic Analysis	No cost other than administrative costs for government and agencies involved, while assisting in the goal of hazard mitigation
Estimated Cost	\$0
Source of Funds	Local
Priority Rank	Medium
Type of Strategy	Emergency Services, Public Information and Awareness
Hazards Addressed	Severe Winter Weather
Evaluation	Minutes of meetings

Action 5.2: Create an emergency snow route for county roads	
Project Status	Restated from 2005 Plan, eliminated the 2006 date
Progress	County and local officials participate more readily in mutual agreements
Responsible Agency	Scott County Commission
Economic Analysis	Only administrative costs for government and agencies involved, while assisting in the goal of hazard mitigation
Estimated Cost	\$0
Source of Funds	Local
Priority Rank	Medium

Type of Strategy	Emergency Services, Public Information and Awareness
Hazards Addressed	Severe Winter Weather
Evaluation	Minutes of meetings, snow routes created

Action 5.3: Meet annually with critical facilities administrators to develop severe winter weather strategies	
Project Status	Restated from 2005 Plan, eliminated the 2006 date
Progress	Officials participate more readily in strategy sessions
Responsible Agency	Scott County Commission
Economic Analysis	Only administrative costs for government and agencies involved, while assisting in the goal of hazard mitigation
Estimated Cost	\$0
Source of Funds	Local
Priority Rank	Medium
Type of Strategy	Emergency Services, Public Information and Awareness
Hazards Addressed	Severe Winter Weather
Evaluation	Minutes of meetings

Action 5.4: Educate the public utility end user on preventive measures to reduce the risk to property	
Project Status	Restated from 2005 Plan, eliminated the 2006 date
Progress	County and local officials participate more readily in mutual agreements
Responsible Agency	Scott County Commission
Economic Analysis	Only administrative costs for government and agencies involved, while assisting in the goal of hazard mitigation
Estimated Cost	\$0
Source of Funds	Local
Priority Rank	Medium
Type of Strategy	Emergency Services, Public Information and Awareness
Hazards Addressed	Severe Winter Weather
Evaluation	Minutes of meetings

Mitigation Actions for the Cities of Sikeston, Minor, Oran, Commerce, Diehlstadt, Vanduser, Haywood City, Blodgett, Chaffee, Scott City, Kelso, Benton and Morley

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

Action 1.1: Seek grant funds for construction of safe rooms, flood buyouts, elevation projects, etc.

Project Status	New
Progress	N/A
Responsible Agency	Mayor, City Council, EMD, School Administrators
Economic Analysis	Construction of safe rooms is likely to be costly, and cannot be accomplished without grant money, but the cost will be justified outcome and save lives
Estimated Cost	Unknown but over \$100,000
Source of Funds	Local Match, Private, State and Government Grants
Priority Rank	Medium to High
Type of Strategy	Prevent, Life and Property Protection
Hazards Addressed	Tornadoes and Severe Thunderstorms
Evaluation	Funding approved and construction completed

Action 1.2: Encourage construction codes on new buildings to withstand high winds and possible F1 tornado	
Project Status	Same as in the previously approved 2005 Plan
Progress	Changing construction codes in an ongoing project
Responsible Agency	Mayor, City Council, EMD, School Administrators
Economic Analysis	No cost to local governments other than administrative costs, but still contributing to hazard mitigation efforts
Estimated Cost	\$0
Source of Funds	Local
Priority Rank	Medium to High
Type of Strategy	Prevent, Life and Property Protection
Hazards Addressed	Tornadoes and Severe Thunderstorms
Evaluation	Funding approved and construction completed

Action 1.3: Encourage construction of tornado safe rooms	
Project Status	New
Progress	This is an ongoing project
Responsible Agency	Mayor, City Administrators, EMP, School Administrators
Economic Analysis	No cost to local governments other than administrative costs, but still contributing to hazard mitigation efforts
Estimated Cost	\$0
Source of Funds	Local Match, Private, State and Government Grants
Priority Rank	Medium-High
Type of Strategy	Prevention, Life and Property
Hazards Addressed	Tornadoes and Severe Thunderstorms
Evaluation	Funding approved and construction completed

Action 1.4: Host workshops annually for business owners and public facilities administrators	
Project Status	New
Progress	This project has not been initiated
Responsible Agency	Mayor, City Administrators, EMP, School Administrators
Economic Analysis	No cost to local governments other than administrative costs, but still contributing to hazard mitigation efforts
Estimated Cost	\$0
Source of Funds	Local Match, Private, State and Government Grants
Priority Rank	Medium-High
Timeline	1-2 years
Type of Strategy	Prevention, Life and Property
Hazards Addressed	Tornadoes and Severe Thunderstorms
Evaluation	Funding approved and construction completed

Goal 2: Minimize property damage due to flooding

Action 2.1: Revise building permits to include site plans and elevations with submittal approval	
Project Status	New
Progress	N/A
Responsible Agency	Mayor, City Council, EMP
Economic Analysis	No cost to local governments other than administrative costs, but still contributing to hazard mitigation efforts
Estimated Cost	\$0
Source of Funds	Local Match, Private, State and Government Grants
Priority Rank	Medium
Type of Strategy	Prevention, Life and Property
Hazards Addressed	Flooding
Evaluation	Implementation of new permits

Action 2.2: Develop design criteria for drainage structures on roads within the county's jurisdiction	
Project Status	Same as 2005 Plan- no change
Progress	Implementation has not yet begun
Responsible Agency	Mayor, City Council, EMP
Economic Analysis	Developing design criteria is no cost to local governments other than administrative costs, but still contributing to hazard mitigation efforts
Estimated Cost	\$0
Source of Funds	Local Match, Private, State and Government Grants
Priority Rank	Medium
Type of Strategy	Prevention, Life and Property

Hazards Addressed	Flooding
Evaluation	Implementation of new design criteria for road drainage structures

Action 2.3: Implement erosion control measures on all county highway projects	
Project Status	Same as 2005 plan – no change
Progress	Implementation has not yet begun
Responsible Agency	Mayor, City Council, EMP
Economic Analysis	No cost to local governments other than administrative costs, but still contributing to hazard mitigation efforts
Estimated Cost	\$0
Source of Funds	Local Match, Private, State and Government Grants
Priority Rank	Medium
Type of Strategy	Prevention, Life and Property
Hazards Addressed	Flooding
Evaluation	Implementation of new permits

Action 2.4: Continue compliance and implementation of the requirements of NFIP and reduce the flood risk within hazard area	
Project Status	Same as 2005 plan – no change
Progress	Participating jurisdictions are still participating and awareness of the benefits of participation has increased
Responsible Agency	Mayor, City Council, EMP
Economic Analysis	No cost to local governments other than administrative costs, but still contributing to hazard mitigation efforts
Estimated Cost	\$0
Source of Funds	Local Match, Private, State and Government Grants
Priority Rank	Medium
Type of Strategy	Prevention, Life and Property
Hazards Addressed	Flooding
Evaluation	Implementation of new permits

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

Action 3.1: Revise policies to include seismic designs on future construction of critical facilities.	
Project Status	Unchanged from 2005 Plan
Progress	New construction in county now adheres to building codes for seismic events
Responsible Agency	Mayor, City Council, EMP
Economic Analysis	No cost to local governments other than administrative costs, but still contributing to hazard mitigation efforts
Estimated Cost	\$0

Source of Funds	Local
Priority Rank	Medium
Type of Strategy	Property Protection, Structural Projects
Hazards Addressed	Earthquakes
Evaluation	Completed policies

Action 3.2: Consider BOCA seismic design building codes for future construction	
Project Status	Unchanged from 2005 Plan
Progress	New construction in county now adheres to building codes for seismic events
Responsible Agency	Mayor, City Council, EMP
Economic Analysis	No cost to local governments other than administrative costs, but still contributing to hazard mitigation efforts
Estimated Cost	\$0
Source of Funds	Local
Priority Rank	Medium-High
Type of Strategy	Property Protection, Structural Projects
Hazards Addressed	Earthquakes
Evaluation	Completed building codes adopted

Action 3.3: Designate an Emergency Operations Center and conduct annual coordination exercises.	
Project Status	Unchanged from 2005 Plan
Progress	This project is ongoing but not completed
Discussion	Co-sponsor with appropriate school boards and earthquake public awareness program for local schools
Responsible Agency	Mayor, City Council, EMP
Economic Analysis	Low cost to local governments, but still contributing to communities response capabilities
Estimated Cost	\$500
Source of Funds	Local
Priority Rank	Medium-High
Type of Strategy	Property Protection, Structural Projects
Hazards Addressed	Earthquakes
Evaluation	Completed EOC

Action 3.4: Co-sponsor with appropriate school boards and earthquake public awareness program for local schools.	
Project Status	Unchanged from 2005 Plan
Progress	This project is ongoing but not completed
Responsible Agency	Mayor, City Council, EMP

Economic Analysis	No cost to local governments other than administrative costs, but still contributing to hazard mitigation efforts
Estimated Cost	\$0
Source of Funds	Local
Priority Rank	Medium-High
Type of Strategy	Property Protection, Structural Projects
Hazards Addressed	Earthquakes
Evaluation	Completed programs

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

Action 4.1: Schedule annual meeting with city mayors to discuss power and water conservation practices	
Project Status	New
Progress	N/A
Responsible Agency	Mayor, City Council, EMP
Economic Analysis	No cost to local governments other than administrative costs, but still contributing to hazard mitigation efforts
Estimated Cost	\$0
Source of Funds	Local
Priority Rank	Medium
Type of Strategy	Emergency Services, Public Information and Awareness
Hazards Addressed	Drought/Heat Wave
Evaluation	Minutes of meetings

Action 4.2: Adopt “best practices” policy in conjunction with the Soil and Water Conservation Commission	
Project Status	Unchanged from previously approved 2005 Plan
Progress	This project is ongoing but has not been completed
Responsible Agency	Mayor, City Council, EMP
Economic Analysis	No cost to local governments other than administrative costs, but still contributing to hazard mitigation efforts
Estimated Cost	\$0
Source of Funds	Local
Priority Rank	Medium
Type of Strategy	Emergency Services, Public Information and Awareness
Hazards Addressed	Drought/Heat Wave
Evaluation	Minutes of meeting and policy adoption

Action 4.3: Meet with public electric utility companies to develop “best practices” for power conservation	
Project Status	Unchanged from previously approved 2005 Plan
Progress	This project is ongoing but has not been completed
Responsible Agency	Mayor, City Council, EMP
Economic Analysis	No cost to local governments other than administrative costs, but still contributing to hazard mitigation efforts
Estimated Cost	\$0
Source of Funds	Local
Priority Rank	Medium
Type of Strategy	Emergency Services, Public Information and Awareness
Hazards Addressed	Drought/Heat Wave
Evaluation	Minutes of meetings

Action 4.5: Sponsor annual safety meeting for county employees	
Project Status	Unchanged from previously approved 2005 Plan
Progress	This project has not been initiated
Responsible Agency	Mayor, City Council, EMP
Economic Analysis	No cost to local governments other than administrative costs, but still contributing to hazard mitigation efforts
Estimated Cost	\$0
Source of Funds	Local
Priority Rank	Medium
Type of Strategy	Emergency Services, Public Information and Awareness
Hazards Addressed	Drought/Heat Wave
Evaluation	Minutes of meetings

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

Action 5.1: Schedule meetings with county highway foreman, city street directors, and state highway engineer to discuss snow removal, route closures, and general safety procedures.	
Project Status	New
Progress	N/A
Responsible Agency	Mayor, City Council, EMP
Economic Analysis	No cost to local governments other than administrative costs, but still contributing to hazard mitigation efforts
Estimated Cost	\$0
Source of Funds	Local

Priority Rank	Medium
Type of Strategy	Emergency Services, Public Information and Awareness
Hazards Addressed	Severe Winter Weather
Evaluation	Minutes of meetings

Action 5.2: Create an emergency snow route for county roads.	
Project Status	New
Progress	County and local officials participate more readily in mutual agreements
Responsible Agency	Mayor, City Council, EMP
Economic Analysis	Low cost and decrease of economic loss
Estimated Cost	\$200.00
Source of Funds	Local
Priority Rank	Medium
Type of Strategy	Emergency Services, Public Information and Awareness
Hazards Addressed	Severe Winter Weather
Evaluation	Minutes of meetings

Action 5.3: Meet annually with critical facilities administrators to develop severe winter weather strategies	
Project Status	Same as the approved 2005 Plan
Progress	County and local officials participate more readily in mutual agreements
Responsible Agency	Mayor, City Council, EMP
Economic Analysis	No cost except administrative costs
Estimated Cost	\$0
Source of Funds	Local
Priority Rank	Medium
Type of Strategy	Emergency Services, Public Information and Awareness
Hazards Addressed	Drought/Heat Wave
Evaluation	Minutes of meetings

Action 5.4: Educate the public utility end user on preventive measures to reduce the risk to property.	
Project Status	Same as the approved 2005 Plan
Progress	This project has not been implemented yet
Responsible Agency	Mayor, City Council, EMP
Economic Analysis	No cost except administrative costs
Estimated Cost	\$0

Source of Funds	Local
Priority Rank	Medium
Type of Strategy	Emergency Services, Public Information and Awareness
Hazards Addressed	Severe Winter Weather
Evaluation	Minutes of meetings

Mitigation Actions for Chaffee R-II, Kelso C-7, Oran R-III, Scott County Central, Scott City R-I, Scott County R-IV, Sikeston R-VI, Southeast Missouri State University in Sikeston, and Three Rivers Community College of Sikeston.

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

Action 1.1: Seek grant funds for construction of safe rooms, flood buyouts, elevation projects, etc. and encourage construction codes on new buildings to withstand high winds and possible F1 tornado.	
Project Status	New
Progress	N/A
Responsible Agency	Board of Education, School Administrators
Economic Analysis	High cost of safe room construction will be justified by the outcome/save lives
Estimated Cost	Unknown but over \$100,000
Source of Funds	Local Match, Private, State and Government Grants
Priority Rank	Medium to High
Type of Strategy	Prevent, Life and Property Protection
Hazards Addressed	Tornadoes and Severe Thunderstorms
Evaluation	Funding approved and construction completed

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

Action 3.4: Co-sponsor with appropriate school boards an earthquake public awareness program for local schools	
Project Status	Ongoing, restated from 2005 Plan to suit newly participating school districts
Progress	This project is ongoing but has not been completed
Responsible Agency	Board of Education, School Administrators
Economic Analysis	Cost of construction will save lives
Estimated Cost	\$500
Source of Funds	Local
Priority Rank	Medium-High
Type of Strategy	Property Protection, Structural Projects
Hazards Addressed	Earthquakes
Evaluation	Completed policies

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

Action 5.2 and 5.3: Create emergency snow routes for school buses, and develop severe winter weather strategies	
Project Status	Restated and combined two actions from the previously approved 2005 plan to suit school district participation
Progress	Not completed but is ongoing
Responsible Agency	Board of Education, School Administrators
Economic Analysis	Low cost, and decrease of economic loss
Estimated Cost	\$200.00
Source of Funds	Local
Priority Rank	Medium
Type of Strategy	Emergency Services, Public Information and Awareness
Hazards Addressed	Severe Winter Weather
Evaluation	Minutes of meetings

Plan Maintenance Process

Plan Monitoring, Evaluating and Updating

The Scott 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 Scott 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 shall 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 an enrollment information
- Other county demographic information
- Better mapping for schools 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.

Local Incorporation of Mitigation Strategy into Other 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 Scott 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 Scott 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. New capital improvement plans and other new land development regulations will incorporate mitigation principles. 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.

Mitigation planning is an on-going process designed to safeguard counties and local jurisdictions from damages caused by natural hazards. The chart below specifies the documents available for incorporation of the mitigation plan into other planning mechanism.

Mitigation Plan to Other Planning Mechanisms-Scott County																								
	TRC-Sikeston	Chaffee R-II	Kelso C-7	Oran R-III	Scott Co. Cent	Scott City R-I	Scott Co. R-IV	Sikeston R-6	SEMO, Sikeston	Scott County	Haywood City	Sikeston	Miner	Oran	Commerce	Diablstadr	Vanduser	Blodgett	Chaffee	Scott City	Kelso	Benton	Morley	
Local Comprehensive Plan												X	x	x										
Capital Improvement Plan										x		X	x	x										
Watershed Protection												X	x	x										
Flood Plain Mitigation Plan										x		X	x	x	X	x	x		x	x			x	x
Emergency Management Plan												X	x	x	X	x	x	x	x	x	x	x	x	x
Zoning Ordinance											x	X	x	x		x			X	x	x	x	x	x
Subdivision Regulations											x	X	x	x					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										
Community Involvement Plan										x		x	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	x	x	x
Evacuation Plan	x	x	x	x	x	x	x	x	x															

Oran	The City of Oran will strengthen its mitigation activities such as tree trimming, warm and cooling shelters, watershed protection plan, and mutual aid agreement plan.
Scott City	Scott City 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.
Sikeston	Sikeston 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. The City of Sikeston will continue to provide aid to other jurisdictions.
Vanduser	Due to its relative size, Vanduser will enhance its mutual aid agreement with Scott County and continue work on a local emergency management plan to meet the threats of natural disasters as outlined in the Mitigation Plan.
Chaffee R-II	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.
Kelso C-7	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.
Oran R-III	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.
Scott Co. Central	Tornado safe room construction should be prioritized as well as continued and expansion of preparedness plans and exercises.
Scott City R-I	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.
Scott Co. R-IV	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.
Sikeston R-6	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-Sikeston	Three Rivers Community College has a satellite campus located in Sikeston which is covered by the Scott 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 will consider tornado safe areas as well as a response to seismic events.
Southeast Missouri State University-Sikeston	Southeast Missouri State University has a satellite campus located in Sikeston which is covered by the Scott 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.
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Public Participation

Public participation has occurred during the previous five years, and will continue into the next five years by using the following strategy. The Scott County Emergency Management Director will coordinate mitigation strategies within the respective county and local jurisdictions. The Scott County Planning Commission, which meets weekly, 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 Scott 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
- Scott 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.

Plan Maintenance

The Scott 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 Scott 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	PED-6	Jurisdictions

mitigation actions		
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		