

4 MITIGATION STRATEGY

44 CFR Requirement 201.6(c)(3): The plan shall include a mitigation strategy that provides the jurisdiction's blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools.

This section presents the mitigation strategy developed by the Maries County Hazard Mitigation Planning Committee (HMPC) based on the risk assessment. The mitigation strategy was developed by the HMPC. The group first agreed on general goal statements that would guide the jurisdictions in their efforts to reduce the impact of disasters in Maries County. Then the group looked at developing and prioritizing a list of specific mitigation actions that could be taken to further the overall goals and directly reduce the County's vulnerability to hazards.

Introduction to Mitigation

Definition of Mitigation

Mitigation is defined by FEMA as "...sustained action that reduces or eliminates long-term risk to people and property from natural hazards and their effects." It describes the ongoing effort at the Federal, State, local, and individual levels to lessen the impact of disasters upon families, homes, communities and economy.

Mitigation includes not only avoiding the development of vulnerable sections of the community, but also making existing development in hazard-prone areas safer. For example, identifying areas in the community that are susceptible to damage from natural hazards and taking steps to make these areas less vulnerable, through flood buyouts.

Mitigation also includes steering growth to less risky areas, through nonstructural measures such as avoiding construction in the most flood-prone areas for example. Keeping buildings and people out of harm's way is the essence of mitigation. In fact, incorporating mitigation into decisions related to the community's growth can result in a safer, more resilient community, and one that is more attractive to new families and businesses.

Missouri is subject to many types of natural hazards: floods, tornadoes, winter storms, earthquakes, droughts, winter storms and occasionally, wildfires. Technological hazards such as chemical explosions, manmade explosions, hazardous material or HAZMAT spills, and terrorism, all of which can have significant economic and social impacts exist also. Some, such as floods and HAZMAT spills, can occur any time of the year and almost anywhere in the state. And as we all know, their occurrence in some places in our state is inevitable. However, due to time and funding limitations, this plan will focus on natural hazards only.

Categories of Mitigation

Mitigation measures may be grouped into six categories.

- Prevention

- Property protection
- Natural resource protection
- Emergency services
- Structural projects
- Public information

Prevention Measures

Prevention measures are intended to keep a hazard risk problem from getting worse. They ensure that future development does not increase hazard losses. Communities can achieve significant progress toward hazard resistance through prevention measures. This is particularly true in areas that have not been developed or where capital investment has not been substantial.

Using prevention measures, future development can be guided away from hazards, while maintaining other community goals such as economic development and quality of life.

Some examples of prevention measures are:

- Planning and zoning
- Open space preservation
- Land development regulations
- Storm water management

Property Protection Measures

Property protection measures are used to modify buildings subject to hazard risk, or their surroundings, rather than to prevent the hazard from occurring. A community may find these to be inexpensive measures because often they are implemented or cost-shared with property owners. These measures directly protect people and property at risk. (Protecting a building does not have to affect the building's appearance and is therefore a popular measure for historic and cultural sites.)

Some examples of property protection measures are:

- Acquisition – public procurement and management of lands that are vulnerable to damage from hazards
- Relocation – permanent evacuation of hazard-prone areas through movement of existing hazard-prone development and population to safer areas
- Rebuilding – modifying structures to reduce damage by future hazard events
- Flood-proofing – protecting a flood-prone building using one or more of several different methods

Natural Resource Protection Measures

Natural resource protection measures are intended to reduce the intensity of hazard effects as well as to improve the quality of the environment and wildlife habitats. Parks, recreation, or conservation agencies or organizations usually implement these activities.

Examples of natural resource protection include:

- Erosion and sediment control
- Wetlands protection

Emergency Services Measures

Emergency services measures protect people before and after a hazard event. Most counties and many cities have emergency management offices to coordinate warning, response and recovery during a disaster.

Emergency services include:

- Warning
- Capacity of Response (Not a Mitigation Measure)
- Critical facilities protection
- Health and safety maintenance

Structural Mitigation Measures

Structural measures directly protect people and property at risk. They are called “structural” because they involve construction of man-made structures to control hazards.

Structural projects for flood control may include:

- Reservoirs
- Levees and floodwalls
- Diversions
- Channel modifications
- Storm sewers
- A structural solution for landslides is the construction of a debris basin

Public Information Mitigation Measures

Public information activities inform and remind people about hazardous areas and the measures necessary to avoid potential damage and injury. Public information activities for mitigation are directed toward property owners, potential property owners, business owners and visitors.

A few examples of public information activities to achieve mitigation are:

- Providing hazard maps and other hazard information
- Outreach programs that provide hazard and mitigation information to people when they have not asked for it
- How might outreach programs accomplish this?
- Print media
- Radio/TV spots and interviews
- Videotape
- Mass mailings
- Notices to residents and property owners in a specific, hazard-prone area

- Displays in widely used facilities such as public buildings and malls
- Presentations at meetings of neighborhood groups
- Real estate disclosure
- Information in the public library or a library developed specifically for mitigation information
- Available technical assistance
- School age and adult education

How does mitigation differ from preparedness, response and recovery?

Mitigation includes long-term activities that reduce or eliminate a hazard and/or a hazard's damage. Building codes, floodplain management, tornado safe rooms/storm shelters, flood buyouts and planning are examples of mitigation. Preparedness activities are designed to develop individual and community capabilities to respond to and recover from disasters. Preparedness activities include training, exercises and stocking emergency supplies. Response actions include those immediate activities that save lives, protect property and stabilize the situation when disaster strikes. The activities that return the community to normal or pre-disaster conditions fall under the heading of recovery.

Mitigation Plan Benefits

Hazard Mitigation Planning offers many community benefits. Principally, it can:

- **Save lives and property** - Communities can save lives and reduce property damage from natural hazards through mitigation actions, such as keeping families and homes out of harm's way.
- **Meet the Needs of the Community** - Each community is different in terms of its economics, size, geography, governance, demography, land uses, and hazards. Therefore each community's mitigation plan will vary to some degree. Mitigation planning identifies problems and solutions that are specific to your community.
- **Achieve Multiple Objectives** - Developing a "multi-objective" plan that can help the community to better sustain itself:
 - Find the most appropriate solutions
 - Address multiple problems with a single solution
 - Maintain or improve local environmental and economic integrity
 - Demonstrate commitment to improving community health and safety

Multi-objective planning creates opportunities to develop a broader resource support base that no longer relies solely upon disaster programs to resolve disaster problems. The solutions may be imbedded in other projects such as transportation, economic development, recreation and environmental enhancements.

• **Reduce vulnerability to future hazards** - With a mitigation strategy in place, the community will be better prepared to take steps that will permanently reduce the risk of future losses for individuals and businesses.

- Preparing and following a Hazard Mitigation Plan can reduce business disruptions following a disaster. Usually it is assumed that business disruptions stem from direct building damages or from infrastructure damages such as a lengthy utility outage. Sometimes, these damages are the result of building a business in a hazardous location (the floodplain for example), and sometimes, the damages may be caused by poor construction, especially in the absence of building codes. However, even if a business is not directly damaged by a disaster and utilities are not adversely affected, the operations of a business may still be disrupted for some time should something like flooding or debris block customer and/or supplier access to the business. For this reason, hazard mitigation planning is important to every stakeholder in the community.
- Building a community without regard to natural hazards or rebuilding one after a disaster “just like it was before” eradicates the community’s power to reduce its vulnerability to natural hazards.
- While it is natural to want to return things to the way they were after a disaster, it is important to remember that, in many cases, the disaster damage will not be as severe if a mitigation plan is developed and implemented before a disaster occurs.

• **Guide & Speed Post-Disaster Recovery** - The planning process guides post-disaster recovery in many ways. By identifying and ranking projects before the next disaster, the community will be in a better position to obtain post-disaster funding because much of the background work necessary for applying for Federal funding will already be done. The plan:

- Prepares the community to deal with post-disaster situations by identifying actions that should be done immediately following the disaster.
- Helps the community to develop policies that promote a rapid and efficient recovery, and capitalize on post-disaster opportunities for safety improvements.
- Having a plan that includes post-disaster actions will ensure that opportunities for future mitigation are not overlooked in the urgency to rebuild.

• **Enhances Funding Opportunities** – The mitigation process works through the use of various possible sources of federal, state and local project funding. Successful completion of the Hazard Mitigation Plan can also fulfill the planning requirements for several federal programs such as the Hazard Mitigation Grant Program (only post-disaster mitigation grant program), the Pre-Disaster Mitigation (PDM) grant program, the Flood Mitigation Assistance (FMA) program and the Community Rating System (CRS) program. This plan also may qualify the community for recognition for other federal programs such as the National Weather Service’s StormReady program.

• **Promotes Public Participation** - The planning process promotes public participation by:

- Helping generate ideas for solutions and ensuring recognition and local ownership of the plan.

- Providing groups and individuals concerned about the potential effects of disasters many opportunities to participate in problem solving and in plan implementation.

Goal & Objective Development

The Maries County Hazard Mitigation Planning Committee developed the goals and objectives by reviewing a list of needs compiled at previous meetings. Committee members created goals and objectives that would meet the needs of Maries County and reduce hazards by the greatest amount. During the update, the advisory committee reviewed all the goals and objectives and provided input on what had been accomplished in the last five years.

4.1 Goals

44 CFR Requirement 201.6(c)(3)(i): [The hazard mitigation strategy shall include a] description of mitigation goals to reduce or avoid long term vulnerabilities to the identified hazards.

The HMPC developed goals to provide direction for reducing hazard-related losses in Maries County. These were based upon the results of the risk assessment and a review of mitigation goals from other state and local plans. These included the Missouri State Hazard Mitigation Plan, and local hazard mitigation plans from adjoining counties as well as the Maries County Local Emergency Operations Plan.

The following overall goals and mitigation objectives were reviewed and accepted by the HMPC as best reflecting the needs of Maries County, and were reconfirmed at the five-year review.

Goal 1: Reduce risks and vulnerabilities of people in hazard-prone areas through current technology, better planning and hazard mitigation activities.

Goal 2: Reduce the potential impact of natural disasters on new and existing properties and infrastructure and the local economy.

Goal 3: Promote education, outreach, research and development programs to improve the knowledge and awareness among the citizens and industry about hazards they may face, their vulnerability to identified hazards, and hazard mitigation alternatives that can reduce their vulnerabilities.

Goal 4: Strengthen communication and coordinate participation between public agencies, citizens, non-profit organizations, business, and industry to create a widespread interest in mitigation.

Goal 5: Establish priorities for reducing risks to the people and their property with emphasis on long-term and maximum benefits to the public rather than short-term benefit of special interests.

Goal 6: Secure resources for investment in hazard mitigation.

4.2 Identification and Analysis of Mitigation Measures

44 CFR Requirement 201.6(c)(3)(ii): The mitigation strategy shall include a section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure.

44 CFR Requirement 201.6(d)(3): A local jurisdiction must review and revise its plan to reflect changes in development, progress in local mitigation efforts and changes in priorities.

At the first HMPC meeting information was distributed defining mitigation and the differences between mitigation and response activities to help the committee better define needs and action items. When the initial plan was written, the planning committee created a list of needs and then developed goals, objectives and action items based on those needs. During the plan update, the planning committee reviewed the list of needs, goals, objectives and action items that were established in the initial plan. The following categories of mitigation were considered when developing the mitigation actions:

1. Prevention tools: regulatory methods such as planning and zoning, building regulations, land development regulations and storm water management.
2. Property protection measures: acquisition of land, relocation of buildings, modifying at-risk structures and flood-proofing at-risk structures.
3. Natural resource protection: erosion and sediment control or wetlands protection.
4. Emergency services measures: warning systems, response capacity, critical facilities protection and health and safety maintenance.
5. Structural mitigation: reservoirs, levees, diversions, channel modifications and storm sewers.
6. Public information – providing hazard maps and information, outreach programs, real estate disclosure, technical assistance and education.

No changes were made to the overarching goals established in 2005. During the revision process it was determined that several listed issues needed to be revised or had been addressed and were no longer considered a need. Minor changes were made to existing action items to reflect needs that have been partially or fully addressed. Some action items were added and are listed after Table 4.1.

The mitigation actions identified in the original plan document were divided into four categories and are defined as follows:

- Completed – actions have been completed
- Retained – actions have not been completed but are deemed important and appropriate for the updated plan – or – the actions are on-going mitigation activities
- Modified – actions were in the original plan document, but the focus or language has been modified to some degree to better define the action item
- Deleted – actions were deemed unrealistic or inappropriate or no longer applicable for the jurisdictions involved

The review and categorization of the original plan's action items are listed in Table 4.1.

Table 4.1 – Review & Assessment of 2006 Plan Action Items

| Action Item Number | Mitigation Action | Assessment for Update | Hazard(s) Addressed |
|--------------------|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| 1 | Implement building codes in all cities. | Modified – The city of Belle has building codes. The city of Vienna does not have codes but does have an ordinance that allows the city council to conduct inspections. Modified as follows: <i>“Encourage the adoption of minimal standards for building codes in all cities.”</i> | Earthquake Wildfire Tornado/Wind Flood |
| 2 | Keep trees trimmed around utility lines. | Completed – Addressed. Electric coops have initiated aggressive tree trimming programs throughout the county. | Winter Storm Tornado/Wind Thunderstorm |
| 3 | Trees trimmed/ removed near roads. | Modified – The county and cities have tree trimming programs in place but this is an on-going action item. Modified as follows: <i>“Encourage the cities’ and county’s tree trimming programs that reduce damages during high winds and severe winter storms while also encouraging dead tree removal.”</i> | Winter Storm Tornado/Wind Thunderstorm |
| 4 | Alternative/temporary housing shelters. | Modified and combined with #23 – The county EMD has established a list of local shelters that can be opened during times of need. These shelters can be used as warming or cooling shelters and/or to temporarily house people who have been displaced during an event. However, this is an ongoing activity that requires regular review and update. Modified as follows: <i>“Continue to maintain a list of locations that can serve as shelters and establish MOUs with the appropriate organizations responsible for those facilities.”</i> | Winter Storm Tornado/Wind Extreme Heat Earthquake Flood |
| 5 | Expand/upgrade early warning systems. | Modified – <i>“Continue to encourage local jurisdictions to obtain early warning systems and improved communications systems and encourage citizens to purchase weather radios.”</i> Local governments should continue to explore methods of providing early warning to the citizens of the county. | Tornado/Wind |
| 6 | Development of CERT program. | Modified – The county has had CERT trainings for both adults and teens, coordinated by the Region I HSOC, but will continue to promote and expand this program. Modified as follows: <i>“Continue to promote the development of CERTs throughout the county through training opportunities and public awareness.”</i> | All Hazards |
| 7 | Citizen preparedness program. | Modified – The county EMD and local fire departments currently distribute “Ready-in-3” brochures and other preparedness materials, but this is an on-going program. Modified as follows: <i>“Implement an education/ awareness program on personal emergency preparedness that encourages residents to prepare emergency kits that include water, blankets, flashlights, etc.; shut down utilities; and that will allow individuals to be self-sufficient for one to three days in the event of a</i> | All Hazards |

| Action Item Number | Mitigation Action | Assessment for Update | Hazard(s) Addressed |
|--------------------|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| | | <i>disaster."</i> | |
| 8 | County-wide disaster drill. | Modified - The county currently participates in local and regional emergency drills coordinated by SEMA and/or the MREPC. These drills have been both tabletop and full-scale. As this is an on-going activity, the action item has been left in the plan and modified as follows: <i>"Continue to participate in local, county-wide, regional and state-wide drills and exercises."</i> | All Hazards |
| 9 | More training (evacuation drills, etc.) | Modified – The county EMD and local emergency response agencies continue to work to provide additional training for emergency responders, schools and local governments. Modified as follows: <i>"Continue to encourage and facilitate training opportunities in all areas of preparedness and response to insure the capabilities and safety of citizens and responders and encourage joint training/drills between agencies, public and private entities (including schools and businesses)."</i> | All Hazards |
| 10 | Business/government disaster plans. | Modified – <i>"Promote the development of emergency plans by businesses and local governments."</i> | All Hazards |
| 11 | Address flood-prone areas. | Modified – <i>"Educate residents about the dangers of floodplain development and benefits of the National Flood Insurance Program."</i> [See additions.] | Flood |
| 12 | Storm water management plans. | Modified – <i>"Encourage the development of storm water management plans to help address flash flooding in Belle and Vienna."</i> | Flood |
| 13 | Water height gauges for bridges. | Deleted – County commissioners stated that these gauges are impractical and too expensive to maintain at low water crossings. | Flood |
| 14 | Make residents aware of fire hazards. | Modified – Local fire department conduct awareness programs at schools on fire safety. Need more education on wildfire. Modified as follows: <i>"Provide information on fire hazards and wildfire to area residents to encourage personal mitigation actions."</i> | Wildfire |
| 15 | Educate how to shut down utilities. | Combined with #7 and #8. | |
| 16 | Secure propane tanks in flood areas. | Modified – <i>"Raise awareness of the need to secure propane tanks to reduce the risk from dislodged tanks during flooding, tornados and high winds."</i> | Flood Tornado/Wind |
| 17 | Improve interagency communication. | Retained – although progress has been made through interagency agreements, upgraded equipment and revised SOPs, there continues to be a need to improve and enhance communications. | All Hazards |
| 18 | Improve public media communication. | Modified – <i>"Partner whenever possible with local media to assure that appropriate warning of impending disasters is provided to all residents in the countywide listening area."</i> | Tornado/Wind Thunderstorm Winter Storm Flood |

| Action Item Number | Mitigation Action | Assessment for Update | Hazard(s) Addressed |
|--------------------|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| | | | Extreme Heat |
| 19 | Emergency backup generators. | Deleted – The county has acquired three emergency backup generators: one for the courthouse/sheriff's department/ emergency communications and two mobile generators that can be moved around the county. | |
| 20 | Cooling locations/ stations. | Combined with #4. | |
| 21 | Home shelter construction education. | Modified – "Provide through local media and make available at local government buildings information on how to construct or purchase a tornado safe room/ shelter." | Tornado/Wind |
| 22 | Update Mutual Aid Agreements. | Deleted – This action has been achieved region-wide with assistance from the state and regional mutual aid coordinator. | All Hazards |
| 23 | Security alarms in public buildings. | Deleted – Expense too great – not really a mitigation action item. | |

The following mitigation actions were added for the 2014 update of the plan:

- Continue to enforce flood damage prevention/floodplain management ordinances in compliance with NFIP requirements.
- Encourage Belle to become a member of the NFIP.
- Encourage buyouts of properties in the floodplain as funds become available.
- Examine potential road and bridge upgrades that would reduce danger to residents during occurrences of natural disasters.
- Encourage cities to require contractor storm water management plans in all new development – both residential and commercial properties.
- Encourage a self-inspection program at critical facilities to assure that the building infrastructure is earthquake and tornado resistant.
- Encourage county health department to use publicity campaigns that make residents aware of proper measure to take during times of threatening conditions such as drought and severe heat.
- Continue to evaluate and update emergency operation plans.
- Regularly review and update school emergency plans.
- Educate school staff on natural hazards and make sure all staff are familiar with school emergency plan including evacuation and safety procedures.
- Schools need to continue to conduct emergency preparedness exercises on a regular basis.
- Encourage the designation of storm shelters and the construction of tornado safe rooms in every school that does not have one.
- Encourage the designation of storm shelters and construction of tornado safe rooms in any facility that typically has large numbers of people present (such as large employers).
- Distribute regular press releases from county and city EMD offices concerning hazards, where they strike, frequency and preparation.

- Encourage meetings between EMD, city/county officials, schools and SEMA to familiarize officials with mitigation planning, implementation, budgeting for mitigation projects and potential mitigation funding opportunities.
- Whenever possible, pool different agency resources to achieve widespread mitigation results.
- Re-evaluate the hazard mitigation plan, merge with other community planning and integrate hazard mitigation activities, where appropriate, with emergency operations plans and procedures.
- Work with local, state and federal agencies to include mitigation in all economic and community development projects.
- Distribute press releases by cities/county regarding adopted mitigation measures to keep public abreast of changes and/or new regulations.
- Implement public awareness program about the benefits of hazard mitigation projects, both public and private.
- Prioritize mitigation projects, based on cost-effectiveness and starting with those sites facing the greatest threat to life, health and property.
- Encourage local governments to consider implementing cost share programs with private property owners for hazard mitigation projects that benefit the jurisdiction as a whole.
- Monitor developments in data availability concerning the impact of dam failure, tornados, sinkholes, land subsidence and wildfire upon Maries County and all jurisdictions through local, state and federal agencies.

4.2.1 Mitigation Goals, Objectives and Actions

A list of the mitigation goals, objectives and action items for the Maries County Multi-Hazard Mitigation Plan (2014) follows. The mitigation actions listed are for the entire planning area and participating jurisdictions differ in the specific actions undertaken in their jurisdictions. Actions which address reducing the effects of hazards on new and/or existing buildings and infrastructure are indicated in parentheses following the actions (New, Existing, Both).

This list of goals, objectives and actions is followed by an overview of the mitigation actions with the hazards each action is addressing and the participating jurisdiction(s) to which it applies (Figure 4.2). More information on the implementation and administration of the specific mitigation actions for each participating jurisdiction is included in Section 4.3.2.

Goal 1: Reduce risks and vulnerabilities of people in hazard-prone areas through current technology, better planning and hazard mitigation activities.

Objectives

1.1 Advise the public about health and safety precautions to guard against injury and loss of life from natural hazards.

1.1.1 Action Item: Implement an education program on personal emergency preparedness that teaches residents how to prepare emergency kits that include water, blankets, flashlights, etc.; learn how to shut off their home utilities in times

of emergency; and be self-sufficient for one to three days in the event of a disaster. (Existing)

- 1.1.2 Action Item:** Continue to educate residents about precautions that should be taken during threats of natural disasters such as severe weather and heat waves.
- 1.1.3 Action Item:** Provide to citizens through local media and make available at local government buildings, information on individual mitigation activities such as building personal shelters and assuring that propane tanks are appropriately tied down. (Both)
- 1.1.4 Action Item:** Promote the development and/or update of emergency plans by businesses, local governments and schools.
- 1.1.5 Action Item:** Continue to provide CERT training and encourage the development of CERTs throughout the county through training opportunities and public awareness.
- 1.1.6 Action Item:** Educate school staff on natural hazards and make sure all staff are familiar with school emergency plan including evacuation and safety procedures.
- 1.1.7 Action Item:** Schools need to continue to conduct emergency preparedness exercises on a regular basis.

1.2 Use the latest technology to provide adequate warning, communication, and mitigation of hazard events.

- 1.2.1 Action Item:** Continue to encourage cities to obtain early warning systems and improved communications systems
- 1.2.2 Action Item:** Continue to promote the use of weather radios by local residents to ensure advanced warning about threatening weather
- 1.2.3 Action Item:** Partner with local radio stations to assure that appropriate warning of impending disasters is provided to all residents in the countywide listening area.
- 1.2.4 Action Item:** Monitor developments in data availability concerning the impact of dam failure, tornados, sinkholes, land subsidence and wildfire upon Maries County and all jurisdictions through local, state and federal agencies for use in hazard mitigation planning. (Both)

1.3 Reduce the danger to, and enhance protection of, dangerous areas during hazard events.

- 1.3.1 Action Item:** Continue to encourage tree trimming and dead tree removal by utility companies and local governments. (Both)
- 1.3.2 Action Item:** Continue to review and consider road and bridge upgrades to improve drainage and reduce flooding and the risk to residents and property. (Both)
- 1.3.3 Action Item:** Continue to maintain a list of locations that can serve as shelters for storms, cooling/warming shelters, etc. and establish MOUs with the appropriate organizations responsible for those facilities.
- 1.3.4 Action Item:** Encourage the designation of storm shelters and the construction of tornado safe rooms in or near schools and large employment centers that currently do not have access to safe rooms.

1.3.5 Action Item: Regularly review and update school emergency plans.

Goal 2: Reduce the potential impact of natural disasters on new and existing properties and infrastructure and the local economy.

Objectives

2.1 Implement cost-effective activities that assist in protecting lives by making homes, businesses, infrastructure, critical facilities, and other property more resistant to natural hazards.

2.1.1 Action Item: Continue to encourage a self-inspection program at critical facilities to assure that building infrastructure is earthquake and tornado resistant. (Existing)

2.1.2 Action Item: Encourage the development and implementation of minimum building codes in all communities. (New)

2.1.3 Action Item: Encourage businesses, local governments and schools to develop and implement emergency plans. (Both)

2.1.4 Action Item: Monitor developments in data availability concerning the impact of dam failure, tornados, sinkholes, land subsidence and wildfire upon Maries County and all jurisdictions through local, state and federal agencies for use in hazard mitigation planning. (Both)

2.1.5 Action Item: Continue to evaluate and update emergency operation plans. (Both)

2.1.6 Action Item: Encourage cities to require contractor storm water management plans in all new development – both residential and commercial properties. (New)

2.2 Discourage new development and encourage preventive measures for existing development in areas vulnerable to natural hazards, thereby reducing repetitive losses to the National Flood Insurance Program.

2.2.1 Action Item: Educate residents about the dangers of floodplain development and the benefits of the National Flood Insurance Program and enforce restrictions on development in the floodplain. (Both)

2.2.2 Action Item: Encourage the development of storm water management plans. (Both)

2.2.3 Action Item: Actively promote the county’s floodplain program and disseminate information to inform prospective builders and current property owners on the floodplain building requirements. (Both)

2.2.4 Action Item: Encourage buyouts of properties in the floodplain as funds become available. (Both)

2.3 Use regulations to ensure that development will not put people in harm’s way or increase threats to existing properties.

2.3.1 Action Item: Encourage minimum standards for building codes in all cities. (New)

- 2.3.2 Action Item:** Encourage local governments to develop and implement regulations for the securing of hazardous materials tank and mobile homes to reduce hazards during flooding and high winds. (Both)
- 2.3.3 Action Item:** Continue to enforce flood damage prevention/floodplain management ordinances in compliance with NFIP requirements.
- 2.3.4 Action Item:** Encourage the City of Belle to become a member of the NFIP.

Goal 3: Promote education, outreach, research and development programs to improve the knowledge and awareness among the citizens and industry about hazards they may face, their vulnerability to identified hazards, and hazard mitigation alternatives that can reduce their vulnerabilities.

Objectives

- 3.1 Heighten public awareness of the full range of natural hazards by developing education and outreach programs. (Both)
 - 3.1.1 Action Item:** Distribute SEMA brochures on natural hazards, preparedness and NFIP at public facilities and events. (Both)
 - 3.1.2 Action Item:** Distribute regular press releases from county and city EMD offices concerning hazards, where they strike, frequency, preparation and how to mitigate. (Both)
 - 3.1.3 Action Item:** Provide information on fire hazards and wildfire to area residents to encourage personal mitigation actions. (Both)
 - 3.1.4 Action Item:** Implement public awareness program about the benefits of hazard mitigation projects, both public and private. (Both)
- 3.2 Provide information on tools, partnership opportunities, and funding resources to assist in implementing mitigation activities.
 - 3.2.1 Action Item:** Encourage local residents to purchase weather radios through press releases and brochures.
 - 3.2.2 Action Item:** Encourage meetings between EMD, city/county officials and SEMA to familiarize officials with mitigation planning, implementation and budgeting for mitigation projects and potential funding sources. (Both)
- 3.3 Publicize and encourage the adoption of appropriate hazard mitigation measures by county and city governments.
 - 3.3.1 Action Item:** Re-evaluate the hazard mitigation plan, merge with other community planning and coordinate and integrate hazard mitigation activities, where appropriate, with emergency operations plans and procedures. (Both)
 - 3.3.2 Action Item:** Distribute press release by cities/county regarding adopted mitigation measures to keep public abreast of changes and/or new regulations. (Both)
- 3.4 Educate the public on actions they can take to prevent or reduce the loss of life or

property from all natural hazards.

- 3.4.1 Action Item:** Encourage county health department to use publicity campaigns that make residents aware of proper measures to take during times of threatening conditions (e.g. drought or heat wave).
- 3.4.2 Action Item:** Publicize local, regional and/or statewide drills/exercises.
- 3.4.3 Action Item:** Encourage the development of a county-wide CERT program and educate the public on how they can benefit from this type of program.
- 3.4.4 Action Item:** Raise awareness of the need to secure propane tanks to reduce the risk from dislodged tanks during flooding, tornados and high winds.

Goal 4: Strengthen communication and coordinate participation between public agencies, citizens, non-profit organizations, business, and industry to create a widespread interest in mitigation.

Objectives

- 4.1 Build and support local partnerships to continuously become less vulnerable to hazards.
 - 4.1.1 Action Item:** Continue to encourage joint meetings of different organizations/agencies for mitigation planning.
 - 4.1.2 Action Item:** Continue to encourage and facilitate training opportunities in all areas of preparedness and response to insure the capabilities and safety of citizens and responders and encourage joint trainings/drills between agencies, public and private entities (including schools and businesses).
 - 4.1.3 Action Item:** Pool different agency resources to achieve widespread mitigation planning results. (Both)
 - 4.1.4 Action item:** Improve interagency communication through joint meetings and trainings.
- 4.2 Encourage active participation and responsibility of chief elected officials in mitigation planning and activities.
 - 4.2.1 Action Item:** Re-evaluate the hazard mitigation plan, merge with other community planning and coordinate and integrate hazard mitigation activities, where appropriate, with emergency operations plans and procedures. (Both)
 - 4.2.2 Action Item:** Encourage meetings between EMD, city and county government and SEMA to familiarize officials with mitigation planning and implementation and budgeting for mitigation projects.

Goal 5: Establish priorities for reducing risks to the people and their property with emphasis on long-term and maximum benefits to the public rather than short-term benefit of special interests.

Objectives

- 5.1.1 Action Item:** Encourage communities to budget for enhanced warning systems.
- 5.1.2 Action Item:** Encourage all communities to develop storm water management plans. (Both)

- 5.1.3 Action Item:** Re-evaluate the hazard mitigation plan, merge with other community planning and coordinate and integrate hazard mitigation activities, where appropriate, with emergency operations plans and procedures. (Both)
- 5.1.4 Action Item:** Encourage cities to require contractor storm water management plans in all new development –both residential and commercial properties. (New)

5.2 Increase the availability of storm shelters for individual families and large groups.

5.2.1 Action Item: Encourage the construction of storm shelters, especially tornado safe rooms near schools and large employment centers that currently do not have access to safe rooms.

5.2.2 Action Item: Encourage the assessment of public buildings as potential storm shelters; designate those that are suitable as safe shelters; and develop accessibility plans for the public during times of need.

5.3 Promote beneficial uses of hazardous areas while expanding open space and recreational opportunities.

5.3.1 Action Item: Encourage local governments to purchase properties in the floodplain as funds become available and convert that land into public space/recreation area.

Goal 6: Secure resources for investment in hazard mitigation

Objectives

6.1 Research the use of local and outside sources of funding

6.1.1 Action Item: Encourage meetings between EMD, city/county officials, schools and SEMA to familiarize officials with mitigation planning, implementation, budgeting for mitigation projects and potential funding sources.

6.1.2 Action Item: Structure grant proposals for road/bridge upgrades so that hazard mitigation concerns are also met. (Both)

6.1.3 Action Item: Work with state/local/federal agencies to include mitigation in all economic and community development projects. (Both)

6.1.4 Action Item: Encourage local jurisdictions to budget for mitigation projects. (Both)

6.1.5 Action Item: Whenever possible, pool different agency resources to achieve widespread mitigation results. (Both)

6.2 Encourage participation of property owners in investing in hazard mitigation projects on their own property.

6.2.1 Action Item: Encourage cities and counties to consider implementing cost-share programs with private property owners for hazard mitigation projects that benefit the jurisdiction as a whole. (Both)

6.2.2 Action Item: Implement public awareness program about the benefits of hazard

mitigation projects, both public and private. (Both)

6.3 In the event of a disaster declaration, be prepared to apply for hazard mitigation grants for prioritized projects.

6.3.1 Action Item: Prioritize mitigation projects, based on cost-effectiveness and starting with those sites facing the greatest threat to life, health and property. (Both)

Table 4.2 Mitigation Actions Hazards Addressed, Applicable Jurisdictions

| Action No. | Mitigation Action Item | Hazards | | | | | | | | | | | Jurisdictions | | | | |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------|------------|--------------|-------|-----------|---------------------------|--------------------------|---------|-----------------------|----------|---------------|-------|--------|---------------------------|----------------------------|
| | | Dam Failure | Drought | Earthquake | Extreme Heat | Flood | Landslide | Land Subsidence/Sinkholes | Severe Storm (Hail/Wind) | Tornado | Severe Winter Weather | Wildfire | Maries County | Belle | Vienna | Maries County R-I Schools | Maries County R-II Schools |
| 1.1.1 | Implement an education program on personal emergency preparedness that teaches residents how to prepare emergency medical kits that include water, blankets, flashlights, etc.; learn how to shut off their home utilities in times of emergency; and be self-sufficient for one to three days in the event of a disaster. | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 1.1.2 | Continue to educate residents about precautions that should be taken during threats of natural disasters such as severe weather and heat waves. | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 1.1.3 | Provide to citizens through local media and make available at local government buildings, information on individual mitigation activities such as building personal shelters and assuring that propane tanks are appropriately tied down. | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 1.1.4 | Promote the development and/or update of emergency plans by businesses, local governments and schools. | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 1.1.5 | Continue to provide CERT training and encourage the development of CERTs throughout the county through training opportunities and public awareness. | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 1.1.6 | Educate school staff on natural hazards and make sure all staff are familiar with school emergency plan including evacuation and safety procedures. | X | | X | X | X | | | X | X | X | X | | | | X | X |
| 1.1.7 | Schools need to continue to conduct emergency preparedness exercises on a regular basis. | X | | X | | X | | | X | X | X | X | | | | X | X |

| | | Hazards | | | | | | | | | | | Jurisdictions | | | | |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------------------------------------------------------------------------------|------------|--------------|-------|-----------|---------------------------|--------------------------|---------|-----------------------|----------|---------------|-------|--------|---------------------------|----------------------------|
| Action No. | Mitigation Action Item | Dam Failure | Drought | Earthquake | Extreme Heat | Flood | Landslide | Land Subsidence/Sinkholes | Severe Storm (Hail/Wind) | Tornado | Severe Winter Weather | Wildfire | Maries County | Belle | Vienna | Maries County R-I Schools | Maries County R-II Schools |
| | | 1.2.1 | Continue to encourage cities to obtain early warning systems and improved communications systems | | | | | X | | | X | X | X | | X | X | X |
| 1.2.2 | Continue to promote the use of weather radios by local residents to ensure advanced warning about threatening weather | | | | | | | | X | X | x | | X | X | X | X | X |
| 1.2.3 | Partner with local radio stations to assure that appropriate warning of impending disasters is provided to all residents in the countywide listening area. | | | | X | X | | | X | X | X | X | X | | | | |
| 1.2.4 | Monitor developments in data availability concerning the impact of dam failure, tornados, sinkholes, land subsidence and wildfire upon Maries County and all jurisdictions through local, state and federal agencies for use in hazard mitigation planning. | X | | | | | | X | | X | | X | X | X | X | X | X |
| 1.3.1 | Continue to encourage tree trimming and dead tree removal by utility companies and local government. | | | | | | | | X | X | X | | X | X | X | X | X |
| 1.3.2 | Continue to review and consider road and bridge upgrades to improve drainage and reduce flooding and the risk to residents and property. | | | | | X | | | | | | | X | X | X | | |
| 1.3.3 | Continue to maintain a list of locations that can serve as shelters for storms, cooling/warming shelters and establish MOUs with the appropriate organizations responsible for those facilities. | X | | X | X | X | | | X | X | X | X | X | X | X | | |
| 1.3.4 | Encourage the designation of storm shelters and the construction of tornado safe rooms in or near schools and large employment centers that currently do not have access to safe rooms. | | | | | | | | X | X | | | X | X | X | X | X |
| 1.3.5 | Regularly review and update school emergency plans. | | | X | | X | | | X | X | X | X | X | | | X | X |
| 2.1.1 | Continue to encourage a self-inspection program at critical facilities to assure that building infrastructure is earthquake and tornado resistant. | | | X | | | | | | X | | | X | X | X | X | X |

| Action No. | Mitigation Action Item | Hazards | | | | | | | | | | | Jurisdictions | | | | |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------|------------|--------------|-------|-----------|---------------------------|--------------------------|---------|-----------------------|----------|---------------|-------|--------|---------------------------|----------------------------|
| | | Dam Failure | Drought | Earthquake | Extreme Heat | Flood | Landslide | Land Subsidence/Sinkholes | Severe Storm (Hail/Wind) | Tornado | Severe Winter Weather | Wildfire | Maries County | Belle | Vienna | Maries County R-I Schools | Maries County R-II Schools |
| 2.1.2 | Encourage the development and implementation of minimum building codes in all communities. | | | X | | X | | | X | X | X | | X | X | X | | |
| 2.1.3 | Encourage businesses/government/schools to develop and implement emergency plans. | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 2.1.4 | Monitor developments in data availability concerning the impact of dam failure, tornados, sinkholes, land subsidence and wildfire upon Maries County and all jurisdictions through local, state and federal agencies for use in hazard mitigation planning. | X | | | | | | X | | X | | X | X | X | X | X | X |
| 2.1.5 | Continue to evaluate and update emergency operation plans. | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 2.1.6 | Encourage cities to require contractor storm water management plans in all new development – both residential and commercial properties. | | | | | X | | | | | | | X | X | | | |
| 2.2.1 | Educate residents about the dangers of floodplain development and the benefits of the National Flood Insurance Program and enforce restrictions on development in the floodplain. | | | | | X | | | | | | X | | X | | | |
| 2.2.2 | Encourage the development of storm water management plans. | | | | | X | | | | | | X | X | X | | | |
| 2.2.3 | Actively promote the county's floodplain program and disseminate information to inform prospective builders and current property owners on the floodplain building requirements. | | | | | X | | | | | | X | | X | | | |
| 2.2.4 | Encourage buyouts of properties in the floodplain as funds become available. | | | | | X | | | | | | X | | X | | | |
| 2.3.1 | Encourage minimum standards for building codes in all cities. | | | X | | X | | | X | X | X | | X | X | | | |
| 2.3.2 | Encourage local governments to develop and implement regulations for the securing of hazardous materials tanks and mobile homes to reduce | | | | | X | | | X | X | | X | X | X | | | |

| Action No. | Mitigation Action Item | Hazards | | | | | | | | | | | Jurisdictions | | | | |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------|------------|--------------|-------|-----------|---------------------------|--------------------------|---------|-----------------------|----------|---------------|-------|--------|---------------------------|----------------------------|
| | | Dam Failure | Drought | Earthquake | Extreme Heat | Flood | Landslide | Land Subsidence/Sinkholes | Severe Storm (Hail/Wind) | Tornado | Severe Winter Weather | Wildfire | Maries County | Belle | Vienna | Maries County R-I Schools | Maries County R-II Schools |
| | hazards during flooding and high winds. | | | | | | | | | | | | | | | | |
| 2.3.3 | Continue to enforce flood damage prevention/floodplain management ordinances in compliance with NFIP requirements. | | | | | X | | | | | | X | | X | | | |
| 2.3.4 | Encourage the City of Belle to become a member of the NFIP | | | | | X | | | | | | X | X | | | | |
| 3.1.1 | Distribute SEMA brochures on natural hazards, preparedness and NFIP at public facilities and events. | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 3.1.2 | Distribute regular press releases from county and city EMD offices concerning hazards, where they strike, frequency, preparation and how to mitigate. | X | X | X | X | X | X | X | X | X | X | X | X | X | | | |
| 3.1.3 | Provide information on fire hazards and wildfire to area residents to encourage personal mitigation actions. | | | | | | | | | | | X | X | X | X | X | X |
| 3.1.4 | Implement public awareness program about the benefits of hazard mitigation projects, both public and private. | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 3.2.1 | Encourage local residents to purchase weather radios through press releases and brochures. | | | | X | X | | | X | X | X | | X | X | X | | |
| 3.2.2 | Encourage meetings between EMD, city/county officials and SEMA to familiarize officials with mitigation planning, implementation and budgeting for mitigation projects and potential funding sources. | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 3.3.1 | Re-evaluate the hazard mitigation plan, merge with other community planning and coordinate and integrate hazard mitigation activities, where appropriate, with emergency operations plans and procedures. | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 3.3.2 | Distribute press release by cities/county regarding adopted mitigation measures to keep public abreast of changes and/or new regulations. | X | X | X | X | X | X | X | X | X | X | X | X | X | | | |

| | | Hazards | | | | | | | | | | | Jurisdictions | | | | |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------|-------|-----------|---------------------------|--------------------------|---------|-----------------------|----------|---------------|-------|--------|---------------------------|----------------------------|
| Action No. | Mitigation Action Item | Dam Failure | Drought | Earthquake | Extreme Heat | Flood | Landslide | Land Subsidence/Sinkholes | Severe Storm (Hail/Wind) | Tornado | Severe Winter Weather | Wildfire | Maries County | Belle | Vienna | Maries County R-I Schools | Maries County R-II Schools |
| | | 3.4.1 | Encourage county health department to use publicity campaigns that make residents aware of proper measures to take during times of threatening conditions | X | X | X | X | X | X | X | X | X | X | X | | | |
| 3.4.2 | Publicize local, regional and/or statewide drills/exercises. | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 3.4.3 | Encourage the development of a county-wide CERT program and educate the public on how they can benefit from this type of program. | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 3.4.4 | Raise awareness of the need to secure propane tanks to reduce the risk from dislodged tanks during flooding, tornados and high winds. | | | | | X | | | X | X | | | X | X | X | | |
| 4.1.1 | Continue to encourage joint meetings of different organizations/ agencies for mitigation planning. | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 4.1.2 | Continue to encourage and facilitate training opportunities in all areas of preparedness and response to insure the capabilities and safety of citizens and responders and encourage joint trainings/drills between agencies, public and private entities (including schools and businesses). | X | | X | | X | X | X | X | X | X | X | X | X | X | X | |
| 4.1.3 | Pool different agency resources to achieve widespread mitigation results. | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 4.1.4 | Improve interagency communication through joint meetings and trainings. | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 4.2.1 | Re-evaluate the hazard mitigation plan, merge with other community planning and coordinate and integrate hazard mitigation activities, where appropriate, with emergency operations plans and procedures. | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 4.2.2 | Encourage meetings between EMD, city and county government and SEMA to familiarize officials with mitigation planning and implementation and budgeting for mitigation projects. | X | X | X | X | X | X | X | X | X | X | X | X | X | | | |
| 5.1.1 | Encourage communities to budget for enhanced warning systems. | | | | | X | | | X | X | X | | X | | X | | |

| Action No. | Mitigation Action Item | Hazards | | | | | | | | | | | Jurisdictions | | | |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------|------------|--------------|-------|-----------|---------------------------|--------------------------|---------|-----------------------|----------|---------------|-------|--------|---------------------------|
| | | Dam Failure | Drought | Earthquake | Extreme Heat | Flood | Landslide | Land Subsidence/Sinkholes | Severe Storm (Hail/Wind) | Tornado | Severe Winter Weather | Wildfire | Maries County | Belle | Vienna | Maries County R-I Schools |
| 5.1.2 | Encourage all communities to develop storm water management plans. | | | | | X | | | X | | X | | X | X | | |
| 5.1.3 | Re-evaluate the hazard mitigation plan, merge with other community planning and coordinate and integrate hazard mitigation activities, where appropriate, with emergency operations plans and procedures. | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 5.1.4 | Encourage cities to require contractor storm water management plans in all new development –both residential and commercial properties. | | | | | X | | | X | | X | | X | X | X | |
| 5.2.1 | Encourage the construction of storm shelters, especially tornado safe rooms near schools and large employment centers that currently do not have access to safe rooms. | | | | | | | | | X | | | X | X | X | X |
| 5.2.2 | Encourage the assessment of public buildings as potential storm shelters; designate those that are suitable as safe shelters; and develop accessibility plans for the public during times of need. | | | | | | | | X | X | | | X | X | X | X |
| 5.3.1 | Encourage local governments to purchase properties in the floodplain as funds become available and convert that land into public space/recreation area. | | | | | X | | | | | | | X | | X | |
| 6.1.1 | Encourage meetings between EMD, city/county officials, schools and SEMA to familiarize officials with mitigation planning, implementation and budgeting for mitigation projects and potential funding sources. | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 6.1.2 | Structure grant proposals for road/bridge upgrades so that hazard mitigation concerns are also met. | X | | X | | X | X | X | | | | | X | X | X | |
| 6.1.3 | Work with state/local/federal agencies to include mitigation in all economic and community development projects. | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 6.1.4 | Encourage local jurisdictions to budget for mitigation projects. | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |

| Action No. | Mitigation Action Item | Hazards | | | | | | | | | | | Jurisdictions | | | | |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------|------------|--------------|-------|-----------|---------------------------|--------------------------|---------|-----------------------|----------|---------------|-------|--------|---------------------------|----------------------------|
| | | Dam Failure | Drought | Earthquake | Extreme Heat | Flood | Landslide | Land Subsidence/Sinkholes | Severe Storm (Hail/Wind) | Tornado | Severe Winter Weather | Wildfire | Maries County | Belle | Vienna | Maries County R-I Schools | Maries County R-II Schools |
| 6.1.5 | Whenever possible, pool different agency resources to achieve widespread mitigation results. | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 6.2.1 | Encourage cities and counties to consider implementing cost-share programs with private property owners for hazard mitigation projects that benefit the jurisdiction as a whole. | X | | X | | X | X | X | X | X | X | X | X | X | X | | |
| 6.2.2 | Implement public awareness program about the benefits of hazard mitigation projects, both public and private through press releases and brochures. | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 6.3.1 | Prioritize mitigation projects, based on cost-effectiveness and starting with those sites facing the greatest threat to life, health and property. | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |

4.3 NFIP Participation and Action Items Supporting NFIP

44 CFR Requirement 201.6l(3)(ii): [The mitigation strategy] must also address the jurisdiction’s participation in the National Flood Insurance Program (NFIP), and continued compliance with NFIP requirements, as appropriate.

Details of NFIP participation and current flood maps have been included in the Flood Profile in Chapter 3. The NFIP participation status of jurisdictions is shown again in Figure 4.3.

Table 4.3 Maries County Jurisdictions Participation in NFIP

| |
|-----------------------------------------------|
| Jurisdictions Participating in NFIP |
| Maries County |
| Vienna |
| Jurisdiction NOT Participating in NFIP |
| Belle |

Source: SEMA

Maries County and Vienna are members of the NFIP. The emergency management director serves as the floodplain manager for the county. The public works superintendent serves as floodplain manager for the City of Vienna. The following mitigation actions pertain to continued compliance with the NFIP for all member jurisdictions:

- 2.2.1 Educate residents about the dangers of floodplain development and the benefits of the National Flood Insurance Program, and enforce restrictions on development in the floodplain..
- 2.2.3 Actively promote the county’s floodplain program and disseminate information to inform prospective builders and current property owners on the floodplain building requirements.
- 2.2.4 Encourage buyouts of properties in the floodplain as funds become available.
- 2.3.2 Encourage local governments to develop and implement regulations for the securing of hazardous materials tank and mobile homes to reduce hazards during flooding and high winds.
- 2.3.3 Continue to enforce flood damage prevention/floodplain management ordinances in compliance with NFIP requirements.
- 2.3.4 Encourage the city of Belle to become a member of the NFIP.
- 3.1.1 Distribute SEMA brochures on natural hazards, preparedness and NFIP at public facilities and events.
- 3.4.4 Raise awareness of the need to secure propane tanks to reduce the risk from dislodged tanks during flooding, tornados and high winds.

5.3.1 Encourage local governments to purchase properties in the floodplain as funds become available and convert that land into public space/recreation area.

4.4 Prioritization of Hazard Mitigation Action Items

[The mitigation strategy section shall include] an action plan describing how the actions identified in section I(3)(ii) will be prioritized, implemented and administered by the local jurisdiction. Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.

4.4.1 STAPLEE and Benefit/Cost Review Scoring

After the list of mitigation actions for all jurisdictions in Maries County had been developed, as recommended by FEMA, a STAPLEE review and Benefit/Cost review was completed on the action items. STAPLEE is a tool used to assess the costs and benefits and overall feasibility of mitigation actions. STAPLEE stands for the following:

- **Social:** Will the action be acceptable to the community? Could it have an unfair effect on a particular segment of the population?
- **Technical:** is the action technically feasible? Are there secondary impacts? Does it offer a long-term solution?
- **Administrative:** Are there adequate staffing, funding and maintenance capabilities to implement the project?
- **Political:** Will there be adequate political and public support for the project?
- **Legal:** Does your jurisdiction have the legal authority to implement the action?
- **Economic:** is the action cost-beneficial? Is there funding available: Will the action contribute to the local economy?
- **Environmental:** Will there be negative environmental consequences from the action? Does it comply with environmental regulations? Is it consistent with community environmental goals?

Each question was scored based on a 0 to 3 point value system:

- 3 = Definitely YES
- 2 = Maybe YES
- 1 = Probably NO
- 0 = Definitely NO

For the Benefit/Cost Review portion of the prioritization process, these two aspects were scored as follows:

Benefit – two (2) points were added for each of the following avoided damages (8 points maximum = highest benefit)

- Injuries and/or casualties
- Property damages
- Loss-of-function/displacement impacts
- Emergency management costs/community costs

Cost – points were subtracted according to the following cost scale (-5 points maximum = highest cost)

- (-1) = Minimal – little cost to the jurisdiction involved
- (-3) = Moderate – definite cost involved but could likely be worked into operating budget
- (-5) = Significant – cost above and beyond most operating budgets; would require extra appropriations to finance or to meet matching funds for a grant

Note: For the Benefit/Cost Review, the benefit and cost of actions which used the word “encourage” were evaluated as if the action or strategy being encouraged was actually to be carried out.

Total Score – The scores for the STAPLEE Review and Benefit/Cost Review were added to determine a Total Score for each action.

Priority Scale – To achieve an understanding of how a Total Score might be translated into a Priority Rating, a sample matrix was filled out for the possible range of ratings an action might receive on both the STAPLEE and Benefit/Cost Review. The possible ratings tested ranged between:

- A hypothetical action with “Half probably NO and half maybe YES” answers on STAPLEE (i.e. poor STAPLEE score) and Low Benefit/High Cost: Total Score = 7
- A hypothetical action with “All definitely YES” on STAPLEE and High Benefit/Little Cost: Total Score = 28

An inspection of the possible scores within this range led to the development of the following Priority Scale based on the Total Score in the STAPLEE- Benefit/Cost Review process:

20 – 28 points = High Priority
14-19 points = Medium Priority
13 points and below = Low Priority

It should be noted that most of the actions attained a High priority rating: this is reflective of the fact that many actions which would have scored poorly on the STAPLEE review were deleted for the update during the initial discussion/review of the actions in the original plan (see Table 4.1). Also, many of the actions are ongoing and already in place but remain high priorities for the jurisdictions. The STAPLEE review, Benefit/Cost review and Final Priority for each of the mitigation actions is shown in Table 4.4.

| Figure 4.4 Prioritization of Mitigation Actions | | 3 = Def YES | | 1 = Prob NO | | 2 = Maybe YES | | 0 = Def NO | | | | | | | |
|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------|-------------|----------|---------------|----------|------------|----------------------|-----------------------------------------|----------------|-------------|------------------|--------------|-----------------|
| Action No. | Mitigation Actions | S | T | A | P | L | E | E | STAPLEE Total | Losses Avoided (2 pts. Each) | Benefit | Cost | B/C Total | Total | Priority |
| 1.1.1 | Implement an education program on personal emergency preparedness that teaches residents how to prepare emergency medical kits that include water, blankets, flashlights, etc.; learn how to shut off their home utilities in times of emergency; and be self-sufficient for one to three days in the event of a disaster. | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 20 | IC, PD, LF, EMCC | 8 | -1 | 7 | 27 | H |
| 1.1.2 | Continue to educate residents about precautions that should be taken during threats of natural disasters such as severe weather and heat waves. | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 20 | IC, LF, EMCC | 6 | -1 | 5 | 25 | H |
| 1.1.3 | Provide to citizens through local media and make available at local government buildings, information on individual mitigation activities such as building personal shelters and assuring that propane tanks are appropriately tied down. | 3 | 2 | 2 | 3 | 3 | 2 | 3 | 18 | IC, PD, LF, EMCC | 8 | -1 | 7 | 25 | H |
| 1.1.4 | Promote the development and/or update of emergency plans by businesses, local governments and schools. | 3 | 2 | 2 | 3 | 3 | 2 | 3 | 18 | IC, PD, LF, EMCC | 8 | -3 | 5 | 23 | H |
| 1.1.5 | Continue to provide CERT training and encourage the development of CERTs throughout the county through training opportunities and public awareness. | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 20 | IC, PD, LF, EMCC | 8 | -1 | 7 | 27 | H |
| 1.1.6 | Educate school staff on natural hazards and make sure all staff are familiar with school emergency plan including evacuation and safety procedures. | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 21 | IC, PD, LF, EMCC | 8 | -1 | 7 | 28 | H |
| 1.1.7 | Schools need to continue to conduct emergency preparedness exercises on a regular basis. | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 20 | IC, PD, LF, EMCC | 8 | -1 | 7 | 27 | H |
| 1.2.1 | Continue to encourage cities to obtain early warning systems and improved communications systems. | 3 | 3 | 2 | 3 | 3 | 1 | 3 | 18 | IC, PD, LF, EMCC | 8 | -3 | 5 | 23 | H |
| 1.2.2 | Continue to promote use of weather radios by local residents to insure advanced warning about threatening weather. | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 21 | IC, EMCC | 4 | -1 | 3 | 24 | H |
| 1.2.3 | Partner with local radio stations to ensure that appropriate warning of impending disasters is provided to all residents in the countywide listening area. | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 21 | IC, EMCC | 4 | -1 | 3 | 24 | H |
| 1.2.4 | Monitor developments in data availability concerning the impact of dam failure, tornados, sinkholes, land subsidence and wildfire upon Maries County and all jurisdictions through local, state and federal agencies for use in hazard mitigation planning. | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 21 | IC, PD, LF, EMCC | 8 | -1 | 7 | 28 | H |
| 1.3.1 | Continue to encourage tree trimming and dead tree removal programs by utility companies and local government. | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 19 | IC, PD, LF, EMCC | 8 | -3 | 5 | 24 | H |

| Figure 4.4 Prioritization of Mitigation Actions | | 3 = Def YES 2 = Maybe YES 1 = Prob NO 0 = Def NO | | | | | | | | | | | | | |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|---|---|---|---|---|---|---------------|---------------------------------|---------|------|-----------|-------|----------|
| Action No. | Mitigation Actions | S | T | A | P | L | E | E | STAPLEE Total | Losses Avoided (2 pts. Each) | Benefit | Cost | B/C Total | Total | Priority |
| 1.3.2 | Continue to review and consider road and bridge upgrades to improve drainage and reduce flooding and the risk to residents and property. | 3 | 3 | 2 | 3 | 3 | 2 | 2 | 18 | IC, PD, LF, EMCC | 8 | -1 | 7 | 25 | H |
| 1.3.3 | Continue to maintain a list of locations that can serve as shelters for storm, cooling/warming shelters and establish MOUs with the appropriate organizations responsible for those facilities. | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 21 | IC, LF, EMCC | 6 | -1 | 5 | 26 | H |
| 1.3.4 | Encourage the designation of storm shelters and the construction of tornado safe rooms in or near schools and large employment centers that currently do not have access to safe rooms. | 3 | 3 | 2 | 3 | 3 | 1 | 3 | 18 | IC, LF, EMCC | 6 | -5 | 1 | 19 | M |
| 1.3.5 | Regularly review and update school emergency plans | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 21 | IC, PD, LF, EMCC | 8 | -1 | 7 | 28 | H |
| 2.1.1 | Continue to encourage a self-inspection program at critical facilities to assure that building infrastructure is earthquake and tornado resistant. | 3 | 2 | 2 | 3 | 3 | 1 | 3 | 17 | IC, PD, LF, EMCC | 8 | -5 | 3 | 20 | H |
| 2.1.2 | Encourage the development and implementation of minimum building codes in all communities. | 2 | 2 | 2 | 2 | 3 | 1 | 2 | 14 | PD, LF, EMCC | 6 | -3 | 3 | 17 | M |
| 2.1.3 | Encourage businesses/government/schools to develop emergency plans. | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 21 | IC, PD, LF, EMCC | 8 | -3 | 5 | 26 | H |
| 2.1.4 | Monitor developments in data availability concerning the impact of dam failure, tornados, sinkholes, land subsidence and wildfire upon Maries County and all jurisdictions through local, state and federal agencies for use in hazard mitigation planning. | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 21 | IC, PD, LF, EMCC | 8 | -1 | 7 | 28 | H |
| 2.1.5 | Continue to evaluate and update emergency operation plans. | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 21 | IC, PD, LF, EMCC | 8 | -1 | 7 | 28 | H |
| 2.1.6 | Encourage cities to require contractor storm water management plans in all new development – both residential and commercial properties. | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 16 | PD, LF | 4 | -3 | 1 | 17 | M |
| 2.2.1 | Educate residents on the dangers of floodplain development and the benefits of the National Flood Insurance Program and enforce restrictions on development in the floodplain.. | 2 | 3 | 3 | 2 | 3 | 2 | 3 | 18 | IC, PD, LF, EMCC | 8 | -1 | 7 | 25 | H |
| 2.2.2 | Encourage the development of storm water management plans. | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 16 | PD, LF | 4 | -3 | 1 | 17 | M |

| Figure 4.4 Prioritization of Mitigation Actions | | 3 = Def YES 1 = Prob NO 2 = Maybe YES 0 = Def NO | | | | | | | | | | | | | |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|---|---|---|---|---|---|---------------|---------------------------------|---------|------|-----------|-------|----------|
| | | S | T | A | P | L | E | E | STAPLEE Total | Losses Avoided (2 pts. Each) | Benefit | Cost | B/C Total | Total | Priority |
| 2.3.1 | Encourage minimum standards for building codes in all cities. | 2 | 2 | 2 | 2 | 3 | 1 | 2 | 14 | PD, LF, EMCC | 6 | -3 | 3 | 17 | M |
| 2.3.2 | Encourage local governments to develop and implement regulations for the securing of hazardous materials tanks and mobile homes to reduce hazards during flooding and high winds | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 13 | IC, PD, EMCC | 8 | -3 | 5 | 18 | M |
| 2.3.3 | Continue to enforce flood damage prevention/floodplain management ordinances in compliance with NFIP requirements. | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 18 | IC, PD, LF, EMCC | 8 | -3 | 5 | 23 | H |
| 2.3.4 | Encourage the City of Belle to become a member of the NFIP. | 2 | 3 | 2 | 2 | 3 | 2 | 3 | 17 | IC, PD, LF, EMCC | 8 | -1 | 7 | 24 | H |
| 3.1.1 | Distribute SEMA brochures on natural disasters, preparedness and NFIP at public facilities and events. | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 20 | IC, PD, LF, EMCC | 8 | -1 | 7 | 27 | H |
| 3.1.2 | Distribute regular press releases from county and city EMD offices concerning hazards, where they strike, frequency, preparedness and how to mitigate. | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 20 | IC, PD, LF, EMCC | 8 | -1 | 7 | 27 | H |
| 3.2.1 | Encourage local residents to purchase weather radios through press releases and brochures. | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 20 | IC, EMCC | 4 | -1 | 3 | 23 | H |
| 3.2.2 | Encourage meetings between EMD, city/county officials and SEMA to familiarize officials with mitigation planning, implementation and budgeting for mitigation projects. | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 19 | IC, PD, LF, EMCC | 8 | -1 | 7 | 26 | H |
| 3.3.1 | Re-evaluate the hazard mitigation plan, merge with other community planning and coordinate and integrate hazard mitigation activities, where appropriate, with emergency operations plans and procedures. | 3 | 2 | 2 | 2 | 3 | 1 | 3 | 16 | IC, PD, LF, EMCC | 8 | -3 | 5 | 21 | H |
| 3.3.2 | Distribute press releases by cities/county/schools regarding adopted mitigation measures to keep public abreast of changes and/or new regulations. | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 19 | IC, PD, LF, EMCC | 8 | -1 | 7 | 26 | H |
| 3.4.1 | Encourage county health department to use publicity campaigns that make residents aware of proper measures to take during times of threatening conditions (e.g. drought, heat wave) | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 19 | IC, PD, LF, EMCC | 8 | -1 | 7 | 26 | H |
| 3.4.2 | Publicize local, regional and/or statewide drills/exercises. | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 21 | IC, PD, LF, EMCC | 8 | -1 | 7 | 28 | H |
| 3.4.3 | Encourage the development of a county-wide CERT program and educate the public on how they can benefit from this type of program. | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 20 | IC, PD, LF, EMCC | 8 | -1 | 7 | 27 | H |

| Figure 4.4 Prioritization of Mitigation Actions | | 3 = Def YES | | 1 = Prob NO | | 2 = Maybe YES | | 0 = Def NO | | | | | | | |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---|-------------|---|---------------|---|------------|---------------|----------------------------|---------|------|-----------|-------|----------|
| | | S | T | A | P | L | E | E | STAPLEE Total | Loss Avoided (2 pts. Each) | Benefit | Cost | B/C Total | Total | Priority |
| Action No. | Mitigation Actions | | | | | | | | | | | | | | |
| 3.4.4 | Raise awareness of the need to secure propane tanks to reduce the risk from dislodged tanks during flooding, tornados and high winds. | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 16 | IC, PD, LF, EMCC | 8 | -3 | 5 | 21 | H |
| 4.1.1 | Continue to encourage joint meetings of different organizations/ agencies for mitigation related planning. | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 20 | IC, PD, LF, EMCC | 8 | -1 | 7 | 27 | H |
| 4.1.2 | Continue to encourage training opportunities in all areas of preparedness and response to insure the capabilities and safety of citizens and responders and encourage joint training/drills between agencies, public and private entities (including schools and businesses). | 3 | 2 | 2 | 3 | 3 | 2 | 3 | 18 | IC, PD, LF, EMCC | 8 | -1 | 7 | 25 | H |
| 4.1.3 | Pool different agency resources to achieve widespread mitigation planning results. | 3 | 2 | 2 | 2 | 3 | 2 | 3 | 17 | IC, PD, LF, EMCC | 8 | -1 | 7 | 24 | H |
| 4.2.1 | Re-evaluate the hazard mitigation plan, merge with other community planning and coordinate and integrate hazard mitigation activities, where appropriate, with emergency operations plans and procedures. | 3 | 2 | 2 | 2 | 3 | 1 | 3 | 16 | IC, PD, LF, EMCC | 8 | -3 | 5 | 21 | H |
| 4.2.2 | Encourage meetings between EMD, city and county government and SEMA to familiarize officials with mitigation planning and implementation and budgeting for mitigation projects. | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 21 | IC, PD, LF, EMCC | 8 | -1 | 7 | 28 | H |
| 5.1.1 | Encourage communities to budget for enhanced warning systems. | 3 | 2 | 2 | 3 | 3 | 2 | 3 | 18 | IC, LF, EMCC | 6 | -3 | 3 | 21 | H |
| 5.1.2 | Encourage all communities to develop storm water management plans. | 2 | 2 | 1 | 1 | 3 | 1 | 3 | 13 | PD | 2 | -5 | -3 | 10 | L |
| 5.1.3 | Re-evaluate the hazard mitigation plan, merge with other community planning and coordinate and integrate hazard mitigation activities, where appropriate, with emergency operations plans and procedures. | 3 | 2 | 2 | 2 | 3 | 1 | 3 | 16 | IC, PD, LF, EMCC | 8 | -3 | 5 | 21 | H |
| 5.1.4 | Encourage cities to require contractor storm water management plans in all new development –both residential and commercial properties. | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 16 | PD | 2 | -3 | -1 | 15 | M |
| 5.2.1 | Encourage the construction of storm shelters, especially tornado safe rooms near schools and large employment centers that currently do not have access to safe rooms. | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 19 | IC, EMCC | 4 | -5 | -1 | 18 | M |
| 5.2.2 | Encourage the assessment of public buildings as potential storm shelters; designate those that are suitable as safe shelters; and develop accessibility plans for the public during times of need. | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 19 | IC, EMCC | 4 | -1 | 3 | 22 | H |

| Figure 4.4 Prioritization of Mitigation Actions | | 3 = Def YES 1 = Prob NO 2 = Maybe YES 0 = Def NO | | | | | | | | | | | | | |
|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|----------|----------|----------|----------|----------|----------|--------------------------|---------------------------------------|----------------|-------------|------------------|--------------|-----------------|
| Action No. | Mitigation Actions | S | T | A | P | L | E | E | STAPLEE Total | Loss Avoided (2 pts. Each) | Benefit | Cost | B/C Total | Total | Priority |
| 5.3.1 | Encourage local governments to purchase properties in the floodplain as funds become available and convert that land into public space/recreation area. | 2 | 2 | 2 | 2 | 3 | 1 | 3 | 15 | IC, PD, LF, EMCC | 8 | -5 | 3 | 18 | M |
| 6.1.1 | Encourage meetings between EMD, city/county officials and SEMA to familiarize officials with mitigation planning, implementation and budgeting for mitigation projects. | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 21 | IC, PD, LF, EMCC | 8 | -1 | 7 | 28 | H |
| 6.1.2 | Structure grant proposals for road/bridge upgrades so that hazard mitigation concerns are also met. | 3 | 2 | 2 | 2 | 3 | 2 | 3 | 17 | IC, PD, LF, EMCC | 8 | -1 | 7 | 24 | H |
| 6.1.3 | Work with state/local/federal agencies to include mitigation in all economic and community development projects. | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 16 | IC, PD, LF, EMCC | 8 | -1 | 7 | 23 | H |
| 6.1.4 | Encourage local jurisdictions to budget for mitigation projects. | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 20 | IC, PD, LF, EMCC | 8 | -5 | 3 | 23 | H |
| 6.1.5 | Whenever possible, pool different agency resources to achieve widespread mitigation results. | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 21 | IC, PD, LF, EMCC | 8 | -1 | 7 | 28 | H |
| 6.2.1 | Encourage cities and counties to consider implementing cost-share programs with private property owners for hazard mitigation projects that benefit the jurisdiction as a whole. | 2 | 1 | 1 | 1 | 2 | 2 | 2 | 11 | IC, PD, LF, EMCC | 8 | -5 | 3 | 14 | M |
| 6.2.2 | Implement public awareness program about the benefits of hazard mitigation projects, both public and private through press releases and brochures. | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 19 | IC, PD, LF, EMCC | 8 | -1 | 7 | 26 | H |
| 6.3.1 | Prioritize mitigation projects, based on cost-effectiveness and starting with those sites facing the greatest threat to life, health and property. | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 20 | IC, PD, LF, EMCC | 8 | -1 | 7 | 27 | H |

Requirement 201.6(c)(3)(iv): For multi-jurisdictional plans, there must be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan.

Requirement 201.6(c)(4)(ii): [The plan shall include a] process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, when appropriate.

4.4.2 Implementation and Administration in Participating Jurisdictions

After completion of the STAPLEE and Benefit/Cost Reviews and prioritization of the mitigation action items, the action items were assigned to specific jurisdictions and plans were developed for implementation and administration.

The mitigation actions for each participating jurisdiction are shown in the following pages. The implementation and administration of each action item is listed in the section for the jurisdiction which is serving as the lead for the action. A description of the method for integrating the hazard mitigation plan action items into other planning processes in the jurisdiction is included after the actions.

Maries County

The following are mitigation actions for which Maries County is the lead. It should be noted that the County is the lead for many actions which mitigate for hazards in multiple jurisdictions in the planning area. [Note: some action items are listed under multiple goals – these have been combined where possible and noted by action number in Table 4.5.]

The tables that follow indicate the jurisdictions(s) for which the county is leading the action. Actions lead by the County for other jurisdictions are repeated in list form under each participating jurisdiction to which they apply.

The benefits (losses avoided) key for the charts is as follows:

- I/C – Injuries or Casualties
- PD – Property Damages
- LF – Loss of function/displacement impacts
- EMCC – Emergency Management/Community Costs

Table 4.5 Action Items Assigned to Maries County

| | |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Action 1.1.1 | Implement an education program on personal emergency preparedness that teaches residents how to prepare emergency medical kits that include water, blankets, flashlights, etc.; learn how to shut off their home utilities in times of emergency; and be self-sufficient for one to three days in the event of a disaster. |
| Priority | High |
| Plan for Implementation & Administration | Public education/awareness efforts on the subject of personal emergency preparedness will be continued by providing a variety of printed materials (brochures, press releases, etc.) on the topic to the public at public buildings such as the courthouse, city halls, etc., and at public events such as fairs and festivals. In addition, some information will be posted on the Phelps -Maries County Health Department website – www.phelpscountyhealth.com |
| Lead | County Commission, County EMD, County Health Department |
| Partners | City governments, emergency response agencies, schools |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | All hazards |
| Applicable Jurisdictions | All jurisdictions |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |
| Action 1.1.2 | Continue to educate residents about precautions that should be taken during threats of natural disasters such as severe weather and heat waves. |
| Priority | High |
| Plan for Implementation & Administration | Information on extreme heat hazards, precautions and preparedness will be continued by providing a variety of printed materials (brochures, press releases, etc.) on the topic to the public at public buildings such as the courthouse, city halls, etc., and at public events such as fairs and festivals. In addition, the information will continue to be posted on the Maries County Health Department website – www.phelpscountyhealth.com |
| Lead | County Commission, County EMD, County Health Department |
| Partners | City governments |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | Extreme Heat, severe weather, tornados, floods |
| Applicable Jurisdictions | All jurisdictions |
| Benefits (Losses Avoided) | IC, LF, EMCC |
| | |
| 1.1.3 | Provide to citizens through local media and make available at local government buildings, information on individual mitigation activities such as building personal shelters and assuring that propane tanks are appropriately tied down. |
| Priority | High |
| Plan for Implementation & Administration | Information on home tornado shelters, methods for securing tanks, etc. will be provided at public buildings such as the courthouse, city halls, etc., and at public events such as fairs and festivals. |
| Lead | County Commission, County EMD |
| Partners | City governments |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Ongoing |
| Hazards addressed | Tornado, flood |
| Applicable Jurisdictions | All jurisdictions |

| | |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Benefits (Losses Avoided) | IC, LF, PD, EMCC |
| 1.1.4 | Promote development of emergency plans by businesses, local governments and schools. |
| Priority | High |
| Plan for Implementation & Administration | Information on and samples of emergency plans and continuity plans for businesses will be made available through the EMD office. . |
| Lead | County EMD, County Commission |
| Partners | City governments, emergency response agencies, county health department |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | All hazards |
| Applicable Jurisdictions | All Jurisdictions |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| 1.1.5 | Continue to provide CERT training and encourage the development of CERTs throughout the county through training opportunities and public awareness.. |
| Priority | High |
| Plan for Implementation & Administration | County EMD will assist in coordinating periodic CERT trainings in the county. Citizens will be notified through local media. The EMD will work to generate interest in the classes and encourage the development of teams. |
| Lead | County EMD, County Commission |
| Partners | City governments, schools, Region I Homeland Security Oversight Committee |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | All hazards |
| Applicable Jurisdictions | All jurisdictions |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| 1.2.1 | Continue to encourage cities to obtain early warning systems and improved communications systems. |
| Priority | High |
| Plan for Implementation & Administration | County EMD and County Commission will continue to review changing technologies and existing systems (sirens, Reverse 9-1-1, AlertFM, etc.) and work to find ways to improve the county's current warning systems. This will be part of the annual review of the county LEOP. |
| Lead | City and County EMDs, County Commission |
| Partners | City governments, schools, sheriff's department |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | Severe storm, tornado, severe winter weather, wildfire |
| Applicable Jurisdictions | All jurisdictions |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| 1.2.2 | Continue to promote use of weather radios by local residents to insure advanced warning about threatening weather. |
| Priority | High |
| Plan for Implementation & Administration | County EMD will continue to promote and educate the public on weather radios. This will be accomplished through press releases to local media. |

| | |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lead | County EMD, County Commission |
| Partners | City governments, schools |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | Severe storm, tornado, severe winter weather, wildfire |
| Applicable Jurisdictions | All jurisdictions |
| Benefits (Losses Avoided) | IC, EMCC |
| | |
| 1.2.3 | Partner with local radio stations to ensure that appropriate warning of impending disasters is provided to residents in the countywide listening area. |
| Priority | High |
| Plan for Implementation & Administration | County EMD will continue to cultivate relationships with local radio stations and work with them to ensure that appropriate warnings are provided by making regular contact. |
| Lead | County EMD, County Commission |
| Partners | Local radio stations |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | Severe storm, tornado, severe winter weather |
| Applicable Jurisdictions | Maries County |
| Benefits (Losses Avoided) | IC, EMCC |
| | |
| 1.2.4, 2.1.4 | Monitor developments in data availability concerning the impact of dam failure, tornados, sinkholes, land subsidence and wildfire upon Maries County and all jurisdictions through local, state and federal agencies for use in hazard mitigation planning. |
| Priority | High |
| Plan for Implementation & Administration | County EMD and County Commission will continue to monitor developments in data availability on impacts of dam failure, tornados, sinkholes, land subsidence & wildfire. This will be done in cooperation with SEMA, FEMA, MDC, MDNR & MRPC. As additional information becomes available, the County EMD will incorporate information into the hazard mitigation plan to improve future planning efforts. |
| Lead | County EMD, County Commission |
| Partners | SEMA, FEMA, MRPC, MDC, MDNR, cities, schools |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | Dam failure, tornados, sinkholes, land subsidence, wildfire |
| Applicable Jurisdictions | All jurisdictions |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |
| 1.3.1 | Continue to encourage tree trimming and dead tree removal programs by utility companies and local government. |
| Priority | High |
| Plan for Implementation & Administration | County Commission, EMDs and city governments need to continue tree trimming and dead tree removal programs in their jurisdictions and encourage electric cooperatives serving the county to aggressively trim trees away from power lines to avoid outages during severe storms. |
| Lead | County Commission, City Governments |
| Partners | Electric cooperatives, private contractors, public and private utilities |
| Projected Cost/Funding | Moderate/likely workable into budget |

| | |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Criterion for Completion | Ongoing |
| Hazards Addressed | Tornado, Severe Storm, Severe Winter Storm |
| Applicable Jurisdictions | Maries County, Belle, Vienna |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |
| 1.3.2 | Continue to review and consider potential road and bridge upgrades to improve drainage, reduce flooding and the risk to residents and property. |
| Priority | High |
| Plan for Implementation & Administration | County Commission will periodically review roads and bridges and determine which bridges, low water crossings and sections of road are potential hazard mitigation projects. The list will be prioritized for the purpose of having a list of projects to search for potential funding. |
| Lead | County Commission |
| Partners | Local governments, MRPC |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | Flood |
| Applicable Jurisdictions | Maries County, Belle, Vienna |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |
| 1.3.3 | Continue to maintain a list of locations that can serve as shelters for storm, cooling/warming shelters and establish MOUs with the appropriate organizations responsible for those facilities. |
| Priority | High |
| Plan for Implementation & Administration | EMD will continue to establish and publicize the location and availability of shelters for different types of events. MOUs will be developed and put in place for each facility to insure that all parties understand the procedures that need to be followed in opening and operating the shelters. |
| Lead | EMD, County Health Department |
| Partners | Local governments, schools, churches |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | Severe Heat, Severe Storms, Tornado |
| Applicable Jurisdictions | Maries County, Belle, Vienna |
| Benefits (Losses Avoided) | IC, LF, EMCC |
| | |
| 1.3.4, 5.2.1 | Encourage the designation of storm shelters and the construction of tornado safe rooms in or near schools and large employment centers that currently do not have access to safe rooms. |
| Priority | Medium |
| Plan for Implementation & Administration | County and city EMDs will periodically review the need for tornado safe rooms/storm shelters in high population facilities and areas and work with potential locations for the designation of storm shelter or the construction of safe rooms. |
| Lead | County EMD, County Commission |
| Partners | Local governments, schools, large employers |
| Projected Cost/Funding | Significant/Grants |
| Criterion for Completion | Ongoing |
| Hazards Addressed | Tornados, Severe Storms |
| Applicable Jurisdictions | Maries County, Belle, Irondale, Mineral Point, Potosi |

| | |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Benefits (Losses Avoided) | IC, EMCC |
| 2.1.1 | Continue to encourage a self-inspection program at critical facilities to assure that building infrastructure is earthquake and tornado resistant. |
| Priority | High |
| Plan for Implementation & Administration | County EMD will encourage a self-inspection program through monthly EMD meetings and provide resources from SEMA and FEMA. |
| Lead | County EMD, County Commission |
| Partners | Local businesses, local government, schools |
| Projected Cost/Funding | High/grants |
| Criterion for Completion | Ongoing |
| Hazards Addressed | All hazards |
| Applicable Jurisdictions | All Jurisdictions |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| 2.1.2 | Encourage the development and implementation of minimum building codes in all communities. |
| Priority | Medium |
| Plan for Implementation & Administration | County EMD, with assistance from local emergency response agencies, and city EMDs will encourage the development and implementation of minimum building codes in all communities. |
| Lead | County EMD |
| Partners | Local response agencies, city EMDs |
| Projected Cost/Funding | Moderate/operating budget |
| Criterion for Completion | Ongoing until all communities have at least minimal building codes in place. |
| Hazards Addressed | Tornado, Severe Storm, Wildfire, Flood |
| Applicable Jurisdictions | Maries County, Vienna |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| 2.1.3 | Encourage businesses, local governments and schools to develop emergency plans. |
| Priority | High |
| Plan for Implementation & Administration | County EMD, with assistance from local emergency response agencies, city EMDs and County Health Department will encourage the development and implementation of emergency plans at EMD monthly meetings, trainings and drills. |
| Lead | County EMD, County Commission |
| Partners | County Health Department, local emergency response agencies, SEMA |
| Projected Cost/Funding | Moderate/operating budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | All Hazards |
| Applicable Jurisdictions | All Jurisdictions |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| 2.1.5 | Continue to evaluate and update emergency operation plans. |
| Priority | High |
| Plan for Implementation & Administration | City and County EMDs are responsible for periodically reviewing and updating the Maries County LEOP which includes all of the communities. |
| Lead | County and City EMDs, County Commission |
| Partners | Local government, schools, emergency response agencies |
| Projected Cost/Funding | Minimal/operating budget |

| | |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Criterion for Completion | Ongoing |
| Hazards Addressed | All hazards |
| Applicable Jurisdictions | All jurisdictions |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |
| 2.2.1 | Educate residents on the dangers of floodplain development and the benefits of the National Flood Insurance Program and enforce restrictions on development in the floodplain. |
| Priority | High |
| Plan for Implementation & Administration | Floodplain managers throughout the county need to work together to provide press releases in local papers and NFIP brochures in public buildings. |
| Lead | County Commission, county floodplain managers |
| Partners | SEMA, FEMA, MRPC |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | Flood |
| Applicable Jurisdictions | Maries County, Vienna |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |
| 2.3.2 | Encourage local governments to develop and implement regulations for the securing of hazardous materials tanks and mobile homes to reduce hazards during flooding and high winds. |
| Priority | Medium |
| Plan for Implementation & Administration | County EMD currently enforces regulations in the floodplain in regards to securing tanks and mobile homes and will encourage communities to extend those requirements beyond the floodplain in order to address hazards during high winds as well as floods. |
| Lead | County EMD, County Commission, Floodplain Managers |
| Partners | Local governments |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | Flood, Tornado, Severe Storm/Wind |
| Applicable Jurisdictions | Maries County, Belle, Irondale, Mineral Point, Potosi |
| Benefits (Losses Avoided) | IC, PD |
| | |
| 2.3.3 | Continue to enforce flood damage prevention/floodplain management ordinances in compliance with NFIP requirements. |
| Priority | High |
| Plan for Implementation & Administration | County floodplain managers need to take floodplain training on a regular basis, review local floodplain management ordinances and make sure local elected officials understand their responsibilities under NFIP. |
| Lead | County Commission, local floodplain managers |
| Partners | SEMA, FEMA |
| Projected Cost/Funding | Moderate/operating budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | Flood |
| Applicable Jurisdictions | Maries County, Irondale, Mineral Point, Potosi |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |
| 2.3.4 | Encourage the City of Belle to become a member of the NFIP. |

| | |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Priority | High |
| Plan for Implementation & Administration | County EMD and SEMA representatives will visit with Belle elected officials and explain the benefits of joining the NFIP. |
| Lead | County Commission |
| Partners | MTNF, MDC, SEMA |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Initial meeting completed by 6/2015 |
| Hazards Addressed | Flood |
| Applicable Jurisdictions | Belle |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |
| 3.1.1 | Distribute SEMA brochures on natural hazards, preparedness and NFIP at public facilities and events. |
| Priority | High |
| Plan for Implementation & Administration | County EMD will continue to distribute information through local media in press releases and brochures at events and in public facilities, and through the Phelps-Maries County Department of Health website – www.phelpscountyhealth.com . |
| Lead | County EMD, County Commission, County Health Department |
| Partners | Local governments, emergency response agencies |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | All Hazards |
| Applicable Jurisdictions | All jurisdictions |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| 3.1.2 | Distribute regular press releases from county and city EMD offices concerning hazards, where they strike, frequency, preparation and how to mitigate. |
| Priority | High |
| Plan for Implementation & Administration | County EMD, in cooperation with SEMA and County Health Department will provide press releases to local media on hazard information and means of mitigating hazards as well as whenever possible, post information on the county health department website – www.phelpscountyhealth.com and coordinate these efforts with SEMA's statewide drills, awareness activities. |
| Lead | County EMD, County Commission, City EMDs |
| Partners | SEMA, city EMDs, local emergency response agencies |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | All hazards |
| Applicable Jurisdictions | Maries County, Vienna, Belle |
| Benefits (Losses Avoided) | IC, PD, LF EMCC |
| | |
| 3.2.1 | Encourage local residents to purchase weather radios through press releases and brochures. |
| Priority | High |
| Plan for Implementation & Administration | County EMD will promote the purchase of weather radios through periodic press releases to local media. |
| Lead | County EMD, County Commission |
| Partners | NOAA, SEMA, cities |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Ongoing |

| | |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hazards Addressed | Extreme Heat, Flood, Severe Storm, Tornado, Severe Winter Storm |
| Applicable Jurisdictions | All jurisdictions |
| Benefits (Losses Avoided) | IC, EMCC |
| | |
| 3.2.2 | Encourage meetings between EMD, city/county officials and SEMA to familiarize officials with mitigation planning, implementation and budgeting for mitigation projects. |
| Priority | High |
| Plan for Implementation & Administration | County EMD will work with various local governments, MREPC and MRPC to coordinate opportunities for SEMA hazard mitigation specialists to present information on mitigation programs, projects and potential funding. |
| Lead | County EMD, County Commission |
| Partners | Local government, SEMA, MREPC, MRPC |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | All Hazards |
| Applicable Jurisdictions | All Jurisdictions |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |
| 3.3.1, 4.2.1, 5.1.3 | Re-evaluate the hazard mitigation plan, merge with other community planning and coordinate and integrate hazard mitigation activities, where appropriate, with emergency operations plans and procedures. |
| Priority | High |
| Plan for Implementation & Administration | County EMD will work with other jurisdictions to review the hazard mitigation plan on a regular basis – annually or whenever disasters occur in the county. In addition, all jurisdictions will be encouraged to merge the hazard mitigation action items with other community plans and planning activities. |
| Lead | County EMD, County Commission |
| Partners | Local Jurisdictions, SEMA, MRPC |
| Projected Cost/Funding | Moderate/operating budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | All Hazards |
| Applicable Jurisdictions | All Jurisdictions |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |
| 3.3.2 | Distribute press releases by cities/county/schools regarding adopted mitigation measures to keep public abreast of changes and/or new regulations. |
| Priority | High |
| Plan for Implementation & Administration | County EMD will provide updates on mitigation activities in the county to local media to keep the public informed. Changes in regulations, particularly in floodplain management will also be publicized through media. |
| Lead | County EMD, County Commission, Floodplain Manager, School Superintendents |
| Partners | Local jurisdictions, SEMA, FEMA, city floodplain managers |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | All Hazards |
| Applicable Jurisdictions | All Jurisdictions |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |

| | |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3.4.1 | Encourage county health department to use publicity campaigns that make residents aware of proper measures to take during times of threatening conditions (e.g. drought, heat wave) |
| Priority | High |
| Plan for Implementation & Administration | County EMD will work with county health department, SEMA and local media to launch publicity/information campaigns to educate residents on what they can do to reduce their risks during threatening conditions such as drought and heat waves. This will include press releases and public service announcements. |
| Lead | County EMD, County Commission, County Health Department |
| Partners | SEMA |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | All Hazards |
| Applicable Jurisdictions | Maries County, Belle, Vienna |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |
| 3.4.2 | Publicize local, regional and/or statewide drills. |
| Priority | High |
| Plan for Implementation & Administration | County EMD will work with local governments, agencies and emergency response agencies to publicize and encourage participation in drills being conducted in any of the jurisdictions. Publicizing will include emails, press releases and postings on county health department website – www.Mariescountyhealthdepartment.org |
| Lead | County EMD, County Commission |
| Partners | Local jurisdictions, SEMA, emergency response agencies, county health department |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Ongoing – as needed |
| Hazards Addressed | All hazards |
| Applicable Jurisdictions | All jurisdictions |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |
| 3.4.3 | Encourage the development of a county-wide CERT program and educate the public on how they can benefit from this type of program. |
| Priority | High |
| Plan for Implementation & Administration | County EMD has helped coordinate some CERT training in the county. Needs to continue to work with training providers to provide additional training and assist potential teams with getting organized and self-sustaining. |
| Lead | County EMD |
| Partners | Local jurisdictions, local response agencies, Region I HSOC, SEMA, MRPC |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | All hazards |
| Applicable Jurisdictions | All jurisdictions |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |
| 3.4.4 | Raise awareness of the need to secure propane tanks to reduce the risk from dislodged tanks during flooding, tornados and high winds. |
| Priority | High |
| Plan for Implementation & Administration | County EMD will develop informational materials to share with local propane dealers and residents on the dangers of unsecured tanks during natural disasters and the |

| | |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | methods for securing tanks. |
| Lead | County EMD |
| Partners | SEMA, propane dealers |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | Flood, Tornado, Severe Storm |
| Applicable Jurisdictions | All jurisdictions |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |
| 4.1.1 | Continue to encourage joint meetings of different organizations/agencies for mitigation related planning. |
| Priority | High |
| Plan for Implementation & Administration | County EMD will incorporate mitigation planning into existing meetings currently being held for training and emergency planning. |
| Lead | County EMD, County Commission, City EMDs |
| Partners | Local jurisdictions, emergency response agencies, SEMA, MRPC |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | All Hazards |
| Applicable Jurisdictions | All Jurisdictions |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |
| 4.1.2 | Continue to encourage training opportunities in all areas of preparedness and response to insure the capabilities and safety of citizens and responders and encourage joint training/drills between agencies, public and private entities (including schools and businesses). |
| Priority | High |
| Plan for Implementation & Administration | County EMD will work with all jurisdictions and emergency response agencies to coordinate trainings, drills and exercises that area inclusive of both public and private entities such as schools and businesses. |
| Lead | County EMD, County Commission |
| Partners | Local Jurisdictions, SEMA, MREPC, MRPC, Region I HSOC, emergency response agencies |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | All Hazards |
| Applicable Jurisdictions | All Jurisdictions |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |
| 4.1.3, 6.1.5 | Pool different agency resources to achieve widespread mitigation planning results. |
| Priority | High |
| Plan for Implementation & Administration | County EMD and County Commission will make contact with other jurisdictions, emergency response agencies, county health department, SEMA, Region C HSOC, MRPC, MREPC and find ways to work together to identify, prioritize, fund and implement mitigation projects throughout the county, as well as incorporate mitigation into all planning activities. |
| Lead | County EMD, County Commission |
| Partners | All Jurisdictions, local emergency response agencies, county health department, SEMA, MRPC, Region I HSOC, MREPC |

| | |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | All Hazards |
| Applicable Jurisdictions | All Jurisdictions |
| Benefits (Losses Avoided) | IC, PD, LF EMCC |
| | |
| 4.2.2 | Encourage meetings between EMDs, city and county government, schools and SEMA to familiarize officials with mitigation planning and implementation and budgeting for mitigation projects. |
| Priority | High |
| Plan for Implementation & Administration | County Commission and County EMD will work with SEMA, MRPC and local jurisdictions to coordinate meetings and/or presentations that will help inform and familiarize local decision-makers with planning for, prioritizing, budgeting for and implementing local projects that will make the county less vulnerable to natural disasters. These actions should include providing information on potential sources of funding for mitigation projects |
| Lead | County Commission, County and City EMDs |
| Partners | Maries County Commission, Cities of Belle and Vienna, Maries County R-I and R-II School districts, FEMA, SEMA, MRPC |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | All hazards |
| Applicable Jurisdictions | All jurisdictions |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |
| 5.2.1 | Encourage the construction of storm shelters, especially tornado safe rooms near schools and large employment centers that currently do not have access to safe rooms. |
| Priority | Medium |
| Plan for Implementation & Administration | County Commission and County EMD should meet with city governments, schools and large employers in the county to encourage them to consider including tornado safe rooms in any future remodel or construction projects. |
| Lead | County Commission, County EMD |
| Partners | Maries County Commission, Belle, Vienna, Maries County R-I and R-II School districts, SEMA, FEMA, MRPC, local chambers of commerce and economic developers |
| Projected Cost/Funding | High/Grants |
| Criterion for Completion | Ongoing until tornado safe rooms exist in each city and/or school and any other high population areas identified. |
| Hazards Addressed | Tornado, Severe Storm |
| Applicable Jurisdictions | All Jurisdictions |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |
| 5.2.2 | Encourage the assessment of public buildings as potential storm shelters; designate those that are suitable as safe shelters; and develop accessibility plans for the public during times of need. |
| Priority | High |
| Plan for Implementation & Administration | County and City EMDs will work with SEMA representatives and local governments to determine which buildings are suitable to serve as storm shelters and establish MOUs and procedures for opening, operating and closing the shelters. |
| Lead | County and City EMDs |

| | |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Partners | Maries County Commission, cities of Belle and Vienna, Maries County R-I and R-II school districts, SEMA |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | All public buildings assessed and determinations made by 12/2018 |
| Hazards Addressed | Tornado, Severe Storm |
| Applicable Jurisdictions | All Jurisdictions |
| Benefits (Losses Avoided) | IC, EMCC |
| | |
| 5.3.1 | Encourage local governments to purchase properties in the floodplain as funds become available and convert that land into public space/recreation area. |
| Priority | Medium |
| Plan for Implementation & Administration | County Commission will direct the floodplain manager to make property owners aware of the possibility of buyouts following flood events and encourage them to consider participating in buyouts or flood proofing their property. |
| Lead | County floodplain manager |
| Partners | Local governments, SEMA, FEMA |
| Projected Cost/Funding | High/Grants |
| Criterion for Completion | Ongoing, with progress marked as properties are purchased. |
| Hazards Addressed | Flood |
| Applicable Jurisdictions | Maries County, City of Vienna |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |
| 6.1.1 | Encourage meetings between EMD, city/county officials, schools and SEMA to familiarize officials with mitigation planning, implementation and budgeting for mitigation projects. |
| Priority | High |
| Plan for Implementation & Administration | County EMD will stay in contact with and work with local jurisdictions, SEMA and FEMA to stay current on funding opportunities for mitigation projects throughout the county. |
| Lead | County EMD, County Commission |
| Partners | Local Jurisdictions, SEMA, FEMA, MRPC |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | All Hazards |
| Applicable Jurisdictions | All Jurisdictions |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |
| 6.1.2 | Structure grant proposals for road/bridge upgrades so that hazard mitigation concerns are also met. |
| Priority | High |
| Plan for Implementation & Administration | Maries County Commission will include hazard mitigation issues in grant applications for upgrades to or replacements of roads and bridges. The county recently participated in a regional project to identify and prioritize bridges and low water crossings that need to be mitigated to reduce risk during flood events. Once this project is completed, the county will receive a report which should be reviewed and considered before any future upgrades are initiated. |
| Lead | Maries County Commission |
| Partners | Road and Bridge Department, city government where applicable, MRPC, SEMA, FEMA |
| Projected Cost/Funding | Minimal/Operating budget |
| Criterion for Completion | Ongoing |

| | |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hazards Addressed | Flood |
| Applicable Jurisdictions | Maries County, Cities of Belle and Vienna |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |
| 6.1.3 | Work with local/state/federal agencies to include mitigation in all economic and community development projects. |
| Priority | High |
| Plan for Implementation & Administration | Local officials need to work with SEMA, FEMA, MRPC and other economic development agencies to include community mitigation projects and programs in all economic and community development projects planned for Maries County. |
| Lead | County Commission |
| Partners | SEMA, FEMA, MRPC, DED, RD |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | All Hazards |
| Applicable Jurisdictions | Maries County, Cities of Belle and Vienna |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |
| 6.1.4 | Encourage local jurisdictions to budget for mitigation projects. |
| Priority | High |
| Plan for Implementation & Administration | County EMD will include discussions on budgeting for mitigation projects with all local jurisdictions at various flood plain management, mitigation planning and emergency management meetings. |
| Lead | County EMD, County Commission |
| Partners | All Local Jurisdictions |
| Projected Cost/Funding | Significant/Grants |
| Criterion for Completion | Ongoing |
| Hazards Addressed | All Hazards |
| Applicable Jurisdictions | All Jurisdictions |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |
| 6.2.1 | Encourage cities and counties to consider implementing cost-share programs with private property owners for hazard mitigation projects that benefit the jurisdiction as a whole. |
| Priority | Medium |
| Plan for Implementation & Administration | County EMD will include discussions on these types of programs with all jurisdictions at meetings held on related issues (floodplain, emergency planning, etc.) |
| Lead | County EMD, County Commission |
| Partners | Cities of Belle and Vienna, SEMA, FEMA |
| Projected Cost/Funding | Significant/Grants |
| Criterion for Completion | Ongoing |
| Hazards Addressed | Dam Failure, Earthquake, Flood, Land Subsidence/Sinkhole, Severe Storm, Tornado, Severe Winter Weather, Wildfire |
| Applicable Jurisdictions | Maries County, Cities of Belle and Vienna |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |
| 6.2.2 | Implement public awareness program about the benefits of hazard mitigation projects, both public and private through press releases and brochures. |
| Priority | High |

| | |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Plan for Implementation & Administration | County EMD, with assistance from all jurisdictions and partner agencies will develop press releases on the benefits of hazard mitigation projects, but for public infrastructure as well as on the part of private property owners. The information will be distributed through local media. |
| Lead | County EMD, County Commission |
| Partners | All jurisdictions, SEMA, FEMA, MRPC |
| Projected Cost/Funding | Minimal/Operating Budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | All Hazards |
| Applicable Jurisdictions | All jurisdictions |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |
| 6.3.1 | Prioritize mitigation projects, based on cost-effectiveness and starting with those sites facing the greatest threat to life, health and property. |
| Priority | High |
| Plan for Implementation & Administration | County EMD will ask jurisdictions to complete this action periodically and provide results to the EMD for review and update of hazard mitigation plan. |
| Lead | County EMD, County Commission |
| Partners | All Jurisdictions |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | 2017, repeat in 2019 |
| Hazards Addressed | All Hazards |
| Applicable Jurisdictions | All Jurisdictions |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |

Integration of Hazard Mitigation Actions into Current Planning Processes

The mitigation actions in this plan will be integrated into the work plans of the departments leading the actions; many of the actions are already integrated into the activities of county personnel. Any funding required for mitigation will be considered during the annual budgeting process in the County.

The local emergency operations plan (LEOP) covers all aspects of emergency preparedness in Maries County, including all jurisdictions listed in this plan. The LEOP is an inclusive document with a broad range of information concerning all the facets of emergency management and planning. The mitigation actions in the Maries County Hazard Mitigation Plan will be integrated into the LEOP as applicable.

Any other planning efforts such as updating the regional Community Economic Development Strategy (CEDS) plan, or any comprehensive or strategic planning conducted by the county will include review and inclusion of hazard mitigation goals, action items and priorities.

Belle

Mitigation actions for Belle are shown in the following table and subsequent list. The actions in the table are those for which Belle itself will take the lead. Those listed at the end of the table are mitigation actions which Maries County will lead on behalf of numerous jurisdictions, including Belle.

The benefits (losses avoided) key for the charts is as follows:

- I/C – Injuries or Casualties
- PD – Property Damages
- LF – Loss of function/displacement impacts
- EMCC – Emergency Management/Community Costs

Table 4.6 Action Items Assigned to City of Belle

| | |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.2.1 | Continue to encourage cities to obtain early warning systems and improved communications systems. |
| Priority | High |
| Plan for Implementation & Administration | Mayor and Board of Aldermen should meet and assess the existing early warning and emergency communications systems in their communities on an annual basis to determine the needs and consider ways to fund upgrades and additions. |
| Lead | Mayor, Board of Alderman |
| Partners | Local emergency response agencies, county dispatch, MRPC, SEMA, Rural Development. |
| Projected Cost/Funding | Moderate/Operating budget |
| Criterion for Completion | Ongoing with upgrades and additions noted as milestones for improvement. |
| Hazards Addressed | All Hazards |
| Benefits (Losses Avoided) | IC, LF, PD, EMCC |
| | |
| 2.1.6, 5.1.4 | Encourage cities to require contractor storm water management plans in all new development – both residential and commercial properties. |
| Priority | Low |
| Plan for Implementation & Administration | The public works department, Mayor and Board of Aldermen need to consider the benefits of developing a storm water management plan and look into methods of developing and funding the project. |
| Lead | Public Works employees, Mayor, Board of Aldermen |
| Partners | MRPC |
| Projected Cost/Funding | Significant/Grants |
| Criterion for Completion | Ongoing |
| Hazards Addressed | Flood |
| Benefits (Losses Avoided) | PD |
| | |
| 2.2.2, 5.1.2 | Encourage the development of storm water management plans. |
| Priority | Medium |
| Plan for Implementation & Administration | The water superintendent, maintenance/sewer operator and village trustees need to consider the benefits of requiring storm water management plans for all new development and explore ways to put these requirements into place. |
| Lead | Mayor, Board of Aldermen, Public Works Department |

| | |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Partners | Local builders associations |
| Projected Cost/Funding | Moderate/operating budget |
| Criterion for Completion | 2015 |
| Hazards Addressed | Flood |
| Benefits (Losses Avoided) | PD |
| | |
| 5.1.1 | Encourage communities to budget for enhanced warning systems. |
| Priority | High |
| Plan for Implementation & Administration | Mayor and Board of Aldermen should review community needs and the cost of enhanced warning systems within the community and search for the means of funding such improvements. |
| Lead | Mayor and Board of Aldermen |
| Partners | County EMD, SEMA, USDA Rural Development, MRPC |
| Projected Cost/Funding | Significant/Grants |
| Criterion for Completion | Schedule meetings by 2014 |
| Hazards Addressed | Flood, Severe Storm, Tornado, Severe Winter Storm |
| Benefits (Losses Avoided) | IC, LF, EMCC |
| | |
| 6.1.3 | Work with state/local/federal agencies to include mitigation in all economic and community development projects. |
| Priority | High |
| Plan for Implementation & Administration | Mayor, Board of Aldermen need to work with SEMA, FEMA, MRPC and other economic development agencies to include community mitigation projects and programs in all economic and community development projects planned for Belle. |
| Lead | Mayor, Board of Aldermen |
| Partners | SEMA, FEMA, MRPC, DED, RD |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | All Hazards |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |

In addition to the above mitigation actions for which the City of Belle is the lead, Maries County will be the lead on the following actions which also serve as mitigation actions for the City of Belle:

- 1.1.1 Implement an education program on personal emergency preparedness that teaches residents how to prepare emergency medical kits that include water, blankets, flashlights, etc. and how to shut off their home utilities in times of emergency.
- 1.1.2 Continue to educate residents about precautions that should be taken during threats of natural disasters such as severe weather and heat waves.
- 1.1.3 Provide to citizens through local media and make available at local government buildings, information on individual mitigation activities such as building personal shelters and assuring that propane tanks are appropriately tied down.

- 1.1.4 Promote the development of emergency plans by businesses, local governments and schools.
- 1.1.5 Continue to provide CERT training and encourage the development of CERTs throughout the county through training opportunities and public awareness.
- 1.2.1 Continue to encourage cities to obtain early warning systems and improved communications systems.
- 1.2.2 Continue to promote the use of weather radios by local residents to insure advanced warning about threatening weather.
- 1.2.3 Partner with local radio stations to assure that appropriate warning of impending disasters is provided to all residents in the countywide listening area.
- 1.2.4 Monitor developments in data availability concerning the impact of dam failure, tornados, sinkholes, land subsidence and wildfire upon Maries County and all jurisdictions through local, state and federal agencies for use in hazard mitigation planning. (Also 2.1.4)
- 1.3.1 Continue to encourage tree trimming and dead tree removal programs by utility companies and local governments.
- 1.3.2 Continue to review and consider road and bridge upgrades to improve drainage and reduce flooding and the risk to residents and property.
- 1.3.3 Continue to maintain a list of locations that can serve as shelters for storm, cooling/warming shelters and establish MOUs with the appropriate organizations responsible for those facilities.
- 1.3.4 Encourage the designation of storm shelters and the construction of tornado safe rooms in or near schools and large employment centers that currently do not have access to safe rooms. (Also 5.2.1)
- 2.1.1 Continue to encourage a self-inspection program at critical facilities to assure that building infrastructure is earthquake and tornado resistant.
- 2.1.2 Encourage the development and implementation of minimum building codes in all communities.
- 2.1.3 Encourage businesses, local governments and schools to develop emergency plans.
- 2.1.5 Continue to evaluate and update emergency operation plans.

- 2.2.1 Educate residents on the dangers of floodplain development and the benefits of the National Flood Insurance Program and enforce restrictions on development in the floodplain.
- 2.3.2 Encourage local governments to develop and implement regulations for the securing of hazardous materials tanks and mobile homes to reduce hazards during flooding and high winds.
- 2.3.3 Continue to enforce flood damage prevention/floodplain management ordinances in compliance with NFIP requirements.
- 2.3.4 Encourage the City of Belle to become a member of the NFIP.
- 3.1.1 Distribute SEMA brochures on natural hazards, preparedness and NFIP at public facilities and events.
- 3.1.2 Distribute regular press releases from county and city EMD offices concerning hazards, where they strike, frequency, preparation and how to mitigate.
- 3.2.1 Encourage residents to purchase weather radios through press releases and brochures.
- 3.2.2 Encourage meetings between EMD, city/county officials and SEMA to familiarize officials with mitigation planning, implementation and budgeting for mitigation projects. (Also 4.2.2, 6.1.1)
- 3.3.1 Re-evaluate the hazard mitigation plan, merge with other community planning and coordinate and integrate hazard mitigation activities, where appropriate, with emergency operations plans and procedures. (Also 4.2.1 and 5.1.3)
- 3.3.2 Distribute press release by cities/county regarding adopted mitigation measures to keep public abreast of changes and/or new regulations.
- 3.4.1 Encourage county health department to use publicity campaigns that make residents aware of proper measures to take during times of threatening conditions (e.g. drought or heat wave).
- 3.4.2 Publicize county or citywide drills.
- 3.4.3 Encourage the development of a county-wide CERT program and educate the public on how they can benefit from this type of program.
- 3.4.4 Raise awareness of the need to secure propane tanks to reduce the risk from dislodged tanks during flooding, tornados and high winds.
- 4.1.1 Continue to encourage joint meetings of different organizations/ agencies for mitigation related planning.

- 4.1.2 Continue to encourage training opportunities in all areas of preparedness and response to insure the capabilities and safety of citizens and responders and encourage joint training/drills between agencies, public and private entities (including schools and businesses.)
- 4.1.3 Pool different agency resources to achieve widespread mitigation planning results. (Also 6.1.5)
- 5.2.2 Encourage the assessment of public buildings as potential storm shelters; designate those that are suitable as safe shelters; and develop accessibility plans for the public during times of need.
- 5.3.1 Encourage local governments to purchase properties in the floodplain as funds become available and convert that land into public space/recreation area.
- 6.1.2 Structure grant proposals for road/bridge upgrades so that hazard mitigation concerns are also met.
- 6.1.3 Work with local/state/federal agencies to include mitigation in all economic and community development projects.
- 6.1.4 Encourage local jurisdictions to budget for mitigation projects.
- 6.2.1 Encourage cities and counties to consider implementing cost-share programs with private property owners for hazard mitigation projects that benefit the jurisdiction as a whole.
- 6.2.2 Implement public awareness program about the benefits of hazard mitigation projects, both public and private, through press releases and brochures
- 6.3.1 Prioritize mitigation projects, based on cost-effectiveness and starting with those sites facing the greatest threat to life, health and property.

Information on the implementation and administration of these actions is described under Maries County in this section.

Integration of Hazard Mitigation Actions into Current Planning Processes

The City of Belle is a small community of approximately 1,545 people. The community has a minimal budget with which to work and little funding for planning activities. Planning is carried out by the Mayor and Board of Aldermen with recommendations from city employees/volunteers or as part of larger, county or regional planning activities. The hazard mitigation actions will be carried out on a volunteer basis by the Mayor and Board of Aldermen and where applicable, the city public works department.

Vienna

Mitigation actions for Vienna are shown in the following table and subsequent list. The actions in the table are those for which Vienna itself will take the lead. Those listed at the end of the table are mitigation actions which Maries County will lead on behalf of numerous jurisdictions, including Vienna.

The benefits (losses avoided) key for the charts is as follows:

- I/C – Injuries or Casualties
- PD – Property Damages
- LF – Loss of function/displacement impacts
- EMCC – Emergency Management/Community Costs

Table 4.7 Action Items Assigned to City of Vienna

| | |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.2.1 | Continue to encourage cities to obtain early warning systems and improved communications systems. |
| Priority | High |
| Plan for Implementation & Administration | Mayor and Board of Aldermen should meet and assess the existing early warning and emergency communications systems in their communities on an annual basis to determine the needs and consider ways to fund upgrades and additions. |
| Lead | Mayor, Board of Alderman |
| Partners | Local emergency response agencies, county dispatch, MRPC, SEMA, Rural Development. |
| Projected Cost/Funding | Moderate/Operating budget |
| Criterion for Completion | Ongoing with upgrades and additions noted as milestones for improvement. |
| Hazards Addressed | All Hazards |
| Benefits (Losses Avoided) | IC, LF, PD, EMCC |
| 2.1.6, 5.1.4 | Encourage cities to require contractor storm water management plans in all new development –both residential and commercial properties. |
| Priority | Medium |
| Plan for Implementation & Administration | The water superintendent, maintenance/sewer operator and village trustees need to consider the benefits of requiring storm water management plans for all new development and explore ways to put these requirements into place. |
| Lead | Mayor, Board of Aldermen, Public Works Department |
| Partners | Local builders associations |
| Projected Cost/Funding | Moderate/operating budget |
| Criterion for Completion | 2015 |
| Hazards Addressed | Flood |
| Benefits (Losses Avoided) | PD |
| 2.2.2, 5.1.2 | Encourage all communities to develop storm water management plans. |
| Priority | Low |
| Plan for Implementation & Administration | The public works department, Mayor and Board of Aldermen need to consider the benefits of developing a storm water management plan and look into methods of developing and funding the project. |
| Lead | Public Works employees, Mayor, Board of Aldermen |

| | |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Partners | MRPC |
| Projected Cost/Funding | Significant/Grants |
| Criterion for Completion | Ongoing |
| Hazards Addressed | Flood |
| Benefits (Losses Avoided) | PD |
| | |
| 2.3.1 | Encourage minimum standards for building codes in all cities. |
| Priority | Medium |
| Plan for Implementation & Administration | Mayor, Board of Aldermen and public works employees will research the benefits, requirements and costs of enacting building codes. |
| Lead | Mayor, Board of Aldermen |
| Partners | Public works department |
| Projected Cost/Funding | Moderate/operating budget |
| Criterion for Completion | Research and discussion completed by Dec. 2015. |
| Hazards Addressed | Tornado, Wind, Wildfire, Earthquake |
| Benefits (Losses Avoided) | PD, LF, EMCC |
| | |
| 5.1.1 | Encourage communities to budget for enhanced warning systems. |
| Priority | High |
| Plan for Implementation & Administration | Mayor and Board of Aldermen should review community needs and the cost of enhanced warning systems within the community and search for the means of funding such improvements. |
| Lead | Mayor and Board of Aldermen |
| Partners | County EMD, SEMA, USDA Rural Development, MRPC |
| Projected Cost/Funding | Significant/Grants |
| Criterion for Completion | Schedule meetings by 2014 |
| Hazards Addressed | Flood, Severe Storm, Tornado, Severe Winter Storm |
| Benefits (Losses Avoided) | IC, LF, EMCC |
| | |
| 6.1.3 | Work with state/local/federal agencies to include mitigation in all economic and community development projects. |
| Priority | High |
| Plan for Implementation & Administration | Mayor, Board of Aldermen need to work with SEMA, FEMA, MRPC and other economic development agencies to include community mitigation projects and programs in all economic and community development projects planned for Belle. |
| Lead | Mayor, Board of Aldermen |
| Partners | SEMA, FEMA, MRPC, DED, RD |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | Ongoing |
| Hazards Addressed | All Hazards |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |

In addition to the above mitigation actions for which the City of Vienna is the lead, Maries County will be the lead on the following actions which also serve as mitigation actions for the City of Vienna:

- 1.1.6 Implement an education program on personal emergency preparedness that teaches residents how to prepare emergency medical kits that include water, blankets, flashlights, etc. and how to shut off their home utilities in times of emergency.
- 1.1.7 Continue to educate residents about precautions that should be taken during threats of natural disasters such as severe weather and heat waves.
- 1.1.8 Provide to citizens through local media and make available at local government buildings, information on individual mitigation activities such as building personal shelters and assuring that propane tanks are appropriately tied down.
- 1.1.9 Promote the development of emergency plans by businesses, local governments and schools.
- 1.1.10 Continue to provide CERT training and encourage the development of CERTs throughout the county through training opportunities and public awareness.
- 1.2.1 Continue to encourage cities to obtain early warning systems and improved communications systems.
- 1.2.2 Continue to promote the use of weather radios by local residents to insure advanced warning about threatening weather.
- 1.2.3 Partner with local radio stations to assure that appropriate warning of impending disasters is provided to all residents in the countywide listening area.
- 1.2.4 Monitor developments in data availability concerning the impact of dam failure, tornados, sinkholes, land subsidence and wildfire upon Maries County and all jurisdictions through local, state and federal agencies for use in hazard mitigation planning. (Also 2.1.4)
- 1.3.1 Continue to encourage tree trimming and dead tree removal programs by utility companies and local governments.
- 1.3.2 Continue to review and consider road and bridge upgrades to improve drainage and reduce flooding and the risk to residents and property.
- 1.3.3 Continue to maintain a list of locations that can serve as shelters for storm, cooling/warming shelters and establish MOUs with the appropriate organizations responsible for those facilities.
- 1.3.4 Encourage the designation of storm shelters and the construction of tornado safe rooms in or near schools and large employment centers that currently do not have access to safe rooms. (Also 5.2.1)

- 2.1.1 Continue to encourage a self-inspection program at critical facilities to assure that building infrastructure is earthquake and tornado resistant.
- 2.1.2 Encourage the development and implementation of minimum building codes in all communities.
- 2.1.3 Encourage businesses, local governments and schools to develop emergency plans.
- 2.1.5 Continue to evaluate and update emergency operation plans.
- 2.2.1 Educate residents on the dangers of floodplain development and the benefits of the National Flood Insurance Program and enforce restrictions on development in the floodplain.
- 2.3.2 Encourage local governments to develop and implement regulations for the securing of hazardous materials tanks and mobile homes to reduce hazards during flooding and high winds.
- 2.3.3 Continue to enforce flood damage prevention/floodplain management ordinances in compliance with NFIP requirements.
- 2.3.4 Encourage the City of Belle to become a member of the NFIP.
- 3.1.1 Distribute SEMA brochures on natural hazards, preparedness and NFIP at public facilities and events.
- 3.1.2 Distribute regular press releases from county and city EMD offices concerning hazards, where they strike, frequency, preparation and how to mitigate.
- 3.2.1 Encourage residents to purchase weather radios through press releases and brochures.
- 3.2.2 Encourage meetings between EMD, city/county officials and SEMA to familiarize officials with mitigation planning, implementation and budgeting for mitigation projects. (Also 4.2.2, 6.1.1)
- 3.3.1 Re-evaluate the hazard mitigation plan, merge with other community planning and coordinate and integrate hazard mitigation activities, where appropriate, with emergency operations plans and procedures. (Also 4.2.1 and 5.1.3)
- 3.3.2 Distribute press release by cities/county regarding adopted mitigation measures to keep public abreast of changes and/or new regulations.
- 3.4.1 Encourage county health department to use publicity campaigns that make residents aware of proper measures to take during times of threatening conditions (e.g. drought or heat wave).

- 3.4.2 Publicize county or citywide drills.
- 3.4.3 Encourage the development of a county-wide CERT program and educate the public on how they can benefit from this type of program.
- 3.4.4 Raise awareness of the need to secure propane tanks to reduce the risk from dislodged tanks during flooding, tornados and high winds.
- 4.1.1 Continue to encourage joint meetings of different organizations/ agencies for mitigation related planning.
- 4.1.2 Continue to encourage training opportunities in all areas of preparedness and response to insure the capabilities and safety of citizens and responders and encourage joint training/drills between agencies, public and private entities (including schools and businesses.)
- 4.1.3 Pool different agency resources to achieve widespread mitigation planning results. (Also 6.1.5)
- 5.2.2 Encourage the assessment of public buildings as potential storm shelters; designate those that are suitable as safe shelters; and develop accessibility plans for the public during times of need.
- 5.3.1 Encourage local governments to purchase properties in the floodplain as funds become available and convert that land into public space/recreation area.
- 6.1.2 Structure grant proposals for road/bridge upgrades so that hazard mitigation concerns are also met.
- 6.1.3 Work with local/state/federal agencies to include mitigation in all economic and community development projects.
- 6.1.4 Encourage local jurisdictions to budget for mitigation projects.
- 6.2.1 Encourage cities and counties to consider implementing cost-share programs with private property owners for hazard mitigation projects that benefit the jurisdiction as a whole.
- 6.2.2 Implement public awareness program about the benefits of hazard mitigation projects, both public and private, through press releases and brochures
- 6.3.1 Prioritize mitigation projects, based on cost-effectiveness and starting with those sites facing the greatest threat to life, health and property.

Information on the implementation and administration of these actions is described under Maries County in this section.

Integration of Hazard Mitigation Actions into Current Planning Processes

The City of Vienna is a small community of approximately 610 people. The community has a minimal budget with which to work and little funding for planning activities. Planning is carried out by the Mayor and Board of Aldermen with recommendations from city employees/volunteers or as part of larger, county or regional planning activities. The hazard mitigation actions will be carried out on a volunteer basis by the Mayor and Board of Aldermen and where applicable, the city Public Works Superintendent.

Maries County R-I School District

Mitigation actions for the Maries County R-I School District are shown in Table 4.10 and following list. The action items in the table are those for which the school district itself will take the lead. Those listed at the end of the table are mitigation actions which the County will lead on behalf of numerous jurisdictions, including the Maries County R-I School District.

The benefits (losses avoided) key for the charts is as follows:

- I/C – Injuries or Casualties
- PD – Property Damages
- LF – Loss of function/displacement impacts
- EMCC – Emergency Management/Community Costs

Table 4.8 Action Items Assigned to Maries County R-I School District

| | |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.1.6 | Educate school staff on natural hazards and make sure all staff are familiar with school emergency plan including evacuation and safety procedures. |
| Priority | High |
| Plan for Implementation & Administration | School administration will provide training to all school staff on the school emergency plan either on an annual basis or as part of new employee orientation. |
| Lead | Superintendent, School Board |
| Partners | Local emergency response agencies, EMDs |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | 2014 and as needed after |
| Hazards Addressed | All hazards |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| 1.1.7 | Schools need to continue to conduct emergency preparedness exercises on a regular basis. |
| Priority | High |
| Plan for Implementation & Administration | School administration and school board will coordinate regular exercises and/or drills to exercise the school emergency plan in order to insure that all staff are familiar with their responsibilities during a disaster incident and that the plan meets school needs. |
| Lead | Superintendent, School Board |
| Partners | School staff, local emergency response agencies and EMDs, SEMA |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | 2014 and annually thereafter |

| | |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hazards Addressed | All hazards |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |
| 1.3.5 | Regularly review and update school emergency plan. |
| Priority | High |
| Plan for Implementation & Administration | The school superintendent, school board and other key school district personnel should annually review and update the school emergency plan as part of regular administrative activities. |
| Lead | School Superintendent, School Board |
| Partners | County EMD, SEMA |
| Projected Cost/Funding | Low/operating budget |
| Criterion for Completion | Annually |
| Hazards Addressed | All Hazards |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |

In addition to the above mitigation actions for which Maries R-I School District is the lead, Maries County will be the lead on the following actions which also serve as mitigation actions for the school district.

- 1.1.1 Implement an education program on personal emergency preparedness that teaches residents how to prepare emergency medical kits that include water, blankets, flashlights, etc. and how to shut off their home utilities in times of emergency.
- 1.1.2 Continue to educate residents about precautions that should be taken during threats of natural disasters such as severe weather and heat waves.
- 1.1.4 Promote the development of emergency plans by businesses/government/schools.
- 1.1.5 Continue to provide CERT training and encourage the development of CERTs throughout the county through training opportunities and public awareness.
- 1.2.1 Continue to encourage cities to obtain early warning systems and improved communications systems.
- 1.2.2 Continue to promote the use of weather radios by local residents to insure advanced warning about threatening weather. (also 3.2.1)
- 1.3.3 Continue to maintain a list of locations that can serve as shelters for storm, cooling/warming shelters and establish MOUs with the appropriate organizations responsible for those facilities.
- 1.3.4 Encourage the designation of storm shelters and the construction of tornado safe rooms in or near schools and large employment centers that currently do not have access to safe rooms. (also 5.2.1)

- 2.1.1 Continue to encourage a self-inspection program at critical facilities to assure that building infrastructure is earthquake and tornado resistant.
- 2.1.3 Continue to encourage businesses, governments and schools to develop and implement emergency plans.
- 2.1.5 Continue to evaluate and update emergency operation plans.
- 3.1.1 Distribute SEMA brochures on natural hazards, preparedness and NFIP at public facilities and events.
- 3.2.2 Encourage meetings between EMD, city/county officials and SEMA to familiarize officials with mitigation planning, implementation and budgeting for mitigation projects. (also 4.2.2, 6.1.1)
- 3.3.1 Re-evaluate the hazard mitigation plan, merge with other community planning and coordinate and integrate hazard mitigation activities, where appropriate, with emergency operations plans and procedures. (Also 4.2.1 and 5.1.3)
- 3.4.2 Publicize local, regional and/or statewide drills/exercises.
- 4.1.1 Continue to encourage joint meetings of different organizations/agencies for mitigation related planning.
- 4.1.2 Continue to encourage training opportunities in all areas of preparedness and response to insure the capabilities and safety of citizens and responders and encourage joint training/drills between agencies, public and private entities (including schools and businesses).
- 4.1.3 Pool different agency resources to achieve widespread mitigation planning results. (also 6.1.5)
- 6.1.3 Work with state/local/federal agencies to include mitigation in all economic and community development projects.
- 6.1.4 Encourage local jurisdictions to budget for mitigation projects.
- 6.2.2 Implement public awareness program about the benefits of hazard mitigation projects, both public and private
- 6.3.1 Prioritize mitigation projects, based on cost-effectiveness and starting with those sites facing the greatest threat to life, health and property.

Information on the implementation and administration of these actions is described under Maries County in this section.

Integration of Actions into Current Planning Processes

Current facility needs, staff training needs and emergency plans are reviewed and updated as needed on an annual basis.

The school district, both the school district superintendent and school board, will work together to insure that school district planning documents will be updated and revised to include the mitigation actions in the Maries County Natural Hazard Mitigation Plan. The school district will communicate with the County EMD, local elected officials and emergency response agencies to make sure that all organizations involved stay informed of school district activities in regard to hazard mitigation.

Maries County R-II School District

Mitigation actions for the Maries County R-II School District are shown in Table 4.9 and following list. The action items in the table are those for which the school district itself will take the lead. Those listed at the end of the table are mitigation actions which the County will lead on behalf of numerous jurisdictions, including the Maries County R-II School District.

The benefits (losses avoided) key for the charts is as follows:

- I/C – Injuries or Casualties
- PD – Property Damages
- LF – Loss of function/displacement impacts
- EMCC – Emergency Management/Community Costs

Table 4.9 Action Items Assigned to Maries County R-II School District

| | |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.1.6 | Educate school staff on natural hazards and make sure all staff are familiar with school emergency plan including evacuation and safety procedures. |
| Priority | High |
| Plan for Implementation & Administration | School administration will provide training to all school staff on the school emergency plan either on an annual basis or as part of new employee orientation. |
| Lead | Superintendent, School Board |
| Partners | Local emergency response agencies, EMDs |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | 2014 and as needed after |
| Hazards Addressed | All hazards |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| 1.1.7 | Schools need to continue to conduct emergency preparedness exercises on a regular basis. |
| Priority | High |
| Plan for Implementation & Administration | School administration and school board will coordinate regular exercises and/or drills to exercise the school emergency plan in order to insure that all staff are familiar with their responsibilities during a disaster incident and that the plan meets school needs. |
| Lead | Superintendent, School Board |

| | |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Partners | School staff, local emergency response agencies and EMDs, SEMA |
| Projected Cost/Funding | Minimal/operating budget |
| Criterion for Completion | 2014 and annually thereafter |
| Hazards Addressed | All hazards |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |
| 1.3.5 | Regularly review and update school emergency plan. |
| Priority | High |
| Plan for Implementation & Administration | The school superintendent, school board and other key school district personnel should annually review and update the school emergency plan as part of regular administrative activities. |
| Lead | School Superintendent, School Board |
| Partners | County EMD, SEMA |
| Projected Cost/Funding | Low/operating budget |
| Criterion for Completion | Annually |
| Hazards Addressed | All Hazards |
| Benefits (Losses Avoided) | IC, PD, LF, EMCC |
| | |

In addition to the above mitigation actions for which Maries R-II School District is the lead, Maries County will be the lead on the following actions which also serve as mitigation actions for the school district.

- 1.1.3 Implement an education program on personal emergency preparedness that teaches residents how to prepare emergency medical kits that include water, blankets, flashlights, etc. and how to shut off their home utilities in times of emergency.
- 1.1.4 Continue to educate residents about precautions that should be taken during threats of natural disasters such as severe weather and heat waves.
- 1.1.4 Promote the development of emergency plans by businesses/government/schools.
- 1.1.5 Continue to provide CERT training and encourage the development of CERTs throughout the county through training opportunities and public awareness.
- 1.2.1 Continue to encourage cities to obtain early warning systems and improved communications systems.
- 1.2.2 Continue to promote the use of weather radios by local residents to insure advanced warning about threatening weather. (also 3.2.1)
- 1.3.3 Continue to maintain a list of locations that can serve as shelters for storm, cooling/warming shelters and establish MOUs with the appropriate organizations responsible for those facilities.

- 1.3.4 Encourage the designation of storm shelters and the construction of tornado safe rooms in or near schools and large employment centers that currently do not have access to safe rooms. (also 5.2.1)
- 2.1.1 Continue to encourage a self-inspection program at critical facilities to assure that building infrastructure is earthquake and tornado resistant.
- 2.1.3 Continue to encourage businesses, governments and schools to develop and implement emergency plans.
- 2.1.5 Continue to evaluate and update emergency operation plans.
- 3.1.1 Distribute SEMA brochures on natural hazards, preparedness and NFIP at public facilities and events.
- 3.2.2 Encourage meetings between EMD, city/county officials and SEMA to familiarize officials with mitigation planning, implementation and budgeting for mitigation projects. (also 4.2.2, 6.1.1)
- 3.3.1 Re-evaluate the hazard mitigation plan, merge with other community planning and coordinate and integrate hazard mitigation activities, where appropriate, with emergency operations plans and procedures. (Also 4.2.1 and 5.1.3)
- 3.4.2 Publicize local, regional and/or statewide drills/exercises.
- 4.1.1 Continue to encourage joint meetings of different organizations/agencies for mitigation related planning.
- 4.1.2 Continue to encourage training opportunities in all areas of preparedness and response to insure the capabilities and safety of citizens and responders and encourage joint training/drills between agencies, public and private entities (including schools and businesses).
- 4.1.3 Pool different agency resources to achieve widespread mitigation planning results. (also 6.1.5)
- 6.1.3 Work with state/local/federal agencies to include mitigation in all economic and community development projects.
- 6.1.4 Encourage local jurisdictions to budget for mitigation projects.
- 6.2.2 Implement public awareness program about the benefits of hazard mitigation projects, both public and private
- 6.3.1 Prioritize mitigation projects, based on cost-effectiveness and starting with those sites facing the greatest threat to life, health and property.

Information on the implementation and administration of these actions is described under Maries County in this section.

Integration of Actions into Current Planning Processes

Current facility needs, staff training needs and emergency plans are reviewed and updated as needed on an annual basis.

The school district, both the school district superintendent and school board, will work together to insure that school district planning documents will be updated and revised to include the mitigation actions in the Maries County Natural Hazard Mitigation Plan. The school district will communicate with the County EMD, local elected officials and emergency response agencies to make sure that all organizations involved stay informed of school district activities in regard to hazard mitigation.

4.5 Funding Sources

There are a number of ways in which local hazard mitigation projects can be funded. A list and description of funding sources follows.

4.5.1 Local Funds

Local funding sources are primarily generated from property and sales tax revenues. These funds are generally allocated directly to schools, public works and other essential government functions. In rural areas and small communities there is likely little room in local government budgets for mitigation related activities. However, in those situations where mitigation is part of essential government functions, it may be possible to incorporate a mitigation project and use local funds. For example, if a bridge is scheduled for repair or replacement, the project could be engineered to make the bridge safer and less vulnerable to overtopping. It may also be possible to use local funds to leverage additional funds from other sources. For instance using local general revenue funds to match a hazard mitigation grant from state or federal sources to build a tornado safe room at a local school.

4.5.2 Non-Governmental Funds

Other sources of local funds could include private donations of funds or of goods and services. These could come from local charities, churches, Red Cross chapters, hospitals, businesses or other local not-for-profit groups. Local grant funds from sources such as community foundations are another potential source of funding for mitigation projects.

4.5.3 Federal Funds

The majority of federal dollars available for hazard mitigation projects is funneled through the FEMA Mitigation Grant program. Another possible source would be Community Development Block Grants (CDBG) after a Presidential Disaster Declaration.

FEMA Mitigation Grant Program – Jurisdictions which have adopted an up-to-date FEMA approved hazard mitigation plan are eligible for hazard mitigation funding through FEMA grant programs. These programs include the following:

- Hazard Mitigation Grant Program (HMGP)
- Pre-Disaster Mitigation (PDM) -
- Flood Mitigation Assistance (FMA)
- Repetitive Flood Claims (RFC)
- Severe Repetitive Loss (SRL)

HMGP is funding provided following a Presidential Disaster Declaration. PDM, FMA, RFC and SRL are grant programs funded through a yearly appropriation from Congress. The funding cycles vary, but the following are approximate times for when grant rounds are open:

- June/July – FEMA publishes the “Unified Guidance” for these grant programs.
- Notices of Interest (NOI) for possible mitigation projects are due to SEMA as soon as possible following the publication of “Unified Guidance”.
- Mid-October – Grant applications are due to SEMA.
- December – SEMA forwards applications to FEMA

Eligibility of mitigation activities vary between grant programs. The type of project and eligible grant programs is illustrated in Table 4.10. Any projects submitted for funding must match the goals and objectives of the Maries County Hazard Mitigation Plan in order to be eligible for funding.

Table 4.10 Eligible Activities for FEMA Mitigation Grant Programs

| Activity | HMGP | PDM | FMA | RFC | SRL |
|------------------------------------------------------------------|------|-----|-----|-----|-----|
| 1. Mitigation Projects | X | X | X | X | X |
| Property Acquisition and Structure Demolition or Relocation | X | X | X | X | X |
| Structure Elevation | X | X | X | X | X |
| Mitigation Reconstruction | | | | | X |
| Dry Flood-proofing of Historic Residential Structures | X | X | X | X | X |
| Dry Flood-proofing of non-residential Structures | X | X | X | X | X |
| Minor Localized Flood Reduction Projects | X | X | X | X | |
| Structural Retrofitting of Existing Buildings | X | X | | | |
| Non-Structural Retrofitting of Existing Buildings and Facilities | X | X | | | |
| Safe Room Construction | X | X | | | |
| Infrastructure Retrofit | X | X | | | |
| Soil Stabilization | X | X | | | |
| Wildfire Mitigation | X | X | | | |

| Activity | HMGP | PDM | FMA | RFC | SRL |
|--------------------------------|------|-----|-----|-----|-----|
| Post-Disaster Code Enforcement | X | | | | |
| 5% Initiative Projects | X | | | | |
| 2. Hazard Mitigation Planning | X | X | X | | |
| 3. Management Costs | X | X | X | X | X |

Source: www.fema.gov/library/viewRecord.do?id=3648

Application and Cost Share Requirements

The application process for the FEMA Mitigation Grant programs includes a Benefit Cost Analysis (BCA). A potential project must have a Benefit Cost Ratio (BCR) of at least 1.0 to be considered for funding; a ratio of 1.0 indicates at least \$1 benefit for each \$1 spent on the project. A BCA is the first step in determining if a project can potentially be funded.

Cost share requirements and the application format for these five programs are illustrated in Figure 4.11. Contributions of cash, in-kind services or materials, or any combination thereof may be accepted as part of the non-federal cost share. For FMA, not more than one half of the non-federal match may be provided from in-kind contributions.

Figure 4.11 FEMA Mitigation Grant Programs Match Requirements & Application Format

| Grant Program | Federal/Local Match | Notes | Application Type |
|---------------------------------------|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| HMGP | 75/25 | | Paper |
| PDM | 75/25 | | e-grants |
| PDM (Small, impoverished community) | 90/10 | Qualification requirements for "small impoverished": <ul style="list-style-type: none"> Community of 3,000 or less identified by the State as rural that is not a remote area within the corporate boundary of a larger city Average per capita annual income not exceeding 80% of the national per capita income, based on best available data (http://www.bea.gov) Local unemployment rate exceeding by 1% or more the most recently reported, average yearly national unemployment rate (http://www.bls.gov/eag/eag.us.htm) Meets other criteria required by the State/Tribe/Territory in which the community is located. | e-grants |
| FMA | 75/25 | | e-grants |
| FMA (Severe repetitive loss property) | 90/10 | In Missouri, this cost share is less than the usual 75/25 because the State has an approved "enhanced" state mitigation plan. | e-grants |
| RFC | 100/0 | RFC is only available to applicants who cannot meet the cost share requirement of FMA. | e-grants |
| SRL | 90/10 | In Missouri, this cost share is less than the usual 75/25 because the State has an approved "enhanced" state mitigation plan. | e-grants |

Hazard Mitigation Grant Program (HMGP)

The Hazard Mitigation Grant Program (HMGP) was created in November 1988 through Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act. The HMGP assists states and local communities in implementing long-term mitigation measure following a Presidential Disaster Declaration. After a major disaster, communities may be able to identify additional areas where mitigation can help prevent losses in the future.

HMGP funding is allocated using a sliding scale formula based on the percentage of funds spent on Public and Individual Assistance programs for each Presidential Disaster Declaration. Due to the Enhanced Missouri State Hazard Mitigation Plan, the State of Missouri receives 20percent of the federal total of a disaster declaration as additional mitigation funds through the HMGP.

In Missouri, the mitigation funds are initially awarded to projects in the counties included in the disaster declaration. If funds remain, applications are opened up to any county state-wide. The HMGP can be used to fund projects to protect either public or private property. The proposed projects must fit within the state and local government's overall mitigation strategy for the disaster area and comply with program guidelines.

Eligibility for funding under the HMGP is limited to state and local government, certain private not-for-profit organizations or institutions that serve a public function, Indian tribes and authorized tribal organizations. Applicants work through their state which is responsible for setting priorities for funding and administering the program. In Missouri the state agency responsible is SEMA. More information on the HMGP can be found at FEMA's website – [fema.gov/government/grant/hmgp/](https://www.fema.gov/government/grant/hmgp/).

Flood Mitigation Assistance Program (FMA)

FMA was created as part of the National Flood Insurance Reform Act of 1994 (42 U.S.C. 4101) with the goal of reducing or eliminating claims under the NFIP. Applicants must be participants in good standing with the NFIP and properties to be mitigated must have flood insurance.

States administer the FMA program and are responsible for selecting projects for funding from the applicants submitted by all communities within the state. The state forwards selected applications to FEMA for eligibility determination. Although individuals cannot apply directly for FMA funds, their local government may submit an application on their behalf.

FMA funding for the state depends upon the number of repetitive losses in the state. The frequency of flooding in Missouri, coupled with the losses incurred in recent years, has caused Missouri's funding to rise. This is a good program for smaller projects such as mitigating low water crossings. For FMA, not more than one half of the non-Federal match funds may be provided from in-kind contributions. More information on the FMA program is available at [fema.gov/government/grant/fma/](https://www.fema.gov/government/grant/fma/).

Repetitive Flood Claims Grant Program (RFC)

The Repetitive Flood Claims (RFC) grant program was authorized in 1968 to assist states and communities in reducing flood damages to NFIP insurance properties that have had one or more claims to the NFIP. In order to apply for funding through this 100% federal share program, a community must show that it can't meet FMA requirements due to lack of cost share match funding or due to a lack of administrative capacity to manage the activities. This does not mean that it must be a low-income community. More information on the RFC grant program is available at [fema.gov/government/grant/rfc/](https://www.fema.gov/government/grant/rfc/).

Severe Repetitive Loss Grant Program (SRL)

The Severe Repetitive Loss (SRL) grant program was authorized in 2004 to provide funding to reduce or eliminate the long-term risk of flood damage to severe repetitive loss (SRL) properties insured under the NFIP. A SRL property is defined as a property that is covered under an NFIP policy and:

- (a) Has at least four NFIP claim payments (including building and contents) over \$5,000 each, and the cumulative amount of such claims payments exceeds \$20,000; OR
- (b) For which at least two separate claims payments (building payments only) have been made with the cumulative amount of the building portion of such claims exceeding the market value of the building.

For both (a) and (b), at least two of the referenced claims must have occurred within any ten-year period and must be greater than 10 days apart. There are very specific requirements for this grant program and they should be reviewed thoroughly before applying. More information on this program is available at [fema.gov/government/grant/srl/](https://www.fema.gov/government/grant/srl/).

Community Development Block Grant (CDBG) Program

The objective of the CDBG program is to assist communities in rehabilitating substandard dwelling structures and to expand economic opportunities – primarily for low-to-moderate-income families. After a Presidential Disaster Declaration, CDBG funds may be used for long-term needs such as acquisition, reconstruction and redevelopment of disaster affected areas.

| There is no low-to-moderate income requirement following a Presidential Disaster Declaration.

