

LAWRENCE COUNTY

MISSOURI

2017 Multi-Jurisdictional

Natural Hazard Mitigation Plan

Approved MONTH DAY, YEAR



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(FEMA APPROVAL LETTER)

CONTRIBUTORS

Lawrence County Hazard Mitigation Planning Committee

Jurisdictional Representatives

Name	Title	Department	Jurisdiction/Agency/Organization
Karen Brown	County Emergency Manager	Emergency Management	Lawrence County
Bonnie Witt-Schulte	911 + EMA Director	Emergency Management	Lawrence County
Janella Spencer	RN Administrator		Lawrence County
Brad Delay	Lawrence County Sheriff	Lawrence County Police	Lawrence County
David Botts	Lawrence Co. Commissioner		Lawrence County
Tim Selvey	Lawrence Co. Commissioner		Lawrence County
Tana Bradshaw	Lawrence Co. Health Department		Lawrence County
Sam Goodman	Lawrence Co. Commissioner		Lawrence County
Steve Woods	Public Works Superintendent		City of Aurora
Mike Randall	City Manager	City of Aurora	City of Aurora
Richard Witthuhn	Chief of Police	Aurora Police Depart.	City of Aurora
Trent White	Building Inspector	City of Aurora	City of Aurora
Curt Mooneyham	Fire Captain	Aurora Fire Department	City of Aurora
Kathie Needham	City Clerk/Human Resources		City of Aurora
Robert Ward	Fire Chief	City of Aurora Fire	City of Aurora
Deborah Schoen	City Clerk	Village of Freistatt	Village of Freistatt
Stacie Young	Emergency Management Director		City of Marionville
Debbie Bateman	City Clerk	City of Marionville	City of Marionville
Donna Beck	City Clerk	City of Miller	City of Miller
Lori Peck	Officer	City of Miller	City of Miller
James Smith	Fire Chief	Miller Fire Department	City of Miller
			City of Monett
Max Springer	City Administrator	Administration	City of Mount Vernon
David Hubert	Chief of Police	Mt. Vernon Police Depart.	City of Mount Vernon
Bruce Conway	Building Officer/Zoning Administrator	Administration	City of Mount Vernon
Julie Johnson	City Clerk		City of Pierce City
Tim Jones	Chief of Police	Verona Police	City of Verona
Dede Hutson	Aldermen Board	Verona Board of	City of Verona
Linda Gates	Aldermen Board	Verona Board of	City of Verona
Mike Gates		Verona Citizen	City of Verona
Greg Hopkins	Elementary Principal	School District	Marionville R-IX
Larry Brown	Superintendent	School District	Marionville R-IX
Dustin Storm	Superintendent	School District	Miller R-II
Michael Calhoun	Superintendent	School District	Monett R-I
Scott Cook	Superintendent	School District	Mt. Vernon R-V
Russ Moreland	Superintendent	School District	Pierce City R-VI
Terry Winton	Principal / Safety Director	Verona High School	Verona R-VII
Gary Adams	Road Supervisor		Miller Benefit Special Road District
Tammy Adams	Natural Disaster Secretary		Miller Benefit Special Road District
David Faucett	Forman		Green Benefit Special Road District
Darrell Vandergrift	Commissioner		Green Benefit Special Road District
Justin Holder	Commissioner		Green Benefit Special Road District
Walden Vandergrift			Green Benefit Special Road District
Billie Siuils			Buck Prairie Special Road District
Thom Watson	Commissioner		Buck Prairie Special Road District
Robert Schnake	Road Supervisor		Mt. Vernon Benefit Special Rd. District
Wayne Echols	Commissioner		Verona Benefit Special Rd District
Les Erwin			Verona Benefit Special Rd District

Stakeholder Representatives

Name	Title	Department	Agency/Organization
Shannon Scott	Family Resource Specialist		OACAC
Cindy Rinker			Barry/Lawrence Regional Library
Eldon Cole			University of Missouri Extension
Greg Hickman	Newton County EM		

Stakeholders are individuals or groups that are affected by a mitigation action or policy and include businesses, private organizations, and citizens. Unlike planning team members, stakeholders may not be involved in all stages of the planning process, but they inform the planning team on a specific topic or provide input from different points of view in the community. See page 2-1 of the *Handbook*.

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EXECUTIVE SUMMARY

The purpose of hazard mitigation is to reduce or eliminate long-term risk to people and property from hazards. Lawrence County and participating jurisdictions and school/special districts developed this multi-jurisdictional local hazard mitigation plan update to reduce future losses from hazard events to the County and its communities and school/special districts. The plan is an update of a plan that was approved on March 27th, 2013. The plan and the update were prepared pursuant to the requirements of the Disaster Mitigation Act of 2000 to result in eligibility for the Federal Emergency Management Agency (FEMA) Hazard Mitigation Assistance Grant Programs.

The Lawrence County Multi-Hazard Mitigation Plan is a multi-jurisdictional plan that covers the following 20 jurisdictions that participated in the planning process:

- City of Aurora
- Village of Freistatt
- City of Marionville
- City of Miller
- City of Monett
- City of Mount Vernon
- City of Pierce City
- City of Verona
- Marionville R-IX
- Miller R-II
- Monett R-I
- Mt. Vernon R-V
- Pierce City R-VI
- Verona R-VII
- Buck Prairie Special Road District
- Green Benefit Special Road District
- Miller Benefit Special Road District
- Mt. Vernon Benefit Special Road District
- Verona Benefit Special Road District

Local jurisdictions that were invited but did not participate in the Plan include:

- Village of Halltown
- Village of Hoberg
- City of Stotts City
- Aurora R-VIII Schools

When the future five-year update is developed for this plan, these jurisdictions will again be invited to participate.

Lawrence County and the entities listed above developed a Multi-Jurisdictional Hazard Mitigation Plan that was approved by FEMA on [date] (hereafter referred to as the *2017 Hazard Mitigation Plan*). This current planning effort serves to update that previously approved plan.

The plan update process followed a methodology prescribed by FEMA, which began with the formation of a Mitigation Planning Committee (MPC) comprised of representatives from Lawrence County participating jurisdictions. The MPC updated the risk assessment that identified and profiled hazards that pose a risk to Lawrence County and analyzed jurisdictional vulnerability to these hazards. The MPC also examined the capabilities in place to mitigate the hazard damages, with emphasis on changes that have occurred since the previously approved plan was adopted. The MPC determined that the planning area is vulnerable to several hazards that are identified, profiled, and analyzed in this plan. Riverine and flash flooding, winter storms, severe thunderstorms/hail/lightning/high winds, and tornadoes are among the hazards that historically have had a significant impact.

Based upon the risk assessment, the MPC updated goals for reducing risk from hazards. The goals are listed below:

1. Promote public awareness of natural hazards and safety measures.
2. Ensure the continued operation of government and emergency services.
3. Ensure the functional operation of critical infrastructures serving the public and the local economy.

To advance the identified goals, the MPC developed recommended mitigation actions, which are detailed in Chapter 4 of this plan. The MPC developed an implementation plan for each action, which identifies priority level, background information, ideas for implementation, responsible agency, timeline, cost estimate, potential funding sources, and more.

PREREQUISITES

44 CFR requirement 201.6(c)(5): The local hazard mitigation plan shall include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval of the plan. For multi-jurisdictional plans, each jurisdiction requesting approval of the plan must document that it has been formally adopted.

This plan has been reviewed by and adopted with resolutions or other documentation of adoption by all participating jurisdictions and schools/special districts. The documentation of each adoption is included in Appendix D, and a model resolution is included on the following page.

The following jurisdictions participated in the development of this plan and have adopted the multi-jurisdictional plan.

- Lawrence County
- City of Aurora
- Village of Freistatt
- City of Marionville
- City of Miller
- City of Monett
- City of Mount Vernon
- City of Pierce City
- City of Verona
- Marionville R-IX
- Miller R-II
- Monett R-I
- Mt. Vernon R-V
- Pierce City R-VI
- Verona R-VII
- Buck Prairie Special Road District
- Green Benefit Special Road District
- Mt. Vernon Benefit Special Road District
- Miller Benefit Special Road District
- Verona Benefit Special Road District

Model Resolution

(LOCAL GOVERNING BODY/SCHOOL DISTRICT), Missouri
RESOLUTION NO.

A RESOLUTION OF THE (LOCAL GOVERNING BODY /SCHOOL DISTRICT) ADOPTING THE LAWRENCE COUNTY
MULTI-JURISDICTIONAL NATURAL HAZARD MITIGATION PLAN

WHEREAS the (*local governing body/school district*) recognizes the threat that natural hazards pose to people and property within the (*local governing body/school district*); and

WHEREAS the (*local governing body/school district*) has participated in the preparation of a multi-jurisdictional local hazard mitigation plan, hereby known as the (*plan name*), hereafter referred to as the *Plan*, in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS the *Plan* identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the (*local governing body/school district*) from the impacts of future hazards and disasters; and

WHEREAS the (*local governing body*) recognizes that land use policies have a major impact on whether people and property are exposed to natural hazards, the (*local governing body/school district*) will endeavor to integrate the *Plan* into the comprehensive planning process; and

WHEREAS adoption by the (*local governing body/school district*) demonstrates their commitment to hazard mitigation and achieving the goals outlined in the *Plan*.

NOW THEREFORE, BE IT RESOLVED BY THE (LOCAL GOVERNMENT/SCHOOL DISTRICT), in the State of Missouri, THAT:

In accordance with (*local rule for adopting resolutions*), the (*local governing body/school district*) adopts the final *FEMA-approved Plan*.

ADOPTED by a vote of __ in favor and __ against, and __ abstaining, this day of _____, _____.

By (Sig): _____
Print name: _____

ATTEST:
By (Sig.): _____
Print name: _____

APPROVED AS TO FORM:
By (Sig.): _____
Print name: _____

1 INTRODUCTION AND PLANNING PROCESS

1	INTRODUCTION AND PLANNING PROCESS	1.1
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1.1 PURPOSE

Hazard Mitigation is the process of preparing for and taking action in order to reduce the long-term risk of natural disasters to financial and human consequences. Mitigation actions may be implemented prior to, during, or after a hazard event; however, it has been demonstrated that hazard mitigation is most effective when based on a long-term inclusive, comprehensive plan that is developed before a disaster has occurred (<http://www.fema.gov/what-mitigation>).

By participating in the planning process and meeting the necessary requirements to do so, communities, school districts, and other special districts become eligible to apply for mitigation grant funding. FEMA has implemented the various hazard mitigation provisions through the Code of Federal Regulations (CFR) at 44 CFR Part 201. The CFR provisions set forth the mitigation plan requirements for local and tribal governments as a condition of receiving FEMA hazard mitigation assistance. Local governments, schools, or other publicly funded districts that do not participate or adopt a hazard mitigation plan will not be eligible to apply for grants as stated under 44 CFR §201.6. Section 322 of the Robert T. Stafford Relief and Emergency Assistance Act (P.L. 93-288), as amended by the Disaster Mitigation Act of 2000 (DMA) (P.L. 106-390), provides for States, Tribes and local governments to undertake a risk-based approach to reducing risks to natural hazards through mitigation planning.

1.2 BACKGROUND AND SCOPE

As required by 44 CFR §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, and resubmit for approval every five (5) years in order to continue to be eligible for mitigation project grant funding. The 2018 Lawrence County Multi-Jurisdictional Natural Hazard Mitigation Plan, from here on referred to as the Plan, is a revision of the previous five-year update adopted on March 3, 2013, which was the first five year update of the original plan completed in 2005.

The Plan is a major reflects significant changes in priorities and development since 2013, and the continued commitment of local governments to mitigate the impact of natural hazards in Lawrence County. Local jurisdictions that participated in the 2013 Plan and are continuing participation in the 2018 include:

-
- Lawrence County
 - City of Aurora
 - City of Marionville
 - City of Mt. Vernon
 - *City of Pierce City*
 - *City of Vernona*
 - *Village of Freistatt*
 - Miller R-II Schools
 - Mt. Vernon R-V Schools
 - Verona R-VII Schools

Local jurisdictions that did not participate in the 2013 plan, but did participate in the 2017 update process are:

- City of Miller
- *City of Monett*
- Monett R-I Schools
- Green Benefit Special Road District
- Mt. Vernon Benefit Special Road District

Local jurisdictions that were invited but did not participate in the Plan include:

- Village of Halltown
- Village of Hoberg
- City of Stotts City
- Aurora R-VIII Schools
- *Marionville R-IX Schools*
- *Pierce City R-VI Schools*

The City of Monett and Monett R-II Schools jurisdictional boundaries cover both Lawrence and Barry Counties. Both jurisdictions participated in the 2016 Barry County Hazard Mitigation Plan, but chose to also participate in the Lawrence County process.

The local mitigation plan is the representation of the jurisdictions' commitment to reduce risks from natural hazards, serving as a guide for decision makers as they commit resources to reducing the effects of natural hazards. Information in the plan will be used to help guide and coordinate mitigation activities and decisions for local land use policy in the future.

1.3 PLAN ORGANIZATION

The Plan is organized into five chapters. The 2013 Plan included a chapter dedicated to local jurisdiction capabilities. This information has been incorporated into the Planning Area Profile and Capabilities Chapter. The format of the Plan was changed to conform to the local hazard mitigation plan outline template released by the Missouri State Emergency Management Agency (SEMA) in September, 2016. The Plan chapter include:

- Chapter 1: Introduction and Planning Process

- Chapter 2: Planning Area Profile and Capabilities
- Chapter 3: Risk Assessment
- Chapter 4: Mitigation Strategy
- Chapter 5: Plan Implementation and Maintenance
- Appendices

Table 1.1 summarizes the changes made in The Plan by chapter.

Table 1.1. Changes Made in Plan Update

Plan Chapter	Summary of Changes Made
Introduction	<ul style="list-style-type: none"> • General Format Changes • Added table identifying jurisdictional representatives that participated in the plan update. • Added step by step process on how the plan was updated
Profile & Capabilities	<ul style="list-style-type: none"> • Added Geological and Karst features map • Critical features moved to Ch. 3 • Added table showing Unemployment, Poverty, education, and language percentages • Historic Sites and endangered species list moved to Ch. 3. • Added table showing FEMA HMA grants approved and still pending in the county. • Expanded jurisdictional Profiles and Mitigation Capabilities section.
Risk Assessment	<ul style="list-style-type: none"> • General format updates • Expanded introduction section • Added Assets at Risk of exposure to current population and structures • Added Critical Facilities inventory of all included jurisdictions • Added inventory of parks, historical sites, and endangered species. • Added table for agricultural-related jobs and information and Major employers • Added Land Use Development section for development since previous plan and future land use expected. • Expanded Community profiles for each jurisdiction.
Mitigation Strategy	<ul style="list-style-type: none"> • Updated mitigation actions development process • Included actions eliminated and reason for removal • Updated progress made towards mitigation goals from earlier plan • Updated cost benefit review method using STAPLEE and simple scores • Discussed funding sources, lead agencies and status of continuing, revised and new actions
Plan Maintenance	<ul style="list-style-type: none"> • Updated the LEPC responsibilities for plan monitoring, evaluation, and implementation.

1.4 PLANNING PROCESS

44 CFR Requirement 201.6(c)(1): [The plan shall document] the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.

The Southwest Missouri Council of Governments (SMCOG) was contracted to facilitate the plan development process. SMCOG staff met with the Lawrence County EMD during an initial scoping meeting to develop contact information for area stakeholders and local jurisdiction representatives in order to establish the Mitigation Planning Committee (MPC). Meeting locations and schedules were discussed, as well as determining the most effective way in

informing and including the public. The planning process included the kick-off meeting and four subsequent MPC meetings. SMCOG staff were also responsible for producing the draft and the final plan update in a FEMA-approvable document, and coordinating with the SEMA and FEMA plan reviews.

Specific information about agenda items for the MPC meetings are presented in Section 1.4.2. SMCOG was also responsible for soliciting public involvement in the planning process. The MPC meetings on April 19th, 2017, May 31st, 2017, June 21st, 2017, and TBA were sent via press release to the Monett Times, Lawrence County Record, and Aurora Advertiser, the newspapers of widest distribution in the County. Meeting dates for and items to be discussed for all meetings, including the kick-off meeting on April 19th, 2017, were posted on the SMCOG website in advance. Drafts of the Plan were also posted on the website for public comment during the drafting of the Plan and prior to the Plan being submitted for approval. Appendix B provides documentation of the planning process including public involvement solicitations and meeting notices.

The preliminary draft of the plan was posted on the SMCOG website for public review and comment on August 12, 2016. A final draft of the Plan was posted on the SMCOG website on October 18, 2016 before the Plan was submitted for SEMA/FEMA approval. On both occasions a press release was sent to the Monett Times, Lawrence County Record, and Aurora Advertiser notifying news outlets that the Plan was available for public comment. Input from city and county officials was solicited through distribution of drafts of plan elements for discussion and review at scheduled meetings and other communications with individual community representatives and elected officials.

Neighboring jurisdictions were notified via email and letters, a notification was sent to adjacent county Emergency Management Directors, Chambers of Commerce, local and regional agencies, such as; OACAC, Health Departments, American Red Cross, Ambulance Districts, and the University of Missouri Extension office. A complete listing of neighboring agencies invited to participate in the planning process and what meetings they were invited to attend is included in Appendix D.

Table 1.2 shows the MPC members and the entities they represent, along with their titles. This includes representatives from local jurisdictions, stakeholders, and school districts.

Table 1.2. Jurisdictional Representatives Lawrence County Mitigation Planning Committee

Name	Title	Department	Jurisdiction/Agency /Organization
Bonnie Witt-Schulte	Emergency Manager		Lawrence County
Karen Brown	Assistant EMA Director		Lawrence County
Sam Goodman	County Commissioner		Lawrence County
David A. Botts	County Commissioner		Lawrence County
Tim R. Selvey	County Commissioner		Lawrence County
Brad A. Delay	Sheriff/Fire Chief		Lawrence County/Mt. Vernon
Janelle Spencer	Administrator		Lawrence County Health Department
Cindy Rinker			Barry/Lawrence Regional Library
Mike Randall	City Manager		City of Aurora
Steve Woods	Public Works Superintendent		City of Aurora

Trent White	P & Z Director/Building Inspector		City of Aurora
Richard Witthuhn	Chief of Police		City of Aurora
Robert R. Ward	Fire Chief		City of Aurora
Bryant Heins	Fire Chief		City of Halltown
Donna Beck	City Clerk/Treasurer		City of Miller/Miller Benefit Special Road District
Lori Peck	Police Officer		City of Miller
Max Springer	City Administrator		City of Mt. Vernon
Bruce P. Conway	Floodplain Administrator		City of Mt. Vernon
David Hubert	Police Officer		City of Mt. Vernon
Dustin Storm	Superintendent		Miller R-2 School District
Michael Calhoun	Teacher/Coach		Monett R-1 School District
David L. Faucett			Green Benefit Special Road District
Wayne Vandergriff II	Commissioner		Green Benefit Special Road District
Robert Schnake			Mt. Vernon Benefit Special Road District
Wayne Echols			Verona Special Road District
Eldon Cole	Program Director		University of Missouri Extension
Shannon Scott			OACAC Lawrence County
Tammy Addams			Miller Benefit Road District
Gary Adams			Miller Benefit Road District
Stacy Young	Emergency Management Director	EMD	City of Marionville
Grey Hopkins			Marionville R-IX
Justin Holder			Green Benefit Special Road District
Tana Bradshaw			Law. Co. Health Department
Donna Beck			City of Miller
Terry Winton			Verona R-VII
Scott Cook			Mt. Vernon R-V School
Les Erwin			Verona Road District
Billie Sivils			Buck Prairie Special Road District
Than Watson			Buck Prairie Special Road District

1.4.1 Multi-Jurisdictional Participation

44 CFR Requirement §201.6(a)(3): Multi-jurisdictional plans may be accepted, as appropriate, as long as each jurisdiction has participated in the process and has officially adopted the plan.

The Plan serves as a written document of the planning process. Active participation of local jurisdiction representatives and stakeholders in the hazard mitigation planning process is essential if the Plan is to have value. To be eligible for mitigation funding, local governments must adopt the FEMA-approved update of the Plan. The participation of the local government stakeholders in the planning process is considered critical to successful implementation of this plan. Each jurisdiction that is seeking approval for the Plan must have its governing body adopt the updated plan, regardless the degree of modifications. SMCOG collaborated with the local governments in Lawrence County to assure participation in the planning process and the development of a plan that represents the needs and interests of Barry County and its local

jurisdictions. Appendix C contains resolutions for jurisdictions adopting the Plan.

County Commissioners, incorporated communities, public school and special districts, and various other stakeholders in mitigation planning were invited to a kick-off meeting for the Plan update on April 19th, 2017. At this meeting it was explained that the Disaster Mitigation Act (DMA) requires each jurisdiction participating in the planning process officially adopt the plan. The criteria for participation that each jurisdiction must meet in order to be considered a “participant” in the Plan was established at this meeting and include the following:

- Participation in at least two (2) MPC meetings, by either direct participation or authorized representation;
- Each participating jurisdiction must provide to the MPC sufficient information to support plan development by completion and return of Data Collection Questionnaires and validating/correcting critical facility inventories;
- Provide documentation to show time donated to the planning effort
- All participants should formally adopt the mitigation plan prior to submittal to SEMA and FEMA for final approval. Note that an “approvable pending adoption” designation can be given without submittal of adoption documents. However, submittal of all adoption documentation with the final plan is the preferred methodology.

In order to be included in the plan as a participating jurisdiction, each jurisdiction was required to send a representative to two (2) meetings and completion of data collection questionnaire, complete in-kind time documentation, and formally adopt the plan as minimum requirements. Although not required, a set of standards for participation were developed in order for each jurisdiction to participate in the planning process and account for the variability of resources within each jurisdiction. This set of standards included identifying and cost/benefit review of mitigation actions and reviewing and commenting on plan draft materials. Jurisdictions that met the minimum requirements and any combination of additional two standards are considered to have satisfactorily participated in the planning process.

Table 1.3 shows the representation of each participating jurisdiction at the planning meetings and the provision of responses to the Data Collection Questionnaire. All jurisdictions participating in the Plan either reviewed or commented on the draft Plan, participated in the update/development of mitigation actions, or documented the donation of time. Meeting sign-in sheets are located in Appendix B.

Table 1.3. Jurisdictional Participation in Planning Process

Jurisdiction	Kick-off Meeting	Meeting #2	Meeting #3	Meeting #4	Meeting #5	Data Collection Questionnaire Response	Update/Develop Mitigation Actions
Lawrence County	x	x	x	x		x	
City of Aurora	x	x		x		x	
Village of Freistatt				x			
Village of Halltown	x						
Village of Hoberg							
City of Marionville		x	x			x	
City of Miller	x	x	x	x		x	
City of Monett	x	x	x			x	
City of Mt. Vernon	x	x	x	x		x	

City of Pierce City				x			
City of Stotts City							
City of Verona				x		x	
Marionville R-IX			x			x	
Miller R-II	x	x	x	x		x	
Monett R-I	x	x	x	x		x	
Mount Vernon R-V		x	x			x	
Pierce City R-VI				x		x	
Verona R-VII		x	x	x			
Buck Prairie Special Road District		x	x				
Green Benefit Special Road District	x	x	x	x		x	
Miller Benefit Special Road District	x	x	x	x		x	
Mt. Vernon Benefit Road District	x	x				x	
Verona Benefit Special Road District	x	x					
OACAC Lawrence County	x	x	x				
University of Missouri Extension	x			x			
Barry/Lawrence Regional Library	x	x	x	x			
Lawrence County Health Dept.	x	x		x			

1.4.2 The Planning Steps

FEMA's Local Mitigation Planning Handbook (March 1, 2013), Local Mitigation Plan Review Guide (October 1, 2011), and Integrating Hazard Mitigation into Local Planning: Case Studies and Tools for Community Officials (March 1, 2013) were used as the sources for developing the Plan update process. The development of the plan followed the 10-step planning process adapted from FEMA's Community Rating System (CRS) and Flood Mitigation Assistance programs. The 10-step process allows the Plan to meet funding eligibility requirements of the Hazard Mitigation Grant Program, Pre-Disaster Mitigation Program, Community Rating System, and Flood Mitigation Assistance Program. Table 1.4 shows how the CRS process aligns with the Nine Task Process outlined in the 2013 Local Mitigation Planning Handbook.

Following **Table 1.4** is a summary of how SMCOG staff used the Nine Task Process to develop the update to the Plan.

Table 1.4. County Mitigation Plan Update Process

Community Rating System (CRS) Planning Steps (Activity 510)	Local Mitigation Planning Handbook Tasks (44 CFR Part 201)
Step 1. Organize	Task 1: Determine the Planning Area and Resources
	Task 2: Build the Planning Team 44 CFR 201.6(c)(1)

Step 2. Involve the public	Task 3: Create an Outreach Strategy 44 CFR 201.6(b)(1)
Step 3. Coordinate	Task 4: Review Community Capabilities 44 CFR 201.6(b)(2) & (3)
Step 4. Assess the hazard	Task 5: Conduct a Risk Assessment 44 CFR 201.6(c)(2)(i) 44 CFR 201.6(c)(2)(ii) & (iii)
Step 5. Assess the problem	
Step 6. Set goals	Task 6: Develop a Mitigation Strategy 44 CFR 201.6(c)(3)(i); 44 CFR 201.6(c)(3)(ii); and 44 CFR 201.6(c)(3)(iii)
Step 7. Review possible activities	
Step 8. Draft an action plan	
Step 9. Adopt the plan	Task 8: Review and Adopt the Plan
Step 10. Implement, evaluate, revise	Task 7: Keep the Plan Current
	Task 9: Create a Safe and Resilient Community 44 CFR 201.6(c)(4)

Step 1: Organize the Planning Team (Handbook Tasks 1 & 2)

In December 2016, SMCOG entered into cooperative agreements with SEMA and Lawrence County to prepare this multi-jurisdictional plan for public entities in Lawrence County. Discussions on the development of the Lawrence County Multi-Jurisdictional Natural Hazard Mitigation Plan began on March 27th, 2017 with an introductory scoping meeting attended by SMCOG staff and the County Emergency Management Director. This meeting was conducted to discuss the timeline for developing the hazard mitigation plan, the planning process, identification of stakeholders and community organizations to include in the planning process and a date for the kick-off meeting for April 19th, 2017 to initiate participation of jurisdictions and public entities in the planning process. The Emergency Management Director (EMD) and SMCOG staff identified prospective participant representatives and stakeholders and a contact list was prepared for mailing an invitation letter to the kick-off Meeting. The list of invitees included local elected officials, municipal government staff, county government staff, emergency services personnel, public school administrators, members from health and social services organizations, utility providers, Missouri University Extension staff, EMDs from adjacent counties, and volunteer organizations. A complete list of invitees is in Appendix D.

The MPC met on several occasions from April through September 2017 to collaborate on the development of the Plan update. Participants assisted in data collection; reviewed and revised the Plan's goals, objectives and mitigation strategies; and provided reviews and comments on the Plan throughout the update process. Communication with MPC members occurred throughout the planning process through face-to-face meetings, phone interviews, and email correspondence in addition to committee meetings.

Table 1.5 shows the meeting schedule and items discussed for MPC meetings.

Table 1.5. Schedule of MPC Meetings

Meeting	Topic	Date
---------	-------	------

Informational Meeting	<ul style="list-style-type: none"> • Discussion of the general process of updating the Hazard Mitigation Plan • Prepared planning committee members and reviewed contact list • Planned future dates for the planning committee • Discussed communication with the public, stakeholders, city officials, and other jurisdictions to make aware of hazard mitigation meetings 	March 27 th , 2017
Kick-off Meeting	<ul style="list-style-type: none"> • Hazard Mitigation definition and importance • The Disaster Mitigation Act of 2000 • Planning Process Summary • Participation Requirements for jurisdictions • Instructions on how to properly fill-out questionnaires and in-kind documentation • Future Meeting Dates 	April 19 th , 2017
Planning Meeting #2	<ul style="list-style-type: none"> • Planning process review • Information presented to analyze natural hazards based on previous occurrences within the county and potential severity • Review of goals, objectives, and mitigation strategies from the 2013 mitigation plan and their progress over the past five years • Brief discussion on potential mitigation strategies for participating jurisdictions. 	May 31 st , 2017
Planning Meeting #3	<ul style="list-style-type: none"> • Update on progress of plan document • Planning process timeline • Mitigation Strategies • Discussion of the relevance of current goals, objectives, and mitigation strategies from the 2013 mitigation plan and their progress over the past five years. • Discussion on new mitigation strategies for participating jurisdictions. 	June 21 st , 2017
Meeting #4	<ul style="list-style-type: none"> • 	August 2 nd , 2017
Meeting #5	<ul style="list-style-type: none"> • 	October 4 th , 2017

Step 2: Plan for Public Involvement (Handbook Task 3)

44 CFR Requirement 201.6(b): An open public involvement process is essential to the development of an effective plan. In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include: (1) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval.

Options for soliciting public input on the Plan were discussed at the MPC kick-Off Meeting held on April 19th, 2017. SMCOG staff explained the importance of public involvement during the planning process. It was determined that SMCOG staff would advertise MPC meetings through legal notices published in the Aurora Advertiser, Monett Times, Lawrence County Record, and KSMU radio. In addition, meeting dates and invitations were posted on the SMCOG website along with drafts of the Plan for public comment during the drafting stage and prior to submission of the Plan to SEMA for approval. Press releases were sent to local news publications when the drafts of the Plan were posted to the SMCOG website for public comment during the drafting stage on xx.xx.xx. A final draft of the Plan was posted on the SMCOG website on xx.xx.xx prior to being submitted to SEMA for approval. Copies of affidavits of publication for legal notices, Screen captures of the SMCOG website, and copies of press releases are included in Appendix B.

It was also discussed at the kick-off meeting that informal solicitation of public input would be sought by members of the MPC through announcements at gatherings and other public meetings, such as board of alderman and local emergency planning committee meetings.

Step 3: Coordinate with Other Departments and Agencies and Incorporate Existing Information (Handbook Task 3)

44 CFR Requirement 201.6(b): An open public involvement process is essential to the development of an effective plan. In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include: (2) An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process. (3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.

As stated in Section 1.4, neighboring communities, businesses, academia, and other non-profit interests were notified via email and letters, a notification was sent to adjacent county Emergency Management Directors, Chambers of Commerce, local and regional agencies, such as; OACAC, Health Departments, American Red Cross, Ambulance Districts, and the University of Missouri Extension office. A complete listing of agencies invited to participate in the planning process and what meetings they were invited to attend is included in Appendix D.

Integration of Other Data, Reports, Studies, and Plans

A significant amount of information presented in the Plan has been updated and revised based on the review and incorporation of existing plans, studies, reports and technical information. Appendix A contains a listing of references to plans, studies, reports and technical information to incorporate into hazard profiles, risk assessment, profile and capability sections. A few

examples of information incorporated from the review of existing plans, etc. include:

- 2013 Missouri State Hazard Mitigation Plan
- State Department of Natural Resources (DNR) dam information, the National Inventory of Dams (NID), dam inspection reports,
- Missouri Department of Conservation (MDC) wildfire statistics
- Wildland/Urban Interface and Intermix areas from the SILVIS Lab - Department of Forest Ecology and Management - University of Wisconsin

Step 4: Assess the Hazard: Identify and Profile Hazards (Handbook Task 5)

At the second MPC meeting on May 31st, 2017, profiles of identified hazards from the 2011 Plan were presented. Storm event data from the National Climatic Data Center for the five year period since the adoption of the 2011 Plan were included in the hazard profiles. The presentation incorporated data from studies, reports, and technical information available through internet research. During the process of identifying hazards the MPC reviewed:

- Previous disaster declarations in the county
- Hazards in the most recent State Hazard Mitigation Plan
- Hazards identified in the previously approved hazard mitigation plan.

The MPC was asked to prioritize the identified hazards based on probability of occurrence, human impact, property impact, and likely functional downtime of facilities and businesses. Additional information about the conclusions drawn at this meeting can be found in the Risk Assessment chapter of the Plan.

Step 5: Assess the Problem: Identify Assets and Estimate Losses

Identified assets in the planning area include population, structures, critical facilities and infrastructure, and other important assets that may be at risk to hazards. The inventory of assets for each jurisdiction was derived from parcel data from the Barry County Assessor, the Barry County Structures dataset, local jurisdiction data collection questionnaires, and HAZUS MH 4.0. Potential losses to existing development were estimated based on hazard event scenarios. In most cases the county assessor's appraised improved values were used to estimate structure losses in impacted areas for structure occupancy types. The methodology for estimating losses varies by hazard. Loss estimates are included in each hazard profile of the Risk Assessment chapter.

Step 6: Set Goals (Handbook Task 6)

The MPC conducted a discussion session during their third meeting on June 21st, 2017 to review and update the Plan goals. The MPC also reviewed the goals from current surrounding county plans.

In the 2011 Plan, the organization of the actions included broad goals and a set of objectives linking the actions to the goals. The MPC opted to keep the goals from the 2011 Plan while agreeing with modifications to the objective statements based on language from several surrounding area plans. The Plan update goals and objectives are as follows:

Goal 1 – Protect lives and property from the effects of natural hazards.

- ***Objective 1.1: Promote public awareness of natural hazards and safety measures***
- ***Objective 1.2: Provide adequate warning systems to alert the public of hazard events***
- ***Objective 1.3: Provide adequate shelter for the population to reduce death and injury from hazard events***
- ***Objective 1.4: Utilize prevention measures to reduce potential future loss from hazardous events***

Goal 2 - Ensure the continued operation of government and emergency services.

- ***Objective 2.1 - Strengthen multi-jurisdictional cooperation & communication among local governments, emergency services agencies, and entities responsible for critical and vulnerable facilities***
- ***Objective 2.2 - Increase and maintain appropriate emergency equipment and facilities***

Goal 3 - Ensure the functional operation of critical infrastructures serving the public and the local economy.

- ***Objective 3.1 - Utilize engineered structural modifications to natural systems and public infrastructures to reduce damaging impacts of hazards***

Step 7: Review Possible Mitigation Actions and Activities

The focus of the MPC meeting on June 21st, 2016 was update of the mitigation strategies and discuss potential new strategies. For a comprehensive range of mitigation actions to consider, the MPC reviewed the following information during the meeting:

- A list of actions proposed in the previous mitigation plan and discussing each ones relevance
- Input during meetings, responses to Data Collection Questionnaires

Jurisdiction representatives on the MPC were encouraged to review the details of the risk assessment vulnerability analysis specific to their jurisdiction. During the meeting, few new strategies were proposed by the committee. SMCOG staff provided a draft of the goals and mitigation alternatives to the MPC at this meeting based on the review of progress towards

Step 8: Draft an Action Plan

At the final MPC meeting on **xx.xx.xxxx**.....

Step 9: Adopt the Plan (Handbook Task 8)

Once the Plan is approved by SEMA and FEMA then the governing body of each jurisdiction must adopt the plan by resolution to be eligible for hazard mitigation assistance. Adoption resolutions will be collected and submitted with the final plan to SEMA and FEMA. Adoption resolutions are included in Appendix C.

Step 10: Implement, Evaluate, and Revise the Plan (Handbook Tasks 7 & 9)

At the final MPC meeting on xx.xx.xxxx....

DRAFT

2 PLANNING AREA PROFILE AND CAPABILITIES

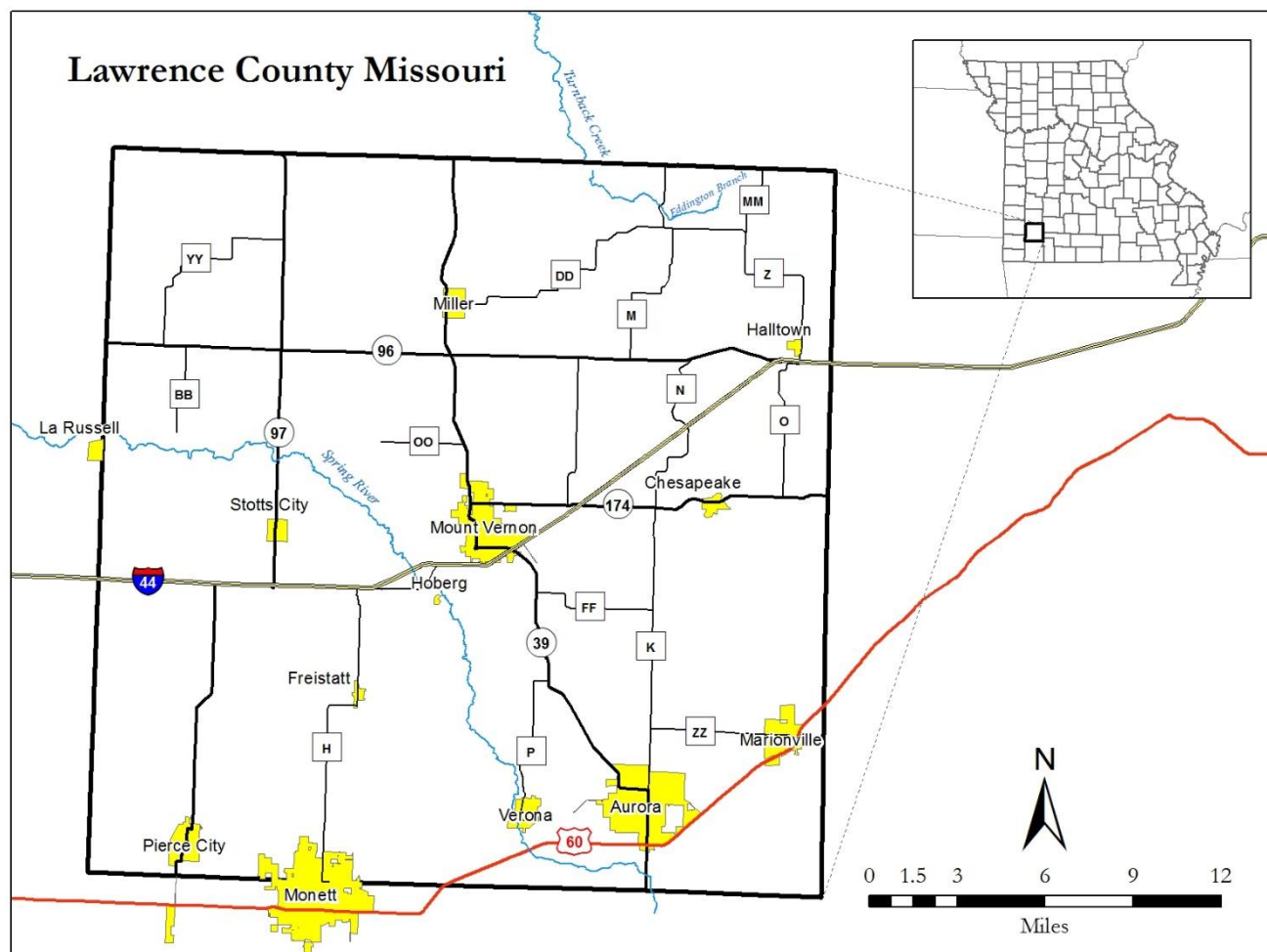
2	PLANNING AREA PROFILE AND CAPABILITIES	1
2.1	<i>Lawrence County Planning Area Profile.....</i>	<i>Error! Bookmark not defined.</i>
2.1.2	Geography, Geology and Topography.....	Error! Bookmark not defined.
2.1.3	Climate	Error! Bookmark not defined.
2.1.4	Population/Demographics	Error! Bookmark not defined.
2.1.5	History	Error! Bookmark not defined.
2.1.6	Occupations	Error! Bookmark not defined.
2.1.7	Agriculture.....	Error! Bookmark not defined.
2.1.8	FEMA Hazard Mitigation Assistance Grants in Planning Area	Error! Bookmark not defined.
2.2	<i>Jurisdictional Profiles and Mitigation Capabilities.....</i>	<i>Error! Bookmark not defined.</i>
2.2.1	LawrenceCounty (Unincorporated)	Error! Bookmark not defined.
2.2.2	City of Aurora.....	Error! Bookmark not defined.
2.2.3	Village of Freistatt	Error! Bookmark not defined.
2.2.4	Village of Halltown	Error! Bookmark not defined.
2.2.5	Village of Hoberg.....	Error! Bookmark not defined.
2.2.6	City of Marionville.....	Error! Bookmark not defined.
2.2.7	City of Miller	Error! Bookmark not defined.
2.2.8	City of Monett.....	Error! Bookmark not defined.
2.2.9	City of Mount Vernon.....	Error! Bookmark not defined.
2.2.10	City of Pierce City.....	Error! Bookmark not defined.
2.2.11	City of Stotts City	Error! Bookmark not defined.
2.2.12	City of Verona.....	Error! Bookmark not defined.
2.2.13	Buck Prairie Special District	Error! Bookmark not defined.
2.2.14	Green Benefit Special Road District	Error! Bookmark not defined.
2.2.15	Miller Benefit Special Road District	Error! Bookmark not defined.
2.2.16	Mt. Vernon Benefit Special Road District	Error! Bookmark not defined.
2.2.17	Verona Benefit Special Road District	Error! Bookmark not defined.
2.2.18	Public School District Profiles and Mitigation Capabilities	Error! Bookmark not defined.

2.1 Lawrence County Planning Area Profile

Lawrence County is bordered by Barry, Christian, Dade, Greene, Jasper, Newton, and Stone counties in southwest Missouri.

Figure 2.1 is a map of the Lawrence County planning area that includes the cities, villages, and places. The inset on the map shows Lawrence County's location in southwest Missouri.

Figure 2.1. Map of Lawrence County



The total population of Lawrence County is 38,381, according to 2016 population estimates. This is a 9% increase from 2000 which is similar to the rate of growth in Missouri, but falls short of the United States percent growth of 15%. The median household income (MHI) of the county has grown 30% since 2000 coming to about \$40,500. The MHI in Lawrence County is lower than Missouri and the US, with a MHI of \$48,173 and \$53,889, respectively. Finally, the Median House Value (MHV) stands at \$98,100 in Lawrence County while Missouri stands at \$138,400 and the US at \$178,600.

2.1.2 Geography, Geology and Topography

Lawrence County includes 612 square miles of land and 1 square mile of water located in

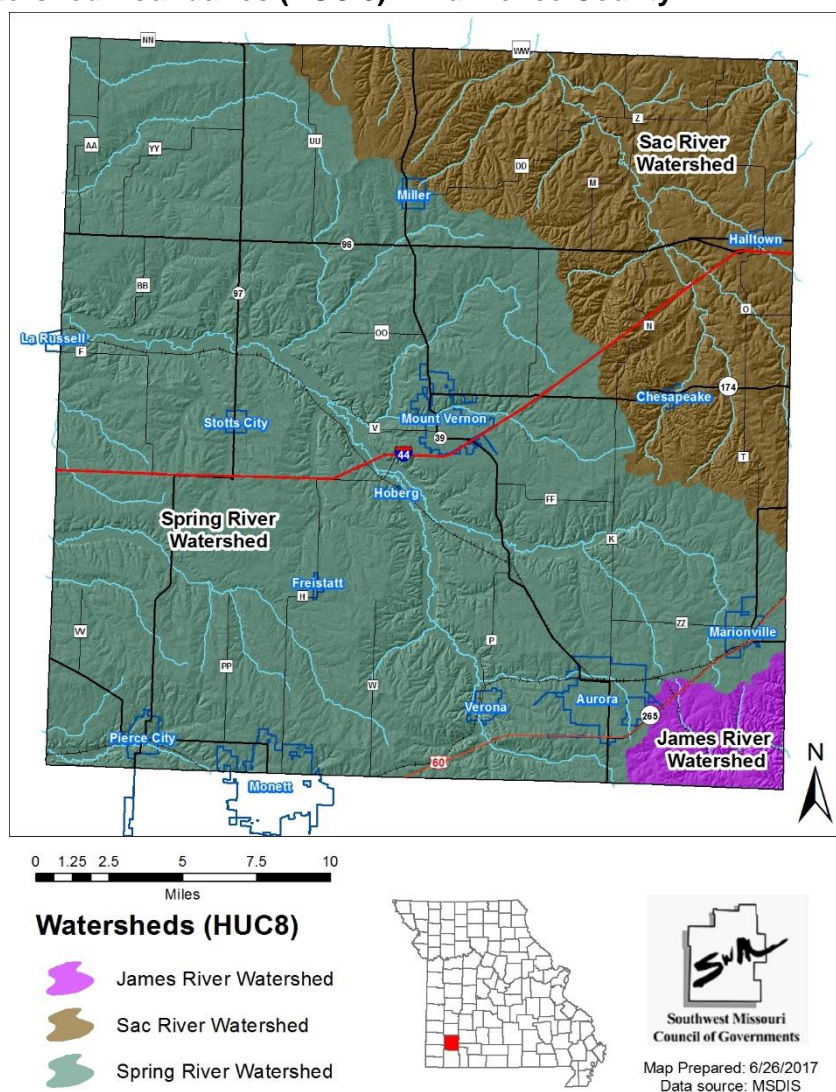
southwest Missouri. Approximately 32 percent of residents live in the unincorporated portions of the county. The county has five municipalities with populations over 1,000: Aurora, Marionville, Monett, Mt. Vernon, and Peirce City. Four of the communities experienced population increase, while one them, Peirce City, experienced population decline over the last decade. Monett and Mt. Vernon experienced a significant increase in population of 1,561 and 514, respectively.

The county is located in the southwest portion of the Ozark Highland ecoregion in Missouri. According to Nature Conservancy, the Ozark Highlands is diverse biologically and geographically with rugged hills, prairies, savannas, and open woodlands. The predominant underlying bedrock is carbonate (limestone and dolomite), giving rise to karst topographic features such as caves, underground streams, springs and sinkholes (TNC, 2003).

According to the USGS hydrologic unit codes (HUCs), Lawrence County lies within three (3) HUC 8 watersheds: The James River Basin, The Spring River Basin, and the Sac River Basin. The Spring River basin covers the majority of the county. The James River basin slightly encompasses the southeast corner of the county. The Sac River Basin is located in the Northeast portion of the county.

Figure 2.2 is a map of HUC 8 watershed boundaries within Lawrence County.

Figure 2.2. Watershed Boundaries (HUC 8) in Lawrence County



The Ozark Highlands are divided into subsections of ecological land types that have similar geology, topography, climate, and vegetation patterns (Nigh and Schroeder, 2002). Lawrence County is entirely located in the Springfield Plain subsection of the Ozarks Highlands. Characteristics of this land type are described in The Atlas of Missouri Ecoregions:

Springfield Plain

Topography – gently undulating plain with generally low relief.

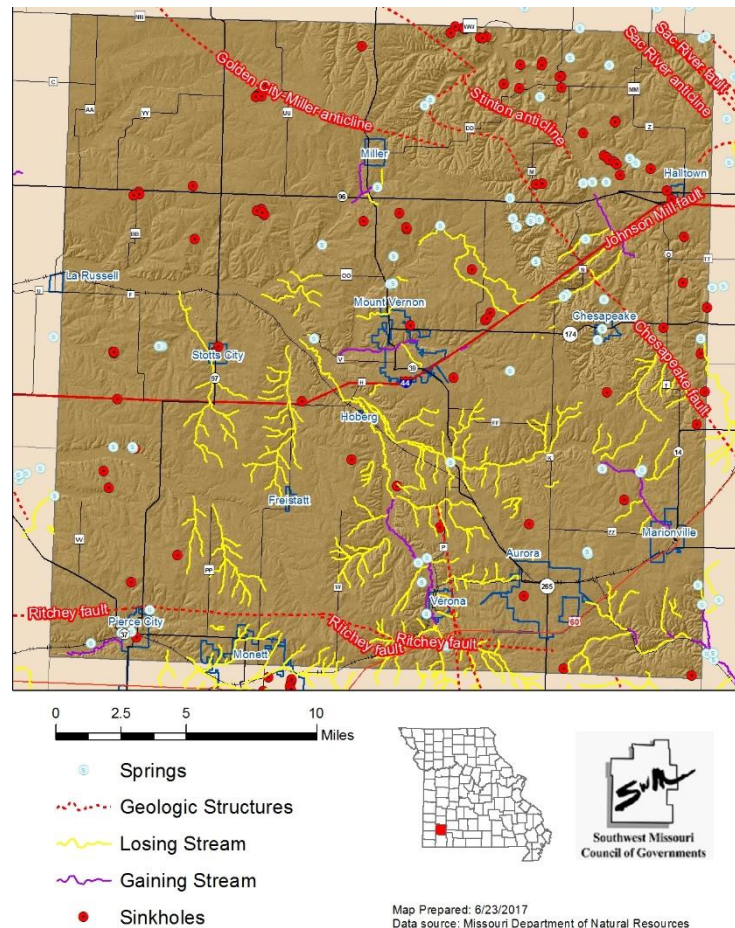
Substrate – Extensive Missipian aged Burlington Limestones with abundant chert; soils are primarily cherty silt loams and loams with a loess component; there are localized clay fragipan soils.

Ecological System – Extensive tall grass prairie areas in the higher flat regions with open savannas and oak woodlands, some on the high-base substrates, in dissected terrain and embedded limestone glades.

Much of Lawrence County is considered a sensitive karst region. Karst topography occurs in regions underlain by calcium-rich limestone or dolomite bedrock. Calcium is easily dissolved by carbonates in the air and surface waters that enter fractures and joints in the bedrock. Sinkholes, caves and losing streams are produced, which after time form a vast underground drainage network connecting surface water with underlying groundwater. Karst features represent a threat to groundwater quality as surface pollutants can easily enter the groundwater system with little filtration.

Figure 2.2 is a map depicting geologic structures, inventory of mines, sinkholes, and springs within Lawrence County.

Figure 2.3. Geologic Features and Karst Features in Barry County



2.1.3 Climate

Barry County has a continental climate with mild winters and hot summers. Based on information from the Midwest Regional Climate Center, Mt. Vernon, MO has an average annual temperature of 56 Fahrenheit. The average high in July is 78.6 Fahrenheit and the average low in January is 16.7 Fahrenheit. It averages 46.27 inches of precipitation, with snow accounting for 9.8 inches annually. Annual snow precipitation was derived from the Pierce City, MO Midwest Regional Climate Center.

2.1.4 Population/Demographics

Table 2.1 provides the total county population and the populations for each city, village, and the unincorporated county for 2000, 2010, and 2015 with the number and percentage change. The unincorporated area population has been determined, however, it is not completely accurate due to a portion of Monett residing Barry County. In terms of percent change, the communities of Freistatt, Halltown, Hoberg, Miller, Pierce City, Stotts City, and Verona experienced a decrease in population. Halltown and Stotts City experience the most population decrease at 42.3% and 39.2%, respectively. Only four communities had their population increase. In terms of sheer magnitude Monett grew the largest adding 1,561 people from 2000 to 2015. Overall, the rate of growth across the county has only slightly increased since 2000.

Table 2.1. Lawrence County Population 2000-2015 by Community

Jurisdiction	2000 Population	2010 Population	2015 Population	2000-2015 # Change	2000-2015 % Change
Lawrence County	35,204	38,634	38,244	3,040	8.6
City of Aurora	7,014	7,508	7,473	459	6.5
Village of Freistatt	184	163	131	-53	-28.8
Village of Halltown	189	173	109	-80	-42.3
Village of Hoberg	60	56	47	-13	-21.6
City of Marionville	2,113	2,225	2,153	40	1.9
City of Miller	754	699	732	-22	-2.9
City of Monett	7,396	8,873	8,957	1,561	21.1
City of Mount Vernon	4,017	4,575	4,531	514	12.8
City of Pierce City	1,385	1,292	1,261	-124	-8.9
City of Stotts City	250	220	152	-98	-39.2
City of Verona	714	619	591	-123	-17.2
Unincorporated	11,128	12,231	12,107	979	8.8

Source: U.S. Bureau of the Census, Decennial Census, *population includes the portions of these cities in adjacent counties

Lawrence County's number of most at-risk populations are slightly above the state and national averages. Children under 5 in the county, comprising 6.5 percent of the total population, is very close to state and national averages of 6.2 and 6.3 percent, respectively. The county also has a slightly higher elderly population, or those above the age of 65, at 17 percent of the population, compared to 15 percent for Missouri and 14.1 percent for the nation. In addition, Lawrence County's median age is about the same as the state and national median.

Lawrence County contains 16,573 housing units, 2,090 of which are vacant, at an average household size of 2.66, which is higher than the state, but slightly lower than the national average. **Table 2.2** provides the number of Lawrence County residents within specific age groups and a comparison of percentages with the state of Missouri and the United States.

Table 2.2. Lawrence County Population Age Composition, Missouri, United States Comparison

Age Group	# of People	Percent	Percent Missouri	Percent United States
Persons under 5 years old	2486	6.5%	6.2%	6.3%
Persons 5 to 9 years old	2715	7.1%	6.5%	6.5%
Persons 10 to 14 years old	2830	7.4%	6.5%	6.5%
Persons 15 to 19 years old	2792	7.3%	6.7%	6.7%
Persons 20 to 24 years old	1912	5.0%	7.1%	7.1%
Persons 25 to 34 years old	4207	11.0%	13.2%	13.6%
Persons 35 to 44 years old	4742	12.4%	12.1%	12.9%
Persons 45 to 54 years old	5125	13.4%	13.8%	13.9%
Persons 55 to 59 years old	2792	7.3%	6.9%	6.6%
Persons 60 to 64 years old	2180	5.7%	5.9%	5.8%
Persons 65 to 74 years old	3518	9.2%	8.3%	7.9%
Persons 75 to 84 years old	2180	5.7%	4.6%	4.2%
Persons 85 and older	803	2.1%	2.0%	1.9%
Total Population	38,244	-	-	-
Median age	39.6		38.2	37.6

Source: U.S. Bureau of the Census, American Community Survey, 2011 – 2015 5-Year Estimates

The University of South Carolina developed an index to evaluate and rank the ability to respond to, cope with, recover from, and adapt to disasters. The index synthesizes 29 socioeconomic variables which research literature suggests contribute to reduction in a community's ability to prepare for, respond to, and recover from hazards. SoVI® data sources include primarily those from the United

The index is a comparative metric that facilitates the examination of the differences in social vulnerability among counties. SoVI® is a valuable tool for policy makers and practitioners. It graphically illustrates the geographic variation in social vulnerability. It shows where there is uneven capacity for preparedness and response and where resources might be used most effectively to reduce the pre-existing vulnerability. SoVI® also is useful as an indicator in determining the differential recovery from disasters.

Lawrence County's SoVI ® score is 0.74000001, placing it in the 62.8th percentile when compared to the rest of the nation. This score means that 62.8 percent of the nation is more resilient to hazards and disasters. The main determinants of the score are qualities of the population based on race and class, wealth, elderly residents, Hispanic ethnicity, special needs individuals, Native American ethnicity, and the service industry employment.

Table 2.3 provides additional demographic and economic indicators for Lawrence County, and incorporated communities compared to the state of Missouri and the United States. The county as a whole had a higher percentage of unemployed families living below the poverty level than the state of Missouri or the United States. In terms of education, the percentage of population in the county that were high school graduates was less than Missouri or the United States. Although the percentage of the county population that spoke a language other than English in the home slightly higher than Missouri, it was considerably less than the United States.

Table 2.3. Unemployment, Poverty, Education, and Language Percentage Demographics, Lawrence County, Missouri

Jurisdiction	Total in Labor Force	Percent of Population Unemployed	Percent of Families Below the Poverty Level	Percentage of Population (High School graduate)	Percentage of Population (Bachelor's degree or higher)	Percentage of population (spoken language other than English)
Lawrence County	17,043	7.0%	14.5%	83.9%	16.8%	7.1%
City of Aurora	3,495	10.1%	14.6%	75.9%	13.8%	3.0%
Village of Freistatt	54	11.1%	5.6%	74.7%	11.1%	16.4%
Village of Halltown	36	0.0%	45.5%	70.5%	9.0%	0.0%
Village of Hoberg	27	0.0%	0.0%	69.0%	0.0%	6.8%
City of Marionville	914	12.7%	18.5%	82.3%	9.0%	1.4%
City of Miller	310	5.5%	13.3%	86.2%	7.8%	0.3%
City of Monett*	4,317	14.1%	23.2%	75.5%	17.6%	22.4%
City of Mount Vernon	1,853	8.3%	9.9%	86.4%	13.6%	0.9%
City of Pierce City	568	10.7%	16.8%	81.2%	7.3%	3.5%
City of Stotts City	59	11.9%	32.4%	82.9%	11.4%	16.8%
City of Verona	263	10.3%	22.2%	66.7%	3.4%	22.6%
State of Missouri	3,053,938	7.5%	11.1%	88.4%	27.1%	6.0%
United States	159,913,288	8.3%	11.3%	86.7%	29.8%	21.0%

Source: U.S. Census, 2015 American Community Survey, 5-year Estimates. *population includes the portions of these cities in adjacent counties.

2.1.5 History

Lawrence County was organized in 1845 out of northern Barry and southern Dade counties, with Mount Vernon designated as the county seat. It was named after Captain James Lawrence, a naval hero of the War of 1812. Earlier, this area was part of the original Greene County. The first settlers of European descent began arriving in present day Lawrence County in the early 1830s, after the removal of the Delaware Indians to Kansas. Judge John Williams was the first settler in the county circa 1831, settling about three miles northeast of Mount Vernon. Most early settlers came from Tennessee, Kentucky, Indiana, and Virginia. (<http://www.mtvernonchamber.com>).

Lawrence County is divided between Ozark forests and natural prairies. This has created a varied landscape within the county. Early settlers lived in forested areas near streams where game, water, and fish were abundant. Timber was available for the construction of shelters and fences and for fuel. Others settled on the open ranges, where the abundance of prairie grasses provided food for the cattle, work animals, and hogs (Hughes, 1982, <http://soils.missouri.edu>).

Farming was the principal industry for the early settlers in Lawrence County. At first, markets were too far away, so early farmers lived by subsistence cropping and raising livestock. The population increased slowly, and settlement was interrupted during the Civil War. (Hughes, <http://www.soils.missouri.edu>) Both Confederate and Union troops headquartered in Mt. Vernon, and over 100 different regiments either camped or passed through the county (<http://www.mtvernonchamber.com>). After the war, large numbers of farmers and businessmen came into the county, and a network of railroads was completed in the 1870s. When the open range was no longer available for livestock, the acreage of crops increased. Crops, especially wheat and corn, as well as livestock and livestock products, were produced for market. General farming produced an abundance of all of these products and led the way to a prosperous economy and rapid agricultural development. Introduced in 1905, favorable natural conditions and high prices for dairy products caused many farmers to turn to commercial dairy farming. During World War II, the commercial dairy farm replaced the general farm as the leading farming practice.

Lead and zinc were also mined in the area. Important mines were discovered near Aurora and Stotts City in the 1880s. This added to the economy, especially in the peak production years of the 1890s (Hughes, 1982, <http://soils.missouri.edu>). By the end of WWI, most of the mines were shut down. During WWII, mining made a brief return (Lowry, *Aurora Centennial*, 1970).

After 1950, farm numbers began to decline in Lawrence County. There were 3,096 farms in 1950, and in 2002, there were only 1,873 farms in the county. Individual farm size increased though, as total farm acreage was 355,968 acres in 1950 and only dropped to 322,822 acres in 2007. Beef production greatly increased over commercial dairy farming by 2007 as over 70% of the farms were raising beef compared to 5% with dairies. The major grain crops still raised in Lawrence County are wheat, soybeans, oats, and corn (Census of Agriculture, 2007; http://www.agcensus.usda.gov/Publications/2007/Online_Highlights/County_Profiles/Missouri/cp29109.pdf).

2.1.6 Occupations

Occupation information for the Lawrence County labor force comes from the American Community Survey 5-year estimates 2011 - 2015. Management, Business, Science, and Arts Occupations includes education and healthcare practitioner and technician occupations among others. Service Occupation includes healthcare support and protective services, such as firefighters and law enforcement in addition to food preparation and personal care services. The other occupation classifications are well defined. **Table 2.4** contains occupation statistics for the incorporated cities and the county as a whole.

Lawrence County, Freistatt, Monett, Mount Vernon, and Stotts City have the highest percentages of management, business, science, and arts occupations while Aurora and Marionville have the highest percentages of service occupations. Percentages of sales and office occupations are highest in

Halltown, Marionville, and Miller while Freistatt and Hoberg have the highest in natural resources, construction, and maintenance occupations. Production, transportation, and material moving occupations account for most occupations in Aurora, Halltown, Hoberg, Pierce City, Stotts City, and Verona.

Table 2.4. Occupation Statistics, Lawrence County, Missouri

Place	Management, Business, Science, and Arts Occupations	Service Occupations	Sales and Office Occupations	Natural Resources, Construction, and Maintenance Occupations	Production, Transportation, and Material Moving Occupations
Lawrence County	28.5%	19.9%	18.2%	11.9%	19.8%
City of Aurora	23.8%	26.8%	16.5%	8.6%	30.0%
Village of Freistatt	33.3%	12.5%	16.7%	22.9%	14.6%
Village of Halltown	5.6%	16.7%	44.4%	5.6%	27.8%
Village of Hoberg	3.7%	14.8%	14.8%	25.9%	40.7%
City of Marionville	13.5%	36.0%	23.1%	11.0%	16.4%
City of Miller	19.1%	15.7%	35.1%	9.9%	20.1%
City of Monett	26.1%	21.4%	18.4%	10.8%	23.2%
City of Mount Vernon	26.6%	24.0%	20.9%	10.3%	18.5%
City of Pierce City	23.9%	22.1%	18.5%	10.7%	24.9%
City of Stotts City	26.9%	9.6%	15.4%	5.8%	42.3%
City of Verona	12.7%	21.2%	18.6%	12.7%	34.7%

Source: U.S. Census, 2011 American Community Survey, 5-year Estimates.

2.1.7 Agriculture

According to the United States Department of Agriculture (USDA) 2012 Agricultural Census, there were 1,849 farms covering 311,127 acres in Lawrence County. The average farm size was 168 acres, which was a little over half of the average farm size in Missouri at 303 acres, with a market value of \$204,905,000 of agricultural products sold. The average sales per farm is \$110,819. Of the total, only 7% was from crop sales while the other 93% came from livestock, poultry, and their products. Broilers and other meat-type chickens made up the majority of farm activities with 2,863,172 heads of meat-type chickens. Lawrence County is ranked number one in the number of livestock inventory items for cattle and calves and second in their value. In addition, 58.6% of principle operators reported a primary occupation of something other than farming. In a 2016 USDA study, 16.5% of the workforce worked in agriculture-related and agribusiness jobs.

2.1.8 FEMA Hazard Mitigation Assistance Grants in Planning Area

From 1993 – 2017, local governments in Lawrence County have been awarded \$4,297,699 in Hazard Mitigation Assistance grants. Hazard Mitigation Assistance in the county has been primarily used to fund the construction of safe rooms in communities and schools. **Table 2.5** lists information on Hazard Mitigation Assistance projects completed in the county.

Table 2.5. FEMA HMA Grants in Lawrence County from 1993-2017

Project Type	Sub applicant	Award Date	Project Total
Community Safe Room	Monett R-I School District	Approved; 8/10/10	\$914,578
Community Safe Room	City of Monett	Approved; 10/16/12	\$833,349
High School and Middle School Safe Room	Monett R-I School District	Approved; 9/26/12	\$2,549,772
Community Safe Room	Pierce City	Approved; 4/26/04	

School Safe Room	Pierce City R-IV	Approved; 10/19/05	
Total			\$4,297,699.00

Source: [FEMA Hazard Mitigation Grant Dataset](#)

2.2 Jurisdictional Profiles and Mitigation Capabilities

This section will include individual profiles for each participating jurisdiction. It will also include a discussion of previous mitigation initiatives in the planning area. There will be a summary table indicating specific capabilities of each jurisdiction that relate to their ability to implement mitigation opportunities. The unincorporated county is profiled first, followed by the incorporated communities, the special districts, and the public school districts.

2.2.1 Lawrence County (Unincorporated)

Lawrence County's jurisdiction includes all unincorporated within the county boundaries. Lawrence County is classified as a Class III county in Missouri. The governing body of Lawrence County is the County Commission. The commission consists of a presiding commissioner, an eastern commissioner, and a western commissioner.

The County's elected governing body; the Board of County Commissioners directs the general administration of County Government. The Commission sets broad operating policies, enacts ordinances and establishes budgets as mandated by State law. The County enters into contracts with other public agencies to ensure the smooth flow of services including law enforcement, construction and maintenance of public roads and bridges, and the operations of county offices, equipment and services. The departments of the County government include:

- County Commission
- Circuit Clerk
- County Collector
- County Clerk
- Emergency Management
- Health Department
- Prosecuting Attorney
- Public Administrator
- Recorder of Deeds
- Sheriff
- Treasurer

Staff capabilities to mitigate the impact of natural hazards include the County Commission and the Office of Emergency Management.

The roles and responsibilities of the County Emergency Management Department (EMD) include coordinating with local government officials and cooperating private organizations to: 1) prevent avoidable disasters and reduce the vulnerability of the residents to any disaster that may strike; 2) establish capabilities for protecting citizens from the effects of disasters; 3) respond effectively to the actual occurrence of disasters; and 4) provide for recovery in the aftermath of any emergency involving extensive damage within the county. The EMD is responsible for the development and maintenance of the Local Emergency Operations Plan.

Table 2.6 provides information about the mitigation capabilities and policies for the unincorporated county based on responses from the Data Collection Questionnaire.

Table 2.6. Lawrence County Mitigation Capabilities

Capability	Y/N Date	Comments
Planning Capabilities		
Comprehensive Plan	No	
Builder's Plan	No	
Capital Improvement Plan	Yes	Continual Review
Local Emergency Plan	N/A	
County Emergency Plan	Yes	Reviewed Bi-Annually 2015
Local Recovery Plan	N/A	
County Recovery Plan	Yes	
Local Mitigation Plan	N/A	
County Mitigation Plan	Yes	Under Review
Local Mitigation Plan (PDM) *	N/A	
County Mitigation Plan (PDM) *	N/A	
Debris Management Plan	Yes	Part of EOP
Economic Development Plan	No	
Transportation Plan	Yes	
Land-use Plan	No	
Flood Mitigation Assistance (FMA) Plan	No	
Watershed Plan	No	
Firewise or other fire mitigation plan	No	
School Mitigation Plan*	N/A	
Critical Facilities Plan (Mitigation/Response/Recovery)	Yes	Listed in EOP
Policies/Ordinance		
Zoning Ordinance	No	
Building Code	No	
Floodplain Ordinance	Yes	
Subdivision Ordinance	No	
Tree Trimming Ordinance	No	
Nuisance Ordinance	No	
Storm Water Ordinance	No	
Drainage Ordinance	No	
Site Plan Review Requirements	No	
Historic Preservation Ordinance	No	
Landscape Ordinance	No	
Iowa Wetlands and Riparian Areas Conservation Plan*	No	
Program		
Zoning/Land Use Restrictions	No	
Codes Building Site/Design	No	
National Flood Insurance Program (NFIP) Participant	Yes	
NFIP Community Rating System (CRS) Participating Community	N/A	
Hazard Awareness Program	N/A	
National Weather Service (NWS) Storm Ready	In Progress	
Building Code Effectiveness Grading (BCEGs)	No	
ISO Fire Rating	N/A	
Economic Development Program	Yes	

Land Use Program	No	
Public Education/Awareness	Yes	
Property Acquisition	No	
Planning/Zoning Boards	No	
Stream Maintenance Program	No	
Tree Trimming Program	No	
Engineering Studies for Streams (Local/County/Regional)	No	
Mutual Aid Agreements	Yes	
Studies/Reports/Maps		
Hazard Analysis/Risk Assessment (Local)	N/A	
Hazard Analysis/Risk Assessment (County)	Yes	EOP / THIRA
Flood Insurance Maps (FIRM)*	Yes	EOP
FEMA Flood Insurance Study (Detailed) *	Yes	EOP
Evacuation Route Map	No	
Critical Facilities Inventory	No	
Vulnerable Population Inventory*	N/A	
Land Use Map*	N/A	
Staff/Department		
Building Code Official	No	
Building Inspector	No	
Mapping Specialist (GIS)	Yes	911 / EMA Offices
Engineer	No	
Development Planner	No	
Public Works Official	No	
Emergency Management Coordinator	Yes	
NFIP Floodplain Administrator	Yes	
Bomb and/or Arson Squad	N/A	Mutual Aid Agreements
Emergency Response Team	N/A	Mutual Aid Agreements
Hazardous Materials Expert	Yes	LEPC – Monett Fire
Local Emergency Planning Committee	Yes	
County Emergency Management Commission	N/A	
Sanitation Department	No	
Transportation Department	No	
Economic Development Department	No	
Housing Department	No	
Planning Consultant*	N/A	
Regional Planning Agencies*	N/A	
Historic Preservation	No	
Non-Governmental Organizations (NGOs)		
American Red Cross	Yes	
Salvation Army	No	
Veterans Groups	Yes	
Environmental Organization	No	
Homeowner Associations	N/A	
Neighborhood Associations	N/A	
Chamber of Commerce	N/A	

Community Organizations (Lions, Kiwanis, etc.	Yes	
Local Funding Availability		
Ability to apply for Community Development Block Grants	Yes	
Ability to fund projects through Capital Improvements funding	Yes	
Authority to levy taxes for a specific purpose	Yes	
Fees for water, sewer, gas, or electric services	No	
Impact fees for new development	No	
Ability to incur debt through general obligation bonds	Yes	
Ability to incur debt through special tax bonds	N/A	
Ability to incur debt through private activities	No	
Ability to withhold spending in hazard prone areas	No	

2.2.2 City of Aurora

Discuss the general location of the city in the county, Mayor/Council or Board of Alderman, how many elected positions, most recent census population compared to 2000, percentage growth or decline. Discuss each community's specific mitigation initiatives, such as:

- Outdoor warning sirens, number, general location
- Public education programs
- Bicycle safety programs and
- Child safety seat training
- County Health Department media efforts to distribute information on winter storms, heat, health and infectious control awareness
- Storm sewer or erosion control projects
- Tree trimming campaigns to prevent power outages
- Flood protection projects
- Reverse 911
- Safety programs, drills, or exercises

The City of Aurora is located in the southeast of Lawrence County, on Highway 60. It is a Third Class City with a City Manager/Council form of government. The council has 5 members. In 2000, the population was 7,014 and grew 6.5% to 7,473 according to 2015 estimates.

Discuss pertinent demographic information or construction characteristics of the buildings that cause differences in risk among jurisdictions in the planning area. For example, high percentages of older structures, mobile homes or manufactured housing, non-English speaking populations, handicapped citizens, etc.

Insert a table (**Table 2.6**) based on the Data Collection Questionnaire distributed to each jurisdiction.

Table 2.7. City of Aurora Mitigation Capabilities

Capability	Y/N Date	Comments
Planning Capabilities		
Comprehensive Plan	Yes, 2008	
Builder's Plan	Yes, 2006	International Building Code
Capital Improvement Plan	N/A	
Local Emergency Plan	N/A	

County Emergency Plan	Yes	Lawrence County HMP
Local Recovery Plan	N/A	
County Recovery Plan	N/A	
Local Mitigation Plan	N/A	
County Mitigation Plan	Yes	Lawrence County HMP
Local Mitigation Plan (PDM) *	N/A	
County Mitigation Plan (PDM) *	N/A	
Debris Management Plan	N/A	
Economic Development Plan	Yes	Included in 2008 Comprehensive Plan
Transportation Plan	Yes	Included in 2008 Comprehensive Plan
Land-use Plan	Yes	Included in 2008 Comprehensive Plan
Flood Mitigation Assistance (FMA) Plan	N/A	
Watershed Plan	Yes	Budgeted to fund in 2017 Storm Water Master Plan
Firewise or other fire mitigation plan	N	Used Firewise in the past
School Mitigation Plan*	N/A	
Critical Facilities Plan (Mitigation/Response/Recovery)	N/A	
Policies/Ordinance		
Zoning Ordinance	Yes	
Building Code	Yes, 2006	IBC
Floodplain Ordinance	Yes	
Subdivision Ordinance	Yes	
Tree Trimming Ordinance	N	
Nuisance Ordinance	Yes	
Storm Water Ordinance	Yes	
Drainage Ordinance	Yes	
Site Plan Review Requirements	Yes	
Historic Preservation Ordinance	N	
Landscape Ordinance	N	
Iowa Wetlands and Riparian Areas Conservation Plan*	N/A	
Program		
Zoning/Land Use Restrictions	Yes	
Codes Building Site/Design	Yes	
National Flood Insurance Program (NFIP) Participant	Yes	
NFIP Community Rating System (CRS) Participating Community	5	
Hazard Awareness Program	N/A	Use Tier 2 certification from state
National Weather Service (NWS) Storm Ready	N/A	
Building Code Effectiveness Grading (BCEGs)	N/A	
ISO Fire Rating	5	
Economic Development Program	Yes	
Land Use Program	Yes	
Public Education/Awareness	Yes	
Property Acquisition	Yes	
Planning/Zoning Boards	Yes	
Stream Maintenance Program	N/A	
Tree Trimming Program	N/A	
Engineering Studies for Streams (Local/County/Regional)	Yes	2017 budgeted for Storm Water Master Plan

Mutual Aid Agreements	Yes	
Studies/Reports/Maps		
Hazard Analysis/Risk Assessment (Local)	Yes	
Hazard Analysis/Risk Assessment (County)	N/A	
Flood Insurance Maps (FIRM)*	N/A	
FEMA Flood Insurance Study (Detailed) *	N/A	
Evacuation Route Map	N/A	
Critical Facilities Inventory	N/A	
Vulnerable Population Inventory	N/A	
Land Use Map	Yes	
Staff/Department		
Building Code Official	Yes	
Building Inspector	Yes	
Mapping Specialist (GIS)	N	
Engineer	Yes	Contracted
Development Planner	N	
Public Works Official	Yes	
Emergency Management Coordinator	Yes	
NFIP Floodplain Administrator	Yes	
Bomb and/or Arson Squad	Yes	State Fire Marshall
Emergency Response Team	N	
Hazardous Materials Expert	N/A	
Local Emergency Planning Committee	Yes	
County Emergency Management Commission	N/A	
Sanitation Department	N	
Transportation Department	Yes	
Economic Development Department	N	
Housing Department	N	
Planning Consultant*	N/A	
Regional Planning Agencies*	N/A	
Historic Preservation	N	
Non-Governmental Organizations (NGOs)		
American Red Cross	N	
Salvation Army	N	
Veterans Groups	N	
Environmental Organization	N	
Homeowner Associations	N	
Neighborhood Associations	N	
Chamber of Commerce	Yes	
Community Organizations (Lions, Kiwanis, etc.	Yes	
Local Funding Availability		
Ability to apply for Community Development Block Grants	Yes	Don't qualify for LMI
Ability to fund projects through Capital Improvements funding	Yes	
Authority to levy taxes for a specific purpose	Yes	
Fees for water, sewer, gas, or electric services	Yes	Yes for sewer
Impact fees for new development	Yes	

Ability to incur debt through general obligation bonds	Yes	
Ability to incur debt through special tax bonds	Yes	
Ability to incur debt through private activities	Yes	
Ability to withhold spending in hazard prone areas	N	

2.2.3 Village of Freistatt

Discuss the general location of the city in the county, Mayor/Council or Board of Alderman, how many elected positions, most recent census population compared to 2000, percentage growth or decline. Discuss each community's specific mitigation initiatives, such as:

- Outdoor warning sirens, number, general location
- Public education programs
- Bicycle safety programs and
- Child safety seat training
- County Health Department media efforts to distribute information on winter storms, heat, health and infectious control awareness
- Storm sewer or erosion control projects
- Tree trimming campaigns to prevent power outages
- Flood protection projects
- Reverse 911
- Safety programs, drills, or exercises

Discuss pertinent demographic information or construction characteristics of the buildings that cause differences in risk among jurisdictions in the planning area. For example, high percentages of older structures, mobile homes or manufactured housing, non-English speaking populations, handicapped citizens, etc.

Insert a table (**Table 2.6**) based on the Data Collection Questionnaire distributed to each jurisdiction.

Table 2.8. Village of Freistatt Mitigation Capabilities

Capability	Y/N Date	Comments
Planning Capabilities		
Comprehensive Plan		
Builder's Plan		
Capital Improvement Plan		
Local Emergency Plan		
County Emergency Plan		
Local Recovery Plan		
County Recovery Plan		
Local Mitigation Plan		
County Mitigation Plan		
Local Mitigation Plan (PDM) *		
County Mitigation Plan (PDM) *		
Debris Management Plan		
Economic Development Plan		

Transportation Plan		
Land-use Plan		
Flood Mitigation Assistance (FMA) Plan		
Watershed Plan		
Firewise or other fire mitigation plan		
School Mitigation Plan*		
Critical Facilities Plan (Mitigation/Response/Recovery)		
Policies/Ordinance		
Zoning Ordinance		
Building Code		
Floodplain Ordinance		
Subdivision Ordinance		
Tree Trimming Ordinance		
Nuisance Ordinance		
Storm Water Ordinance		
Drainage Ordinance		
Site Plan Review Requirements		
Historic Preservation Ordinance		
Landscape Ordinance		
Iowa Wetlands and Riparian Areas Conservation Plan*		
Program		
Zoning/Land Use Restrictions		
Codes Building Site/Design		
National Flood Insurance Program (NFIP) Participant		
NFIP Community Rating System (CRS) Participating Community		
Hazard Awareness Program		
National Weather Service (NWS) Storm Ready		
Building Code Effectiveness Grading (BCEGs)		
ISO Fire Rating		
Economic Development Program		
Land Use Program		
Public Education/Awareness		
Property Acquisition		
Planning/Zoning Boards		
Stream Maintenance Program		
Tree Trimming Program		
Engineering Studies for Streams (Local/County/Regional)		
Mutual Aid Agreements		
Studies/Reports/Maps		
Hazard Analysis/Risk Assessment (Local)		
Hazard Analysis/Risk Assessment (County)		
Flood Insurance Maps (FIRM)*		
FEMA Flood Insurance Study (Detailed) *		
Evacuation Route Map		
Critical Facilities Inventory		
Vulnerable Population Inventory		

Land Use Map		
Staff/Department		
Building Code Official		
Building Inspector		
Mapping Specialist (GIS)		
Engineer		
Development Planner		
Public Works Official		
Emergency Management Coordinator		
NFIP Floodplain Administrator		
Bomb and/or Arson Squad		
Emergency Response Team		
Hazardous Materials Expert		
Local Emergency Planning Committee		
County Emergency Management Commission		
Sanitation Department		
Transportation Department		
Economic Development Department		
Housing Department		
Planning Consultant*		
Regional Planning Agencies*		
Historic Preservation		
Non-Governmental Organizations (NGOs)		
American Red Cross		
Salvation Army		
Veterans Groups		
Environmental Organization		
Homeowner Associations		
Neighborhood Associations		
Chamber of Commerce		
Community Organizations (Lions, Kiwanis, etc.)		
Local Funding Availability		
Ability to apply for Community Development Block Grants		
Ability to fund projects through Capital Improvements funding		
Authority to levy taxes for a specific purpose		
Fees for water, sewer, gas, or electric services		
Impact fees for new development		
Ability to incur debt through general obligation bonds		
Ability to incur debt through special tax bonds		
Ability to incur debt through private activities		
Ability to withhold spending in hazard prone areas		

2.2.4 City of Marionville

Discuss the general location of the city in the county, Mayor/Council or Board of Alderman, how many elected positions, most recent census population compared to 2000, percentage growth or decline. Discuss each community's specific mitigation initiatives, such as:

- Outdoor warning sirens, number, general location
- Public education programs
- Bicycle safety programs and
- Child safety seat training
- County Health Department media efforts to distribute information on winter storms, heat, health and infectious control awareness
- Storm sewer or erosion control projects
- Tree trimming campaigns to prevent power outages
- Flood protection projects
- Reverse 911
- Safety programs, drills, or exercises

Discuss pertinent demographic information or construction characteristics of the buildings that cause differences in risk among jurisdictions in the planning area. For example, high percentages of older structures, mobile homes or manufactured housing, non-English speaking populations, handicapped citizens, etc.

Insert a table (**Table 2.6**) based on the Data Collection Questionnaire distributed to each jurisdiction.

Table 2.9. City of Marionville Mitigation Capabilities

Capability	Y/N Date	Comments
Planning Capabilities		
Comprehensive Plan	Yes	
Builder's Plan	N/A	
Capital Improvement Plan	N/A	
Local Emergency Plan	N/A	
County Emergency Plan	N/A	
Local Recovery Plan	N/A	
County Recovery Plan	N/A	
Local Mitigation Plan	N/A	
County Mitigation Plan	Yes	Lawrence County
Local Mitigation Plan (PDM) *	N/A	
County Mitigation Plan (PDM) *	N/A	
Debris Management Plan	N/A	
Economic Development Plan	N/A	
Transportation Plan	No	
Land-use Plan	Yes; 1998	
Flood Mitigation Assistance (FMA) Plan	Yes	
Watershed Plan	N/A	

Firewise or other fire mitigation plan	N/A	
School Mitigation Plan*	N/A	
Critical Facilities Plan (Mitigation/Response/Recovery)	N/A	
Policies/Ordinance		
Zoning Ordinance	Yes	
Building Code	Yes; 2012	International Building Code
Floodplain Ordinance	7	
Subdivision Ordinance	Yes	
Tree Trimming Ordinance	No	
Nuisance Ordinance	Yes	
Storm Water Ordinance	Yes	
Drainage Ordinance	Yes	
Site Plan Review Requirements	Yes	
Historic Preservation Ordinance	No	
Landscape Ordinance	Yes	
Iowa Wetlands and Riparian Areas Conservation Plan*	N/A	
Program		
Zoning/Land Use Restrictions	Yes	
Codes Building Site/Design	Yes	
National Flood Insurance Program (NFIP) Participant	Yes	
NFIP Community Rating System (CRS) Participating Community	N/A	
Hazard Awareness Program	Yes	
National Weather Service (NWS) Storm Ready	Yes	
Building Code Effectiveness Grading (BCEGs)	Yes	
ISO Fire Rating	7	
Economic Development Program	Yes	Enhanced Enterprise Zone
Land Use Program	N/A	
Public Education/Awareness	No	
Property Acquisition	No	
Planning/Zoning Boards	Yes	
Stream Maintenance Program	No	
Tree Trimming Program	No	
Engineering Studies for Streams (Local/County/Regional)	No	
Mutual Aid Agreements	Yes	
Studies/Reports/Maps		
Hazard Analysis/Risk Assessment (Local)	N/A	
Hazard Analysis/Risk Assessment (County)	N/A	
Flood Insurance Maps (FIRM)*	N/A	
FEMA Flood Insurance Study (Detailed) *	N/A	
Evacuation Route Map	N/A	
Critical Facilities Inventory	No	
Vulnerable Population Inventory	N/A	
Land Use Map	Yes	
Staff/Department		
Building Code Official	Yes	

Building Inspector	Yes	
Mapping Specialist (GIS)	No	
Engineer	Yes	Part-time
Development Planner	Yes	
Public Works Official	Yes	
Emergency Management Coordinator	Yes	
NFIP Floodplain Administrator	Yes	
Bomb and/or Arson Squad	No	
Emergency Response Team	No	
Hazardous Materials Expert	No	
Local Emergency Planning Committee	No	
County Emergency Management Commission	N/A	
Sanitation Department	No	
Transportation Department	No	
Economic Development Department	No	
Housing Department	No	
Planning Consultant*	N/A	
Regional Planning Agencies*	N/A	
Historic Preservation	No	
Non-Governmental Organizations (NGOs)		
American Red Cross	No	
Salvation Army	No	
Veterans Groups	No	
Environmental Organization	No	
Homeowner Associations	No	
Neighborhood Associations	No	
Chamber of Commerce	No	
Community Organizations (Lions, Kiwanis, etc.	Yes	
Local Funding Availability		
Ability to apply for Community Development Block Grants	No	
Ability to fund projects through Capital Improvements funding	Yes	
Authority to levy taxes for a specific purpose	Yes	
Fees for water, sewer, gas, or electric services	Yes	
Impact fees for new development	N/A	
Ability to incur debt through general obligation bonds	N/A	
Ability to incur debt through special tax bonds	N/A	
Ability to incur debt through private activities	N/A	
Ability to withhold spending in hazard prone areas	No	

2.2.5 City of Miller

Discuss the general location of the city in the county, Mayor/Council or Board of Alderman, how many elected positions, most recent census population compared to 2000, percentage growth or decline. Discuss each community's specific mitigation initiatives, such as:

- Outdoor warning sirens, number, general location
- Public education programs
- Bicycle safety programs and
- Child safety seat training
- County Health Department media efforts to distribute information on winter storms, heat, health and infectious control awareness
- Storm sewer or erosion control projects
- Tree trimming campaigns to prevent power outages
- Flood protection projects
- Reverse 911
- Safety programs, drills, or exercises

Discuss pertinent demographic information or construction characteristics of the buildings that cause differences in risk among jurisdictions in the planning area. For example, high percentages of older structures, mobile homes or manufactured housing, non-English speaking populations, handicapped citizens, etc.

Insert a table (**Table 2.6**) based on the Data Collection Questionnaire distributed to each jurisdiction.

Table 2.10. City of Miller Mitigation Capabilities

Capability	Y/N Date	Comments
Planning Capabilities		
Comprehensive Plan	N/A	
Builder's Plan	N/A	
Capital Improvement Plan	Yes; 2016	Sewer Improvements
Local Emergency Plan	Yes; 2004	
County Emergency Plan	Yes; 2005	
Local Recovery Plan	Yes; 2005	Adopted County
County Recovery Plan	Yes; 2005	
Local Mitigation Plan	N/A	
County Mitigation Plan	N/A	
Local Mitigation Plan (PDM) *	N/A	
County Mitigation Plan (PDM) *	N/A	
Debris Management Plan	N/A	
Economic Development Plan		
Transportation Plan	N/A	
Land-use Plan	N/A	
Flood Mitigation Assistance (FMA) Plan	N/A	
Watershed Plan		

Firewise or other fire mitigation plan	N/A	
School Mitigation Plan*		
Critical Facilities Plan (Mitigation/Response/Recovery)	N/A	
Policies/Ordinance		
Zoning Ordinance	No	
Building Code	Yes; 1996	
Floodplain Ordinance	No	
Subdivision Ordinance	No	
Tree Trimming Ordinance	Yes	
Nuisance Ordinance	Yes	
Storm Water Ordinance	Yes	
Drainage Ordinance	N/A	
Site Plan Review Requirements	N/A	
Historic Preservation Ordinance	N/A	
Landscape Ordinance	N/A	
Iowa Wetlands and Riparian Areas Conservation Plan*		
Program		
Zoning/Land Use Restrictions	Yes	
Codes Building Site/Design	Yes	
National Flood Insurance Program (NFIP) Participant	N/A	
NFIP Community Rating System (CRS) Participating Community	N/A	
Hazard Awareness Program	Yes	
National Weather Service (NWS) Storm Ready	No	
Building Code Effectiveness Grading (BCEGs)	Yes	Building Inspector
ISO Fire Rating	7	
Economic Development Program	No	
Land Use Program	No	
Public Education/Awareness	Yes	Newsletters – Bulletin Board, Facebook
Property Acquisition	N/A	
Planning/Zoning Boards	No	
Stream Maintenance Program	N/A	
Tree Trimming Program	N/A	
Engineering Studies for Streams (Local/County/Regional)		
Mutual Aid Agreements	Yes	Local Cities
Studies/Reports/Maps		
Hazard Analysis/Risk Assessment (Local)	No	
Hazard Analysis/Risk Assessment (County)	No	
Flood Insurance Maps (FIRM)*		
FEMA Flood Insurance Study (Detailed) *		
Evacuation Route Map	No	
Critical Facilities Inventory	N/A	
Vulnerable Population Inventory	No	
Land Use Map	No	
Staff/Department		
Building Code Official	Yes	Part-time

Building Inspector	Yes	Part-time
Mapping Specialist (GIS)	No	
Engineer	Yes	Part-time
Development Planner	No	
Public Works Official	Yes	Part-time
Emergency Management Coordinator	Yes	Part-time
NFIP Floodplain Administrator	No	
Bomb and/or Arson Squad	Yes	Part-time
Emergency Response Team	Yes	Part-time
Hazardous Materials Expert	Yes	Part-time
Local Emergency Planning Committee	No	
County Emergency Management Commission	Yes	Part-time
Sanitation Department	N/A	
Transportation Department	N/A	
Economic Development Department	N/A	
Housing Department	N/A	
Planning Consultant*		
Regional Planning Agencies*		
Historic Preservation	N/A	
Non-Governmental Organizations (NGOs)		
American Red Cross	No	
Salvation Army	No	
Veterans Groups	Yes	Am Legion
Environmental Organization	No	
Homeowner Associations	No	
Neighborhood Associations	No	
Chamber of Commerce	No	
Community Organizations (Lions, Kiwanis, etc.	Yes	Lions Club
Local Funding Availability		
Ability to apply for Community Development Block Grants	Yes	
Ability to fund projects through Capital Improvements funding	Yes	
Authority to levy taxes for a specific purpose	Yes	
Fees for water, sewer, gas, or electric services	Yes	Water, sewer
Impact fees for new development	No	
Ability to incur debt through general obligation bonds	Yes	
Ability to incur debt through special tax bonds	Yes	
Ability to incur debt through private activities	No	
Ability to withhold spending in hazard prone areas	N/A	

2.2.6 City of Monett

Discuss the general location of the city in the county, Mayor/Council or Board of Alderman, how many elected positions, most recent census population compared to 2000, percentage growth or decline. Discuss each community's specific mitigation initiatives, such as:

- Outdoor warning sirens, number, general location
- Public education programs
- Bicycle safety programs and
- Child safety seat training
- County Health Department media efforts to distribute information on winter storms, heat, health and infectious control awareness
- Storm sewer or erosion control projects
- Tree trimming campaigns to prevent power outages
- Flood protection projects
- Reverse 911
- Safety programs, drills, or exercises

Discuss pertinent demographic information or construction characteristics of the buildings that cause differences in risk among jurisdictions in the planning area. For example, high percentages of older structures, mobile homes or manufactured housing, non-English speaking populations, handicapped citizens, etc.

Insert a table (**Table 2.6**) based on the Data Collection Questionnaire distributed to each jurisdiction.

Table 2.11. City of Monett Mitigation Capabilities

Capability	YES/NO Date	Comments
Planning Capabilities		
Comprehensive Plan	N/A	
Builder's Plan	N/A	
Capital Improvement Plan	Yes	Reviewed yearly
Local Emergency Plan	Yes	Review October 2015
County Emergency Plan	N/A	
Local Recovery Plan	Yes	EOP
County Recovery Plan		
Local Mitigation Plan	N/A	EOP
County Mitigation Plan	N/A	
Local Mitigation Plan (PDM) *		Refer to County Plan
County Mitigation Plan (PDM) *		
Debris Management Plan	Yes	Part of EOP
Economic Development Plan	No	
Transportation Plan	Yes	8/2015 On-going development
Land-use Plan	Yes	1997
Flood Mitigation Assistance (FMA) Plan	No	
Watershed Plan	No	

Firewise or other fire mitigation plan	No	
School Mitigation Plan*		
Critical Facilities Plan (Mitigation/Response/Recovery)	Yes	Listed in EOP
Policies/Ordinance		
Zoning Ordinance	Yes	
Building Code	Ibc	2006
Floodplain Ordinance	Yes 2000	
Subdivision Ordinance	Yes	
Tree Trimming Ordinance	Yes	Ordinance #3225
Nuisance Ordinance	Yes	
Storm Water Ordinance	Yes	1994
Drainage Ordinance	No	
Site Plan Review Requirements	Yes	
Historic Preservation Ordinance	No	
Landscape Ordinance	Yes	
Iowa Wetlands and Riparian Areas Conservation Plan*		
Program		
Zoning/Land Use Restrictions	Yes	
Codes Building Site/Design	Yes	
National Flood Insurance Program (NFIP) Participant	Yes	
NFIP Community Rating System (CRS) Participating Community	Unoknoowno	
Hazard Awareness Program	No	
National Weather Service (NWS) Storm Ready	Yes	
Building Code Effectiveness Grading (BCEGs)	9	
ISO Fire Rating	4	
Economic Development Program	No	
Land Use Program	No	Under Development
Public Education/Awareness	Yes	
Property Acquisition	No	
Planning/Zoning Boards	Yes	
Stream Maintenance Program	N/A	
Tree Trimming Program	Yes	
Engineering Studies for Streams (Local/County/Regional)	N/A	
Mutual Aid Agreements	Yes	
Studies/Reports/Maps		
Hazard Analysis/Risk Assessment (Local)	Yes	EOP / THIRA
Hazard Analysis/Risk Assessment (County)	N/A	
Flood Insurance Maps (FIRM)*		
FEMA Flood Insurance Study (Detailed) *		
Evacuation Route Map	Yes	EOP
Critical Facilities Inventory	Yes	EOP
Vulnerable Population Inventory	No	
Land Use Map	Yes	1997
Staff/Department		
Building Code Official	Yes	Full-time

Building Inspector	Yes	Full-time
Mapping Specialist (GIS)	Yes	Part-time
Engineer	Yes	Contracted
Development Planner	No	
Public Works Official	Yes	Full-time
Emergency Management Coordinator	Yes	Full-time
NFIP Floodplain Administrator	Yes	Full-time
Bomb and/or Arson Squad	No	Mutual Aid
Emergency Response Team	Yes	CERT
Hazardous Materials Expert	Yes	Full-time
Local Emergency Planning Committee	Yes	Volunteer
County Emergency Management Commission	N/A	
Sanitation Department	Yes	Full-time
Transportation Department	No	
Economic Development Department	Yes	Full-time
Housing Department	No	
Planning Consultant*		
Regional Planning Agencies*		
Historic Preservation	No	
Non-Governmental Organizations (NGOs)		
American Red Cross	Yes	
Salvation Army	No	
Veterans Groups	Yes	
Environmental Organization	No	
Homeowner Associations	Yes	
Neighborhood Associations	No	
Chamber of Commerce	Yes	
Community Organizations (Lions, Kiwanis, etc.	Yes	LIONS, JAYCEES, KIWANIS, KOC
Local Funding Availability		
Ability to apply for Community Development Block Grants	Yes	
Ability to fund projects through Capital Improvements funding	Yes	
Authority to levy taxes for a specific purpose	Yes	
Fees for water, sewer, gas, or electric services	Yes	
Impact fees for new development	Yes	
Ability to incur debt through general obligation bonds	Yes	
Ability to incur debt through special tax bonds	Yes	
Ability to incur debt through private activities	Yes	
Ability to withhold spending in hazard prone areas	Yes	

2.2.7 City of Mount Vernon

Discuss the general location of the city in the county, Mayor/Council or Board of Alderman, how many elected positions, most recent census population compared to 2000, percentage growth or decline. Discuss each community's specific mitigation initiatives, such as:

- Outdoor warning sirens, number, general location
- Public education programs
- Bicycle safety programs and
- Child safety seat training
- County Health Department media efforts to distribute information on winter storms, heat, health and infectious control awareness
- Storm sewer or erosion control projects
- Tree trimming campaigns to prevent power outages
- Flood protection projects
- Reverse 911
- Safety programs, drills, or exercises

Discuss pertinent demographic information or construction characteristics of the buildings that cause differences in risk among jurisdictions in the planning area. For example, high percentages of older structures, mobile homes or manufactured housing, non-English speaking populations, handicapped citizens, etc.

Insert a table (**Table 2.6**) based on the Data Collection Questionnaire distributed to each jurisdiction.

Table 2.12. City of Vernon Mitigation Capabilities

Capability	Y/N Date	Comments
Planning Capabilities		
Comprehensive Plan	Yes; 2008	Last updated in 2014
Builder's Plan	Yes; 2006	International Building Code
Capital Improvement Plan	Yes	Updated each year
Local Emergency Plan	Yes	Updated in 2012 and currently being updated
County Emergency Plan	Yes	
Local Recovery Plan	Yes	
County Recovery Plan	Yes	
Local Mitigation Plan	Yes	
County Mitigation Plan	Yes	
Local Mitigation Plan (PDM) *	Yes	
County Mitigation Plan (PDM) *	Yes	
Debris Management Plan	Yes	
Economic Development Plan	Yes	
Transportation Plan	No	
Land-use Plan	Yes	
Flood Mitigation Assistance (FMA) Plan	No	

Watershed Plan	No	
Firewise or other fire mitigation plan	No	
School Mitigation Plan*		
Critical Facilities Plan (Mitigation/Response/Recovery)	No	
Policies/Ordinance		
Zoning Ordinance	Yes	
Building Code	Version 2006	
Floodplain Ordinance	Yes 3/26, 1975	
Subdivision Ordinance	Yes	
Tree Trimming Ordinance	No	
Nuisance Ordinance	Yes	
Storm Water Ordinance	No	Storm Water regulations are included in the Sub-Division Regulations
Drainage Ordinance	No	Drainage is covered in Zoning Regulations and Sub-division regulations
Site Plan Review Requirements	Yes	
Historic Preservation Ordinance	No	
Landscape Ordinance	No	
Iowa Wetlands and Riparian Areas Conservation Plan*		
Program		
Zoning/Land Use Restrictions	Yes	
Codes Building Site/Design	Yes	
National Flood Insurance Program (NFIP) Participant	No	
NFIP Community Rating System (CRS) Participating Community	Yes	
Hazard Awareness Program		
National Weather Service (NWS) Storm Ready	No	
Building Code Effectiveness Grading (BCEGs)	No	
ISO Fire Rating	6	
Economic Development Program	Yes	
Land Use Program	Yes	
Public Education/Awareness	No	
Property Acquisition	No	
Planning/Zoning Boards	Yes	
Stream Maintenance Program	Yes	
Tree Trimming Program	Yes	
Engineering Studies for Streams (Local/County/Regional)	No	
Mutual Aid Agreements	Yes	
Studies/Reports/Maps		
Hazard Analysis/Risk Assessment (Local)	Yes	
Hazard Analysis/Risk Assessment (County)	Yes	
Flood Insurance Maps (FIRM)*		
FEMA Flood Insurance Study (Detailed) *		
Evacuation Route Map	No	
Critical Facilities Inventory	Yes	
Vulnerable Population Inventory	Yes	

Land Use Map	Yes	
Staff/Department		
Building Code Official	Yes	Full-time
Building Inspector	Yes	Full-time
Mapping Specialist (GIS)	No	
Engineer	No	
Development Planner	No	
Public Works Official	Yes	Full-time
Emergency Management Coordinator	Yes	Full-time (Police Chief)
NFIP Floodplain Administrator	Yes	Full-time (Code Enforcement Officer)
Bomb and/or Arson Squad	No	
Emergency Response Team	No	Handled by Fire Department
Hazardous Materials Expert	No	Handled by Fire Department
Local Emergency Planning Committee	No	
County Emergency Management Commission	No	
Sanitation Department	Yes	Full-time Contracted out
Transportation Department	Yes	Full-time
Economic Development Department	Yes	Full-time (City Administrator)
Housing Department	No	
Planning Consultant*		
Regional Planning Agencies*		
Historic Preservation	No	
Non-Governmental Organizations (NGOs)		
American Red Cross	No	Closest is in Springfield
Salvation Army	No	Closest is in Springfield
Veterans Groups	Yes	VFW and American Legion
Environmental Organization	No	
Homeowner Associations	No	
Neighborhood Associations	No	
Chamber of Commerce	Yes	Full-time
Community Organizations (Lions, Kiwanis, etc.)	Yes	Rotary Club, Community Betterment, Emergency Services for Children
Local Funding Availability		
Ability to apply for Community Development Block Grants	Yes	
Ability to fund projects through Capital Improvements funding	Yes	
Authority to levy taxes for a specific purpose	Yes	
Fees for water, sewer, gas, or electric services	Yes	
Impact fees for new development	Yes	
Ability to incur debt through general obligation bonds	Yes	
Ability to incur debt through special tax bonds	Yes	
Ability to incur debt through private activities	Yes	
Ability to withhold spending in hazard prone areas		

2.2.8 City of Pierce City

Discuss the general location of the city in the county, Mayor/Council or Board of Alderman, how many elected positions, most recent census population compared to 2000, percentage growth or decline. Discuss each community's specific mitigation initiatives, such as:

- Outdoor warning sirens, number, general location
- Public education programs
- Bicycle safety programs and
- Child safety seat training
- County Health Department media efforts to distribute information on winter storms, heat, health and infectious control awareness
- Storm sewer or erosion control projects
- Tree trimming campaigns to prevent power outages
- Flood protection projects
- Reverse 911
- Safety programs, drills, or exercises

Discuss pertinent demographic information or construction characteristics of the buildings that cause differences in risk among jurisdictions in the planning area. For example, high percentages of older structures, mobile homes or manufactured housing, non-English speaking populations, handicapped citizens, etc.

Insert a table (**Table 2.6**) based on the Data Collection Questionnaire distributed to each jurisdiction.

Table 2.13. City of Pierce City Mitigation Capabilities

Capability	Y/N	Date	Comments
Planning Capabilities			
Comprehensive Plan			
Builder's Plan			
Capital Improvement Plan			
Local Emergency Plan			
County Emergency Plan			
Local Recovery Plan			
County Recovery Plan			
Local Mitigation Plan			
County Mitigation Plan			
Local Mitigation Plan (PDM) *			
County Mitigation Plan (PDM) *			
Debris Management Plan			
Economic Development Plan			
Transportation Plan			
Land-use Plan			
Flood Mitigation Assistance (FMA) Plan			
Watershed Plan			

Firewise or other fire mitigation plan		
School Mitigation Plan*		
Critical Facilities Plan (Mitigation/Response/Recovery)		
Policies/Ordinance		
Zoning Ordinance		
Building Code		
Floodplain Ordinance		
Subdivision Ordinance		
Tree Trimming Ordinance		
Nuisance Ordinance		
Storm Water Ordinance		
Drainage Ordinance		
Site Plan Review Requirements		
Historic Preservation Ordinance		
Landscape Ordinance		
Iowa Wetlands and Riparian Areas Conservation Plan*		
Program		
Zoning/Land Use Restrictions		
Codes Building Site/Design		
National Flood Insurance Program (NFIP) Participant		
NFIP Community Rating System (CRS) Participating Community		
Hazard Awareness Program		
National Weather Service (NWS) Storm Ready		
Building Code Effectiveness Grading (BCEGs)		
ISO Fire Rating		
Economic Development Program		
Land Use Program		
Public Education/Awareness		
Property Acquisition		
Planning/Zoning Boards		
Stream Maintenance Program		
Tree Trimming Program		
Engineering Studies for Streams (Local/County/Regional)		
Mutual Aid Agreements		
Studies/Reports/Maps		
Hazard Analysis/Risk Assessment (Local)		
Hazard Analysis/Risk Assessment (County)		
Flood Insurance Maps (FIRM)*		
FEMA Flood Insurance Study (Detailed) *		
Evacuation Route Map		
Critical Facilities Inventory		
Vulnerable Population Inventory		
Land Use Map		
Staff/Department		
Building Code Official		

Building Inspector		
Mapping Specialist (GIS)		
Engineer		
Development Planner		
Public Works Official		
Emergency Management Coordinator		
NFIP Floodplain Administrator		
Bomb and/or Arson Squad		
Emergency Response Team		
Hazardous Materials Expert		
Local Emergency Planning Committee		
County Emergency Management Commission		
Sanitation Department		
Transportation Department		
Economic Development Department		
Housing Department		
Planning Consultant*		
Regional Planning Agencies*		
Historic Preservation		
Non-Governmental Organizations (NGOs)		
American Red Cross		
Salvation Army		
Veterans Groups		
Environmental Organization		
Homeowner Associations		
Neighborhood Associations		
Chamber of Commerce		
Community Organizations (Lions, Kiwanis, etc.		
Local Funding Availability		
Ability to apply for Community Development Block Grants		
Ability to fund projects through Capital Improvements funding		
Authority to levy taxes for a specific purpose		
Fees for water, sewer, gas, or electric services		
Impact fees for new development		
Ability to incur debt through general obligation bonds		
Ability to incur debt through special tax bonds		
Ability to incur debt through private activities		
Ability to withhold spending in hazard prone areas		

2.2.9 City of Stotts City

Discuss the general location of the city in the county, Mayor/Council or Board of Alderman, how many elected positions, most recent census population compared to 2000, percentage growth or decline. Discuss each community's specific mitigation initiatives, such as:

- Outdoor warning sirens, number, general location
- Public education programs
- Bicycle safety programs and
- Child safety seat training
- County Health Department media efforts to distribute information on winter storms, heat, health and infectious control awareness
- Storm sewer or erosion control projects
- Tree trimming campaigns to prevent power outages
- Flood protection projects
- Reverse 911
- Safety programs, drills, or exercises

Discuss pertinent demographic information or construction characteristics of the buildings that cause differences in risk among jurisdictions in the planning area. For example, high percentages of older structures, mobile homes or manufactured housing, non-English speaking populations, handicapped citizens, etc.

Insert a table (**Table 2.6**) based on the Data Collection Questionnaire distributed to each jurisdiction.

Table 2.14. City of Stotts City Mitigation Capabilities

Capability	Y/N	Date	Comments
Planning Capabilities			
Comprehensive Plan			
Builder's Plan			
Capital Improvement Plan			
Local Emergency Plan			
County Emergency Plan			
Local Recovery Plan			
County Recovery Plan			
Local Mitigation Plan			
County Mitigation Plan			
Local Mitigation Plan (PDM) *			
County Mitigation Plan (PDM) *			
Debris Management Plan			
Economic Development Plan			
Transportation Plan			
Land-use Plan			
Flood Mitigation Assistance (FMA) Plan			
Watershed Plan			

Firewise or other fire mitigation plan		
School Mitigation Plan*		
Critical Facilities Plan (Mitigation/Response/Recovery)		
Policies/Ordinance		
Zoning Ordinance		
Building Code		
Floodplain Ordinance		
Subdivision Ordinance		
Tree Trimming Ordinance		
Nuisance Ordinance		
Storm Water Ordinance		
Drainage Ordinance		
Site Plan Review Requirements		
Historic Preservation Ordinance		
Landscape Ordinance		
Iowa Wetlands and Riparian Areas Conservation Plan*		
Program		
Zoning/Land Use Restrictions		
Codes Building Site/Design		
National Flood Insurance Program (NFIP) Participant		
NFIP Community Rating System (CRS) Participating Community		
Hazard Awareness Program		
National Weather Service (NWS) Storm Ready		
Building Code Effectiveness Grading (BCEGs)		
ISO Fire Rating		
Economic Development Program		
Land Use Program		
Public Education/Awareness		
Property Acquisition		
Planning/Zoning Boards		
Stream Maintenance Program		
Tree Trimming Program		
Engineering Studies for Streams (Local/County/Regional)		
Mutual Aid Agreements		
Studies/Reports/Maps		
Hazard Analysis/Risk Assessment (Local)		
Hazard Analysis/Risk Assessment (County)		
Flood Insurance Maps (FIRM)*		
FEMA Flood Insurance Study (Detailed) *		
Evacuation Route Map		
Critical Facilities Inventory		
Vulnerable Population Inventory		
Land Use Map		
Staff/Department		
Building Code Official		

Building Inspector		
Mapping Specialist (GIS)		
Engineer		
Development Planner		
Public Works Official		
Emergency Management Coordinator		
NFIP Floodplain Administrator		
Bomb and/or Arson Squad		
Emergency Response Team		
Hazardous Materials Expert		
Local Emergency Planning Committee		
County Emergency Management Commission		
Sanitation Department		
Transportation Department		
Economic Development Department		
Housing Department		
Planning Consultant*		
Regional Planning Agencies*		
Historic Preservation		
Non-Governmental Organizations (NGOs)		
American Red Cross		
Salvation Army		
Veterans Groups		
Environmental Organization		
Homeowner Associations		
Neighborhood Associations		
Chamber of Commerce		
Community Organizations (Lions, Kiwanis, etc.		
Local Funding Availability		
Ability to apply for Community Development Block Grants		
Ability to fund projects through Capital Improvements funding		
Authority to levy taxes for a specific purpose		
Fees for water, sewer, gas, or electric services		
Impact fees for new development		
Ability to incur debt through general obligation bonds		
Ability to incur debt through special tax bonds		
Ability to incur debt through private activities		
Ability to withhold spending in hazard prone areas		

2.2.10 City of Verona

Discuss the general location of the city in the county, Mayor/Council or Board of Alderman, how many elected positions, most recent census population compared to 2000, percentage growth or decline. Discuss each community's specific mitigation initiatives, such as:

- Outdoor warning sirens, number, general location
- Public education programs
- Bicycle safety programs and
- Child safety seat training
- County Health Department media efforts to distribute information on winter storms, heat, health and infectious control awareness
- Storm sewer or erosion control projects
- Tree trimming campaigns to prevent power outages
- Flood protection projects
- Reverse 911
- Safety programs, drills, or exercises

Discuss pertinent demographic information or construction characteristics of the buildings that cause differences in risk among jurisdictions in the planning area. For example, high percentages of older structures, mobile homes or manufactured housing, non-English speaking populations, handicapped citizens, etc.

Insert a table (**Table 2.6**) based on the Data Collection Questionnaire distributed to each jurisdiction.

Table 2.15. City of Verona Mitigation Capabilities

Capability	Y/N Date	Comments
Planning Capabilities		
Comprehensive Plan	Y; 2013	
Builder's Plan	Y; 2012	
Capital Improvement Plan	Y; 2013	
Local Emergency Plan	Y; 2014	
County Emergency Plan	Y; Jan. 1, 2014	
Local Recovery Plan	Y; 2014	
County Recovery Plan	Y; Jan. 1, 2014	
Local Mitigation Plan	Y; 2014	
County Mitigation Plan		
Local Mitigation Plan (PDM) *		
County Mitigation Plan (PDM) *		
Debris Management Plan	Y; Jan. 1, 2014	
Economic Development Plan		
Transportation Plan	Y; Jan. 1, 2014	
Land-use Plan	Y; Jan. 1,	

	2014	
Flood Mitigation Assistance (FMA) Plan	Y; Jan. 1, 2014	
Watershed Plan		
Firewise or other fire mitigation plan		
School Mitigation Plan*		
Critical Facilities Plan (Mitigation/Response/Recovery)		
Policies/Ordinance		
Zoning Ordinance	Y	
Building Code	Y; 2012 #1	
Floodplain Ordinance	Y; 2010	
Subdivision Ordinance	N	
Tree Trimming Ordinance	N	
Nuisance Ordinance	Y	
Storm Water Ordinance	Y	
Drainage Ordinance	Y	
Site Plan Review Requirements	Y	
Historic Preservation Ordinance	N	
Landscape Ordinance	N	
Iowa Wetlands and Riparian Areas Conservation Plan*		
Program		
Zoning/Land Use Restrictions	Y	
Codes Building Site/Design	Y	
National Flood Insurance Program (NFIP) Participant	Y	
NFIP Community Rating System (CRS) Participating Community		
Hazard Awareness Program	N	
National Weather Service (NWS) Storm Ready	N/A	
Building Code Effectiveness Grading (BCEGs)	Y	
ISO Fire Rating		
Economic Development Program	N/A	
Land Use Program	Y	
Public Education/Awareness	N/A	
Property Acquisition	N/A	
Planning/Zoning Boards	Y	
Stream Maintenance Program	N/A	
Tree Trimming Program	N/A	
Engineering Studies for Streams (Local/County/Regional)	N/A	
Mutual Aid Agreements	Y	
Studies/Reports/Maps		
Hazard Analysis/Risk Assessment (Local)	Y	
Hazard Analysis/Risk Assessment (County)	Y	
Flood Insurance Maps (FIRM)*		
FEMA Flood Insurance Study (Detailed) *		
Evacuation Route Map	Y	
Critical Facilities Inventory	Y	
Vulnerable Population Inventory	Y	

Land Use Map	Y	
Staff/Department		
Building Code Official	Y	Part Time
Building Inspector	Y	Part Time
Mapping Specialist (GIS)	N/A	
Engineer	N/A	
Development Planner	N/A	
Public Works Official	Y	Full Time
Emergency Management Coordinator	Y	Part Time
NFIP Floodplain Administrator	N/A	
Bomb and/or Arson Squad	N/A	
Emergency Response Team	N/A	
Hazardous Materials Expert	N/A	
Local Emergency Planning Committee	N/A	
County Emergency Management Commission	Y	
Sanitation Department	Y	Full Time
Transportation Department	N/A	
Economic Development Department	N/A	
Housing Department	N/A	
Planning Consultant*		
Regional Planning Agencies*		
Historic Preservation	N/A	
Non-Governmental Organizations (NGOs)		
American Red Cross	N	
Salvation Army	N	
Veterans Groups	N	
Environmental Organization	N	
Homeowner Associations	N	
Neighborhood Associations	N	
Chamber of Commerce	N	
Community Organizations (Lions, Kiwanis, etc.)	Y	Masons Lodge
Local Funding Availability		
Ability to apply for Community Development Block Grants	Y	
Ability to fund projects through Capital Improvements funding	Y	
Authority to levy taxes for a specific purpose	Y	
Fees for water, sewer, gas, or electric services	Y	
Impact fees for new development	Y	
Ability to incur debt through general obligation bonds	Y	
Ability to incur debt through special tax bonds	Y	
Ability to incur debt through private activities	Y	
Ability to withhold spending in hazard prone areas	Y	

Table 2.16. Mitigation Capabilities Summary Table

CAPABILITIES	Lawrence County	City of Aurora	Village of Freistatt	Village of Halltown	Village of Hoberg	City of Marionville	City of Miller	City of Monett	City of Mount Vernon	City of Pierce City	City of Stotts City	City of Verona
Planning Capabilities												
Comprehensive Plan	No	Yes, 2008				Yes	N/A	N/A	Yes; 2008			
Builder's Plan	No	Yes, 2006				N/A	N/A	N/A	Yes; 2006			
Capital Improvement Plan	Yes	N/A				N/A	Yes; 2016	Yes	Yes			
Local Emergency Plan	N/A	N/A				N/A	Yes; 2004	Yes	Yes			
County Emergency Plan	Yes	Yes				N/A	Yes; 2005	N/A	Yes			
Local Recovery Plan	N/A	N/A				N/A	Yes; 2005	Yes	Yes			
County Recovery Plan	Yes	N/A				N/A	Yes; 2005		Yes			
Local Mitigation Plan	N/A	N/A				N/A	N/A	N/A	Yes			
County Mitigation Plan	Yes	Yes				Yes	N/A	N/A	Yes			
Local Mitigation Plan (PDM)	N/A	N/A				N/A	N/A		Yes			
County Mitigation Plan (PDM)	N/A	N/A				N/A	N/A		Yes			
Debris Management Plan	Yes	N/A				N/A	N/A	Yes	Yes			
Economic Development Plan	No	Yes				N/A		No	Yes			
Transportation Plan	Yes	Yes				No	N/A	Yes	No			
Land-use Plan	No	Yes				Yes; 1998	N/A	Yes	Yes			
Flood Mitigation Assistance (FMA) Plan	No	N/A				Yes	N/A	No	No			
Watershed Plan	No	Yes				N/A		No	No			
Firewise or other fire mitigation plan	No	No				N/A	N/A	No	No			
School Mitigation Plan	N/A	N/A				N/A						
Critical Facilities Plan (Mitigation/Response/Recovery)	Yes	N/A				N/A	N/A	Yes	No			

CAPABILITIES	Lawrence County	City of Aurora	Village of Freistatt	Village of Halltown	Village of Hoberg	City of Marionville	City of Miller	City of Monett	City of Mount Vernon	City of Pierce City	City of Stotts City	City of Verona
Policies/Ordinance												
Zoning Ordinance	No	Yes				Yes	No	Yes	Yes			
Building Code	No	Yes, 2006				Yes; 2012	Yes; 1996	Ibc	Version 2006			
Floodplain Ordinance	Yes	Yes				7	No	Yes 2000	Yes 3/26, 1975			
Subdivision Ordinance	No	Yes				Yes	No	Yes	Yes			
Tree Trimming Ordinance	No	No				No	Yes	Yes	No			
Nuisance Ordinance	No	Yes				Yes	Yes	Yes	Yes			
Storm Water Ordinance	No	Yes				Yes	Yes	Yes	No			
Drainage Ordinance	No	Yes				Yes	N/A	No	No			
Site Plan Review Requirements	No	Yes				Yes	N/A	Yes	Yes			
Historic Preservation Ordinance	No	No				No	N/A	No	No			
Landscape Ordinance	No	No				Yes	N/A	Yes	No			
Iowa Wetlands and Riparian Areas Conservation Plan	No	N/A				N/A						
Program												
Zoning/Land Use Restrictions	No	Yes				Yes	Yes	Yes	Yes			
Codes Building Site/Design	No	Yes				Yes	Yes	Yes	Yes			
National Flood Insurance Program (NFIP) Participant	Yes	Yes				Yes	N/A	Yes	No			
NFIP Community Rating System (CRS) Participating Community	N/A	5				N/A	N/A	N/A	Yes			
Hazard Awareness Program	N/A	N/A				Yes	Yes	No				
National Weather Service (NWS) Storm Ready	In Progress	N/A				Yes	No	Yes	No			
Building Code Effectiveness Grading (BCEGs)	No	N/A				Yes	Yes	9	No			
ISO Fire Rating	N/A	5				7	7	4	6			
Economic Development Program	Yes	Yes				Yes	No	No	Yes			
Land Use Program	No	Yes				N/A	No	No	Yes			
Public Education/Awareness	Yes	Yes				No	Yes	Yes	No			

CAPABILITIES	Lawrence County	City of Aurora	Village of Freistatt	Village of Halltown	Village of Hoberg	City of Marionville	City of Miller	City of Monett	City of Mount Vernon	City of Pierce City	City of Stotts City	City of Verona
Property Acquisition	No	Yes				No	N/A	No	No			
Planning/Zoning Boards	No	Yes				Yes	No	Yes	Yes			
Stream Maintenance Program	No	N/A				No	N/A	N/A	Yes			
Tree Trimming Program	No	N/A				No	N/A	Yes	Yes			
Engineering Studies for Streams (Local/County/Regional)	No	Yes				No		N/A	No			
Mutual Aid Agreements	Yes	Yes				Yes	Yes	Yes	Yes			
Studies/Reports/Maps												
Hazard Analysis/Risk Assessment (Local)	N/A	Yes				N/A	No	Yes	Yes			
Hazard Analysis/Risk Assessment (County)	Yes	N/A				N/A	No	N/A	Yes			
Flood Insurance Maps	Yes	N/A				N/A						
FEMA Flood Insurance Study (Detailed)	Yes	N/A				N/A						
Evacuation Route Map	No	N/A				N/A	No	Yes	No			
Critical Facilities Inventory	No	N/A				No	N/A	Yes	Yes			
Vulnerable Population Inventory	N/A	N/A				N/A	No	No	Yes			
Land Use Map	N/A	Yes				Yes	No	Yes	Yes			
Staff/Department												
Building Code Official	No	Yes				Yes	Yes	Yes	Yes			
Building Inspector	No	Yes				Yes	Yes	Yes	Yes			
Mapping Specialist (GIS)	Yes	No				No	No	Yes	No			
Engineer	No	Yes				Yes	Yes	Yes	No			
Development Planner	No	No				Yes	No	No	No			
Public Works Official	No	Yes				Yes	Yes	Yes	Yes			
Emergency Management Coordinator	Yes	Yes				Yes	Yes	Yes	Yes			
NFIP Floodplain Administrator	Yes	Yes				Yes	No	Yes	Yes			
Bomb and/or Arson Squad	N/A	Yes				No	Yes	No	No			
Emergency Response Team	N/A	No				No	Yes	Yes	No			
Hazardous Materials Expert	Yes	N/A				No	Yes	Yes	No			

CAPABILITIES	Lawrence County	City of Aurora	Village of Freistatt	Village of Halltown	Village of Hoberg	City of Marionville	City of Miller	City of Monett	City of Mount Vernon	City of Pierce City	City of Stotts City	City of Verona
Local Emergency Planning Committee	Yes	Yes				No	No	Yes	No			
County Emergency Management Commission	N/A	N/A				N/A	Yes	N/A	No			
Sanitation Department	No	No				No	N/A	Yes	Yes			
Transportation Department	No	Yes				No	N/A	No	Yes			
Economic Development Department	No	No				No	N/A	Yes	Yes			
Housing Department	No	No				No	N/A	No	No			
Planning Consultant	N/A	N/A				N/A						
Regional Planning Agencies	N/A	N/A				N/A						
Historic Preservation	No	No				No	N/A	No	No			
Non-Governmental Organizations (NGOs)												
American Red Cross	Yes	No				No	No	Yes	No			
Salvation Army	No	No				No	No	No	No			
Veterans Groups	Yes	No				No	Yes	Yes	Yes			
Environmental Organization	No	No				No	No	No	No			
Homeowner Associations	N/A	No				No	No	Yes	No			
Neighborhood Associations	N/A	No				No	No	No	No			
Chamber of Commerce	N/A	Yes				No	No	Yes	Yes			
Community Organizations (Lions, Kiwanis, etc.	Yes	Yes				Yes	Yes	Yes	Yes			
Financial Resources												
Apply for Community Development Block Grants	Yes	Yes				No	Yes	Yes	Yes			
Fund projects through Capital Improvements funding	Yes	Yes				Yes	Yes	Yes	Yes			
Authority to levy taxes for specific purposes	Yes	Yes				Yes	Yes	Yes	Yes			
Fees for water, sewer, gas, or electric services	No	Yes				Yes	Yes	Yes	Yes			
Impact fees for new development	No	Yes				N/A	No	Yes	Yes			

CAPABILITIES	Lawrence County	City of Aurora	Village of Freistatt	Village of Halltown	Village of Hoberg	City of Marionville	City of Miller	City of Monett	City of Mount Vernon	City of Pierce City	City of Stotts City	City of Verona
Incur dept through general obligation bonds	Yes	Yes				N/A	Yes	Yes	Yes			
Incur debt through special tax bonds	N/A	Yes				N/A	Yes	Yes	Yes			
Incur debt through private activities	No	Yes				N/A	No	Yes	Yes			
Withhold spending in hazard prone areas	No	No				No	N/A	Yes				

Source: Data Collection Questionnaires, date

2.2.11 Buck Prairie Special Road District

Describe the purpose of the special district, the area it covers, whether or not it is a public entity, how it is governed (Board of Trustees who are appointed or elected). Does it have the power to levy taxes, who owns it, how is it funded. List the departments, such as:

- Customer Service
- Information Technology
- Human Resources
- Water Distribution and Grounds
- Engineering
- Finance
- Office of the CEO / General Manager
- Water Production

List past or ongoing projects or programs designed to reduce disaster losses such as a levee or flood wall protecting a portion of the facility. List mitigation-related capabilities such as:

- On-site warning sirens
- Weather radios
- Mutual Aid Agreements in place
- Critical Facilities Inventory
- Engineer on Staff
- Emergency Management Coordinator on Staff
- Ability to fund projects through Capital Improvements Funding
- Fees collected for water services
- Financial Resources from Impact fees for new development
- Ability to withhold spending in hazard prone areas

Table 2.17. Buck Prairie Special Road District Mitigation Capabilities

Capability	Y/N	Date	Comments
Planning Capabilities			
Comprehensive Plan			
Builder's Plan			
Capital Improvement Plan			
Local Emergency Plan			
County Emergency Plan			
Local Recovery Plan			
County Recovery Plan			
Local Mitigation Plan			
County Mitigation Plan			
Local Mitigation Plan (PDM) *			
County Mitigation Plan (PDM) *			

Debris Management Plan		
Economic Development Plan		
Transportation Plan		
Land-use Plan		
Flood Mitigation Assistance (FMA) Plan		
Watershed Plan		
Firewise or other fire mitigation plan		
School Mitigation Plan*		
Critical Facilities Plan (Mitigation/Response/Recovery)		
Policies/Ordinance		
Zoning Ordinance		
Building Code		
Floodplain Ordinance		
Subdivision Ordinance		
Tree Trimming Ordinance		
Nuisance Ordinance		
Storm Water Ordinance		
Drainage Ordinance		
Site Plan Review Requirements		
Historic Preservation Ordinance		
Landscape Ordinance		
Iowa Wetlands and Riparian Areas Conservation Plan*		
Program		
Zoning/Land Use Restrictions		
Codes Building Site/Design		
National Flood Insurance Program (NFIP) Participant		
NFIP Community Rating System (CRS) Participating Community		
Hazard Awareness Program		
National Weather Service (NWS) Storm Ready		
Building Code Effectiveness Grading (BCEGs)		
ISO Fire Rating		
Economic Development Program		
Land Use Program		
Public Education/Awareness		
Property Acquisition		
Planning/Zoning Boards		
Stream Maintenance Program		
Tree Trimming Program		
Engineering Studies for Streams (Local/County/Regional)		
Mutual Aid Agreements		
Studies/Reports/Maps		
Hazard Analysis/Risk Assessment (Local)		
Hazard Analysis/Risk Assessment (County)		
Flood Insurance Maps (FIRM)*		
FEMA Flood Insurance Study (Detailed) *		

Evacuation Route Map		
Critical Facilities Inventory		
Vulnerable Population Inventory		
Land Use Map		
Staff/Department		
Building Code Official		
Building Inspector		
Mapping Specialist (GIS)		
Engineer		
Development Planner		
Public Works Official		
Emergency Management Coordinator		
NFIP Floodplain Administrator		
Bomb and/or Arson Squad		
Emergency Response Team		
Hazardous Materials Expert		
Local Emergency Planning Committee		
County Emergency Management Commission		
Sanitation Department		
Transportation Department		
Economic Development Department		
Housing Department		
Planning Consultant*		
Regional Planning Agencies*		
Historic Preservation		
Non-Governmental Organizations (NGOs)		
American Red Cross		
Salvation Army		
Veterans Groups		
Environmental Organization		
Homeowner Associations		
Neighborhood Associations		
Chamber of Commerce		
Community Organizations (Lions, Kiwanis, etc.)		
Local Funding Availability		
Ability to apply for Community Development Block Grants		
Ability to fund projects through Capital Improvements funding		
Authority to levy taxes for a specific purpose		
Fees for water, sewer, gas, or electric services		
Impact fees for new development		
Ability to incur debt through general obligation bonds		
Ability to incur debt through special tax bonds		
Ability to incur debt through private activities		
Ability to withhold spending in hazard prone areas		

2.2.12 Green Benefit Special Road District

Describe the purpose of the special district, the area it covers, whether or not it is a public entity, how it is governed (Board of Trustees who are appointed or elected). Does it have the power to levy taxes, who owns it, how is it funded. List the departments, such as:

- Customer Service
- Information Technology
- Human Resources
- Water Distribution and Grounds
- Engineering
- Finance
- Office of the CEO / General Manager
- Water Production

List past or ongoing projects or programs designed to reduce disaster losses such as a levee or flood wall protecting a portion of the facility. List mitigation-related capabilities such as:

- On-site warning sirens
- Weather radios
- Mutual Aid Agreements in place
- Critical Facilities Inventory
- Engineer on Staff
- Emergency Management Coordinator on Staff
- Ability to fund projects through Capital Improvements Funding
- Fees collected for water services
- Financial Resources from Impact fees for new development
- Ability to withhold spending in hazard prone areas

Table 2.18. Green Benefit Special Road District Mitigation Capabilities

Capability	Y/N Date	Comments
Planning Capabilities		
Comprehensive Plan	N/A	
Builder's Plan	N/A	
Capital Improvement Plan	N/A	
Local Emergency Plan	N/A	
County Emergency Plan	N/A	
Local Recovery Plan	N/A	
County Recovery Plan	N/A	
Local Mitigation Plan	N/A	
County Mitigation Plan	N/A	
Local Mitigation Plan (PDM) *	N/A	

County Mitigation Plan (PDM) *	N/A	
Debris Management Plan	N/A	
Economic Development Plan	N/A	
Transportation Plan	N/A	
Land-use Plan	N/A	
Flood Mitigation Assistance (FMA) Plan	N/A	
Watershed Plan	N/A	
Firewise or other fire mitigation plan	N/A	
School Mitigation Plan*	N/A	
Critical Facilities Plan (Mitigation/Response/Recovery)	N/A	
Policies/Ordinance		
Zoning Ordinance	N/A	
Building Code	N/A	
Floodplain Ordinance	N/A	
Subdivision Ordinance	N/A	
Tree Trimming Ordinance	N/A	
Nuisance Ordinance	N/A	
Storm Water Ordinance	N/A	
Drainage Ordinance	N/A	
Site Plan Review Requirements	N/A	
Historic Preservation Ordinance	N/A	
Landscape Ordinance	N/A	
Iowa Wetlands and Riparian Areas Conservation Plan*	N/A	
Program		
Zoning/Land Use Restrictions	N/A	
Codes Building Site/Design	N/A	
National Flood Insurance Program (NFIP) Participant	N/A	
NFIP Community Rating System (CRS) Participating Community	N/A	
Hazard Awareness Program	N/A	
National Weather Service (NWS) Storm Ready	N/A	
Building Code Effectiveness Grading (BCEGs)	N/A	
ISO Fire Rating	N/A	
Economic Development Program	N/A	
Land Use Program	N/A	
Public Education/Awareness	N/A	
Property Acquisition	N/A	
Planning/Zoning Boards	N/A	
Stream Maintenance Program	N/A	
Tree Trimming Program	N/A	
Engineering Studies for Streams (Local/County/Regional)	N/A	
Mutual Aid Agreements	N/A	
Studies/Reports/Maps		
Hazard Analysis/Risk Assessment (Local)	N/A	
Hazard Analysis/Risk Assessment (County)	N/A	
Flood Insurance Maps (FIRM)*	N/A	

FEMA Flood Insurance Study (Detailed) *	N/A	
Evacuation Route Map	N/A	
Critical Facilities Inventory	N/A	
Vulnerable Population Inventory	N/A	
Land Use Map	N/A	
Staff/Department		
Building Code Official	N/A	
Building Inspector	N/A	
Mapping Specialist (GIS)	N/A	
Engineer	N/A	
Development Planner	N/A	
Public Works Official	N/A	
Emergency Management Coordinator	N/A	
NFIP Floodplain Administrator	N/A	
Bomb and/or Arson Squad	N/A	
Emergency Response Team	N/A	
Hazardous Materials Expert	N/A	
Local Emergency Planning Committee	N/A	
County Emergency Management Commission	N/A	
Sanitation Department	N/A	
Transportation Department	N/A	
Economic Development Department	N/A	
Housing Department	N/A	
Planning Consultant*	N/A	
Regional Planning Agencies*	N/A	
Historic Preservation	N/A	
Non-Governmental Organizations (NGOs)		
American Red Cross	N/A	
Salvation Army	N/A	
Veterans Groups	N/A	
Environmental Organization	N/A	
Homeowner Associations	N/A	
Neighborhood Associations	N/A	
Chamber of Commerce	N/A	
Community Organizations (Lions, Kiwanis, etc.	N/A	
Local Funding Availability		
Ability to apply for Community Development Block Grants	No	
Ability to fund projects through Capital Improvements funding	No	
Authority to levy taxes for a specific purpose	No	
Fees for water, sewer, gas, or electric services	No	
Impact fees for new development	No	
Ability to incur debt through general obligation bonds	No	
Ability to incur debt through special tax bonds	No	
Ability to incur debt through private activities	No	
Ability to withhold spending in hazard prone areas	No	

2.2.13 Miller Benefit Special Road District

Describe the purpose of the special district, the area it covers, whether or not it is a public entity, how it is governed (Board of Trustees who are appointed or elected). Does it have the power to levy taxes, who owns it, how is it funded. List the departments, such as:

- Customer Service
- Information Technology
- Human Resources
- Water Distribution and Grounds
- Engineering
- Finance
- Office of the CEO / General Manager
- Water Production

List past or ongoing projects or programs designed to reduce disaster losses such as a levee or flood wall protecting a portion of the facility. List mitigation-related capabilities such as:

- On-site warning sirens
- Weather radios
- Mutual Aid Agreements in place
- Critical Facilities Inventory
- Engineer on Staff
- Emergency Management Coordinator on Staff
- Ability to fund projects through Capital Improvements Funding
- Fees collected for water services
- Financial Resources from Impact fees for new development
- Ability to withhold spending in hazard prone areas

Table 2.19. Miller Benefit Special Road District Mitigation Capabilities

Capability	Y/N Date	Comments
Planning Capabilities		
Comprehensive Plan		
Builder's Plan	N/A	
Capital Improvement Plan		ASAP. New Maintenance building
Local Emergency Plan		
County Emergency Plan		
Local Recovery Plan		
County Recovery Plan		
Local Mitigation Plan		
County Mitigation Plan		
Local Mitigation Plan (PDM) *		
County Mitigation Plan (PDM) *		

Debris Management Plan		3 burn spots in the City of Miller
Economic Development Plan		
Transportation Plan		
Land-use Plan		
Flood Mitigation Assistance (FMA) Plan		
Watershed Plan		
Firewise or other fire mitigation plan		
School Mitigation Plan*		
Critical Facilities Plan (Mitigation/Response/Recovery)		
Policies/Ordinance		
Zoning Ordinance	N	
Building Code	N	
Floodplain Ordinance	N	
Subdivision Ordinance	N	
Tree Trimming Ordinance	N	
Nuisance Ordinance	N	
Storm Water Ordinance	N	
Drainage Ordinance	N	
Site Plan Review Requirements	N	
Historic Preservation Ordinance	N	
Landscape Ordinance	N	
Iowa Wetlands and Riparian Areas Conservation Plan*	N	
Program		
Zoning/Land Use Restrictions	N	
Codes Building Site/Design	N	
National Flood Insurance Program (NFIP) Participant	N	
NFIP Community Rating System (CRS) Participating Community	N	
Hazard Awareness Program	N	
National Weather Service (NWS) Storm Ready	N	
Building Code Effectiveness Grading (BCEGs)	N	
ISO Fire Rating	N	
Economic Development Program	N	
Land Use Program	N	
Public Education/Awareness	N	
Property Acquisition	N	
Planning/Zoning Boards	N	
Stream Maintenance Program	N	
Tree Trimming Program	N	
Engineering Studies for Streams (Local/County/Regional)	N	
Mutual Aid Agreements	N	
Studies/Reports/Maps		
Hazard Analysis/Risk Assessment (Local)	N	
Hazard Analysis/Risk Assessment (County)	N	
Flood Insurance Maps (FIRM)*		
FEMA Flood Insurance Study (Detailed) *		

Evacuation Route Map	N	
Critical Facilities Inventory	N	
Vulnerable Population Inventory	N	
Land Use Map		Road Maps
Staff/Department		
Building Code Official	N	
Building Inspector	N	
Mapping Specialist (GIS)	N	
Engineer	N	
Development Planner	N	
Public Works Official	N	
Emergency Management Coordinator	N	
NFIP Floodplain Administrator	N	
Bomb and/or Arson Squad	N	
Emergency Response Team	N	
Hazardous Materials Expert	N	
Local Emergency Planning Committee	N	
County Emergency Management Commission	N	
Sanitation Department	N	
Transportation Department	N	
Economic Development Department	N	
Housing Department	N	
Planning Consultant*		
Regional Planning Agencies*		
Historic Preservation	N	
Non-Governmental Organizations (NGOs)		
American Red Cross	N	
Salvation Army	N	
Veterans Groups	N	
Environmental Organization	N	
Homeowner Associations		
Neighborhood Associations		
Chamber of Commerce		
Community Organizations (Lions, Kiwanis, etc.		
Local Funding Availability		
Ability to apply for Community Development Block Grants		
Ability to fund projects through Capital Improvements funding		
Authority to levy taxes for a specific purpose		
Fees for water, sewer, gas, or electric services		
Impact fees for new development		
Ability to incur debt through general obligation bonds		
Ability to incur debt through special tax bonds		
Ability to incur debt through private activities		
Ability to withhold spending in hazard prone areas		

2.2.14 Mt. Vernon Benefit Special Road District

Describe the purpose of the special district, the area it covers, whether or not it is a public entity, how it is governed (Board of Trustees who are appointed or elected). Does it have the power to levy taxes, who owns it, how is it funded. List the departments, such as:

- Customer Service
- Information Technology
- Human Resources
- Water Distribution and Grounds
- Engineering
- Finance
- Office of the CEO / General Manager
- Water Production

List past or ongoing projects or programs designed to reduce disaster losses such as a levee or flood wall protecting a portion of the facility. List mitigation-related capabilities such as:

- On-site warning sirens
- Weather radios
- Mutual Aid Agreements in place
- Critical Facilities Inventory
- Engineer on Staff
- Emergency Management Coordinator on Staff
- Ability to fund projects through Capital Improvements Funding
- Fees collected for water services
- Financial Resources from Impact fees for new development
- Ability to withhold spending in hazard prone areas

Table 2.20. Mt. Vernon Special Road District Mitigation Capabilities

Capability	Y/N Date	Comments
Planning Capabilities		
Comprehensive Plan	No	
Builder's Plan	No	
Capital Improvement Plan	No	
Local Emergency Plan	N/A	
County Emergency Plan	No	
Local Recovery Plan	No	
County Recovery Plan	No	
Local Mitigation Plan	N/A	
County Mitigation Plan	Yes	
Local Mitigation Plan (PDM) *	N/A	
County Mitigation Plan (PDM) *	N/A	

Debris Management Plan	No	
Economic Development Plan	No	
Transportation Plan	No	
Land-use Plan	No	
Flood Mitigation Assistance (FMA) Plan	No	
Watershed Plan	No	
Firewise or other fire mitigation plan	No	
School Mitigation Plan*	N/A	
Critical Facilities Plan (Mitigation/Response/Recovery)	No	
Policies/Ordinance		
Zoning Ordinance	No	
Building Code	No	
Floodplain Ordinance	No	
Subdivision Ordinance	Yes	Engineer Approved
Tree Trimming Ordinance	No	
Nuisance Ordinance	No	
Storm Water Ordinance	No	
Drainage Ordinance	No	
Site Plan Review Requirements	Yes	Engineer
Historic Preservation Ordinance	No	
Landscape Ordinance	No	
Iowa Wetlands and Riparian Areas Conservation Plan*	N/A	
Program		
Zoning/Land Use Restrictions	No	
Codes Building Site/Design	No	
National Flood Insurance Program (NFIP) Participant	No	
NFIP Community Rating System (CRS) Participating Community	No	
Hazard Awareness Program	No	
National Weather Service (NWS) Storm Ready	No	
Building Code Effectiveness Grading (BCEGs)	No	
ISO Fire Rating	N/A	
Economic Development Program	No	
Land Use Program	No	
Public Education/Awareness	No	
Property Acquisition	No	
Planning/Zoning Boards	No	
Stream Maintenance Program	N/A	
Tree Trimming Program	Yes	
Engineering Studies for Streams (Local/County/Regional)	Yes	Part Time
Mutual Aid Agreements	No	
Studies/Reports/Maps		
Hazard Analysis/Risk Assessment (Local)	N/A	
Hazard Analysis/Risk Assessment (County)	N/A	
Flood Insurance Maps (FIRM)*	N/A	
FEMA Flood Insurance Study (Detailed) *	N/A	

Evacuation Route Map	No	
Critical Facilities Inventory	No	
Vulnerable Population Inventory	No	
Land Use Map	No	
Staff/Department		
Building Code Official	No	
Building Inspector	No	
Mapping Specialist (GIS)	No	
Engineer	Yes	County – Part Time
Development Planner	No	
Public Works Official	No	
Emergency Management Coordinator	Yes	County
NFIP Floodplain Administrator	No	
Bomb and/or Arson Squad	N/A	
Emergency Response Team	No	
Hazardous Materials Expert	No	
Local Emergency Planning Committee	No	
County Emergency Management Commission	Yes	County
Sanitation Department	N/A	
Transportation Department	No	
Economic Development Department	No	
Housing Department	No	
Planning Consultant*	N/A	
Regional Planning Agencies*	N/A	
Historic Preservation	No	
Non-Governmental Organizations (NGOs)		
American Red Cross	Yes	
Salvation Army	Yes	
Veterans Groups	Yes	
Environmental Organization	Yes	County
Homeowner Associations	No	
Neighborhood Associations	Yes	
Chamber of Commerce	Yes	City
Community Organizations (Lions, Kiwanis, etc.)	Yes	
Local Funding Availability		
Ability to apply for Community Development Block Grants	N/A	
Ability to fund projects through Capital Improvements funding	N/A	
Authority to levy taxes for a specific purpose	Yes	
Fees for water, sewer, gas, or electric services	Yes	
Impact fees for new development	Yes	
Ability to incur debt through general obligation bonds	N/A	
Ability to incur debt through special tax bonds	N/A	
Ability to incur debt through private activities	Yes	
Ability to withhold spending in hazard prone areas	No	

2.2.15 Verona Benefit Special Road District

Describe the purpose of the special district, the area it covers, whether or not it is a public entity, how it is governed (Board of Trustees who are appointed or elected). Does it have the power to levy taxes, who owns it, how is it funded. List the departments, such as:

- Customer Service
- Information Technology
- Human Resources
- Water Distribution and Grounds
- Engineering
- Finance
- Office of the CEO / General Manager
- Water Production

List past or ongoing projects or programs designed to reduce disaster losses such as a levee or flood wall protecting a portion of the facility. List mitigation-related capabilities such as:

- On-site warning sirens
- Weather radios
- Mutual Aid Agreements in place
- Critical Facilities Inventory
- Engineer on Staff
- Emergency Management Coordinator on Staff
- Ability to fund projects through Capital Improvements Funding
- Fees collected for water services
- Financial Resources from Impact fees for new development
- Ability to withhold spending in hazard prone areas

Table 2.21. Verona Benefit Special Road District Mitigation Capabilities

Capability	Y/N	Date	Comments
Planning Capabilities			
Comprehensive Plan			
Builder's Plan			
Capital Improvement Plan			
Local Emergency Plan			
County Emergency Plan			
Local Recovery Plan			
County Recovery Plan			
Local Mitigation Plan			
County Mitigation Plan			
Local Mitigation Plan (PDM) *			
County Mitigation Plan (PDM) *			

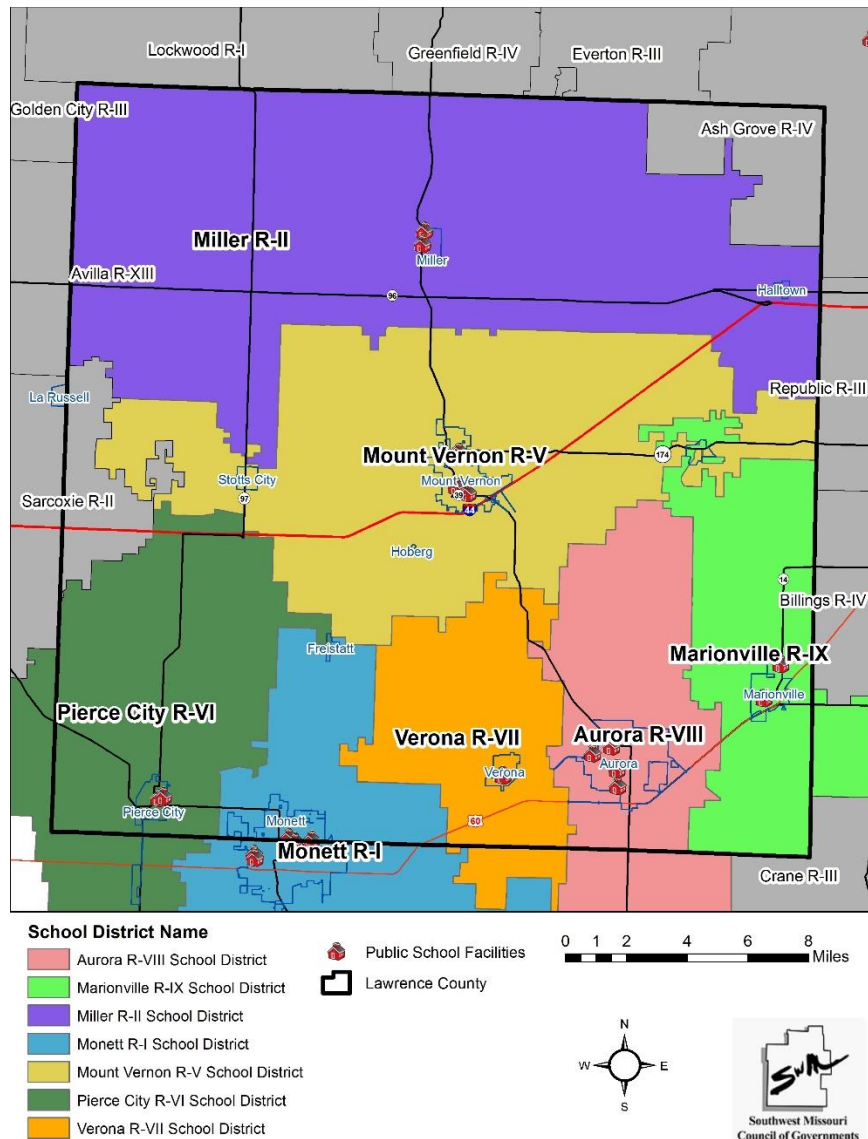
Debris Management Plan		
Economic Development Plan		
Transportation Plan		
Land-use Plan		
Flood Mitigation Assistance (FMA) Plan		
Watershed Plan		
Firewise or other fire mitigation plan		
School Mitigation Plan*		
Critical Facilities Plan (Mitigation/Response/Recovery)		
Policies/Ordinance		
Zoning Ordinance		
Building Code		
Floodplain Ordinance		
Subdivision Ordinance		
Tree Trimming Ordinance		
Nuisance Ordinance		
Storm Water Ordinance		
Drainage Ordinance		
Site Plan Review Requirements		
Historic Preservation Ordinance		
Landscape Ordinance		
Iowa Wetlands and Riparian Areas Conservation Plan*		
Program		
Zoning/Land Use Restrictions		
Codes Building Site/Design		
National Flood Insurance Program (NFIP) Participant		
NFIP Community Rating System (CRS) Participating Community		
Hazard Awareness Program		
National Weather Service (NWS) Storm Ready		
Building Code Effectiveness Grading (BCEGs)		
ISO Fire Rating		
Economic Development Program		
Land Use Program		
Public Education/Awareness		
Property Acquisition		
Planning/Zoning Boards		
Stream Maintenance Program		
Tree Trimming Program		
Engineering Studies for Streams (Local/County/Regional)		
Mutual Aid Agreements		
Studies/Reports/Maps		
Hazard Analysis/Risk Assessment (Local)		
Hazard Analysis/Risk Assessment (County)		
Flood Insurance Maps (FIRM)*		
FEMA Flood Insurance Study (Detailed) *		

Evacuation Route Map		
Critical Facilities Inventory		
Vulnerable Population Inventory		
Land Use Map		
Staff/Department		
Building Code Official		
Building Inspector		
Mapping Specialist (GIS)		
Engineer		
Development Planner		
Public Works Official		
Emergency Management Coordinator		
NFIP Floodplain Administrator		
Bomb and/or Arson Squad		
Emergency Response Team		
Hazardous Materials Expert		
Local Emergency Planning Committee		
County Emergency Management Commission		
Sanitation Department		
Transportation Department		
Economic Development Department		
Housing Department		
Planning Consultant*		
Regional Planning Agencies*		
Historic Preservation		
Non-Governmental Organizations (NGOs)		
American Red Cross		
Salvation Army		
Veterans Groups		
Environmental Organization		
Homeowner Associations		
Neighborhood Associations		
Chamber of Commerce		
Community Organizations (Lions, Kiwanis, etc.)		
Local Funding Availability		
Ability to apply for Community Development Block Grants		
Ability to fund projects through Capital Improvements funding		
Authority to levy taxes for a specific purpose		
Fees for water, sewer, gas, or electric services		
Impact fees for new development		
Ability to incur debt through general obligation bonds		
Ability to incur debt through special tax bonds		
Ability to incur debt through private activities		
Ability to withhold spending in hazard prone areas		

2.2.16 Public School District Profiles and Mitigation Capabilities

This section provides general information about participating school districts in the plan. There are seven school districts with facilities in Lawrence County. **Figure 2.4** is a map of school district boundaries in Lawrence County.

Figure 2.4. Lawrence County School District Boundaries



Insert a chart providing location and enrollment information for each school district. Insert data limitations language for the school districts that cover more than one county, since the enrollment data is for the entire school district and not just the portion located in the planning area. Insert a table for each school district that includes information about the district obtained in the Data Collection Questionnaire and from <http://mcde.dese.mo.gov/quickfacts/Pages/District-and-School-Information.aspx>. After going to this website, select the file for the most recent year called “20xx Building Enrollment PK-12”, filter the spreadsheet by selecting only the public school districts in the planning area. Web based searches will also result in valuable information.

Table 2.22. Lawrence County School Buildings and Enrollment Data, 2017

District Name	Building Name	Building Enrolment
Aurora R-VIII	Aurora High	619
Aurora R-VIII	Aurora Jr. High	309
Aurora R-VIII	Pate Early Childhood Center	507
Aurora R-VIII	Robinson Elementary	292
Aurora R-VIII	Robinson Intermediate	290
Marionville R-IX	Marionville High	214
Marionville R-IX	Marionville Middle	146
Marionville R-IX	Marionville Elementary	395
Miller R-II	Miller High	256
Miller R-II	Central Elementary	304
Monett R-I	Monett High	733
Monett R-I	Monett Middle	366
Monett R-I	Central Park Elementary	359
Monett R-I	Monett Elementary	579
Monett R-I	Monett Intermediate	363
Mt. Vernon R-V	Mt. Vernon High	465
Mt. Vernon R-V	Mt. Vernon Middle	311
Mt. Vernon R-V	Mt. Vernon Elementary	359
Mt. Vernon R-V	Mt. Vernon Intermediate	311
Pierce City R-VI	Pierce City High	203
Pierce City R-VI	Pierce City Middle	214
Pierce City R-VI	Central Elementary	273
Verona R-VII	Verona High	193
Verona R-VII	Verona Elementary	219

<http://mcids.dese.mo.gov/quickfacts/Pages/District-and-School-Information.aspx>

Also from the Data Collection Questionnaire, insert tables with the following school district capabilities for hazard mitigation.

Table 2.23. Summary of Lawrence County School District Mitigation Capabilities

Capability	Aurora R-VIII	Marionville R-IX	Miller R-II	Monett R-I	Mt. Vernon R-V	Pierce City R-VI	Verona R-VII
Planning Elements							
Master Plan/ Date		N/A	Yes, 2015	No	No	Yes, 2008	
Capital Improvement Plan/Date		Yes, 2017	Yes, 2016	Yes, 2016	No	No	
School Emergency Plan / Date		Yes, 2017	Yes, 2016	Yes, 2014	Yes, 2009	Yes	
Weapons Policy/Date		Yes, 2017	Yes, 2014	Yes, 2010	Yes, 2014	Yes	
Personnel Resources							
Full-Time Building Official (Principal)		Yes	Yes	Yes	Yes	No	
Emergency Manager		N/A	No	Yes	Yes	No	
Grant Writer		N/A	No	No	N/A	No	
Public Information Officer		N/A	No	No	Yes	No	
Financial Resources							
Capital Improvements Project Funding		Yes	No	Yes	Yes	Yes	
Local Funds		Yes	No	Yes	Yes	Yes	
General Obligation Bonds		Yes	No	Yes	Yes	No	
Special Tax Bonds		N/A	No	No	Yes	No	
Private Activities/Donations		Yes	No	Yes	Yes	Yes	
State And Federal Funds/Grants		Yes	No	Yes	Yes	Yes	
Other							
Public Education Programs							

Capability	Aurora R-VIII	Marionville R-IX	Miller R-II	Monett R-I	Mt. Vernon R-V	Pierce City R-VI	Verona R-VII
Privately Or Self-Insured?							
Fire Evacuation Training							
Tornado Sheltering Exercises							
Public Address/Emergency Alert System		Yes	Yes	Yes	Yes	Yes	
NOAA Weather Radios		Yes	Yes	Yes	Yes	Yes	
Lock-Down Security Training							
Mitigation Programs							
Tornado Shelter/Saferoom		Yes (non-FEMA)	No	Yes	No	Yes	
Campus Police		SRO (starting 8/17)	Local PD	Local PD	Local PD	Local PD	

Data Collection Questionnaires, 2017

3 RISK ASSESSMENT

3.1 Hazard Identification	Error! Bookmark not defined.
3.1.1 <i>Review of Existing Mitigation Plans</i>	<i>Error! Bookmark not defined.</i>
3.1.2 <i>Review Disaster Declaration History</i>	<i>Error! Bookmark not defined.</i>
3.1.3 <i>Research Additional Sources</i>	<i>Error! Bookmark not defined.</i>
3.1.4 <i>Hazards Identified</i>	<i>Error! Bookmark not defined.</i>
3.1.5 <i>Multi-Jurisdictional Risk Assessment</i>	<i>Error! Bookmark not defined.</i>
3.2 Assets at Risk	Error! Bookmark not defined.
3.2.1 <i>Total Exposure of Population and Structures</i>	<i>Error! Bookmark not defined.</i>
Unincorporated County and Incorporated Cities	Error! Bookmark not defined.
3.2.2 <i>Critical and Essential Facilities and Infrastructure</i>	<i>Error! Bookmark not defined.</i>
3.2.3 <i>Other Assets</i>	<i>Error! Bookmark not defined.</i>
3.3 Land Use and Development	Error! Bookmark not defined.
3.3.1 <i>Development Since Previous Plan Update</i>	<i>Error! Bookmark not defined.</i>
3.3.2 <i>Future Land Use and Development</i>	<i>Error! Bookmark not defined.</i>
School District's Future Development	Error! Bookmark not defined.
Special District's Future Development	Error! Bookmark not defined.
3.4 Hazard Profiles, Vulnerability, and Problem Statements	Error! Bookmark not defined.
Hazard Profiles	Error! Bookmark not defined.
Vulnerability Assessments	Error! Bookmark not defined.
Problem Statements	Error! Bookmark not defined.
3.4.1 <i>Dam Failure</i>	<i>Error! Bookmark not defined.</i>
Hazard Profile	Error! Bookmark not defined.
Vulnerability	Error! Bookmark not defined.
Problem Statement	Error! Bookmark not defined.
3.4.2 <i>Drought</i>	<i>Error! Bookmark not defined.</i>
Hazard Profile	Error! Bookmark not defined.
Vulnerability	Error! Bookmark not defined.
Problem Statement	Error! Bookmark not defined.
3.4.3 <i>Earthquakes</i>	<i>Error! Bookmark not defined.</i>
Hazard Profile	Error! Bookmark not defined.
Vulnerability	Error! Bookmark not defined.
Problem Statement	Error! Bookmark not defined.
3.4.4 <i>Extreme Heat</i>	<i>Error! Bookmark not defined.</i>
Hazard Profile	Error! Bookmark not defined.
Vulnerability	Error! Bookmark not defined.

Problem Statement.....	Error! Bookmark not defined.
3.4.5 Fires (Urban/Structural and Wild)	Error! Bookmark not defined.
Hazard Profile	Error! Bookmark not defined.
Vulnerability.....	Error! Bookmark not defined.
Problem Statement.....	Error! Bookmark not defined.
3.4.6 Flooding (Flash and River).....	Error! Bookmark not defined.
Profile	Error! Bookmark not defined.
Vulnerability.....	Error! Bookmark not defined.
Problem Statement.....	Error! Bookmark not defined.
3.4.7 Land Subsidence/Sinkholes	Error! Bookmark not defined.
Hazard Profile	Error! Bookmark not defined.
Vulnerability.....	Error! Bookmark not defined.
Problem Statement.....	Error! Bookmark not defined.
3.4.8 Thunderstorm/High Winds/Lightning/Hail.....	Error! Bookmark not defined.
Hazard Profile	Error! Bookmark not defined.
Vulnerability.....	Error! Bookmark not defined.
Problem Statement.....	Error! Bookmark not defined.
3.4.9 Tornado.....	Error! Bookmark not defined.
HazardProfile	Error! Bookmark not defined.
Vulnerability.....	Error! Bookmark not defined.
Problem Statement.....	Error! Bookmark not defined.
3.4.10 Winter Weather/Snow/Ice/Severe Cold	Error! Bookmark not defined.
Hazard Profile	Error! Bookmark not defined.
Vulnerability.....	Error! Bookmark not defined.
Problem Statement.....	Error! Bookmark not defined.

44 CFR Requirement §201.6(c)(2): [The plan shall include] A risk assessment that provides the factual basis for activities proposed in the strategy to reduce losses from identified hazards. Local risk assessments must provide sufficient information to enable the jurisdiction to identify and prioritize appropriate mitigation actions to reduce losses from identified hazards.

The goal of the risk assessment is to estimate the potential loss in the Lawrence County, Missouri, including loss of life, personal injury, property damage, and economic loss, from a hazard event. The risk assessment process allows communities and school/special districts in the planning area to better understand their potential risk to the identified hazards. It will provide a framework for developing and prioritizing mitigation actions to reduce risk from future hazard events.

This is an update of the previous Lawrence County Hazard Mitigation Plan adopted in March of 2013. According to the U.S. Census Bureau July 1, 2016 population estimate, the population of Lawrence County fell to 38,381 from 38,634 at the time of the 2010 decennial census. The population has decreased by approximately 253 people since the Lawrence County Hazard Mitigation Plan was adopted in 2013. According to the building permit data from the U.S. Department of Housing and Urban Development (SOCDS), 76 total building units were

constructed 2010-2016. Of the total, 68 units were single-family dwellings while 8 units were multi-family dwellings. Building permit data is derived from the Census Bureau's Building Permits Survey.

Lawrence County has since remained a third class county in Missouri. According to Missouri Revised statutes (RSMO 48.020), "All counties having an assessed valuation of less than the assessed valuation necessary for that county to be in the second classification shall automatically be in the third classification."

This chapter is divided into four main parts:

- **Section 3.1 Hazard Identification** identifies the hazards that threaten the planning area and provides a factual basis for elimination of hazards from further consideration;
- **Section 3.2 Assets at Risk** provides the planning area's total exposure to natural hazards, considering critical facilities and other community assets at risk;
- **Section 3.3 Future Land Use and Development** discusses areas of planned future development
- **Section 3.4 Hazard Profiles and Vulnerability Analysis** provides more detailed information about the hazards impacting the planning area. For each hazard, there are three sections: 1) Hazard Profile provides a general description and discusses the threat to the planning area, the geographic location at risk, potential severity/magnitude/extent, previous occurrences of hazard events, probability of future occurrence, risk summary by jurisdiction, impact of future development on the risk; 2) Vulnerability Assessment further defines and quantifies populations, buildings, critical facilities, and other community/school or special district assets at risk to natural hazards; and 3) Problem Statement briefly summarizes the problem and develops possible solutions.

3.1 Hazard Identification

Requirement §201.6(c)(2)(i): [The risk assessment shall include a] description of the type...of all natural hazards that can affect the jurisdiction.

The Plan profiles all natural hazards that can affect Lawrence County. The natural hazards that can affect the county have been identified in the 2013 Lawrence County Plan and the 2013 Missouri State Plan. Natural hazards are naturally occurring climatological, hydrological or geologic events that have a negative effect on people and the built environment. Natural hazards identified in the 2013 Lawrence County Plan included:

- Tornado
- Severe Thunderstorm
- Riverine and Flash Flood
- Severe Winter Weather
- Drought
- Heatwave
- Earthquake
- Dam Failure
- Wildfire, and
- Sinkholes

No new natural hazards have been identified since the adoption of the previous plan. The 2013 Missouri State Plan combines severe cold from severe winter weather hazard and heatwave into an extreme temperature hazard. The Plan will follow the 2013 Missouri State Plan and incorporate this change. The 2013 Missouri State Plan also addresses human-caused, and technological hazards; however, these will not be included in this plan update.

3.1.1 Review of Existing Mitigation Plans

The MPC reviewed the hazards identified in the previously approved plan, as well as the hazards identified in the state plan at the May 31st, 2017 meeting. The hazards identified in the 2013 Lawrence County Plan are identified in the 2013 Missouri State Plan. The State Plan also includes levee failure as well as structural and urban fire in addition to wildfire. Human-caused and technological hazards identified in the State Plan include:

- CBRNE Attack
- Civil Disorder
- Cyber Disruption
- Hazardous Materials
- Mass Transportation Accidents
- Nuclear Power Plants
- Public Health Emergencies/Environmental Issues
- Special Events
- Terrorism

- **Utility Interruptions and System Failures**

In Missouri, local plans customarily include only natural hazards, as only natural hazards are required by federal regulations to be included. The MPC was informed that they may decide to include technological hazards and human-caused threats in the plan, although this is not required by federal regulations. The MPC determined to include only natural hazards. The MPC agreed that human-caused and technological hazards are addressed in a Regional Homeland Security Oversight Committee (RHSOC) Threat and Hazard Identification Risk Assessment (THIRA) and that including only natural hazards would meet the needs of local entities participating in the plan update.

Levee failure was omitted due to the fact that the National Levee Database, maintained by the U.S. Army Corps of Engineers (USACE), shows no federal levees located in the Lawrence County and planning committee research revealed no records of levees within Lawrence County. Although it is likely that levees exist, such as low-head agricultural levees, no records indicate that a breach or overtopping of these levees would impact property other than that of the levee owner. Damage to residential structures is unlikely. Therefore, these hazards are not included in this risk assessment for Lawrence County. Landslides occur in all 50 states; however, this hazard is not likely to have much of a notable impact on Lawrence County due to soil profile, geology, and climate factors. In addition, the risk of coastal storms, hurricanes, tsunamis, avalanche, and volcanic activity does not exist in Lawrence County due to the county's location in the central United States.

3.1.2 Review Disaster Declaration History

From 1990 to present, Lawrence County has experienced severe storms, tornadoes, flooding, and severe winter storms. All of these natural hazard events triggered federal disaster declarations. Federal and/or state declarations may be granted when the severity and magnitude of an event surpasses the ability of the local government to respond and recover. Disaster assistance is supplemental and sequential. When the local government's capacity has been surpassed, a state disaster declaration may be issued, allowing for the provision of state assistance. If the disaster is so severe that both the local and state governments' capacities are exceeded; a federal emergency or disaster declaration may be issued allowing for the provision of federal assistance.

FEMA also issues emergency declarations, which are more limited in scope and do not include the long-term federal recovery programs of major disaster declarations. Determinations for declaration type are based on scale and type of damages and institutions or industrial sectors affected. The Robert T. Stafford Disaster Relief and Emergency Assistance Act, (PL 100-707) requires that all requests for a declaration by the President must be made by the governor of the affected state. State and federal officials conduct a Preliminary Damage Assessment (PDA) to show that the disaster is of such severity and magnitude that effective response is beyond state and local capabilities. Based on the governor's request, the president may declare that a major disaster or emergency exists, thus activating federal programs to assist in the response and recovery effort. Not all programs are activated for every disaster. Some declarations will provide only individual assistance or public assistance, while others provide both. FEMA also issues emergency declarations, which are more limited in scope and do not include the long-term federal recovery programs of major disaster declarations. Determinations for declaration type are based on scale and type of damages and institutions or industrial sectors affected.

(<https://www.fema.gov/disaster-declaration-process>)

Since 1990, Lawrence County has experienced eight (8) hazard events that triggered federal disaster declarations. The most recent occurred on May 19th. Flooding was included in 15 out of 19 events that triggered a FEMA disaster declaration. Nine declarations also included tornados. Seven of these declarations triggered both individual and public assistance.

Table 3.1 lists the federal FEMA disaster declarations that included the planning area from 1990 to present.

Table 3.1. FEMA Disaster Declarations that included Lawrence County, Missouri, 1990-Present

Disaster Number	Description	Declaration Date Incident Period	Individual Assistance (IA) Public Assistance (PA)
4317	Severe Storms, Tornadoes, Straight-line Winds, and Flooding	June 2 nd , 2017	Public Assistance
4250	Severe Storms, Tornadoes, Straight-line Winds, and Flooding	January 21 st , 2016	Individual & Public Assistance
1980	Severe Storms, Tornadoes, and Flooding	May 9 th , 2011	Individual Assistance
1847	Severe Storms, Tornadoes, and Flooding	June 19 th , 2009	Individual Assistance
1749	Severe Storms and Flooding	March 19 th , 2009	Public Assistance
1728	Severe Storms and Flooding	September 21 st , 2007	Public Assistance
1676	Severe Winter Storms and Flooding	January 15 th , 2007	Public Assistance
1631	Severe Storms, Tornadoes, and Flooding	March 16 th , 2006	Individual & Public Assistance
1463	Severe Storms, Tornadoes, and Flooding	May 6 th , 2003	Individual Assistance
995	Flooding, Severe Storm	July 9 th , 1993	Individual & Public Assistance

Source: Missouri State Hazard Plan 2013; Federal Emergency Management Agency <http://www.fema.gov/disasters>

3.1.3 Research Additional Sources

List the additional sources of data on locations and past impacts of hazards in the planning area:

- Missouri Hazard Mitigation Plans (2010 and 2013)
- Lawrence County Hazard Mitigation Plan (2013)
- Federal Emergency Management Agency (FEMA)
- Missouri Department of Natural Resources (MDNR)
- National Drought Mitigation Center Drought Reporter
- US Department of Agriculture's (USDA) Risk Management Agency Crop Insurance Statistics
- National Agricultural Statistics Service (Agriculture production/losses)

-
- Data Collection Questionnaires completed by each jurisdiction
 - State of Missouri GIS data
 - Environmental Protection Agency
 - Flood Insurance Administration
 - Hazards US (HAZUS)
 - Missouri Department of Transportation
 - Missouri Division of Fire Marshal Safety
 - Missouri Public Service Commission
 - National Fire Incident Reporting System (NFIRS)
 - National Oceanic and Atmospheric Administration's (NOAA) National Climatic Data Center (NCDC);
 - Pipeline and Hazardous Materials Safety Administration
 - County and local Comprehensive Plans to the extent available
 - County Emergency Management
 - County Flood Insurance Rate Map, FEMA
 - Flood Insurance Study, FEMA
 - SILVIS Lab, Department of Forest Ecology and Management, University of Wisconsin
 - U.S. Army Corps of Engineers
 - U.S. Department of Transportation
 - United States Geological Survey (USGS)
 - Various articles and publications available on the internet (you should state that you will give citations to the sources in the body of the plan)

Note that the only centralized source of data for many of the weather-related hazards is the National Oceanic and Atmospheric Administration's (NOAA) National Climatic Data Center (NCDC). Although it is usually the best and most current source, there are limitations to the data which should be noted. The NCDC documents the occurrence of storms and other significant weather phenomena having sufficient intensity to cause loss of life, injuries, significant property damage, and/or disruption to commerce. In addition, it is a partial record of other significant meteorological events, such as record maximum or minimum temperatures or precipitation that occurs in connection with another event. Some information appearing in the NCDC may be provided by or gathered from sources outside the National Weather Service (NWS), such as the media, law enforcement and/or other government agencies, private companies, individuals, etc. An effort is made to use the best available information but because of time and resource constraints, information from these sources may be unverified by the NWS. Those using information from NCDC should be cautious as the NWS does not guarantee the accuracy or validity of the information.

The NCDC damage amounts are estimates received from a variety of sources, including those listed above in the Data Sources section. For damage amounts, the NWS makes a best guess using all available data at the time of the publication. Property and crop damage figures should be considered as a broad estimate. Damages reported are in dollar values as they existed at the time of the storm event. They do not represent current dollar values.

The database currently contains data from January 1950 to February 2017, as entered by the NWS.

Due to changes in the data collection and processing procedures over time, there are unique periods of record available depending on the event type. The following timelines show the different time spans for each period of unique data collection and processing procedures.

- Tornado: From 1950 through 1954, only tornado events were recorded.
- Tornado, Thunderstorm Wind and Hail: From 1955 through 1992, only tornado, thunderstorm wind and hail events were keyed from the paper publications into digital data. From 1993 to 1995, only tornado, thunderstorm wind and hail events have been extracted from the Unformatted Text Files.
- All Event Types (48 from Directive 10-1605): From 1996 to present, 48 event types are recorded as defined in NWS Directive 10-1605.

Note that injuries and deaths caused by a storm event are reported on an area-wide basis. When reviewing a table resulting from an NCDC search by county, the death or injury listed in connection with that county search did not necessarily occur in that county.

3.1.4 Hazards Identified

The natural hazards that can possibly or have affected Lawrence County are profiled in alphabetical order. All hazards do not affect every jurisdiction participating in the Plan. **Table 3.2** provides a summary of the jurisdictions that may be affected by each hazard. An "x" in the table indicates that jurisdictions are affected by the hazard, and a "-" indicates the hazard is not applicable to that jurisdiction.

Table 3.2. Hazards Identified for Each Jurisdiction

Jurisdiction	Dam Failure	Drought	Earthquake	Extreme Heat	Wildfires	Flooding (River and Flash)	Land Subsidence/Sinkholes	Severe Winter Weather	Thunderstorm/Lightning/Hail/High Wind	Tornado
Lawrence County	x	x	x	x	x	x	x	x	x	x
Aurora	-	x	x	x	x	x	x	x	x	x
Freistatt	-	x	x	x	-	x	-	x	x	x
Halltown	-	x	x	x	-	x	-	x	x	x
Hoberg	-	x	x	x	-	x	-	x	x	x
Marionville	-	x	x	x	-	x	-	x	x	x
Miller	-	x	x	x	x	x	-	x	x	x
Monett	-	x	x	x	-	x	-	x	x	x
Mount Vernon	-	x	x	x	-	x	x	x	x	x
Peirce City	-	x	x	x	x	x	x	x	x	x
Stotts City	-	x	x	x	-	x	x	x	x	x
Verona	-	x	x	x	x	x	-	x	x	x
School Districts										
Aurora R-VIII	-	x	x	x	x	x	x	x	x	x
Marionville R-IX	-	x	x	x	-	x	-	x	x	x
Miller R-II	-	x	x	x	x	x	-	x	x	x
Monett R-I	-	x	x	x	-	x	x	x	x	x
Mt. Vernon R-V	-	x	x	x	-	x	x	x	x	x
Pierce City R-VI	-	x	x	x	x	x	x	x	x	x
Verona R-VII	-	x	x	x	x	x	-	x	x	x

3.1.5 Multi-Jurisdictional Risk Assessment

The risk assessment assesses each participating jurisdiction's vulnerability to each hazard that can affect the planning area. Many of the hazards identified in the risk assessment have the same probability of occurrence throughout the planning area. The hazards that vary across the planning area in terms of risk include dam failure, flash flood, grass or wildland fire, river flood, flash flood, and sinkholes/land subsidence. These differences are detailed in each hazard profile under geographic location and vulnerability.

Lawrence County's climate is fairly uniform throughout the planning area. Since 2010, the county has experienced a -0.7% decrease in population. Building construction throughout the count has been minimal with urban areas such as Aurora, Monett, and Mount Vernon experiencing the most development. Population estimates do not foresee a great influx of people residing in Lawrence County in the future, but growth management is still a concern in urban areas. Growth mitigation capabilities of each jurisdiction are profiled in section 2.2.

Naturally, the urbanized areas of Lawrence County have a greater density of important assets, which are more vulnerable to weather-related hazards. This increase in vulnerability, however, can be mitigated through updated building codes and code enforcement as well as land use planning.

These capabilities and resources to mitigate the impact of natural hazards vary across jurisdictions in the planning area. These differences will be discussed in greater detail in the vulnerability sections of each hazard.

3.2 Assets at Risk

This section assesses the planning area population, structures, critical facilities and infrastructure, and other important assets that may be at risk to hazards. The inventory of assets for each jurisdiction were derived from parcel data from the Lawrence County Assessor, the Lawrence County Structures dataset downloaded from Missouri Spatial Data information Service (MSDIS), local jurisdiction data collection questionnaires, and HAZUS MH 4.0. Minimal development has occurred in Lawrence County since the previous update.

3.2.1 Total Exposure of Population and Structures

Unincorporated County and Incorporated Cities

In the following three tables, population data is based on 2010 Census Bureau data. Building counts and building exposure values are based on parcel data provided by the State of Missouri Geographic Information Systems (GIS) database which can be found at the following website, http://sema.dps.mo.gov/programs/mitigation_management.php. Contents exposure values were calculated by factoring a multiplier to the building exposure values based on usage type. The multipliers were derived from the HAZUS MH 2.1 and are defined below in **Table 3.3**. Land values have been purposely excluded from consideration because land remains following disasters, and subsequent market devaluations are frequently short term and difficult to quantify. Another reason for excluding land values is that state and federal disaster assistance programs generally do not address

loss of land (other than crop insurance). It should be noted that the total valuation of buildings is based on county assessors' data which may not be current. In addition, government-owned properties are usually taxed differently or not at all, and so may not be an accurate representation of true value. Note that public school district assets and special districts assets are included in the total exposure tables assets by community and county.

Table 3.3 shows the total population, building count, estimated value of buildings, estimated value of contents and estimated total exposure to parcels for the unincorporated county and each incorporated city. For multi-county communities, the population and building data may include data on assets located outside the planning area. **Table 3.4** that follows provides the building value exposures for the county and each city in the planning area broken down by usage type. Finally, **Table 3.5** provides the building count total for the county and each city in the planning area broken out by building usage types (residential, commercial, industrial, and agricultural).

Table 3.3. Maximum Population and Building Exposure by Jurisdiction

Jurisdiction	2015 Population	Building Count	Building Exposure (\$)	Contents Exposure (\$)	Total Exposure (\$)
Aurora	7,473	5,523	\$53,967,010		
Chesapeake	116	84	\$270,900		
Freistatt	131	257	\$733,140		
Halltown	109	187	\$546,540		
Hoberg	47	70	\$173,020		
Marionville	2,153	1,724	\$11,404,740		
Miller	732	913	\$3,144,580		
Monett	8,957	2,297	\$23,035,120		
Mount Vernon	4,531	3,222	\$36,656,290		
Peirce City	1,261	1,168	\$6,501,670		
Stotts City	152	273	\$528,560		
Verona	591	594	\$2,648,960		
Unincorporated Lawrence	11,991	30,836	\$125,869,130		
Totals	38,244	47,148	\$265,479,660		

Sources: Population, 2011-2015 American Community Survey 5-Year Estimates; Building Count and Building Exposure, Missouri GIS Database: http://sema.dps.mo.gov/programs/mitigation_management.php; Contents Exposure derived by applying multiplier to Building Exposure based on HAZUS MH 2.1 standard contents multipliers per usage type as follows: Residential (50%), Commercial (100%), Industrial (150%), Agricultural (100%). For purposes of these calculations, government, school, and utility were calculated at the commercial contents rate.

Table 3.4. Building Values/Exposure by Usage Type

Jurisdiction	Residential	Commercial	Agricultural	Total
Aurora				
Chesapeake				
Freistatt				
Halltown				
Hoberg				

Marionville				
Miller				
Monett				
Mount Vernon				
Peirce City				
Stotts City				
Verona				
Unincorporated Lawrence				
Totals				

Source: Missouri GIS Database, http://sema.dps.mo.gov/programs/mitigation_management.php;

Table 3.5. Building Counts by Usage Type

Jurisdiction	Residential Counts	Commercial Counts	Agricultural Counts	Total
Aurora				5,523
Chesapeake				84
Freistatt				257
Halltown				187
Hoberg				70
Marionville				1,,724
Miller				913
Monett				2,297
Mount Vernon				3,222
Peirce City				1,168
Stotts City				273
Verona				594
Unincorporated Lawrence				30,836
Totals				47,148

Source: Missouri GIS Database, http://sema.dps.mo.gov/programs/mitigation_management.php; Public School Districts and Special Districts

Even though schools and special districts' total assets are included in the tables above, additional discussion is needed, based on the data that is available from the districts' completion of the Data Collection Questionnaire and district maintained websites. The number of enrolled students at the participating public school districts is provided in **Table 3.6** below. Additional information includes the number of buildings, building values (building exposure) and contents value (contents exposure). These numbers will represent the total enrollment and building count for the public school districts regardless of the county in which they are located.

Table 3.6. Population and Building Exposure by Jurisdiction-Public School Districts

Public School District	Enrolment	Building Count	Building Exposure (\$)	Contents Exposure (\$)	Total Exposure (\$)
Aurora R-VIII	2,017				
Marionville R-IX	755	11	\$23,606,198	\$4,555,619	\$28,161,187
Miller R-II	560	7	\$15,594,120	\$2,347,880	\$17,942,000
Monett R-I	2,400	27	\$70,576,063	\$6,548,040	\$77,124,103

Mt. Vernon R-V	1,446	16	\$50,541,743	5,147,168	\$55,689,431
Pierce City R-VI	690				
Verona R-VII	412				
Totals					

Source: <http://mcids.dese.mo.gov/quickfacts/Pages/District-and-School-Information.aspx>. The Building Exposure, Contents Exposure, and Total Exposure amounts come from the completed Data Collection Questionnaires from Public School Districts. In general, the school districts obtain this information from their insurance coverage amounts.

3.2.2 Critical and Essential Facilities and Infrastructure

This section will include information from the Data Collection Questionnaire and other sources concerning the vulnerability of participating jurisdictions' critical, essential, high potential loss, and transportation/lifeline facilities to identified hazards. Definitions of each of these types of facilities are provided below.

- Critical Facility: Those facilities essential in providing utility or direction either during the response to an emergency or during the recovery operation.
- Essential Facility: Those facilities that if damaged, would have devastating impacts on disaster response and/or recovery.
- High Potential Loss Facilities: Those facilities that would have a high loss or impact on the community.
- Transportation and lifeline facilities: Those facilities and infrastructure critical to transportation, communications, and necessary utilities.

Table 3.7 includes a summary of the inventory of critical and essential facilities and infrastructure in the planning area. The list was compiled from the Data Collection Questionnaire as well as the following sources:

- Lawrence County Parcel Data
- HAZUS 4.0
- MSDIS Database

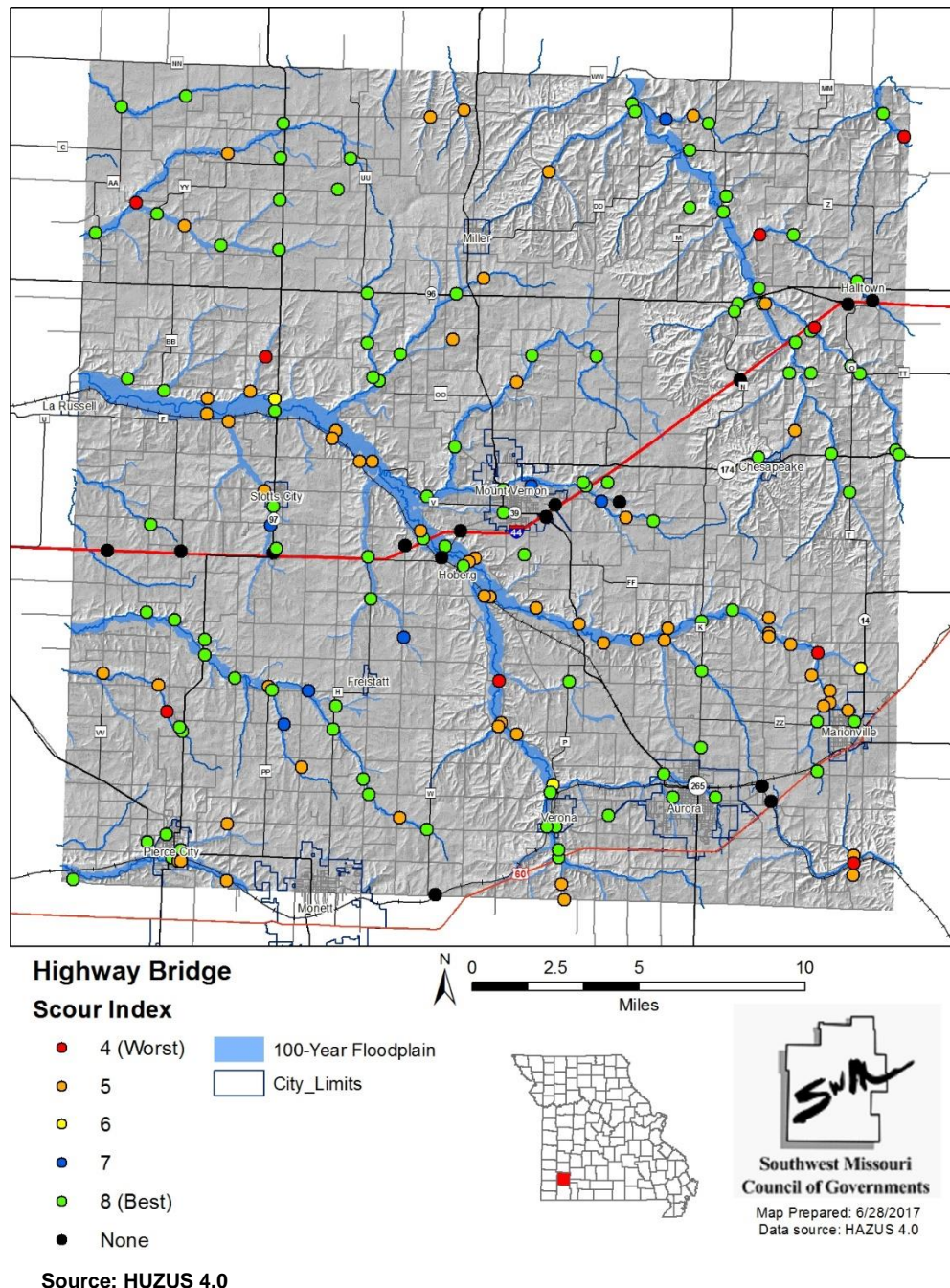
Table 3.7. Inventory of Critical/Essential Facilities and Infrastructure by Jurisdiction

Jurisdiction	Airport Facility	Bus Facility	Childcare Facility	Communications Tower	Electric Power Facility	Emergency Operations	Fire Service	Government	Housing	Shelters	Highway Bridge	Hospital/Health Care	Military	Natural Gas Facility	Nursing Homes	Police Station	Potable Water Facility	Rail	School Facilities (Public/Private)	Wastewater Facility	TOTALs
Aurora	1	0	8	0	3	0	2	6	5	0	4	1	0	2	2	1	0	Y	1/1	1	38
Freistatt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	N	0/1	1	2
Halltown	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	N	0/0	0	3
Hoberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Y	0/0	0	0
Marionville	0	0	1	0	0	0	1	1	3	0	1	0	0	0	1	1	0	Y	2/0	1	12
Miller	0	0	1	1	0	0	0	12	0	0	0	0	0	0	0	1	0	N	2/1	1	19
Monett (Lawrence)	1	0	4	0	0	0	0	0	6	0	0	0	0	0	0	0	0	Y	2/0	0	13
Monett (Barry)	1	0	2	3	0	1	2	5	3	3	16	1	0	0	1	1	0	Y	5/0	1	45
Mount Vernon	0	1	7	2	2	1	1	12	3	0	3	1	0	0	2	1	0	Y	4/0	1	41
Peirce City	0	0	2	0	0	0	1	2	0	0	5	0	0	0	0	1	0	Y	3/1	1	16
Stotts City	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	N	0/0	1	3
Verona	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0	1	0	Y	2/0	1	7
Unincorporated Lawrence	5	0	1	33	0	0	1	0	0	0	188	0	0	16	0	0	0	Y	0/1	1	246
TOTALS	8	1	26	39	5	2	10	40	20	3	221	3	0	18	6	7	0	9	29	10	445

Source: Data Collection Questionnaires; HAZUS, etc.

Figure 3.1 is a map that shows the locations of bridges in the planning area included in the National Bridge Inventory data set. This data was extracted from FEMA HAZUS MH 4.4 software which reflects conditions from 2016. The HAZUS data contains a “scour index”, which is a number indicating the vulnerability of a bridge to scour during a flood. Bridges with a scour index between 1 and 3 are considered “scour critical”, or a bridge with a foundation determined to be unstable for the observed or evaluated scour condition. According to this information, there are no scour critical bridges identified in the planning area; however, several are scored a four on the scour index. Included on the map is the mapped 100-year floodplain.

Figure 3.1. Lawrence County Bridges



An interactive website developed by Transportation for America allows users to locate and map structurally deficient bridges in their area. Transportation for America is an alliance of elected, business, and civic leaders from communities across the country, united to ensure that states and the federal government step up to invest in smart, homegrown, locally-driven transportation solutions. To use the interactive map, click the following link:

- <http://t4america.org/maps-tools/bridges/>

Information obtained from this tool can either be described in text or provided as a screen shot of the map below.

Figure 3.2. Structurally Deficient Bridges

[M A P]

3.2.3 Other Assets

Assessing the vulnerability of the planning area to disaster also requires data on the natural, historic, cultural, and economic assets of the area. This information is important for many reasons.

- These types of resources warrant a greater degree of protection due to their unique and irreplaceable nature and contribution to the overall economy.
- Knowing about these resources in advance allows for consideration immediately following a hazard event, which is when the potential for damages is higher.
- The rules for reconstruction, restoration, rehabilitation, and/or replacement are often different for these types of designated resources.
- The presence of natural resources can reduce the impacts of future natural hazards, such as wetlands and riparian habitats which help absorb floodwaters.
- Losses to economic assets like these (e.g., major employers or primary economic sectors) could have severe impacts on a community and its ability to recover from disaster.

Threatened and Endangered Species: **Table 3.8** shows Federally Threatened, Endangered, Proposed and Candidate Species in Lawrence County.

Table 3.8. Threatened and Endangered Species in Lawrence County

Common Name	Scientific Name	Status
Grey Bat	<i>Myotis grisescens</i>	Endangered
Indiana bat	<i>Myotis sodalis</i>	Endangered
Northern long-eared bat	<i>Myotis septentrionalis</i>	Threatened
Arkansas darter	<i>Etheostoma cragini</i>	Candidate
Neosho mucket	<i>Lampsilis rafinesqueana</i>	Endangered/Critical Habitat
Rabbitsfoot	<i>Quadrula cylindrica cylindrica</i>	Threatened
Ozark Cavefish	<i>Amblyopsis rosea</i>	Threatened
Geocarbon	<i>Geocarbon minimum</i>	Threatened
Missouri Bladderpod	<i>Physaria filiformis</i>	Threatened
Western prairie fringed orchid	<i>Plantantera praeclara</i>	Threatened

Source: U.S. Fish and Wildlife Service, <http://www.fws.gov/midwest/Endangered/lists/missouri-cty.html>; <http://ecos.fws.gov/ipac/>

Natural Resources: Insert introductory language about how the Missouri Department of Conservation (MDC) provides a database of lands the MDC owns, leases, or manages for public use. **Table 3.9** provide the names and locations of parks and conservation areas in the planning area.

Table 3.9. Areas and Parks in Lawrence County

Area Name	Address	City
Robert E. Talbot Conservation Area	Highway 96 near Stotts City	Stotts City, MO
Paris Spring Access	Highway 266 near Halltown	Halltown, MO
Providence Prairie Conservation Area	NW Lawrence County near Highway 97	Miller, MO
Kickapoo Prairie Conservation Area	NW Lawrence County near Highway 97	Miller, MO

<http://mdc4.mdc.mo.gov/applications/moatlas/AreaList.aspx?txtUserID=quest&txtAreaNm=s>

Park Name	Address	City
Oak Park	Aurora, MO 65605	Aurora, MO
Crosby Park	Aurora, MO 65605	Aurora, MO
White Park	Aurora, MO 65605	Aurora, MO
Baldwin Park	Aurora, MO 65605	Aurora, MO
Wynne Park	Mt. Vernon Blvd & McCanse Street	Mt. Vernon, MO
Shafer Park	800 Shafer Street	Mt. Vernon, MO
Kings Park	Kings Street & McCanse Street	Mt. Vernon, MO
The Gibbs Park	South Street & Hazel Street	Mt. Vernon, MO
Spirit of 76 Park	501 N Main Street	Mt. Vernon, MO
Williams Creek Pond	Adjoins Spirit of '76	Mt. Vernon, MO
Gary Ewing Park	1225 E. Highway 174	Mt. Vernon, MO
Pierce City Park	Pierce City, MO 65723	Pierce City, MO
Memorial Sports Complex	904 Ballpark Road	Pierce City, MO
Verona City Park	137 E Main Street	Verona, MO

Source: <http://www.aurora-cityhall.org/parks.php>, <http://www.mtvernon-cityhall.org/index.cfm?content=48>,

Historic Resources: The National Register of Historic Places is the official list of registered cultural resources worthy of preservation. It was authorized under the National Historic Preservation Act of 1966 as part of a national program. The purpose of the program is to coordinate and support public and private efforts to identify, evaluate, and protect our historic and archeological resources. The National Register is administered by the National Park Service under the Secretary of the Interior. Properties listed in the National Register include districts, sites, buildings, structures and objects that are significant in American history, architecture, archeology, engineering, and culture.

Properties in Lawrence County listed in the National Register of Historic Places are listed in **Table 3.10**.

Table 3.10. Lawrence County Properties on the National Register of Historic Places

Property	Address	City	Date Listed
Coleman, Lewis Shaw, House	227 E. College Street	Aurora	10/17/16
Lawrence County Bank Building	100 West Commercial Street	Pierce City	03/10/05
Lawrence County Courthouse	City Square	Mt. Vernon	09/23/80
Old Spanish Fort Archeological Site	Address Restricted	N/A	01/25/71
Pierce City Fire Station, Courthouse and Jail	Walnut Street	Pierce City	08/28/98

Economic Resources: Table 3.11 shows major non-government employers in the planning area.

Table 3.11. Major Non-Government Employers in Lawrence County

Employer Name	Main Locations	Product or Service	Employees
St. John's Hospital Aurora	Aurora	Acute care hospital	215
Ag Forte, LLC	Aurora	Turkey Hatchery	350
MWM Dexter	Aurora	Commercial Printer	120
Wal-Mart	Aurora	Discount department store	250
TT Group	Aurora	Shoe Manufacturing	100
Aurora Nursing Center	Aurora	Elderly Health Care	95
Alpine Wood Products	Marionville	Wood Products	50
Architectural Systems	Monett	Engineering & Fabrication	390
EFCO, A Pella Company	Monett	Windows/Construction Material	1,516
International Dehydrated Foods	Monett	Food Products Supplier	220
Monett Metals	Monett	Metal Casting	110
Schreiber Foods	Monett	Food Products Supplier	160
Tyson Foods	Monett	Poultry Products Supplier	700
WinTech	Monett	Window Supplier	110
Cox Monnett Hospital	Monett	Healthcare	334
Wal-Mart Super Center	Monett	Retail/Food	325
Schreiber Foods	Mt. Vernon	Grocer	240
Wilmoth Companies	Mt. Vernon	Oil Company	220
Gene Taylor CBOC	Mt. Vernon	Veteran Care	180
Walmart	Mt. Vernon	Retail/Food	175
Reyco-Granning	Mt. Vernon	Auto Suspension	169
Positronics	Mt. Vernon	Manufacturer	141
Lawrence County Manor	Mt. Vernon	Nursing/Rehabilitation	85

Source: Data Collection Questionnaires; local Economic Development Commissions

Agriculture: Lawrence county agriculture plays a big part in the county's economy. Lawrence County was ranked 7th in Missouri for total value of agricultural products sold and 3rd in total value of livestock, poultry, and other products. Lawrence County is also ranked 1st in Missouri for the number of total livestock of cattle and calves at 109,706 heads. Livestock sales account for 93% of total products sold at market value. The tables show revenue increasing by 19% from 2007 to 2012 and 20% on average for individual farms. Although revenues have increased, the number of farms have fallen slightly along with the total acreage in the county. **Tables 3.12** provides a summary of the agricultural presence in Lawrence County.

Table 3.12. Agriculture Presence in Lawrence County

Category	2012	2007	Percent Change
Number of Farms	1,849	1,873	-1%
Land in Farms	311,127 acres	322,822 acres	-4%
Average Size of Farms	168 acres	172 acres	-2%
Market Value of Products Sold			

Crop Sales	\$15,166,000 (7%)	N/A	
Livestock Sales	\$189,739,000 (93%)	N/A	
Total	\$204,905,000	\$172,461,000	+19%
Average Per Farm	\$110,819	\$92,077	+20%
Payments			
Government Payments	\$1,959,000	\$2,967,000	-34%
Average Per Farm Receiving Payments	\$5,695	\$6,759	-16%

Source: USDA Census of Agriculture; <https://www.agcensus.usda.gov/>

3.3 Land Use and Development

3.3.1 Development Since Previous Plan Update

Lawrence County has experienced slight growth since 2000, with a population increase of approximately 8.6% from 2000 to 2015.

Table 3.14 provides the population growth statistics for all jurisdictions in Lawrence County based on 2000/2010 census and 2015 U.S. Census ACS population estimates.

Table 3.13. Lawrence County Population Growth, 2000-2015

Jurisdiction	Total Population 2000	Total Population 2010	Total population 2015	2000-2015 # Change	2000-2015 % Change
Lawrence County	35,204	38,634	38,244	3,040	8.6%
City of Aurora	7,014	7,508	7,473	459	6.5%
Village of Freistatt	184	163	131	-53	-28.8%
Village of Halltown	189	173	109	-80	-42.3%
Village of Hoberg	60	56	47	-13	-21.6%
City of Marionville	2,113	2,225	2,153	40	1.9%
City of Miller	754	699	732	-22	-2.9%
City of Monett	7,396	8,873	8,957	1,561	21.1%
City of Mount Vernon	4,017	4,575	4,531	514	12.8%
City of Pierce City	1,385	1,292	1,261	-124	-8.9%
City of Stotts City	250	220	152	-98	-39.2%
City of Verona	714	619	591	-123	-17.2%
Unincorporated	11,128	12,231	12,107	979	8.8%

Source: U.S. Bureau of the Census, Decennial Census; Population Statistics are for entire incorporated areas as reported by the Census bureau

Population growth or decline is generally accompanied by increases or decreases in the number of housing units. Increases in population add to the built environment and increase risk and exposure to hazard events.

Table 3.14 provides the change in numbers of housing units in the planning area from 2000 to 2015. It should be noted that the total 2015 housing units has a higher chance of inaccuracies

Table 3.14. Change in Housing Units, 2000-2015

Jurisdiction	Housing Units 2000	Housing Units 2010	Housing Units 2015	2000-2010 # Change	2000-2010 % Change
Lawrence County	14,789	16,649	16,573	1,784	12.1%
City of Aurora	3,093	3,396	3,382	289	9.3%
Village of Freistatt	86	90	123	37	43.0%
Village of Halltown	74	88	58	-16	-21.6%
Village of Hoberg	29	29	28	-1	-3.4%
City of Marionville	993	1,018	958	-35	-3.5%

City of Miller	378	363	399	21	5.6%
City of Monett	3,130	3,828	3,648	518	16.5%
City of Mount Vernon	1,730	2,013	2,006	151	15.8%
City of Pierce City	646	602	634	-12	-1.9%
City of Stotts City	117	108	101	-16	-13.7%
City of Verona	252	239	240	-12	-4.8%

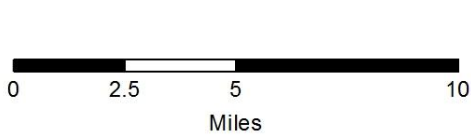
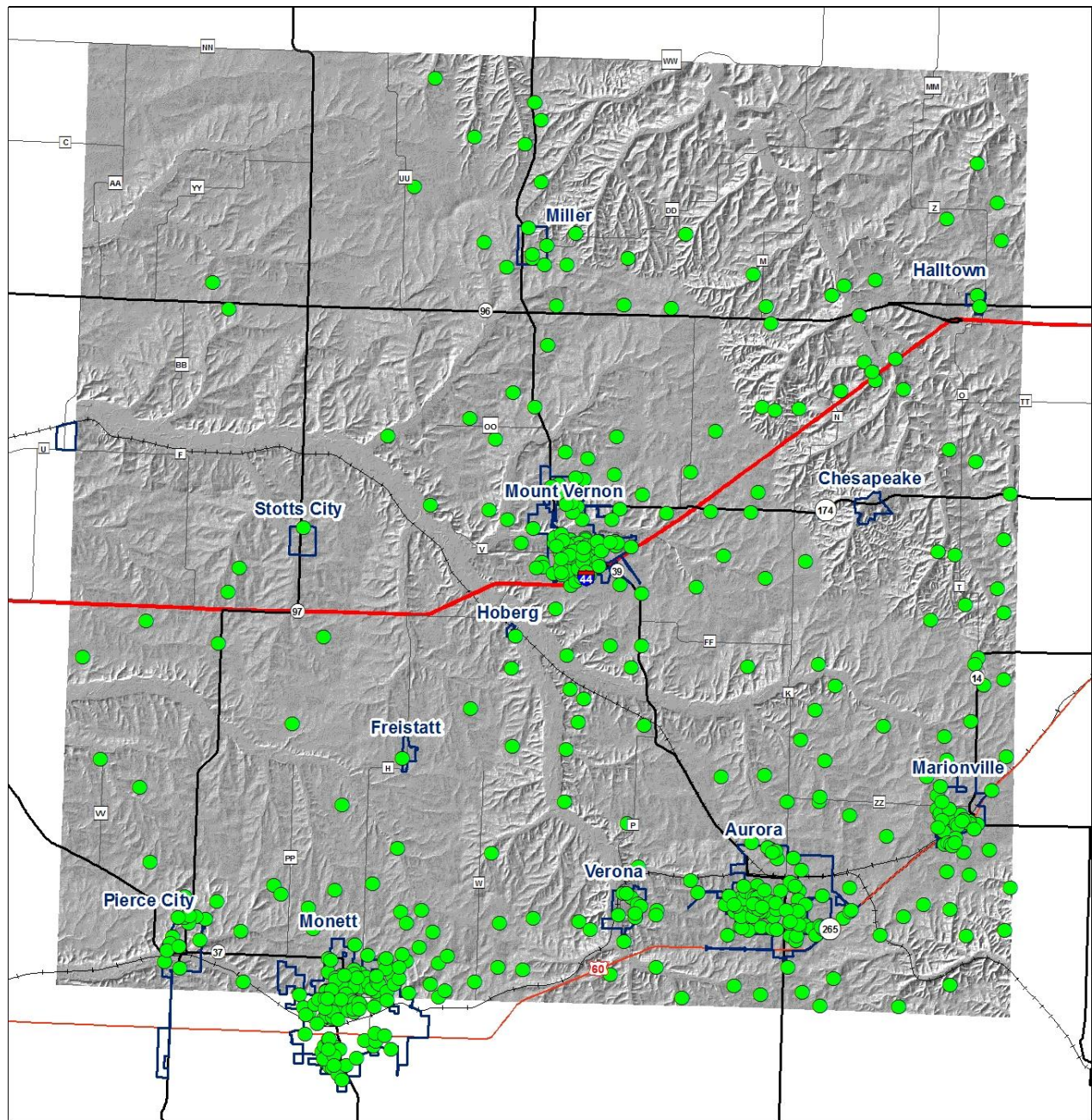
Source: U.S. Bureau of the Census, Decennial Census; Population Statistics are for entire incorporated areas as reported by the U.S. Census Bureau

This topographic map of the Mount Vernon, Missouri area, displays a high density of green dots representing data points. The dots are concentrated in several urban and suburban areas, including Miller, Halltown, Stotts City, Mount Vernon, Chesapeake, Hoberg, Freistatt, Marionville, Aurora, Verona, Pierce City, and Monett. A prominent red line runs diagonally from the upper left to the lower right, while a blue line runs horizontally through the center of the map. The map also shows various roads, including US Highway 96 and Missouri State Routes 174, 14, 22, 265, and 80. The terrain is characterized by rolling hills and valleys, with a grid of letters and numbers overlaid for reference.



3.22

Figure 3.4. Lawrence County Dot Density by Census Block, 2010 Population



Population by Census Block, 2010

- 1 Dot = 60
- POP10



City of Aurora

Aurora is the most populated jurisdiction entirely located in Lawrence County at about 7,500 people in 2010. ACS data shows the population decreased slightly between 2010 and 2015, but since 2000, the population has grown by 6.5%. The city has a comprehensive plan in place but has not been updated since 2008. The city has developed several areas since the last plan update including residential subdivisions, commercial and industrial additions.

Village of Freistatt

Village of Halltown

Village of Hoberg

City of Marionville

Marionville has a comprehensive plan in place for the city which also includes a land use plan, but it has not been updated since 1998. Since 2000, the population has stayed relatively the same. The only significant development to occur since the previous update is an apartment complex. The city is located along MO 60 highway.

City of Miller

The City of Miller is located in the northwest portion of the county. The city has a capital improvement plan in place but does not have a comprehensive plan. Since the previous plan, a Dollar General store was constructed along Highway 37. Population of Miller has decreased slightly, but has relatively remained the same.

City of Monett

The city of Monett's comprehensive plan has not been updated since 1998. The city also has an Airport Master Plan to manage growth for the Municipal Monett Airport. Monett has grown to a population of about 8,935 people, 20% more than in 2000. In addition, there are 15% more housing units bringing the total to around 3,579 units. Since the last plan update, there have been numerous new commercial developments in the city, including a new shopping center. Monett also saw the construction of new waste water plant. Despite new development, Monett has not annexed any land in the past 5 years.

City of Mount Vernon

The City of Mount Vernon is the county seat and centrally located in the county. Mt. Vernon recently updated their Comprehensive Plan back in 2014 and their Capital Improvements Plan is updated annually. Other plans include a Builder's Plan and land use plan. The population of the city has increased steadily since 2000 by 12.8%. ACS 2015 currently puts the population at 4,531 people. Development since the previous update includes a couple commercial developments and one industrial development.



City of Pierce City

City of Stotts City

City of Verona

3.3.2 Future Land Use and Development

Provide details regarding future growth, land use, and development of the planning area. The information for the details will come from the community responses to the Data Collection Questionnaire, from information provided by each of the participating jurisdictions, and other Web based searches. Provide maps where possible. Check any local or county Comprehensive Plans for information. Also check growth plans that school districts and special districts might have. Discuss how growth or decline will impact hazard risk in the planning area. See also data at the following Website, by county. http://www.oseda.missouri.edu/countypage/county_seir.shtml If growth is not anticipated, explain this and back it up with data, like a list of building permits issued during prior years. See www.city-data.com

The remaining discussion in this section provides future growth and development information, where available, relative to each participating jurisdiction, based on the format used above for the county information.

City of Aurora

Village of Freistatt

Village of Halltown

Village of Hoberg

City of Marionville

City of Miller

City of Monett

City of Mount Vernon

City of Pierce City

City of Stotts City

City of Verona

School District's Future Development

Aurora R-VIII

Marionville R-IX

Miller R-II

Monett R-I

Mt. Vernon R-V

Pierce City R-VI

Verona R-VII

In this section, summarize future development trends for the participating school districts. Include information on any proposed construction, bonds, renovation, student growth or decline, employment growth or decline, and facilities improvement plans.

Special District's Future Development

Buck Prairie Special Road District

Green Benefit Special Road District

Miller Benefit Special Road District

Mt. Vernon Special Road District

Verona Special Road District

In this section summarize future development for the participating special districts. Include information on any proposed construction, bonds, renovation, service district growth or decline, employment growth or decline, and facilities improvement plans.

3.4 Hazard Profiles, Vulnerability, and Problem Statements

Each hazard identified in Section 3.1.4 will be analyzed individually in a hazard profile. The profile will consist of a general hazard description, location, severity/magnitude/extent, previous events, future probability, a discussion of risk variations between jurisdictions, and how anticipated development could impact risk. At the end of each hazard profile will be a vulnerability assessment, followed by a summary problem statement.

Hazard Profiles

Requirement §201.6(c)(2)(i): [The risk assessment shall include a] description of the...location and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.

The level of information presented in the profiles will vary by hazard based on the information available. With each update of this plan, new information will be incorporated to provide better evaluation and prioritization of the hazards that affect the planning area. Detailed profiles for each of the identified hazards include information categorized as follows:

Hazard Description: This section consists of a general description of the hazard and the types of impacts it may have on a community or school/special district.

Geographic Location: This section describes the geographic location of the hazard in the planning area. Where available, use maps to indicate the specific locations of the planning area that are vulnerable to the subject hazard. For some hazards, the entire planning area is at risk.

Severity/Magnitude/Extent: This includes information about the severity, magnitude, and extent of a hazard. For some hazards, this is accomplished with description of a value on an established scientific scale or measurement system, such as an EF2 tornado on the Enhanced Fujita Scale. Severity, magnitude, and extent can also include the speed of onset and the duration of hazard events. Describing the severity/magnitude/extent of a hazard is not the same as describing its potential impacts on a community. Severity/magnitude/extent defines the characteristics of the hazard regardless of the people and property it affects.

Previous Occurrences: This section includes available information on historic incidents and their impacts. Historic event records form a solid basis for probability calculations.

Probability of Future Occurrence: The frequency of recorded past events is used to estimate the likelihood of future occurrences. Probability was determined by dividing the number of recorded events by the number of years and multiplying by 100. This gives the percent chance of the event happening in any given year. For events occurring more than once annually, the probability will be reported 100% in any given year, with a statement of the average number of events annually.

Vulnerability Assessments

Requirement §201.6(c)(2)(ii) :[The risk assessment shall include a] description of the jurisdiction’s vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description shall include an overall summary of each hazard and its impact on the community.

Requirement §201.6(c)(2)(ii)(A) :The plan should describe vulnerability in terms of the types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas.

Requirement §201.6(c)(2)(ii)(B) :[The plan should describe vulnerability in terms of an] estimate of the potential dollar losses to vulnerable structures identified in paragraph (c)(2)(i)(A) of this section and a description of the methodology used to prepare the estimate.

Requirement §201.6(c)(2)(ii)(C) :[The plan should describe vulnerability in terms of] providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.

Requirement §201.6(c)(2)(ii) : (As of October 1, 2008) [The risk assessment] must also address National Flood Insurance Program (NFIP) insured structures that have been repetitively damaged in floods.

Following the hazard profile for each hazard will be the vulnerability assessment. The vulnerability assessment further defines and quantifies populations, buildings, critical facilities, and other community assets at risk to damages from natural hazards. The vulnerability assessments will be based on the best available county-level data, which is in the Missouri Hazard Mitigation Plan (2010). The county-level assessments in the State Plan were based on the following sources:

- Statewide GIS data sets compiled by state and federal agencies; and
- FEMA’s HAZUS-MH loss estimation software.

The vulnerability assessments in the Lawrence County plan will also be based on:

- Written descriptions of assets and risks provided by participating jurisdictions;
- Existing plans and reports;
- Personal interviews with planning committee members and other stakeholders; and
- Other sources as cited.

Explain that within the Vulnerability Assessment, the following sub-headings will be addressed:

Vulnerability Overview

Potential Losses to Existing Development: (including types and numbers, of buildings, critical facilities, etc.)

Previous and Future Development: This section will include information on how changes in development have impacted the community’s vulnerability to this hazard. Describe how any changes in development that occurred in known hazard prone areas since the previous plan have increased or decreased the community’s vulnerability. Describe any anticipated future development in the county, and how that would impact hazard risk in the planning area.

Hazard Summary by Jurisdiction: For hazard risks that vary by jurisdiction, this section will provide an overview of the variation and the factual basis for that variation.

Problem Statements

Each hazard analysis must conclude with a brief summary of the problems created by the hazard in the planning area, and possible ways to resolve those problems. Include jurisdiction-specific information in those cases where the risk varies across the planning area.

3.4.1 Dam Failure

Some specific sources for this hazard are:

- Missouri Department of Natural Resources, Dam and Reservoir Safety, <http://dnr.mo.gov/env/wrc/dam-safety/statemap.htm>
- Stanford University's National Performance of Dams Program; <http://npdp.stanford.edu/index.html>
- National Inventory of Dams, <http://geo.usace.army.mil/>
- MO DNR Dam & Reservoir Safety Program;
- National Resources Conservation Service <http://www.nrcs.usda.gov>
- DamSafetyAction.org, <http://www.damsafetyaction.org/MO/>

Hazard Profile

Hazard Description

A dam is defined as a barrier constructed across a watercourse for the purpose of storage, control, or diversion of water. Dams are typically constructed of earth, rock, concrete, or mine tailings. Dam failure is the uncontrolled release of impounded water resulting in downstream flooding, affecting both life and property. Dam failure can be caused by any of the following:

- **Overtopping** - inadequate spillway design, debris blockage of spillways or settlement of the dam crest.
- **Piping** - internal erosion caused by embankment leakage, foundation leakage and deterioration of pertinent structures appended to the dam.
- **Erosion** - inadequate spillway capacity causing overtopping of the dam, flow erosion, and inadequate slope protection.
- **Structural Failure** - caused by an earthquake, slope instability or faulty construction.

According to the State Plan, Missouri had some 5,423 recorded dams in 2013, the largest number of man-made dams of any state in the country. Missouri's topography allows lakes to be built easily and inexpensively, which accounts for the high number of dams. Despite the large number of dams, there are only 682 (about 13 percent) state regulated dams, with an additional 66 federally regulated dams. Federal dams in Missouri are primarily regulated by two federal agencies; the U.S. Army Corps of Engineers (USACE), and the U.S. Department of Agriculture Forest Service. The remaining 4,495 dams are unregulated.

Dams that fall under state regulation are non-federally regulated dams that are more than 35 feet in height. Most nonfederal dams are privately owned structures built either for agricultural, water supply or recreational use. The Department of Natural Resources (MDNR) Water Resources Center maintains the Dam and Reservoir Safety Program in Missouri. The program ensures that dams over 35 feet in height are safely constructed, operated, and maintained pursuant to Chapter 236 of Revised Statutes of Missouri.

The Department of Natural Resources provides information about regulated and unregulated dams in Missouri. The information includes details of the dam dimensions, date of construction, approximate reservoir volume, contributing drainage basin area and hazard classification. In addition,

USACE maintains the National Inventory of Dams (NID). The information in the NID database matches the list from the MDNR website with some additional details for dams in Lawrence County. Although both agencies provide a hazard classification for dams, the dam classification systems differ.

The Missouri Dam and Reservoir Safety Council Rules and Regulations uses three classes of downstream environmental zone used when considering permits. The downstream environment zone is the area below the dam that would become inundated should the dam fail. Inundation is defined as water two feet or more over the submerged ground outside of the stream channel. These classes are based on the number of structures and types of development contained within the inundation area as presented in **Table 3.15**. The downstream environment zone classification is also used to prescribe the frequency of inspection.

Table 3.15. MDNR Dam Hazard Classification Definitions

Hazard Class	Definition
Class I	The area downstream from the dam that would be affected by inundation contains ten (10) or more permanent dwellings or any public building. Inspection of these dams must occur every two years
Class II	The area downstream from the dam that would be affected by inundation contains one to nine permanent dwelling, or one (1) or more campgrounds with permanent water, sewer and electrical services or one (1) or more industrial buildings. Inspection of these dams must occur once every three years.
Class III	The area downstream from the dam that would be affected by inundation does not contain any of the structures identified for Class I or Class II dams. Inspection of these dams must occur once every five years

Source: Missouri Department of Natural Resources, http://dnr.mo.gov/env/wrc/docs/rules_reg_94.pdf

Dams in the NID are classified according to hazard potential, an indicator of the consequences of dam failure. A dam's hazard potential classification, presented in **Table 3.16**, does not indicate its condition. Dams assigned the high hazard potential classification are those where failure will potentially result in loss of human life. Significant hazard potential are those dams where failure results in no probable loss of human life but can cause economic loss. Dams assigned the low hazard potential classification are those where failure or results in no probable loss of human life and low economic or environmental losses. Losses are principally limited to the owner's property

Table 3.16. NID Dam Hazard Classification Definitions

Hazard Class	Definition
Low Hazard	Failure results in only minimal property damage.
Significant Hazard	Failure could possibly result in the loss of life and appreciable property damage.
High Hazard	If the dam were to fail, lives would be lost and extensive property damage could result.

Source: USACE, [National Inventory of Dams](#)

There is not a direct correlation between the State Hazard classification and the NID classifications. However, most dams that are in the State's Classes I and II are considered NID High Hazard Dams.

Geographic Location

Dams in Planning Area

There are total of seven (7) recorded dams in Lawrence County in both the MDNR and NID

databases. All dams are considered Class III and Low Hazard under MDNR and NID guidelines, respectively. They have no significant threat of failing or damage to structures in the event of a failure. All are privately-owned and unregulated due to not having a height of 35 feet or above.

Information about Low Hazard dams in Lawrence County is presented in **Table 3.17**. The table indicates if there is an Emergency Action Plan (EAP) in place, height, last inspection date, river, nearest city/township, “as the crow flies” distance to the nearest downstream city/township, and normal storage of water impounded by the dam in acre feet. An acre foot is defined as the volume of one acre of surface area to the depth of one foot.

Table 3.17. Low Hazard Dams in the Lawrence County Planning Area

Dam Name	Emergency Action Plan (EAP)/AP	Dam Height (Ft)	Normal Storage (Lake Area)	Last Inspection Date	River	Nearest Downstream City	Distance To Nearest City (Miles)	Owner
Faucetts Point Lake Dam	Not Reported	18.00	10.00	N/A	TR Honey Creek	Hoberg	4	Leon D Faucett
Harlan Stump Dam	Not Reported	15.00	11.00	N/A	TR North Fork Spring	Golden City	0	Unknown
Mendenhall Lake Dam	Not Reported	20.00	8.00	N/A	TR Johnson Creek	Pennsboro	0	Jack Mendenhall
Poirot Farms Inc. Dam	Not Reported	10.00	15.00	N/A	Coon Creek	Dudenville	0	Poirot Farm Inc
Poirot Lake Dam/(Shallow)	Not Reported	12.00	30.00	N/A	Coon Creek	Lamar	28	Poirot Farm Inc
Pyle Lake Dam	Not Reported	15.00	12.00	N/A	TR Coon Creek	Lamar	30	Frank Pyle
Southwest Research Center Dam	Not Reported	21.00	6.00	N/A	TR Honey Creek	Mt Vernon	1	Southwest Research Center

Sources: Missouri Department of Natural Resources, <http://dnr.mo.gov/env/wrc/dam-safety/statemap.htm> and National Inventory of Dams, http://nid.usace.army.mil/cm_apex/f?p=838:12 By the end of 2015, the Missouri DNR anticipates having Emergency Action Plans, including inundation maps for all state-regulated Class 1 and Class 2 dams. Contact the DNR Dam and Reservoir Safety Program at 800-361-4827 to request the inundation maps for your county to show geographic locations at risk, extent of failure and to perform GIS analysis of those assets at risk to dam failure.

There are no high or significant hazard dams in the planning area.

Upstream Dams Outside the Planning Area

A few dams reside outside near the planning area; however, none have a significant threat to the county or county jurisdictions in the event of a dam failure due to a low hazard designation and not located upstream.

Severity/Magnitude/Extent

The severity/magnitude of dam failure would be similar in some cases to the impacts associated with flood events (see the flood hazard vulnerability analysis and discussion). Based on the hazard class definitions, failure of any of the High Hazard/Class I dams could result in a serious threat of loss of human life, serious damage to residential, industrial or commercial areas, public utilities, public buildings, or major transportation facilities. Catastrophic failure of any high hazard dams has the potential to result in greater destruction due to the potential speed of onset and greater depth, extent, and velocity of flooding. Note that for this reason, dam failures could flood areas outside of mapped flood hazards.

Dam failure in Lawrence County is extremely unlikely. All dams in the planning area are low hazard/Class I designation and reside in low populated areas of unincorporated parts of the county. In the event of a dam failure, little to no damage would occur to structures as no structures are in the vicinity of the inundation zones.

Previous Occurrences

There is no record of a dam failure within the county. For the 26-year period from 1975 to 2001 for which dam failure statistics are available, 17 dam failures were recorded in the state of Missouri. This does not include the Taum Sauk failure in 2005 or the Moon Valley Lake Dam failure in 2008 since the comprehensive data collected by Stanford University was not updated past 2001. According to this data, the annual probability calculates to a 65% ($17/26 = 0.65$ or 65%) probability in any given year for at least one dam failure event somewhere in the State of Missouri. However, with over 5,000 dams in the State, this translates to an overall low probability per dam structure.

Probability of Future Occurrence

There are no records of dam failure in Lawrence County. Since there are zero recorded events in the planning area, a calculation of a probability percent is not possible. According to information from the 2013 State Plan, Missouri's percentage of high hazard dams in the DNR inventory puts the State at about the national average for that category. However, if development occurs downstream of dams the percentage of high hazard dams will increase. Additionally, the probability of dam failure increases as many of the smaller and privately owned dams continue to deteriorate without the benefit of further regulation or improvements. Regular inspection and maintenance schedules for dams greatly reduces the probability of dam failure. There are no records of inspections occurring at any dams in the planning area.

Vulnerability

Vulnerability Overview

Vulnerability to dam failure in Lawrence County is limited to structures and critical infrastructure located in dam inundation zones. Due to dams not reaching the high requirements, all the counties dams are unregulated by the state and potential have been unchecked for several years. All dams in the county are earthen-type dams and rated as low-hazard (NID). Earthen dams are prone to erosion and can be heavily damaged in flood events. Although all dams in the county are low-hazard, dam failure is still possible. In the event of a dam failure, some buildings may lie in the inundation area, but the number would be minimal as most are located in secluded parts of the county. Based on aerial photographs, three dams, Faucett Lake Dam, Southwest Research Center Dam, and Mendenhall lake dam, would cause the most damage in the event of a dam failure. See the section below to see aerial photos of these dams. All damages caused by the failure of an unregulated dam falls to the owner's responsibility.

Potential Losses to Existing Development: (including types and numbers, of buildings, critical facilities, etc.)

Losses to existing development would be minimal due to the location of dams in the county. Since all seven dams are rated as low-hazard, the potential magnitude of a dam failure event would be negligible. Usually, one or two buildings are located within the vicinity of a dam, followed by large

fields; however, three dams in the planning area are in the vicinity of several buildings. The following aerial photos, show the dam location and buildings in the vicinity. Due to the lack of available inundation maps, aerial photos from Google Maps were utilized to evaluate potential damage to structures in the vicinity of the dam. Figures X.X through X.X shows buildings that may be affected in the event of a dam failure.

Figure 3.5. Faucett Lake Dam

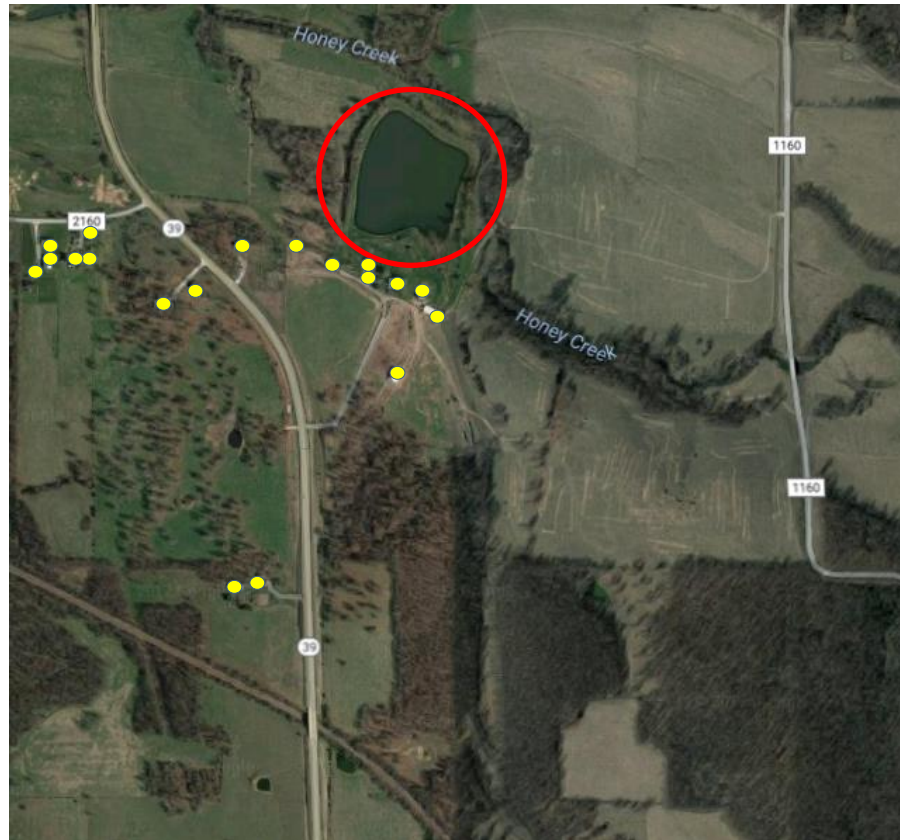


Figure 3.6. Mendenhall Lake Dam

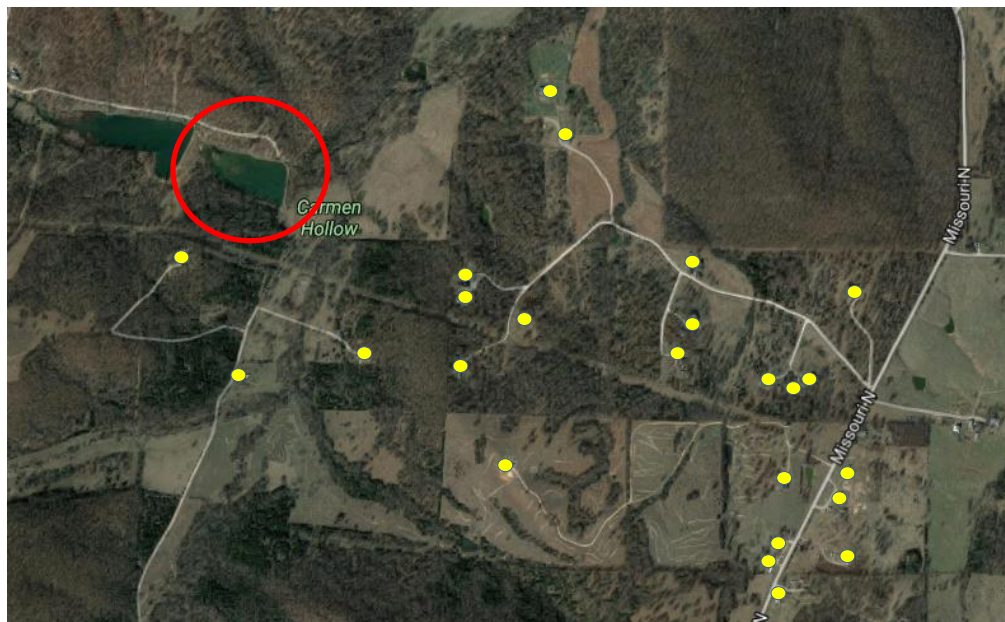
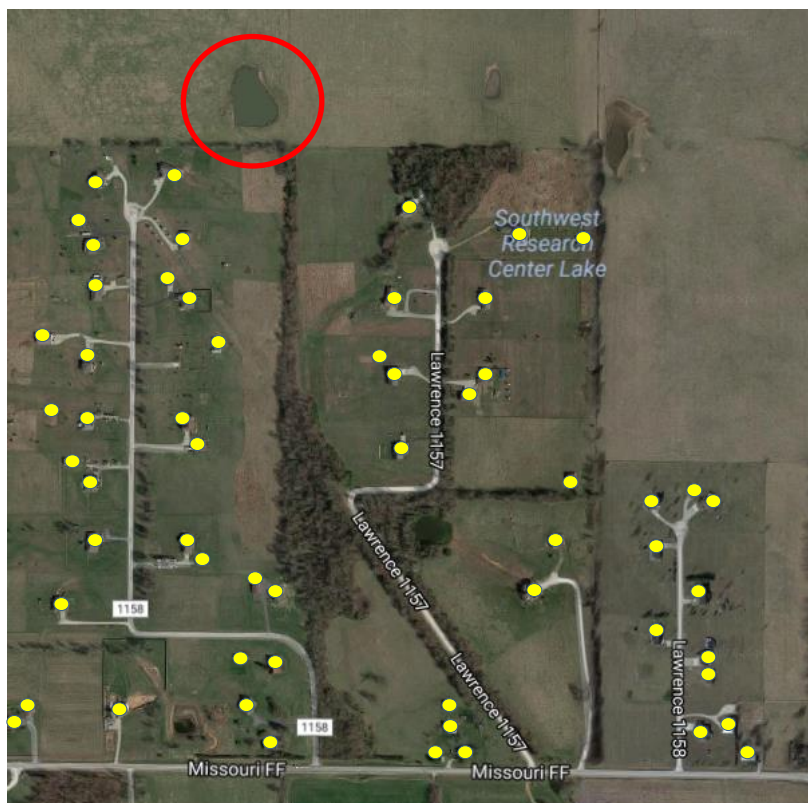


Figure 3.7. Southwest Research Center Dam



Other dams exist in planning area, however, due to low number of buildings in the vicinity, they are not shown. Table X.X shows total exposure to buildings in the vicinity of the three dams.

Table 3.18. Dam Failure Exposure in Lawrence County

Dam Name	Approximate # of buildings in vicinity	Exposure (\$)	Contents (\$)	Total Exposure (\$)
Faucett Dam	19	\$91,340	\$45,670	\$137,010
Mendenhall Dam	24	\$569,450	\$284,725	\$854,175
SW Research Lake Dam	58	\$1,130,320	\$565,160	\$1,695,480
TOTALS	101	\$1,791,110	\$895,555	\$2,686,665

Source: Lawrence County Assessor GIS database; Content values are determined based on all structures being of residential use.

Since inundation maps are unavailable, the vulnerability of Lawrence County to dam failure is approximate. Although building counts are approximate, exposure and content costs are accurate.

Impact of Previous and Future Development

It is possible that future development will occur in the downstream environment of dams within the county; however, no major development is expected due to the slow growth of the unincorporated parts of Lawrence County.

Hazard Summary by Jurisdiction

No jurisdictions or school districts would suffer damages in the event of a dam failure. All damages would occur in unincorporated parts of the county.

Problem Statement

There are no dams in the county with a high hazard or significant hazard potential. There are a few dams in the vicinity of Lawrence County with a higher hazard rating, but all downstream. Inundation maps have not been created for any dams in the county, and since they are not state regulate, few have probably been checked in the last decade. Records to do indicate any inspections in recent years, even though it is required by law that low-hazard dams be inspected every five years. Due to the number of unregulated dams in Missouri and the lack of manpower, inspections of these dams in unlikely in the coming years. The probability of dam failure in the county is very low, the potential for damage remains.

All dams are earthen dams and are prone to erosion and damage from floods. To mitigate this problem, dam owners should be contacted to setup inspections to evaluate the state of dams. Any damages caused by unregulated dams becomes the responsibility of the dam owner.

3.4.2 Drought

Hazard Profile

Hazard Description

Drought is generally defined as a condition of moisture levels significantly below normal for an extended period of time over a large area that adversely affects plants, animal life, and humans. A drought period can last for months, years, or even decades. There are four types of drought conditions relevant to Missouri, according to the State Plan, which are as follows.

- Meteorological drought is defined in terms of the basis of the degree of dryness (in comparison to some “normal” or average amount) and the duration of the dry period. A meteorological drought must be considered as region-specific since the atmospheric conditions that result in deficiencies of precipitation are highly variable from region to region.
- Hydrological drought is associated with the effects of periods of precipitation (including snowfall) shortfalls on surface or subsurface water supply (e.g., streamflow, reservoir and lake levels, ground water). The frequency and severity of hydrological drought is often defined on a watershed or river basin scale. Although all droughts originate with a deficiency of precipitation, hydrologists are more concerned with how this deficiency plays out through the hydrologic system. Hydrological droughts are usually out of phase with or lag the occurrence of meteorological and agricultural droughts. It takes longer for precipitation deficiencies to show up in components of the hydrological system such as soil moisture, streamflow, and ground water and reservoir levels. As a result, these impacts also are out of phase with impacts in other economic sectors.
- Agricultural drought focus is on soil moisture deficiencies, differences between actual and potential evaporation, reduced ground water or reservoir levels, etc. Plant demand for water depends on prevailing weather conditions, biological characteristics of the specific plant, its stage of growth, and the physical and biological properties of the soil.
- Socioeconomic drought refers to when physical water shortage begins to affect people.

Geographic Location

Droughts are regional climatic events that can impact large areas and multiple counties. The entire county is at risk to the impacts of drought. However, drought most directly impacts the agricultural sector, so areas within the county where there is extensive agricultural land use can experience significant impacts. The slow development of Lawrence County allows it to retain its agricultural land. The major agricultural activity in the county is livestock which accounts for 98% of sales. Due to the density of livestock in the region, an extreme drought can have a devastating effect.

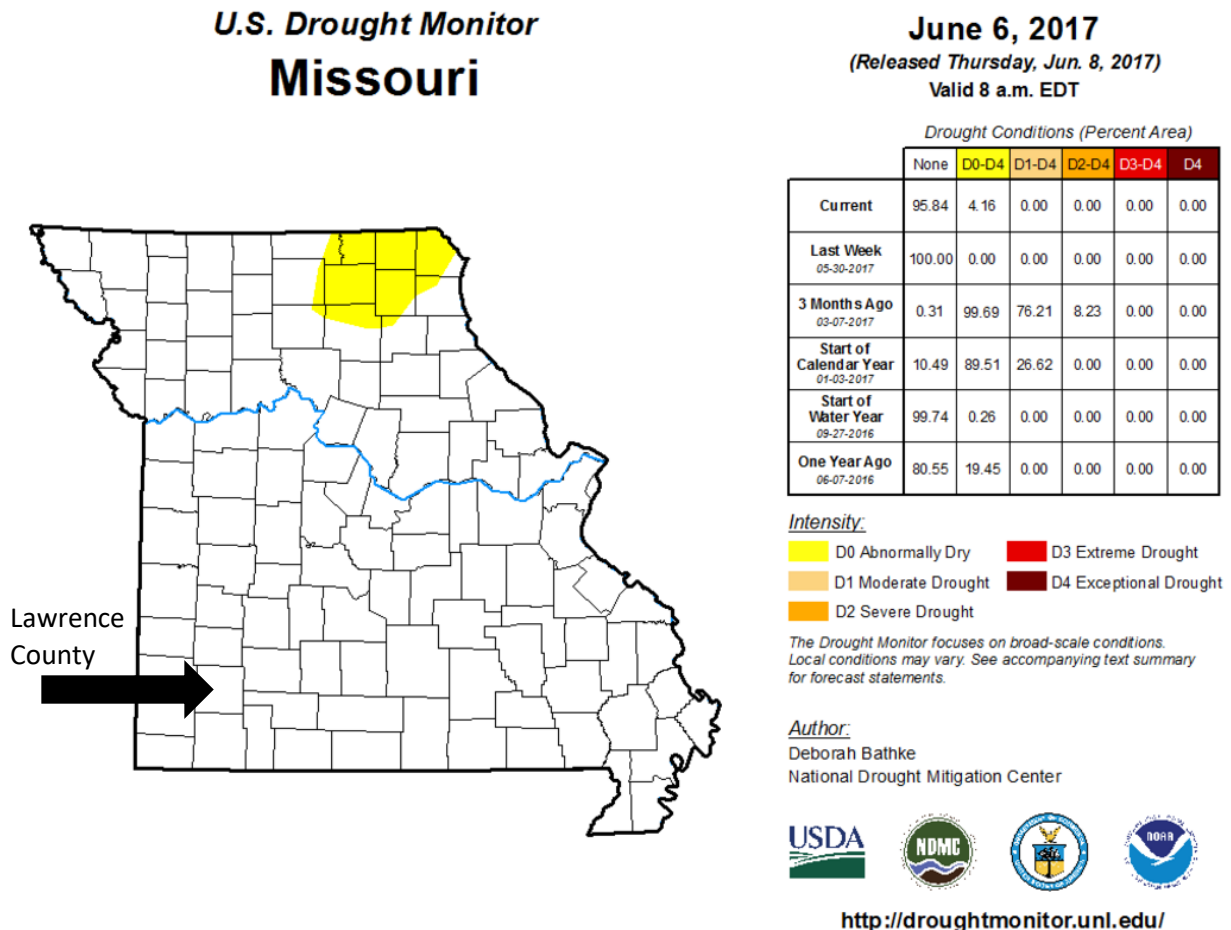
Severity/Magnitude/Extent

The National Drought Monitor Center at the University of Nebraska at Lincoln summarized the potential severity of drought as follows. Drought can create economic impacts on agriculture and related sectors, including forestry and fisheries, because of the reliance of these sectors on surface and subsurface water supplies. In addition to losses in yields in crop and livestock production, drought is associated with increases in insect infestations, plant disease, and wind erosion. Droughts also bring increased problems with insects and disease to forests and reduce growth. The incidence of forest and range fires increases substantially during extended droughts, which in turn place both

human and wildlife populations at higher levels of risk. Income loss is another indicator used in assessing the impacts of drought because so many sectors are affected. Finally, while drought is rarely a direct cause of death, the associated heat, dust and stress can all contribute to increased mortality.

Figure 3.3 is a recent map from the U.S. Drought Monitor and an example of the size of the geographic area that could be in drought at any given moment in time. The map is only a snapshot of conditions at a given time and indicates the severity of drought conditions.

Figure 3.8. U.S. Drought Monitor Map of Missouri on June 6th, 2017



Source: U.S. Drought Monitor, <http://droughtmonitor.unl.edu/Home/StateDroughtMonitor.aspx?MO>

The Palmer Drought Indices measure dryness based on recent precipitation and temperature. The indices are based on a “supply-and-demand model” of soil moisture. Calculation of supply is relatively straightforward, using temperature and the amount of moisture in the soil. However demand is more complicated as it depends on a variety of factors, such as evapotranspiration and recharge rates. These rates are harder to calculate. Palmer tried to overcome these difficulties by developing an algorithm that approximated these rates, and based the algorithm on the most readily available data — precipitation and temperature.

The Palmer Index has proven most effective in identifying long-term drought of more than several months. However, the Palmer Index has been less effective in determining conditions over a matter of weeks. It uses a “0” as normal, and drought is shown in terms of negative numbers; for example, negative 2 is moderate drought, negative 3 is severe drought, and negative 4 is extreme drought.

Palmer's algorithm also is used to describe wet spells, using corresponding positive numbers.

According to the MDNR Missouri Drought Plan revised in 2002, Missouri's Drought Response System is divided into four phases based on Palmer index values:

- **Phase I: Advisory Phase**—Requires a drought monitoring and assessment system to provide enough lead time for state and local planners to take appropriate action;
- **Phase II: Drought Alert**—When the PDSI reads -1.0 to -2.0, and stream flows, reservoir levels, and groundwater levels are below normal over a several month period, or when the Drought Assessment Committee (DAC) determines that Phase II conditions exist based on other drought determination methods;
- **Phase III: Conservation Phase**—When the PDSI reads -2.0 to -4.0, and stream flows, reservoir levels, and groundwater levels continue to decline, along with forecasts indicating an extended period of below-normal precipitation, or when the DAC determines that Phase III conditions exist based on other drought determination models;
- **Phase IV: Drought Emergency**—When the PDSI is lower than -4.0, or when the DAC determines that Phase IV conditions exist based on other drought determination methods.

Palmer also developed a formula for standardizing drought calculations for each individual location based on the variability of precipitation and temperature at that location. The Palmer index can therefore be applied to any site for which sufficient precipitation and temperature data is available.

It is important to note that all incorporated communities in Lawrence County rely on groundwater wells as the primary water supply. The impact of drought on deeper public wells would not be significant unless the drought was of such severity to reduce groundwater levels.

As it pertains to drought impact on agricultural lands, the USDA's Risk Management Agency provides insured crop loss payments in the county as a result of drought from 1948 to the present. From 2006 through 2016, records indicate that there was \$9,006,625 in crop insurance payments during this time in Lawrence County. The annualized losses in that time were \$900,662 and all crop insurance payments paid to drought damages occurred between the years of 2012-2014.

Previous Occurrences

The NCDC storm events database includes 17 events occurring in Lawrence County from 1997 through 2017. Many of these were multiple reports from persistent drought events that lasted several months. The NCDC reports indicate that there were six distinct drought periods during the 20 year timeframe. **Table 3.19** provides a summary of these events.

Table 3.19. Previous Drought Occurrences 1997 – 2017

Drought Year	Duration	Property Damage	Crop Damage
1999	October	\$0	\$20,000
2000	August - September	\$0	\$0
2006	January - April	\$0	\$0
2011	July - November	\$0	\$10,000
2012-2013	July - January	\$1,950	\$8,630,000
Total		\$1,950	\$8,660,000

Source: NCDC Storm Events Database

The impacts of these events are described in the NCDC storm event narratives:

- **1999** - Stock ponds in many areas dried up forcing farmers to either pump or transport water for livestock. A few shallower wells reportedly ran dry. Many ranchers sold cattle and other livestock due to the lack of an adequate water supply. Some farmers compared this drought to the last severe drought in the area which occurred in 1980.
- **2000** - Drought conditions worsened across central, south central and southwest Missouri in early August, and maintained its intensity through the month. The very abnormally high temperatures by the end of the month, averaging 6 to 12 degrees above normal, also accelerated the already dry conditions over the area. Although short-term dryness, slower crop growth, fire risk above average, and phase 1 and 2 drought conditions were introduced by the Missouri drought assessment committee, no significant losses were noted.
- **2006** – According to the U.S. Drought monitor, Lawrence County and several surrounding counties experienced extreme drought experiencing record breaking low precipitation levels in February and March. No significant losses were noted
- **2011** - The southwestern district was especially hard hit during the month of July with as much as 80% of crops in very poor condition. Complete crop failures were also reported in portions of southwest Missouri. Burned up pastures forced livestock producers to feed hay as many were suffering from major grazing issues. Hay production was halted as grasses were dormant or burned from the lack of rainfall and heat. Less than an inch rainfall occurred during the month for much of the county. In general, some of the most exceptionally dry areas were found in parts of southwest Missouri where around 25 percent of the normal rainfall fell during the month. This drought began in July and was ongoing through the month of November. Through that time, precipitation remained extremely low.
- **2012/2013** - A persistent upper level high pressure ridge over the central portions of the country caused more dry conditions for the area. Severe to exceptional drought remained in place across southwestern Missouri through the month. Some rainfall fell by the end of the month giving some areas relief. The COOP station near Miller reported 4.23 of rainfall for the month of October. Drought conditions ranged from extreme (D3) across central Missouri to exceptional (D4) over southwestern Missouri. For the counties of across the Missouri Ozarks and southwestern Missouri, between 50 and 75 percent of the combined corn, soybeans and hay acreage was reported as a loss due to the drought. Total losses in Lawrence County came to \$8.6 million. The losses and damages to harvested yield were from the start of the planting season through the end of August.

Probability of Future Occurrence

Over the 20-year record period, Lawrence County was in a drought for 17 months. There are a total of 240 months in the record period. The calculated risk percent from the number of months of drought and the total number of months in the record period equates to the annual average percentage of 7.08% probability of drought occurrence in the county. Although drought is not predictable, long-range outlooks and predicted impacts of climate change could indicate an increased chance of drought persistence and severity.

Vulnerability

Vulnerability Overview

The agriculture sector is particularly vulnerable to drought. Periods of dry weather can reduce stock ponds and force the early sale of livestock. Crop production can be disrupted and vegetative diseases can spread reducing yields. Cities that operate water wells can experience water shortages during persistent drought periods like the six month drought period in 2012/2013. Those that rely on private wells are likely be impacted by reductions in the groundwater supply.

Potential Losses to Existing Development

According to data from the USDA Risk Management Agency, there was \$9,006,625 in insured crop loss payments in the years of 2006 through 2006. The total annualized loss in this timeframe is \$900,662 and is expected to continue at this rate in the future. There are no anticipated structural losses, loss of life, or injuries associated with this hazard.

Impact of Previous and Future Development

Increases in acreage planted with crops would add to exposure to drought-related agricultural losses. In addition, increases in population result in increased demand for treated water, adding additional strain on water supply systems. The amount of farm acreage dropped 4% from 2007 to 2012. This reduces the exposure of drought-related agricultural losses. The population of Lawrence County has risen slightly from 2000 to 2010 which puts more strain on water supply systems; however, significant growth in the county is not expected.

Impact of Climate Change

A new analysis, performed for the Natural Resources Defense Council, examined the effects of climate change on water supply and demand in the contiguous United States. The study found that more than 1,100 counties will face higher risks of water shortages by mid-century as a result of climate change. Two of the principal reasons for the projected water constraints are shifts in precipitation and potential evapotranspiration (PET). Climate models project decreases in precipitation in many regions of the U.S., including areas that may currently be described as experiencing water shortages of some degree.

The Natural Resources Defense Council developed a new water supply sustainability index. The risk to water sustainability is based on the following criteria:

- Projected water demand as a share of available precipitation
- Groundwater use as a share of projected available precipitation
- Susceptibility to drought
- Projected increase in freshwater withdrawals
- Projected increase in summer water deficit

The risk to water sustainability for counties meeting two of the criteria are classified as “moderate,” while those meeting three of the criteria are classified as “high,” and those meeting four or more are classified as “extreme.” Counties meeting less than two criteria are considered to have low risk to water sustainability. According to the Natural Resources Defense Council, without climate change the water supply sustainability index for Lawrence County is low. With climate change, the water supply sustainability index increases to moderate (NRDC).

Hazard Summary by Jurisdiction

Although the probability of drought is the same for the entire county, farming and livestock enterprises

in the unincorporated parts of the county would feel the greatest impact. These impacts are mitigated somewhat by the purchase of crop insurance. Monett has two source wells for potable water, while Aurora, Mt. Vernon, and Pierce City have one source. This comes to a total of four source wells in Lawrence County (one well in Monett is located in Barry County). Although, these communities are susceptible to water shortages due to groundwater reduction, other communities with no source are more at risk to extreme water shortages in the event of a drought. School and special districts would be the least impacted by drought; however, those districts in communities with single source wells or none at all may experience water shortages prior to those in larger communities. Larger communities also are more at risk due to higher building exposure. The expansion and retraction of soil can cause foundation damages to buildings in the event of a severe drought.

Problem Statement

Although drought most likely will not cause structural damage, the impact is greatest on the agriculture sector and if persistent enough, could cause reductions in groundwater and water shortages in communities that provide potable water services. Potential solutions to mitigate the impact of drought would be for communities to develop an ordinance to restrict the use of public water resources for non-essential usage, such as landscaping, washing cars, filling swimming pools, etc. during extreme drought periods. School and special districts can also implement water conservation measures at all district facilities.

3.4.3 Earthquakes

Some specific sources for this hazard are:

- U.S. Seismic Hazard Map, United States Geological Survey, http://earthquake.usgs.gov/hazards/products/conterminous/2014/HazardMap2014_lq.jpg;
- 6.5 Richter Magnitude Earthquake Scenario, New Madrid Fault Zone map, <http://www.igsb.uiowa.edu/Browse/quakes/quakes.htm>;
- Probability of magnitude 5.0 or greater within 100 Years, United States Geological Survey, <https://geohazards.usgs.gov/eqprob/2009/index.php>

Hazard Profile

Hazard Description

An earthquake is a sudden motion or trembling that is caused by a release of energy accumulated within or along the edge of the earth's tectonic plates. Earthquakes occur primarily along fault zones and tears in the earth's crust. Along these faults and tears in the crust, stresses can build until one side of the fault slips, generating compressive and shear energy that produces the shaking and damage to the built environment. Heaviest damage generally occurs nearest the earthquake epicenter, which is that point on the earth's surface directly above the point of fault movement. The composition of geologic materials between these points is a major factor in transmitting the energy to buildings and other structures on the earth's surface.

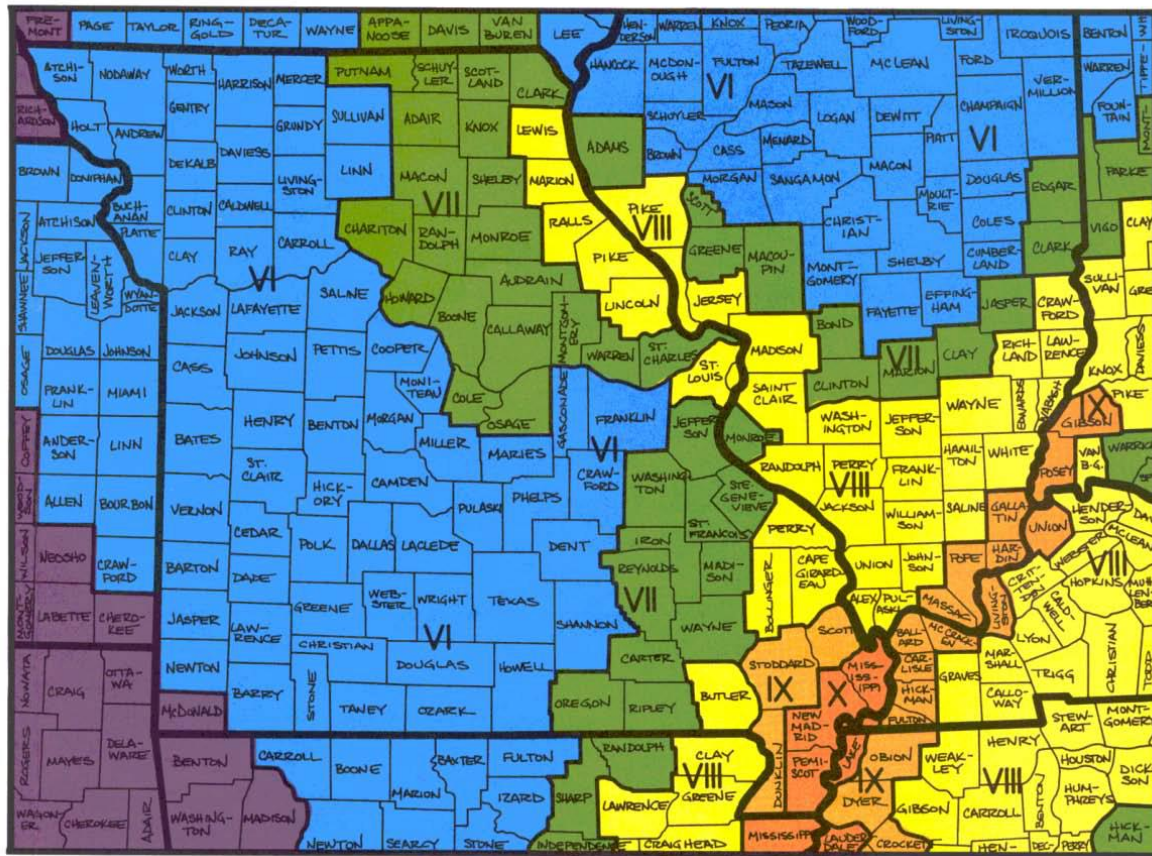
The subterranean faults were formed many millions of years ago on or near the surface of the earth. Subsequent to that time, these ancient faults subsided, while the areas adjacent were pushed up. As this fault zone (also known as a rift) lowered, sediments filled in the lower areas. Under pressure, the sediments hardened into limestones, sandstones, and shales – thus burying the rifts. The pressures on the North American plate and the movements along the San Andreas Fault by the Pacific plate have reactivated the buried rift(s) in the Mississippi embayment. This rift system is called the Reelfoot Rift and underlies the New Madrid Seismic Zone (Braille et al., 1986).

Geographic Location

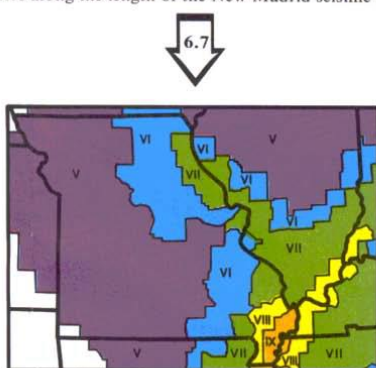
The greatest hazard from earthquakes in Lawrence County comes from the New Madrid Seismic Zone situated in the boot heel area of southeast Missouri. The potential of high magnitude earthquakes occurring along the New Madrid fault presents risk that does not vary across the planning area. The Nemaha uplift in central Kansas is also prone to seismic activity; however, the center of the Humboldt fault zone near the Nemaha Uplift is approximately 180 to 220 mile west of Lawrence County and produces lower magnitude seismic events.

Figure 3.4 shows the highest projected Modified Mercalli intensities by county from a potential magnitude 7.6 earthquake whose epicenter could be anywhere along the length of the New Madrid Seismic Zone. The secondary maps in Figure 3.6 on show the same regional intensities for 6.7 and 8.6 earthquakes, respectively. Lawrence County is located in zone VI from a potential magnitude 7.6 earthquake along the New Madrid fault. Residents would feel movement, there could be minimal damage to structures, and dishes and glassware would likely be broken.

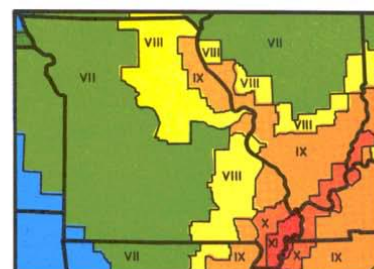
Figure 3.9. Impact Zones for Earthquake Along the New Madrid Fault



This map shows the highest projected Modified Mercalli intensities by county from a potential magnitude - 7.6 earthquake whose epicenter could be anywhere along the length of the New Madrid seismic zone.



This map shows the highest projected Modified Mercalli intensities by county from a potential magnitude - 6.7 earthquake whose epicenter could be anywhere along the length of the New Madrid seismic zone.



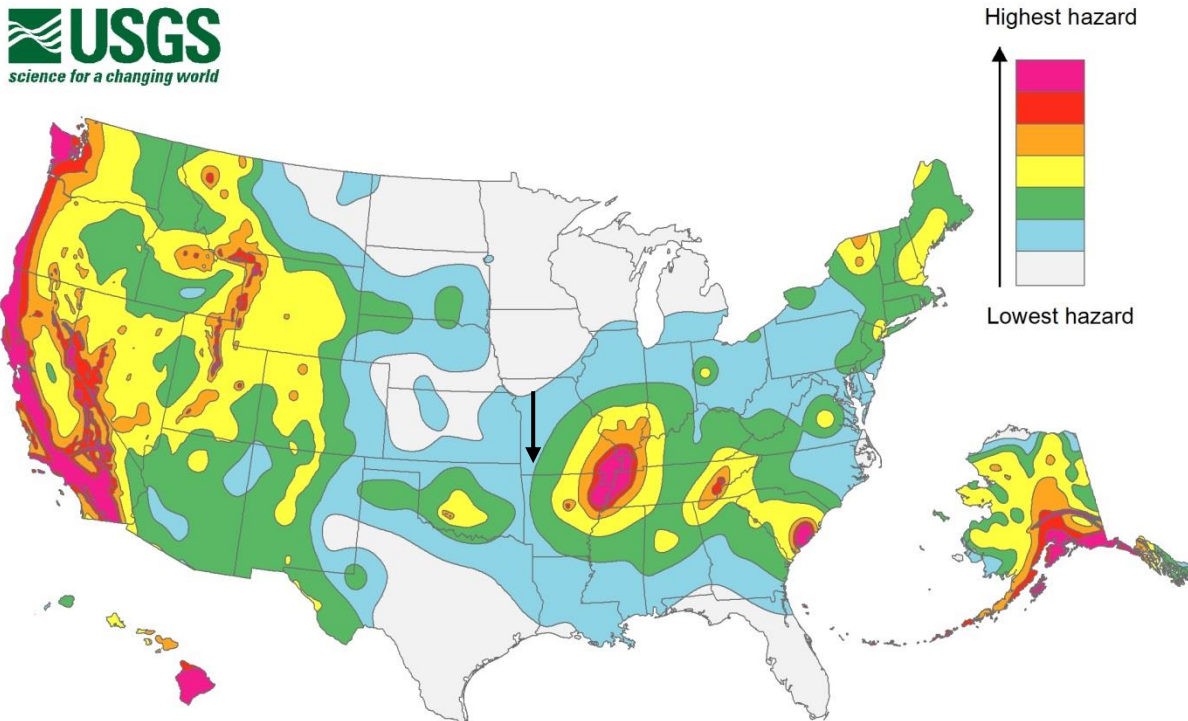
This map shows the highest projected Modified Mercalli intensities by county from a potential magnitude - 8.6 earthquake whose epicenter could be anywhere along the length of the New Madrid seismic zone.

Source:

http://sema.dps.mo.gov/docs/Programs/Planning,%20Disaster%20&%20Recovery/State%20of%20Missouri%20Hazard%20Analysis/2012-State-Hazard-Analysis/Annex_F_Earthquakes.pdf

Figure 3.11 illustrates seismicity in the United States. The arrow shows the location of the planning area and/or insert narrative describing in which zone the planning area is located. Include a key showing what the numbers represent.

Figure 3.10. United States Seismic Hazard Map



Source: United States Geological Survey at http://earthquake.usgs.gov/hazards/products/conterminous/2014/HazardMap2014_lq.jpg

Severity/Magnitude/Extent

Extent or severity of earthquakes is generally measured in two ways: 1) the Richter Magnitude Scale is a measure of earthquake magnitude; and 2) the Modified Mercalli Intensity Scale is a measure of earthquake severity. The two scales are defined as follows.

Richter Magnitude Scale

The Richter Magnitude Scale was developed in 1935 as a device to compare the size of earthquakes. The magnitude of an earthquake is measured using a logarithm of the maximum extent of waves recorded by seismographs. Adjustments are made to reflect the variation in the distance between the various seismographs and the epicenter of the earthquakes. On the Richter Scale, magnitude is expressed in whole numbers and decimal fractions. For example, comparing a 5.3 and a 6.3 earthquake shows that the 6.3 quake is ten times bigger in magnitude. Each whole number increase in magnitude represents a tenfold increase in measured amplitude because of the logarithm. Each whole number step in the magnitude scale represents a release of approximately 31 times more energy.

Modified Mercalli Intensity Scale

The intensity of an earthquake is measured by the effect of the earthquake on the earth's surface. The intensity scale is based on the responses to the quake, such as people awakening, movement of furniture, damage to chimneys, etc. The intensity scale currently used in the United States is the Modified Mercalli (MM) Intensity Scale. It was developed in 1931 and is composed of 12 increasing levels of intensity. They range from imperceptible shaking to catastrophic destruction, and each of the twelve levels is denoted by a Roman numeral. The scale does not have a mathematical basis, but is based on observed effects. Its use gives the laymen a more meaningful idea of the severity. **Table 3.19** provides the impact by levels of intensity on the Mercalli Scale.

Table 3.20. Modified Mercalli Intensity Scale

Intensity Level	Description
I	People do not feel any movement.
II	A few people might notice movement.
III	Many people indoors feel movement; Hanging objects swing.
IV	Most people indoors feel movement; Dishes, windows, and doors rattle; Walls, frames and structures creak; Liquids in open vessels are slightly disturbed; Parked cars rocked.
V	Almost everyone feels movement. Most people are awakened; Doors swing open or closed; Dishes are broken; Pictures on the wall move; Windows crack in some cases; Small objects move or are turned over; Liquids might spill out of open containers.
VI	Everyone feels movement; Poorly built buildings are damaged slightly; Considerable quantities of dishes, glassware and windows are broken; People have trouble walking; Pictures fall off walls; Objects fall from shelves; Plaster in walls might crack; Some furniture is overturned; Small bells in churches, chapels, and schools ring.
VII	People have difficulty standing; Considerable damage in poorly built or badly designed buildings, adobe houses, old walls, and spires; Damage is slight to moderate in well-built buildings; Numerous windows are broken; Weak chimneys break at rooflines; Cornices from towers and high buildings fall; Loose bricks fall from buildings; Heavy furniture is overturned and damaged; Some sand and gravel stream banks cave in.
VIII	Drivers have trouble steering; Poorly built structures suffer severe damage; Ordinary substantial buildings partially collapse; Damage slight in structures especially built to withstand earthquakes; Tree branches break; Houses not bolted down may shift on foundations; Tall structures such as towers and might chimneys twist and fall; Temporary or permanent changes in springs and wells; Sand and mud is ejected.
IX	Most buildings suffer damage; Houses not bolted down move off their foundations; Some underground pipes are broken; The ground cracks conspicuously; Reservoirs suffer damage.
X	Well-built wooden structures destroyed; most masonry and frame structures destroyed, including foundations; Rails bent; Dams seriously damaged; Cracks open in pavement.
XI	Few, if any masonry structures remain standing; Large well-built bridges destroyed; Rails bent greatly; Buried pipelines are rendered completely useless. Water mixed with sand and mud ejected in large amounts.
XII	Damage total, nearly all works of construction damaged greatly or destroyed; Objects thrown into the air; Large amounts of rock may move; The ground moves in waves or ripples.

Source: http://sema.dps.mo.gov/docs/EQ_Map.pdf

Previous Occurrences

There is no historical record of an earthquake occurrence within Lawrence County, according to Homefacts. The southeastern portion of Missouri is most susceptible to earthquakes because it

overlies the New Madrid Seismic Zone. Earthquake hazards in the western part of the State also exist because of the historical earthquakes in eastern Kansas and Nebraska. No area of Missouri is immune from the danger of earthquakes. Minor, but potentially damaging, earthquakes can occur anywhere in the state (SEMA, 2013).

Probability of Future Occurrence

Without a historical record for earthquake events in Lawrence County, it is not possible to calculate a precise probability of earthquake occurrence. Homefacts, however, gives Lawrence County a 0.23% probability of a magnitude 5.0 earthquake to occur in the next 50 years.

Vulnerability

Vulnerability Overview

Ground shaking is the most damaging effect from earthquakes. Ground shaking will impact all structures and critical infrastructure such as roads and electrical transmission systems. The greatest earthquake risk to Lawrence County is the New Madrid fault in the boot-heel region of Missouri. A 7.6 magnitude earthquake would result in poorly built buildings damaged slightly; considerable quantities of dishes, glassware and windows are broken; people having trouble walking; pictures falling off walls; objects falling from shelves; plaster in walls cracking; and furniture overturned. Damage to structures will occur but will vary on the quality of construction. In addition, some underground utilities may be damaged. Some injuries may occur but fatalities are unlikely.

Potential Losses to Existing Development

Potential losses to existing development include the total exposure for all communities listed in 3.3 and 3.6 in the Assets at Risk section of this chapter. The total exposure of each jurisdiction was used to estimate losses due to a 7.6 earthquake along the New Madrid. A damage factor of 0.5% was applied to each jurisdiction's total building and contents based on the expected impact for Zone VI on the modified Mercalli scale. **Table 3.21** depicts the estimated losses in each jurisdiction based on total exposure and a 0.5% damage factor.

Table 3.21. Estimated Potential Earthquake Losses

Jurisdiction	Potential Earthquake Losses
Lawrence County	
Aurora	
Freistatt	
Halltown	
Hoberg	
Marionville	
Miller	
Monett	
Mount Vernon	
Peirce City	
Stotts City	
Verona	
Aurora R-VIII	
Marionville R-IX	
Miller R-II	
Monett R-I	

Mt. Vernon R-V	
Pierce City R-VI	
Verona R-VII	

Impact of Previous and Future Development

Future development is not expected to increase the risk other than contributing to the overall exposure of what could become damaged as a result of an event.

Hazard Summary by Jurisdiction

Earthquake intensity is not likely to vary greatly throughout the planning area; the risk of occurrence is the same throughout. However, damages will differ where there are variations in the planning area based on percentage of structures built prior to 1939. For example, if one community has a higher percentage of residences built prior to 1939 than the other jurisdictions, that community is likely to experience higher damages. **Table 3.20** with the number and percentage of housing units built in 1939 or earlier.

Table 3.22. Percent of Housing Units Built in 1939 or Earlier

Jurisdiction	Built 1939 or earlier #	Built 1939 or earlier %
Lawrence County	2,601	15.7%
Aurora	523	15.5%
Freistatt	21	17.1%
Halltown	17	29.3%
Hoberg	11	39.3%
Marionville	154	16.1%
Miller	116	29.1%
Monett	769	21.1%
Mount Vernon	231	11.5%
Peirce City	172	27.1%
Stotts City	24	23.8%
Verona	55	22.9%

Source: U.S. Census; 2011-2015 ACS

It should also be noted that school districts with facilities constructed prior to 1939 could suffer more damages than newer facilities.

Problem Statement

Based on likely damage from a 7.6 magnitude earthquake along the New Madrid fault, older poorly built structures will suffer slight damage. Halltown, Hoberg, Miller, and Pierce City have the highest percentages of houses built before 1939 and would experience the most damage to structures. Potential damages to future development can be mitigated by adopting and enforcing at least IBC 2012 building codes. Most communities in Lawrence County do not have up-to-date building codes. Updating and enforcing building codes throughout Lawrence County would mitigate the impact on future development from an earthquake event.

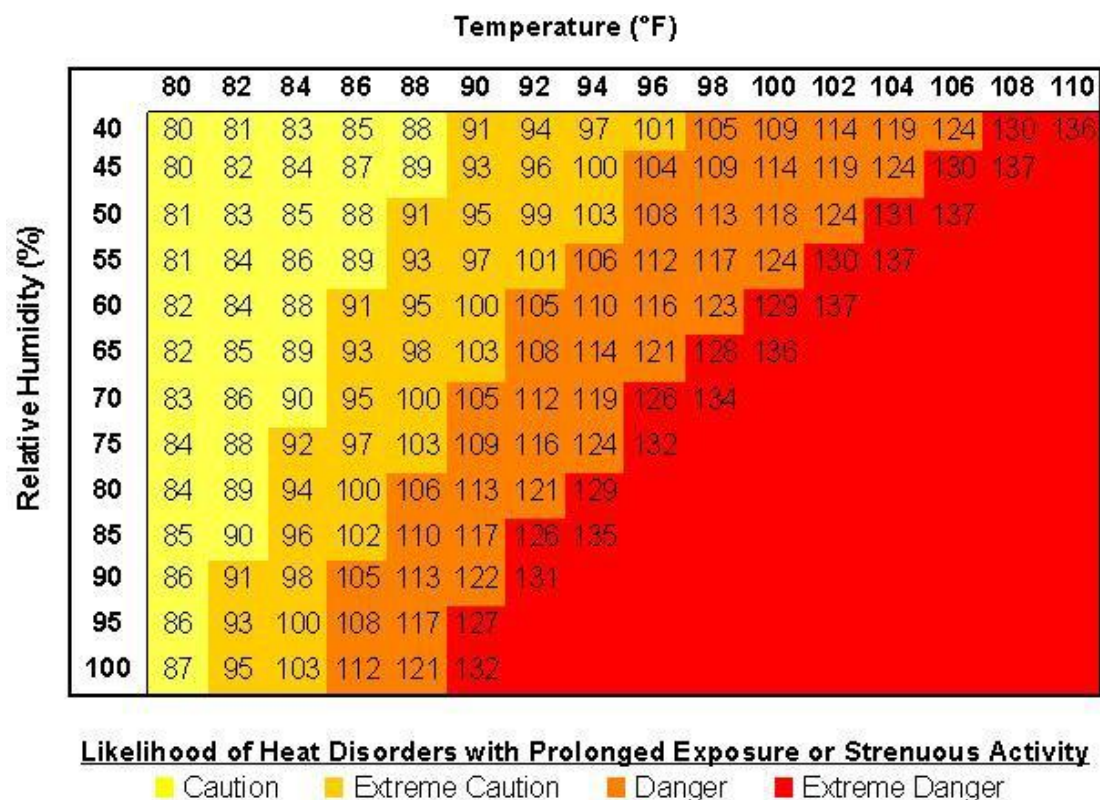
3.4.4 Extreme Heat

Hazard Profile

Hazard Description

Extreme temperature events, both hot and cold, can impact human health and mortality, natural ecosystems, agriculture and other economic sectors. The remainder of this section profiles extreme heat. Extreme cold events are profiled in combination with Winter Storm in **Section 3.4.____**. According to information provided by FEMA, extreme heat is defined as temperatures that hover 10 degrees or more above the average high temperature for the region and last for several weeks. Ambient air temperature is one component of heat conditions, with relative humidity being the other. The relationship of these factors creates what is known as the apparent temperature. The Heat Index chart shown in **Figure 3.11** uses both of these factors to produce a guide for the apparent temperature or relative intensity of heat conditions.

Figure 3.11. Heat Index (HI) Chart



Source: National Weather Service (NWS)

Note: Exposure to direct sun can increase Heat Index values by as much as 15°F. The shaded zone above 105°F corresponds to a HI that may cause increasingly severe heat disorders with continued exposure and/or physical activity.

Geographic Location

Extreme temperatures are an area-wide hazard event, the risk of extreme heat or cold does not vary within the county across jurisdictions.

Severity/Magnitude/Extent

Extreme heat can cause stress to crops and animals. According to USDA Risk Management Agency, losses to insurable crops during the 10-year time period from 2006 to 2016 were \$106,787 due to extreme heat in Lawrence County. Extreme heat can also strain electricity delivery infrastructure overloaded during peak use of air conditioning during extreme heat events. Another type of infrastructure damage from extreme heat is road damage. When asphalt is exposed to prolonged extreme heat, it can cause buckling of asphalt-paved roads, driveways, and parking lots.

From 1988-2016, there were 3,902 fatalities in the U.S. attributed to summer heat. This translates to an annual national average of 139 deaths. During the same period, 1 death was recorded in the planning area, according to NCDC data. The National Weather Service stated that among natural hazards, no other natural disaster—not lightning, hurricanes, tornadoes, floods, or earthquakes—causes more deaths.

Those at greatest risk for heat-related illness include infants and children up to five years of age, people 65 years of age and older, people who are overweight, and people who are ill or on certain medications. However, even young and healthy individuals are susceptible if they participate in strenuous physical activities during hot weather. In agricultural areas, the exposure of farm workers, as well as livestock, to extreme temperatures is a major concern.

Table 3.18 lists typical symptoms and health impacts due to exposure to extreme heat.

Table 3.23. Typical Health Impacts of Extreme Heat

Heat Index (HI)	Disorder
80-90° F (HI)	Fatigue possible with prolonged exposure and/or physical activity
90-105° F (HI)	Sunstroke, heat cramps, and heat exhaustion possible with prolonged exposure and/or physical activity
105-130° F (HI)	Heatstroke/sunstroke highly likely with continued exposure

Source: National Weather Service Heat Index Program, www.weather.gov/os/heat/index.shtml

The National Weather Service has an alert system in place (advisories or warnings) when the Heat Index is expected to have a significant impact on public safety. The expected severity of the heat determines whether advisories or warnings are issued. A common guideline for issuing excessive heat alerts is when for two or more consecutive days : (1) when the maximum daytime Heat Index is expected to equal or exceed 105 degrees Fahrenheit (°F); and the night time minimum Heat Index is 80°F or above. A heat advisory is issued when temperatures reach 105 degrees and a warning is issued at 115 degrees.

Previous Occurrences

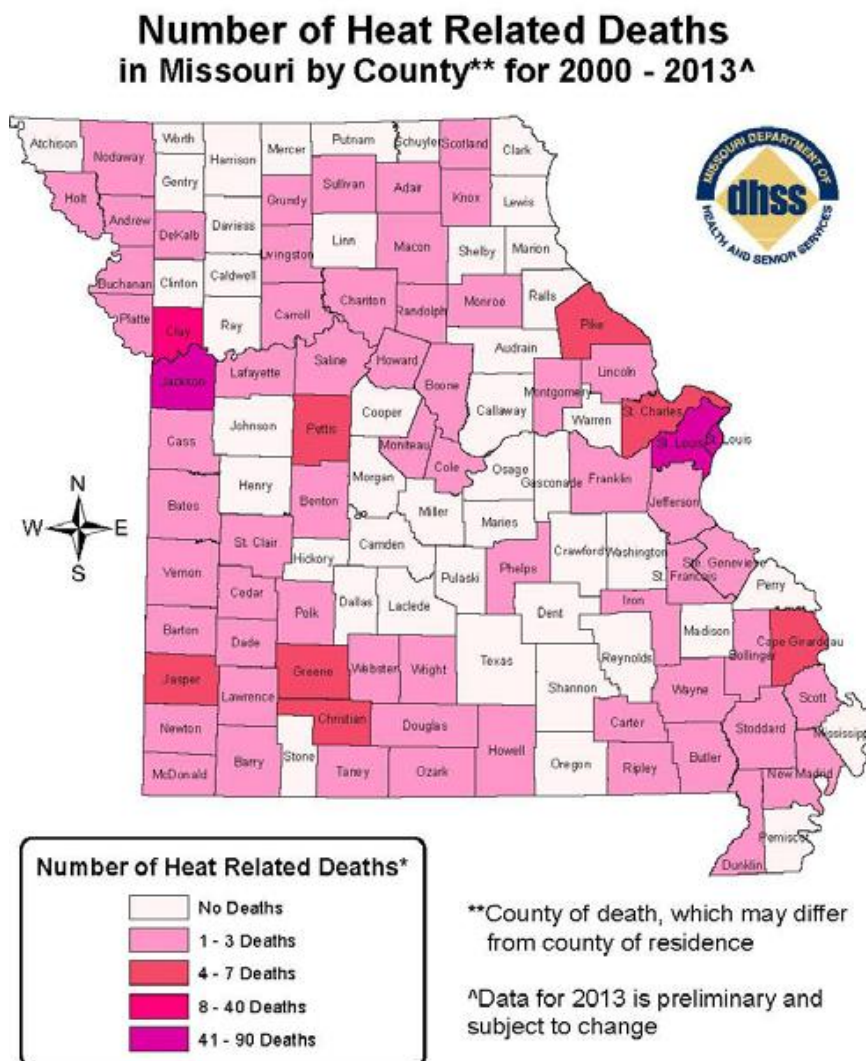
There are ten (10) recorded heat or excessive heat events in the National Climatic Data Center (NCDC) database from 1997 to 2017 for Lawrence County. There was one death and \$30,000 of property associated with these events. The event narratives describe fatalities that occurred during regional multi-county heat events for other nearby counties. During excessive heat in July 2011, several heads of cattle were killed owned by one farmer near Verona which resulted in \$30,000 in property damage. No crop damage was recorded in any heat events. One death occurred during the August and September heatwave in 2000. Heat was blamed when an elderly man was found dead in his car. That same heatwave saw 29 others hospitalized for heat-related illnesses. Table 3.24 shows extreme heat event periods in Lawrence County.

Table 3.24. Extreme Heat Event periods in Lawrence County, 1997-2017

Begin Date	End Date	Recorded Temperature	Injuries	Deaths	Property Damage
07/23/1999	08/08/1999	105-115 degrees	0	0	\$0
08/27/2000	09/04/2000	100-110 degrees	0	1	\$0
07/17/2001	08/09/2001	100-110 degrees	0	0	\$0
07/31/2011	07/31/2011	100+ degrees	0	0	\$30,000
06/01/2012	08/31/2012	95-100+ degrees	0	0	\$0
Total			0	1	\$30,000

Figure 3.12 is a map created by The Missouri Department of Health and Senior Services (DHSS) for heat related fatalities by county. The map indicates that there have been between one (1) and three (3) heat related fatalities in Lawrence County from 2000 to 2013.

Figure 3.12. Heat Related Deaths in Missouri 2000 - 2013



*Source: Bureau of Environmental Epidemiology

Date: 6/5/2014

Probability of Future Occurrence

If a 20 year time period is used, then the probability that an extreme heat event will occur in Lawrence County in any given year is 25% or once every four years. This equates to dividing five (5) years with an event period by the total number of years in the record period from 1997 to 2017 (20) and multiplying by 100.

The events recorded in the NCDC database describe prolonged periods where temperatures rose above at least 90° for at least 12 consecutive days. Heat advisories and warnings are issued for shorter periods of extreme heat nearly every year and may not meet the threshold for consecutive days in the NCDC database. It is possible that the heat related fatalities reported by DHSS (as shown in Figure 3.13) occurred during a shorter period of extreme heat and would not be recorded in the NCDC database. This data limitation indicates that extreme heat events could be underreported in the NCDC.

Vulnerability

Vulnerability Overview

High humidity, which often accompanies heat in Missouri, can make the effects of heat even more harmful. While heat-related illness and death can occur from exposure to intense heat in just one afternoon, heat stress on the body has a cumulative effect. Consequently, the persistence of a heat wave increases the threat to public health. The people most at risk are children under five years of age and adults over the age of 65 as well as people who work outdoors. The agriculture sector can also suffer crop loss during periods of extreme heat. Extreme heat may also cause buckling of roads.

Potential Losses to Existing Development

Based on information in the 2013 Plan and DHSS, one to three heat related deaths may occur within Lawrence County over the next 13 years.

Impact of Previous and Future Development

Population growth can result in increases in the age-groups that are most vulnerable to extreme heat. Population growth also increases the strain on electricity infrastructure, as more electricity is needed to accommodate the growing population. Aurora, Monett and Mount Vernon have the largest populations under 5 years of age and over 65. Lawrence County, as a whole, has not experienced a high rate of population growth in the last 15 years and is not expected to increase at a significant rate.

Hazard Summary by Jurisdiction

Those at greatest risk for heat-related illness and deaths include children up to five years of age, people 65 years of age and older, people who are overweight, and people who are ill or on certain medications. To determine jurisdictions within the planning area with populations more vulnerable to extreme heat, demographic data was obtained from the 2010 census on population percentages in each jurisdiction comprised of those under age 5 and over age 65. Data was not available for overweight individuals and those on medications vulnerable to extreme heat.

Table 3.19 below summarizes vulnerable populations in the participating jurisdictions. Note that school and special districts are not included in the table because students and those working for the special districts are not customarily in these age groups.

Table 3.25. County Percentage and Count of Population Under Age 5 and Over Age 65, 2011-2015 ACS Census Data

Jurisdiction	Population Under 5 yrs	Population 65 yrs and over
Lawrence County	2,489 (6.5%)	6,501 (17%)
Aurora	493 (6.6%)	1,203 (16.1%)
Freistatt	9 (6.9%)	43 (32.8%)
Halltown	12 (11%)	14 (12.8%)
Hoberg	3 (6.4%)	2 (4.3%)
Marionville	140 (6.5%)	476 (22.1%)
Monett	708 (7.9%)	1,344 (15%)
Miller	52 (7.1%)	118 (16.1%)
Mt. Vernon	344 (7.6%)	1,051 (23.2%)
Pierce City	101 (8%)	219 (17.4%)
Stotts City	9 (5.9%)	22 (14.5%)
Verona	50 (8.5%)	55 (9.3%)

Source: U.S. Census Bureau, ACS 2011-2015 Five-Year Estimates

All schools in the planning area have proper air-conditioning and all follow proper procedures in the event of extreme heat.

Problem Statement

Older and younger segments of the population are more vulnerable to the impact of extreme heat. In addition people living below the poverty level may be more vulnerable during periods of extreme heat due to a lack of air conditioning or utilities in their homes. Institutionalized populations, such as those living in nursing homes, become more vulnerable to extreme heat due to power outages.

To help reduce the risk of death, heating and cooling centers should be promoted and known to the public, especially to those who have young children or are over the age of 65. Partnering with local community organizations to continue to donate fans and offer weatherization programs would mitigate the impact on vulnerable populations in the county.

3.4.5 Fires (Urban/Structural and Wild)

The specific sources for this hazard are:

- Missouri Department of Conservation Wildfire Data Search at <http://mdc4.mdc.mo.gov/applications/FireReporting/Report.aspx>
- Statistics, Missouri Division of Fire Safety;
- National Statistics, US Fire Administration;
- Fire/Rescue Mutual Aid Regions in Missouri;
- Forestry Division of the Missouri Dept of Conservation;
- National Fire Incident Reporting System (NFIRS), <http://www.dfs.dps.mo.gov/programs/resources/fire-incident-reporting-system.asp>
- Firewise Missouri, <http://www.firewisemissouri.org/wildfire-in-missouri.html>
- University of Wisconsin Slivis Lab, http://silvis.forest.wisc.edu/maps/wui_main

Hazard Profile

Hazard Description

The incident types considered for urban/structural fire include all fires in the following categories: 1) general fires, 2) structure fire, 3) fire in mobile property used as a fixed structure, and 4) mobile property (vehicle) fire. The fire incident types for wildfires include: 1) natural vegetation fire, 2) outside rubbish fire, 3) special outside fire, and 4) cultivated vegetation, crop fire.

The Missouri Division of Fire Safety (MDFS) indicates that approximately 80 percent of the fire departments in Missouri are staffed with volunteers. Whether paid or volunteer, these departments are often limited by lack of resources and financial assistance. The impact of a fire to a single-story building in a small community may be as great as that of a larger fire to a multi-story building in a large city.

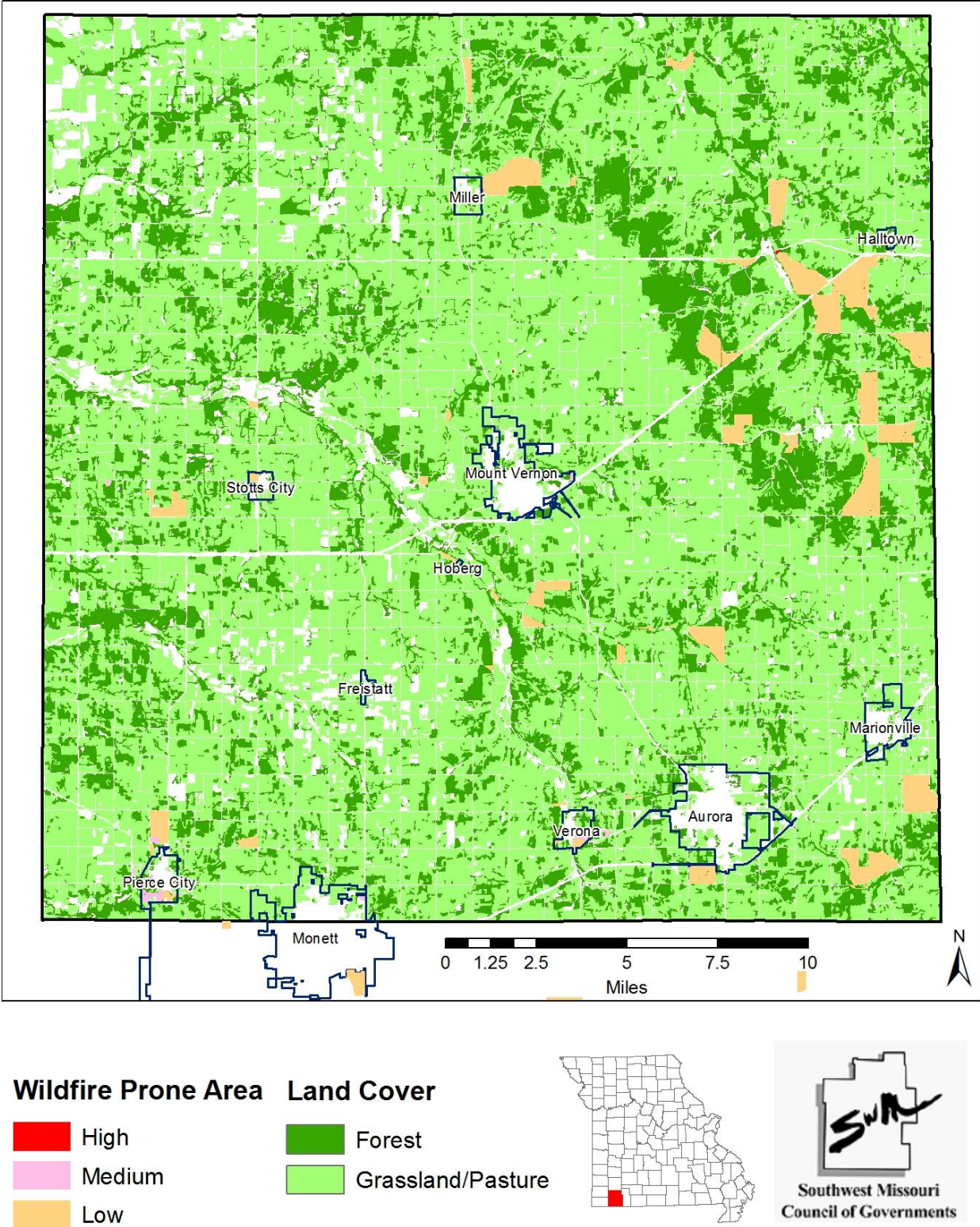
The Forestry Division of the Missouri Department of Conservation (MDC) is responsible for protecting privately owned and state-owned forests and grasslands from wildfires. To accomplish this task, eight forestry regions have been established in Missouri for fire suppression. The Forestry Division works closely with volunteer fire departments and federal partners to assist with fire suppression activities. Currently, more than 900 rural fire departments in Missouri have mutual aid agreements with the Forestry Division to obtain assistance in wildfire protection if needed.

Most of Missouri fires occur during the spring season between February and May. The length and severity of both structural and wildland fires depend largely on weather conditions. Spring in Missouri is usually characterized by low humidity and high winds. These conditions result in higher fire danger. In addition, due to the recent lack of moisture throughout many areas of the state, conditions are likely to increase the risk of wildfires. Drought conditions can also hamper firefighting efforts, as decreasing water supplies may not prove adequate for firefighting. It is common for rural residents burn their garden spots, brush piles, and other areas in the spring. Some landowners also believe it is necessary to burn their forests in the spring to promote grass growth, kill ticks, and reduce brush. Therefore, spring months are the most dangerous for wildfires. The second most critical period of the year is fall. Depending on the weather conditions, a sizeable number of fires may occur between mid-October and late November.

Geographic Location

Absent demographic information indicating otherwise, the risk of structural fire probably does not vary widely across the planning area. However, damages due to wildfires would be higher in communities with more wildland–urban interface (WUI) areas. The term refers to the zone of transition between unoccupied land and human development and needs to be defined in the plan. Within the WUI, there are two specific areas identified: 1) Interface and 2) Intermix. The interface areas are those areas that abut wildland vegetation and the Intermix areas are those areas that intermingle with wildland areas. **Figure 3.10** shows WUI areas in Lawrence County. Areas of medium interface/intermix are present near the City of Verona, while areas of low interface/intermix are present near Aurora, Miller, and Pierce City. Most of the WUI areas in the unincorporated part of the county are considered low intermix; however, there are smaller areas that are medium and high.

Figure 3.13. Lawrence County Wildland Intermix



Severity/Magnitude/Extent

Structural and urban fires are a daily occurrence throughout the State. Statewide, approximately 100 fatalities occur annually, as well as numerous injuries affecting the lives of the victims, their families, and many others—especially those involved in fire and medical services. Unlike other disasters, structural fires can be caused by human criminal activity: arson. All citizens pay the costs of arson whether through increased insurance rates, higher costs to maintain fire and medical services, or the costs of supporting the criminal justice system.

Wildfires damage the environment, killing some plants and occasionally animals. Firefighters have been injured or killed, and structures can be damaged or destroyed. The loss of plants can heighten the risk of soil erosion and landslides. Although Missouri wildfires are not the size and intensity of those in the Western United States, they could impact recreation and tourism in and near the fires.

Wildland fires in Missouri have been mostly a result of human activity rather than lightning or some other natural event. Wildfires in Missouri are usually surface fires, burning the dead leaves on the ground or dried grasses. They do sometimes “torch” or “crown” out in certain dense evergreen stands like eastern red cedar and shortleaf pine. However, Missouri does not have the extensive stands of evergreens found in the western US that fuel the large fire storms seen on television news stories.

While very unusual, crown fires can and do occur in Missouri native hardwood forests during prolonged periods of drought combined with extreme heat, low relative humidity, and high wind. Tornadoes, high winds, wet snow and ice storms in recent years have placed a large amount of woody material on the forest floor that causes wildfires to burn hotter and longer. These conditions also make it more difficult for fire fighters suppress fires safely.

Often wildfires in Missouri go unnoticed by the general public because the sensational fire behavior that captures the attention of television viewers is rare in the state. Yet, from the standpoint of destroying homes and other property, Missouri wildfires can be quite destructive.

There is no information about the severity of damages from notable wildland fires in the planning area.

Previous Occurrences

According to MDC Wildfire Data, there have been 660 wildfires reported in Lawrence County from 2007 to May 2017. A total of 8,921 acres were burned as a result of these reported wildfires. In addition, eighteen buildings were destroyed which include residential, commercial, and outbuildings. 37 buildings were damaged and 283 were threatened by wildfires. **Table 3.25** contains MDC wildfire statistics by year.

Table 3.26. Lawrence County Wildfires 2007-2017

Year	Number of Wildfires	Buildings Destroyed	Buildings Damaged	Buildings Threatened	Acres Burned
2007	18	0	0	1	67
2008	34	1	0	9	287.5
2009	59	0	0	9	544
2010	58	0	4	29	153.47
2011	68	4	5	38	326.7
2012	78	0	3	57	4,942
2013	35	0	0	2	304

2014	77	0	0	23	434
2015	78	2	1	7	337
2016	106	2	2	31	797.2
2017	49	9	22	77	728.6
Total	660	18	37	283	8,921.47

Source: Missouri Department of Conservation, <http://mdc4.mdc.mo.gov/applications/FireReporting/Report.aspx> * = Through July 14th, 2016

There are no records from school districts and special districts about previous wildfire events and the damages resulting from them.

Probability of Future Occurrence

Based on the last eleven years of fire reporting statistics from the MDC in **Table 3.25**, there were a total of 660 reported wildfires from 2007 to 2017. This equates to an average of 60 wildfire events annually and a 100% probability of occurrence in any given year.

Vulnerability

Vulnerability Overview

Wildfires occur throughout wooded and open vegetation areas of Missouri. They can occur any time of the year, but mostly occur during long, dry hot spells. Any small fire, if not quickly detected and suppressed, can get out of control. Most wildfires are caused by human carelessness or negligence. However, some are precipitated by lightning strikes and in rare instances, spontaneous combustion. Structures and people in WUI areas in the county and cities are more vulnerable to the impact of wildfires due to the level of fuel mixed with structures.

Potential Losses to Existing Development

On average, 1.6 buildings are destroyed or damaged annually by wildfires in Lawrence County. 25.7 structures are threatened per year and about 811 acres of land are burned on average, annually.

Impact of Previous and Future Development

It is anticipated that there will be some future development in WUI areas throughout unincorporated areas of the county. Future growth in WUI areas of the county will increase the risk and exposure to wildfires. It is expected that WUI development in cities will be mitigated by development regulations reducing the risk to wildfire hazard.

Hazard Summary by Jurisdiction

Table 3.26 summarizes the structure exposure for Lawrence County and cities. The structure counts and values were derived by overlaying Lawrence County Assessor parcels with the WUI census block data. The exposure amount indicates the dollar amount of assets at risk and the variability of vulnerability from place to place.

Table 3.27. Wildfire Structure Exposure by Jurisdiction

Jurisdiction	Residential	Commercial	Agriculture	Exposure (\$)
--------------	-------------	------------	-------------	---------------

Lawrence County				
Aurora				
Freistatt				
Halltown				
Hoberg				
Marionville				
Miller				
Monett				
Mt. Vernon				
Pierce City				
Stotts City				
Verona				

Source: Lawrence County Assessors

No school facilities or special district facilities in the county reside in any WUI areas.

Problem Statement

Wildfire occurrences are very frequent within Lawrence County. These events can destroy, damage, and threaten structures in hazard prone areas. Populations and structures in WUI areas of the county have an increased risk to wildfires due to the level of fuel mixed with structures. **Table 3.26** indicates that of the participating jurisdictions of Lawrence County, Aurora, Miller, Monett, Pierce City, Stotts City, and Verona are in the vicinity of wildfire prone areas. Pierce City and Verona have a heightened risk to wildfire due to being in the vicinity of medium wildfire prone areas. Cities that have adopted landscape ordinances can include fire safe landscape design requirements in these areas.

The unincorporated part of the county has the highest risk and exposure to wildfires. County officials and the fire department can promote fire resistant construction materials and landscape design techniques to mitigate the risk to wildfire in future development. Information about these materials and techniques are included in the MDC publication, Living with Wildfire. Including this information in education and awareness programs for the public may potentially mitigate wildfire damage in the county.

3.4.6 Flooding (Flash and River)

Profile

Hazard Description

A flood is partial or complete inundation of normally dry land areas. Riverine flooding is defined as the overflow of rivers, streams, drains, and lakes due to excessive rainfall, rapid snowmelt, or ice. There are several types of riverine floods, including headwater, backwater, interior drainage, and flash flooding. Riverine flooding is defined as the overflow of rivers, streams, drains, and lakes due to excessive rainfall, rapid snowmelt or ice melt. The areas adjacent to rivers and stream banks that carry excess floodwater during rapid runoff are called floodplains. A floodplain is defined as the lowland and relatively flat area adjoining a river or stream. The terms “base flood” and “100- year flood” refer to the area in the floodplain that is subject to a one percent or greater chance of flooding in any given year. Floodplains are part of a larger entity called a basin, which is defined as all the land drained by a river and its branches.

Flooding caused by dam and levee failure is discussed in Section 3.____ and Section 3.____ respectively. It will not be addressed in this section.

A flash flood occurs when water levels rise at an extremely fast rate as a result of intense rainfall over a brief period, sometimes combined with rapid snowmelt, ice jam release, frozen ground, saturated soil, or impermeable surfaces. Flash flooding can happen in Special Flood Hazard Areas (SFHAs) as delineated by the National Flood Insurance Program (NFIP), and can also happen in areas not associated with floodplains.

Ice jam flooding is a form of flash flooding that occurs when ice breaks up in moving waterways, and then stacks on itself where channels narrow. This creates a natural dam, often causing flooding within minutes of the dam formation.

In some cases, flooding may not be directly attributable to a river, stream, or lake overflowing its banks. Rather, it may simply be the combination of excessive rainfall or snowmelt, saturated ground, and inadequate drainage. With no place to go, the water will find the lowest elevations – areas that are often not in a floodplain. This type of flooding, often referred to as sheet flooding, is becoming increasingly prevalent as development outstrips the ability of the drainage infrastructure to properly carry and disburse the water flow.

Most flash flooding is caused by slow-moving thunderstorms or thunderstorms repeatedly moving over the same area. Flash flooding is a dangerous form of flooding which can reach full peak in only a few minutes. Rapid onset allows little or no time for protective measures. Flash flood waters move at very fast speeds and can move boulders, tear out trees, scour channels, destroy buildings, and obliterate bridges. Flash flooding can result in higher loss of life, both human and animal, than slower developing river and stream flooding.

In certain areas, aging storm sewer systems are not designed to carry the capacity currently needed to handle the increased storm runoff. Typically, the result is water backing into basements, which damages mechanical systems and can create serious public health and safety concerns. This combined with rainfall trends and rainfall extremes all demonstrate the high probability, yet generally unpredictable nature of flash flooding in the planning area.

Although flash floods are somewhat unpredictable, there are factors that can point to the likelihood of flash floods occurring. Weather surveillance radar is being used to improve monitoring capabilities

of intense rainfall. This, along with knowledge of the watershed characteristics, modeling techniques, monitoring, and advanced warning systems has increased the warning time for flash floods.

Geographic Location

Riverine flooding is most likely to occur in Special Flood Hazard Areas (SFHAs) where the 100-year floodplain has been mapped. Areas along the Spring River, especially in Mt. Vernon and Stotts City, experience the greatest impact to riverine floods and flash floods. Clear Creek also causes significant flooding in and around Pierce City. According to the NCDC storm event data from 1997 through February 28th, 2017, there were 20 floods and 68 flash flood events recorded in the county. These events are typically regional in nature; however flash floods are can be contained to one specific area specifically portions of highways or roads. **Figures 3.14** through **3.24** are mapped SFHAs for communities and unincorporated areas in Lawrence County.

Figure 3.14. Lawrence County SFHAs with Critical Facilities

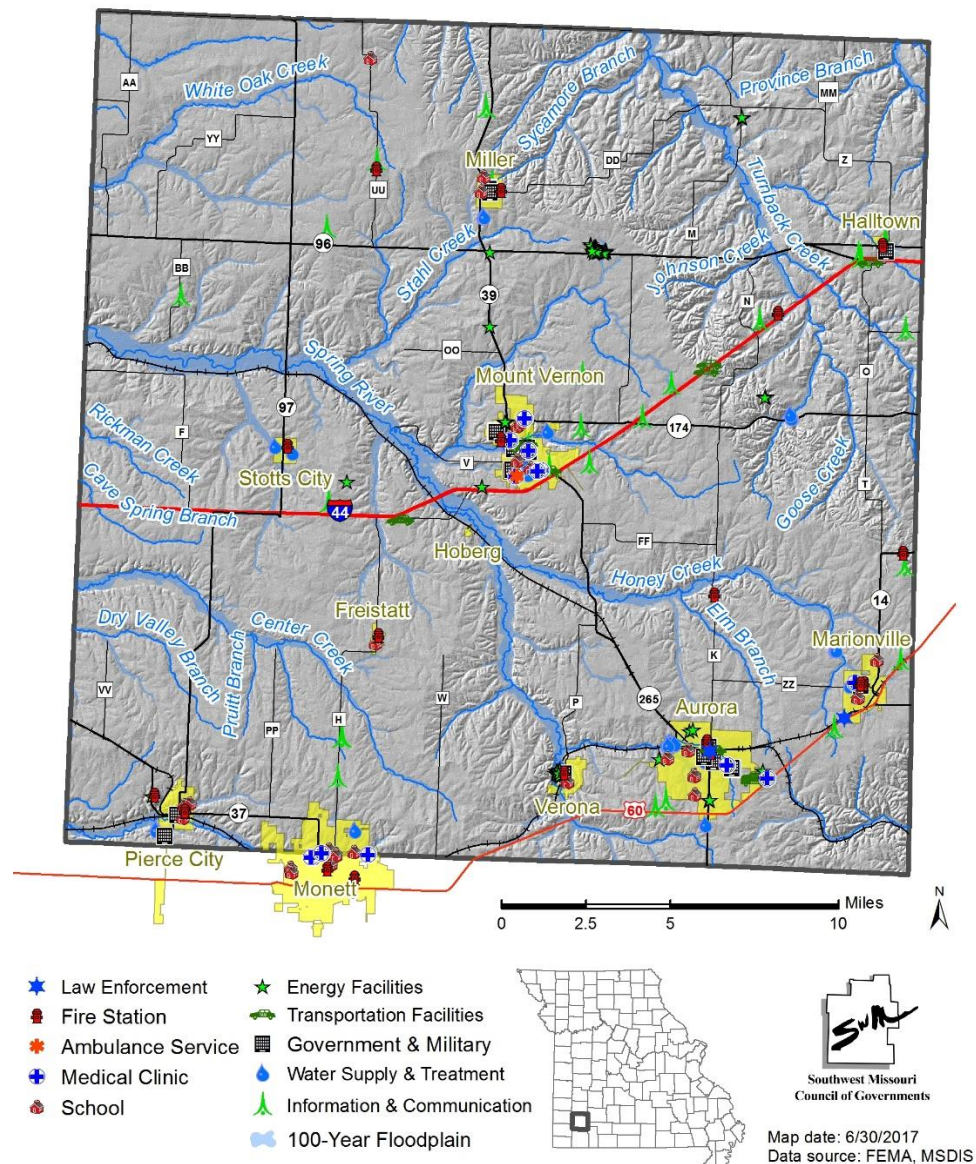


Figure 3.15. City of Aurora SFHAs with Critical Facilities

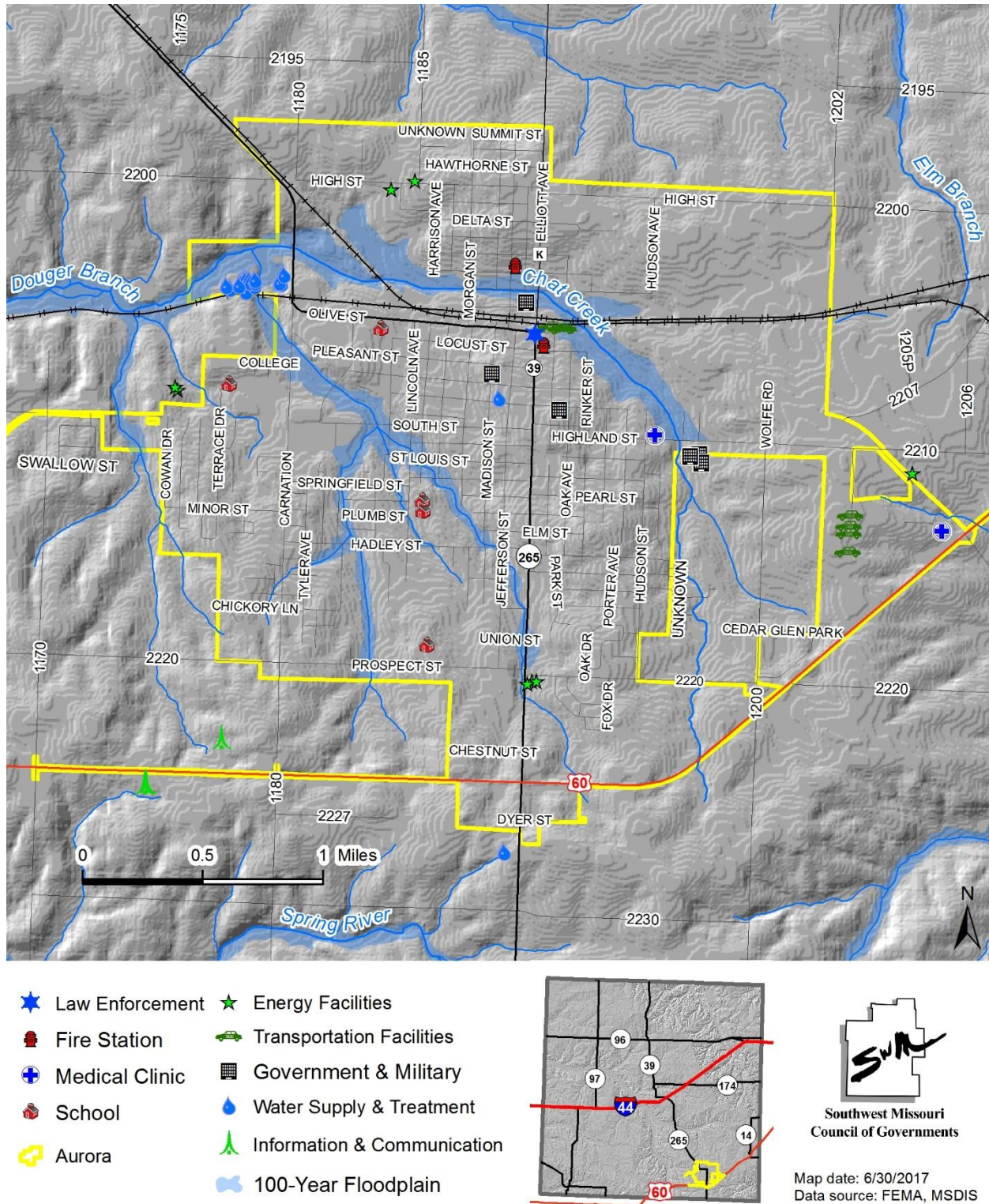


Figure 3.16. Village of Freistatt SFHAs with Critical Facilities

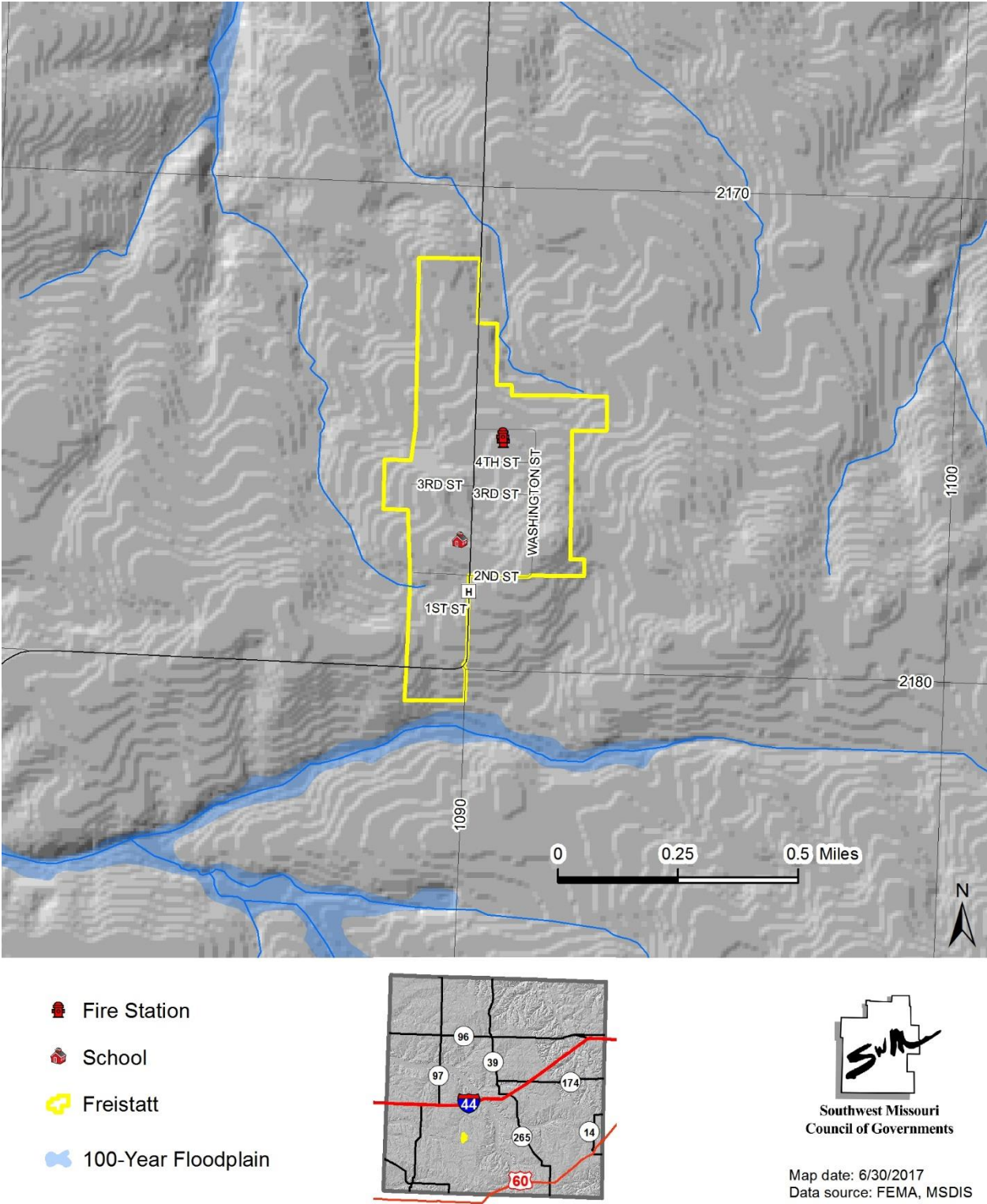


Figure 3.17. Village of Halltown SFHAs with Critical Facilities

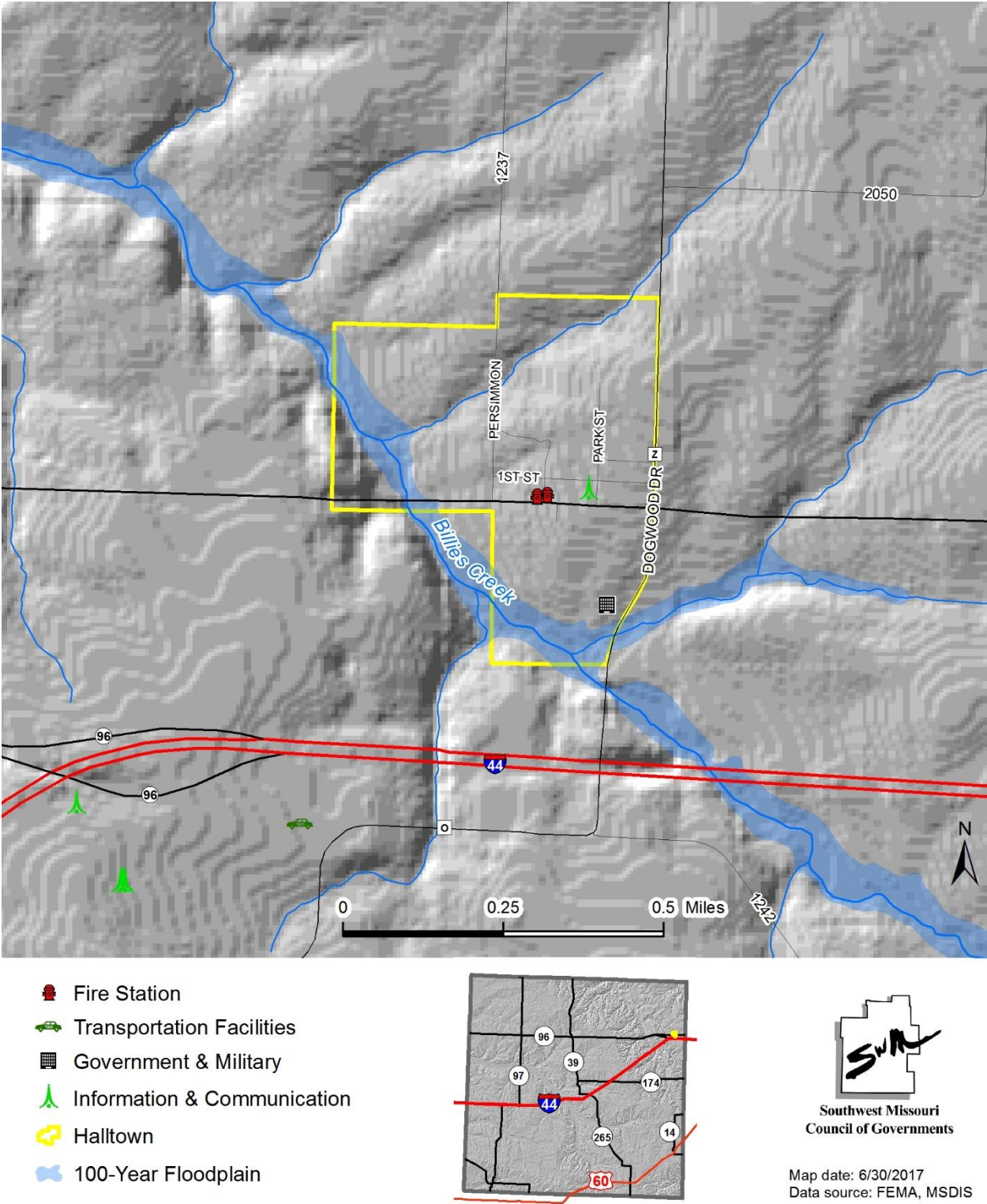
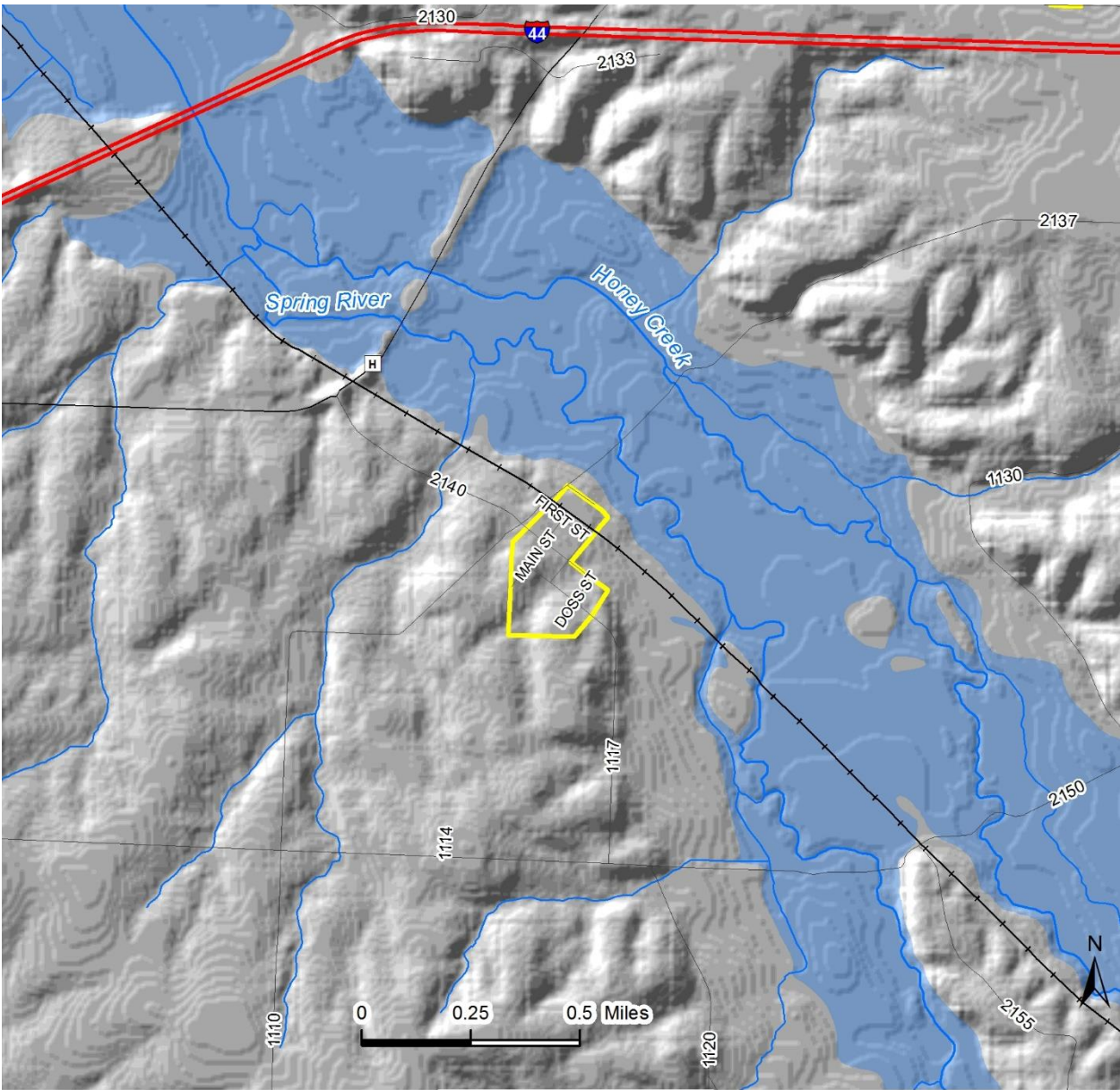

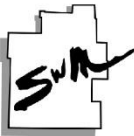
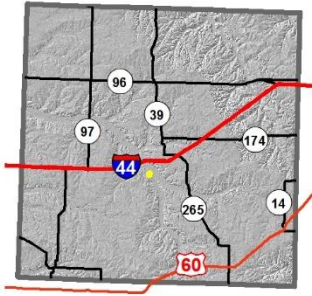


Figure 3.18. Village of Hoberg SFHAs with Critical Facilities



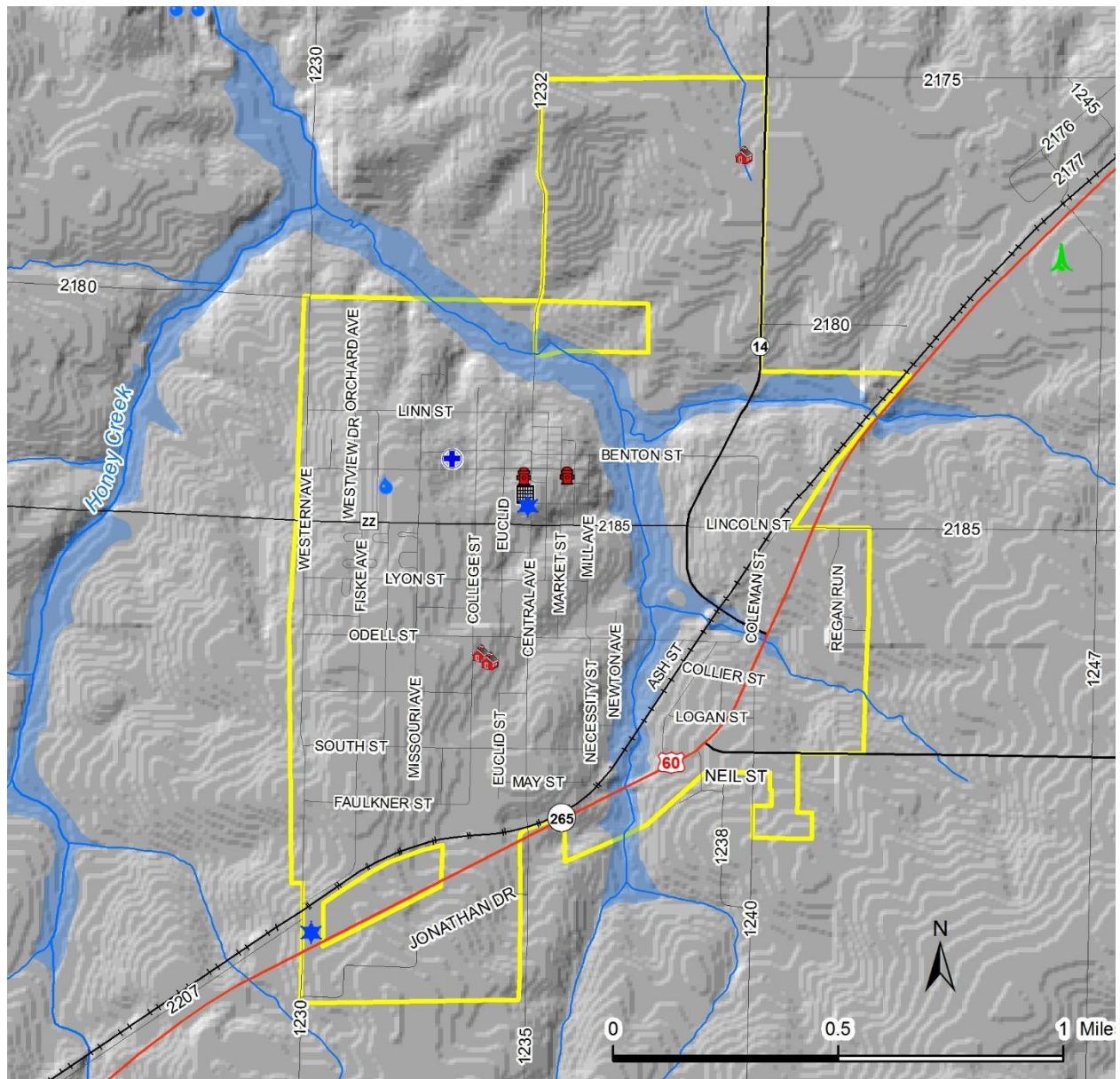
-  Hoberg
-  100-Year Floodplain



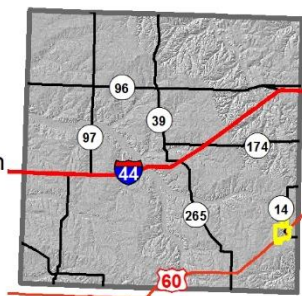
Southwest Missouri
Council of Governments

Map date: 6/30/2017
Data source: FEMA, MSDIS

Figure 3.19. City of Marionville SFHAs with Critical Facilities



- | | |
|---------------------|-------------------------------|
| ★ Law Enforcement | ■ Government & Military |
| 🚒 Fire Station | 💧 Water Supply & Treatment |
| 🚑 Ambulance Service | 📡 Information & Communication |
| 🏥 Medical Clinic | 🌊 100-Year Floodplain |
| 🎓 School | 🟡 Marionville |



Map date: 6/30/2017
Data source: FEMA, MSDIS

Figure 3.20. City of Miller SFHAs with Critical Facilities

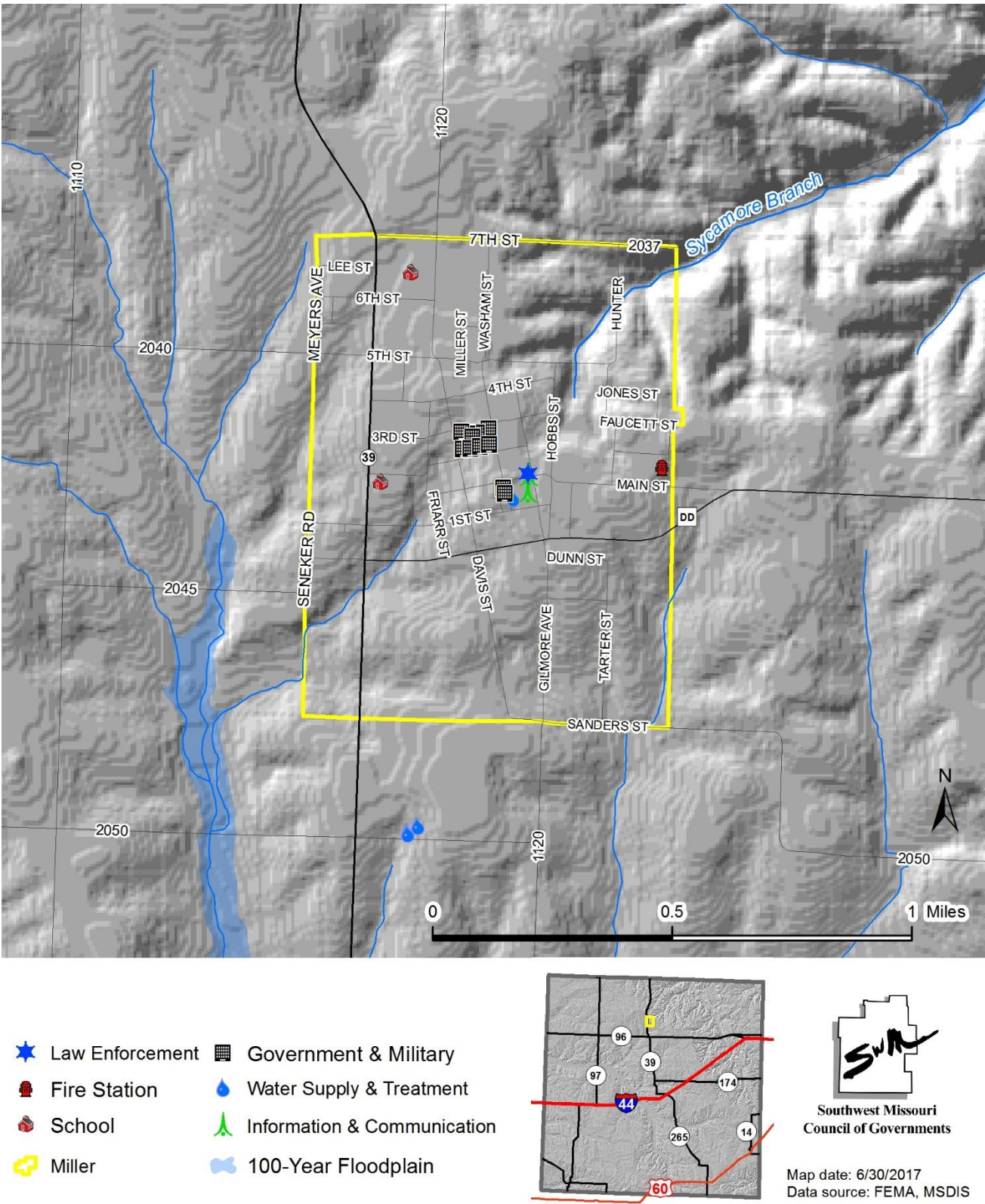


Figure 3.21. City of Monett SFHAs with Critical Facilities

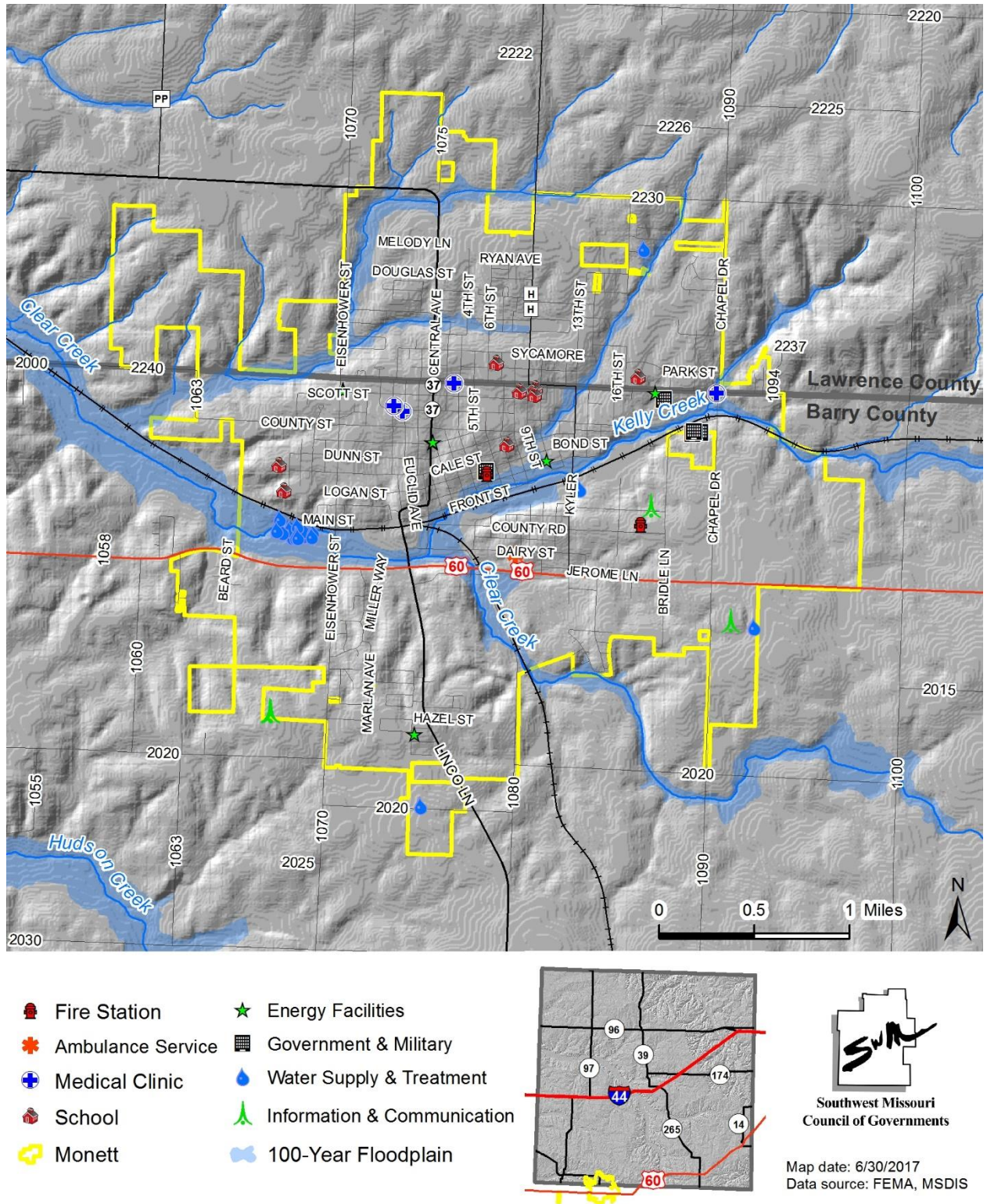
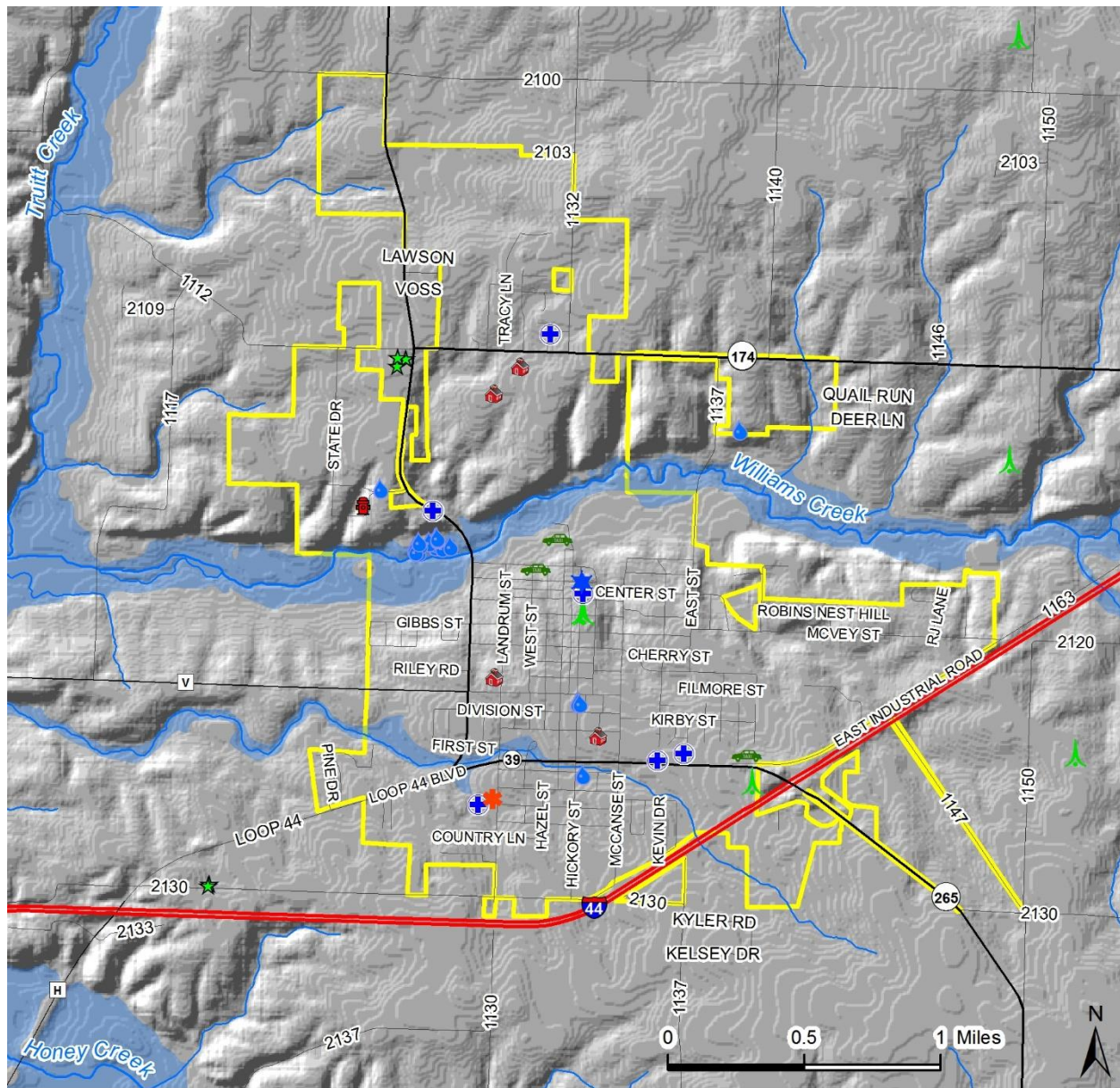
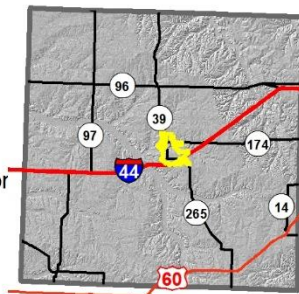


Figure 3.22. City of Mt. Vernon SFHAs with Critical Facilities

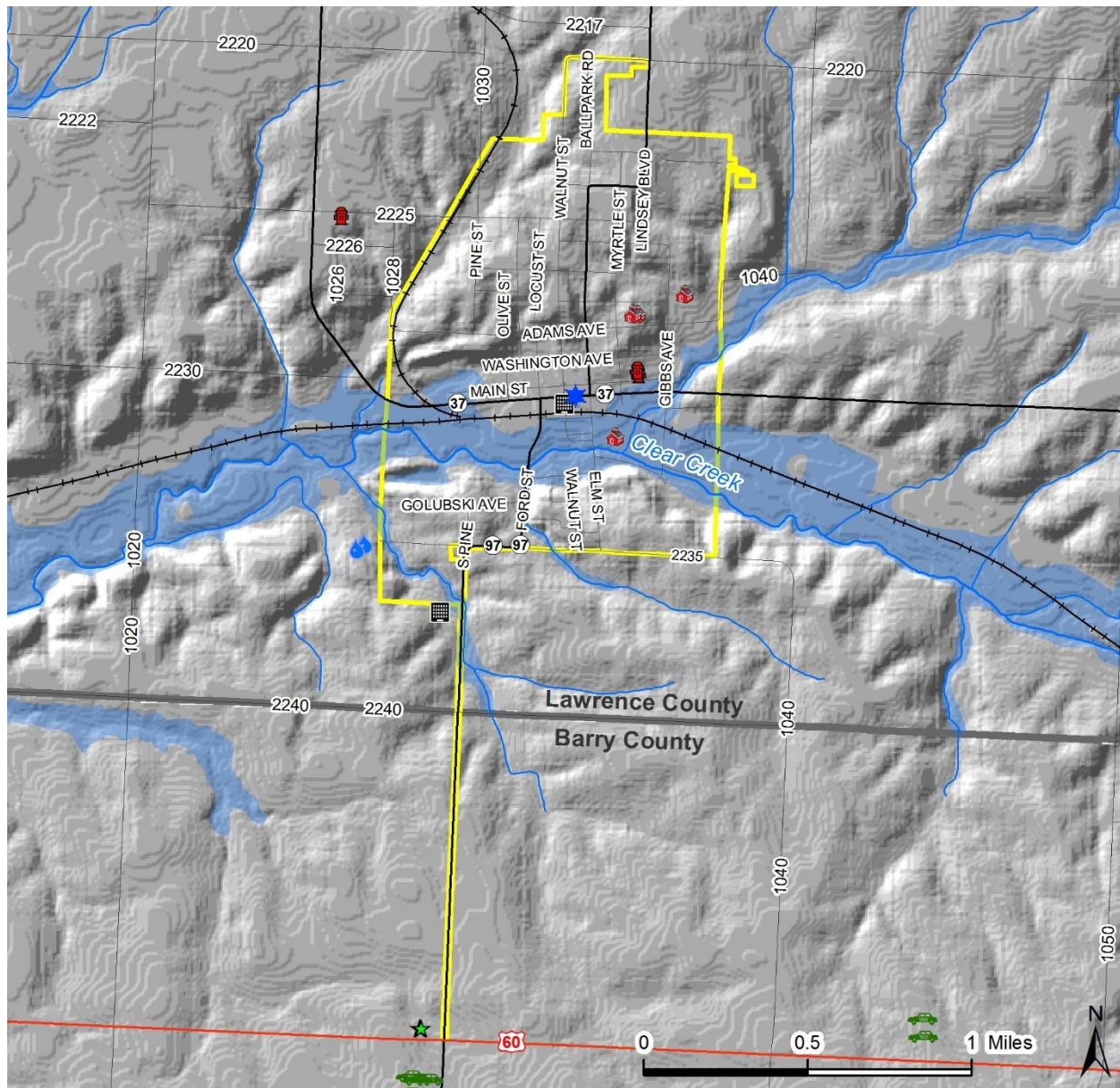


- | | |
|---------------------|-------------------------------|
| ★ Law Enforcement | ★ Energy Facilities |
| 🚒 Fire Station | 🚗 Transportation Facilities |
| ★ Ambulance Service | 💧 Water Supply & Treatment |
| ⛑ Medical Clinic | 📡 Information & Communication |
| 🎓 School | 🌊 100-Year Floodplain |
| 🏡 Mount Vernon | |

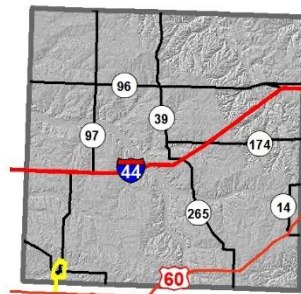


Map date: 6/30/2017
Data source: FEMA, MSDIS

Figure 3.23. City of Pierce City SFHAs with Critical Facilities



- | | |
|-------------------|-----------------------------|
| ★ Law Enforcement | ★ Energy Facilities |
| 🚒 Fire Station | 🚗 Transportation Facilities |
| 🏫 School | 🏢 Government & Military |
| 🗺 Pierce City | 💧 Water Supply & Treatment |
| | 🌊 100-Year Floodplain |



Southwest Missouri
Council of Governments

Map date: 6/30/2017
Data source: FEMA, MSDIS

Figure 3.24. City of Stotts City SFHAs with Critical Facilities

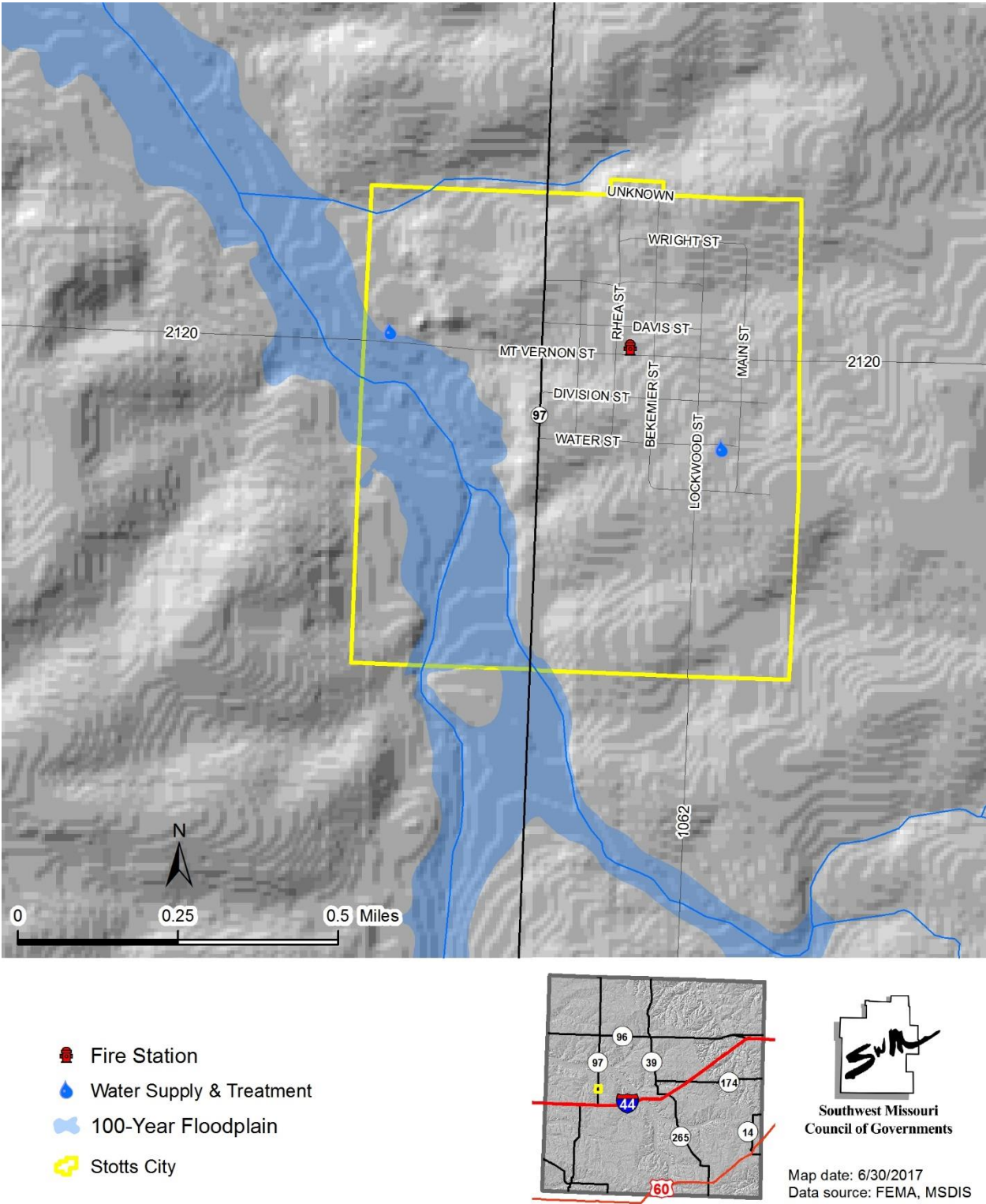
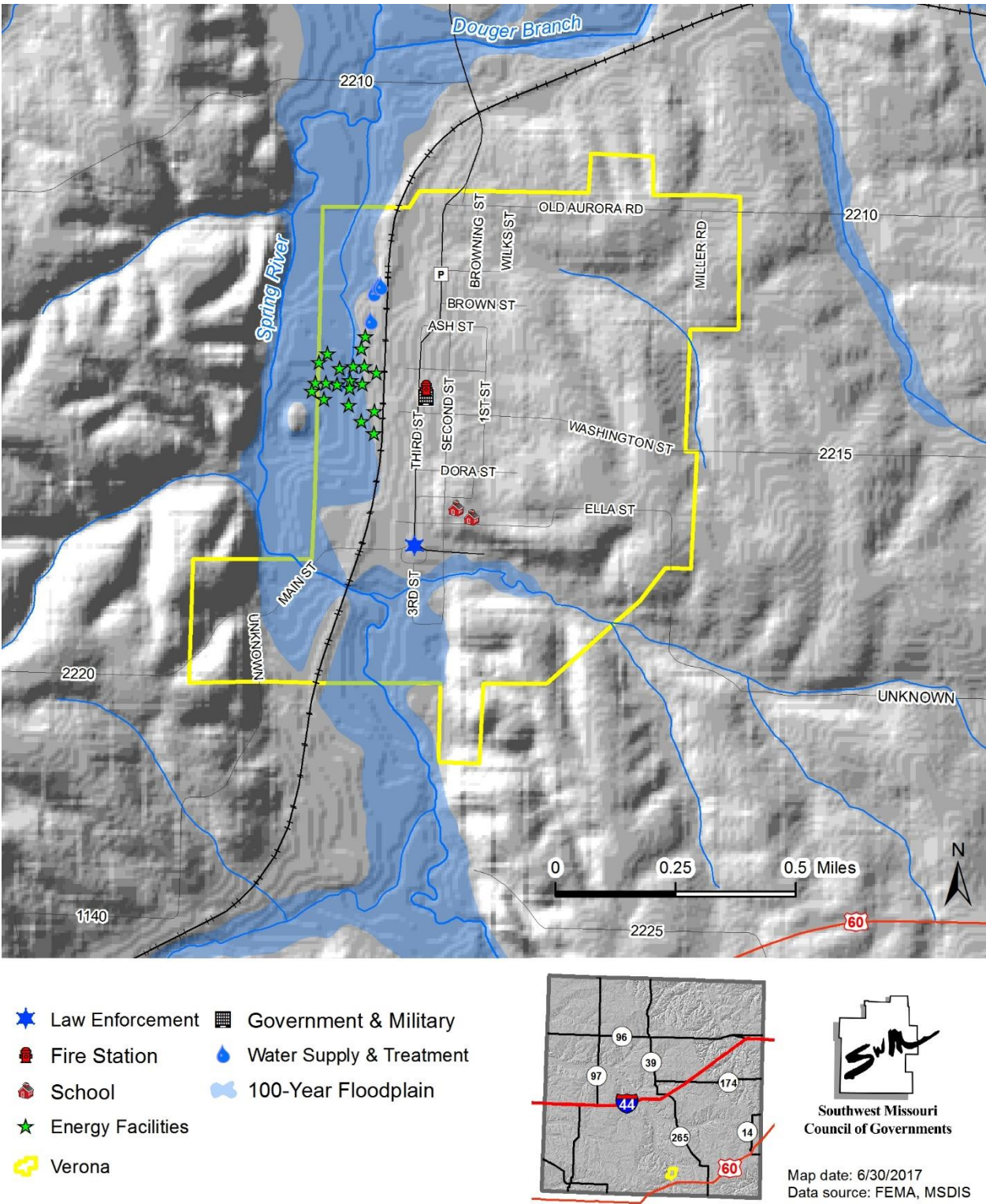


Figure 3.25. City of Verona SFHAs with Critical Facilities



Flash flooding events pose the most pervasive hazard of the two flood types in the county due to permeability of soils, slopes, increasing urban development and extensive network of streams and rivers. Sustained rainfall or downpours at the rate of one inch per hour have caused street flooding in incorporated areas and made a significant number of low water crossings impassible. In the instances of low water crossings, flash flooding occurs in the floodplain while low-lying areas in all jurisdictions are susceptible to flash floods outside the 100-year floodplain. They also occur in areas without adequate drainage to carry away the amount of water that falls during intense rainfall events. A review of the NCDC storm event database determined which jurisdictions are most prone to flooding and flash flooding from 1997 through February 2017 are listed in **Table 3.28** and **Table 3.29**.

Table 3.28. Lawrence County NCDC Flood Events by Location, 1997-2017

Location	# of events
Unincorporated Lawrence County	7
-Several flooded rivers, creeks, and tributaries (02/24/2001)	
-Several flooded rivers, creeks, and tributaries (05/08/2002)	
-Several flooded rivers, creeks, and tributaries (05/12/2002)	
-Widespread flooding (05/17/2002)	
-County Road 2220 west of Verona, Highway 97 north of Stotts City, several road sections near Spring River, Highway DD near Highway M intersection, Highway 99 & 37 intersection (01/04/2005) (01/05/2005)	
-County Roads 2130 & 1090 intersection west of Mt. Vernon (01/12/2005)	
-Highway 97 north of Stotts City near Spring River (03/03/2008)	
-Numerous roadways and lowlands (03/19/2008)	
-Route AA north of Route C (07/30/2013)	
-Highway 97 north of Stotts City near Spring River (11/17/2015)	
-Route AA near Coon Creek (05/17/2016)	
Monett	1
Numerous flooded roadways and low water crossings (3/22/2008)	
Mt. Vernon	3
-Flooded sections of County Roads 1090 and 2110 near Spring River (05/21/2010)	
-Low water bridge on County Road 2110 flooded (05/31/2013)	
-Minor Street Flooding on Landrum Street (05/29/2015)	
Pierce City	1
-Impassible section of Highway 97 north by Turnback Creek (06/02/2007)	
Stotts City	9
-Highway 97 north of Road 2110 flooded near Spring River (03/25/2010)	
-Highway 97 by Spring River (05/20/2010)	
-Highway 96 flooded and closed by Spring River (05/31/2013)	
-Highway 97 at Spring River (06/01/2013)	
-Highway 97 along Spring River (07/30/2013)	
-Highway 97 by Spring River (04/03/2015)	
-Highway 97 by Spring River (05/29/2015)	
-Highway 97 by Spring River (08/10/2015)	
-Highway 97 by Spring River (11/27/2015)	
Total	21

Source: National Climatic Data Center; database only has data up to 02/28/2017.

Flash flooding occurs in SFHAs and those locations in the planning area that are low-lying. They also occur in areas without adequate drainage to carry away the amount of water that falls during intense rainfall events. The NCDC storm event data lists flash flood events according to the nearest community or place. Most of these events cover larger areas than the smaller geographic areas reported in the data. Some specific locations are listed within the narratives for flash flood events. Where specific roads and locations are listed they are provided in the table. Although some events may not be inside the corporate limits of the community identified in the narrative, they are in such

proximity that the community named would be the most affected by impassible roads. It is safe to assume that numerous low water crossings would be impacted by heavy rains that exacerbate flash flooding across the county. In addition, multiple records are related to the same event and vice versa.

Table 3.29. Lawrence NCDC Flash Flood Events by Location, 1997-2017

Location	# of Events
Unincorporated Lawrence County	27
-Numerous low water crossings; farm roads near Aurora and Verona closed (03/19/1998)	
-Highway 97; Several other roads flooded (08/13/1998) (06/11/2007)	
-Unspecified/Countywide (10/05/1998), (04/25/1994), (05/04/1999), (06/20/2000) (03/19/2008)	
-Northern portion; low water bridge & county road flooded (07/01/2000) (07/22/2000)	
-Numerous low water crossings (02/24/2001) (06/05/2014)	
-Widespread; Spring River; Pierce City & Stotts City (10/10/2001)	
-Highway 96 (06/13/2004) (09/06/2007)	
-Highway 97 (07/03/2004)	
-County Road 2220 west of Verona, Highway 97, Spring River, Stotts City, Highway DD near Highway M, Highway 99 at Highway 37 intersection (01/05/2005)	
-Highway 96 & 97 (09/08/2007)	
-Several locations; Farm Roads 2170, 1200 & 2165 (01/07/2008)	
-Highway 37 north of Stotts City by Spring River (05/08/2008)	
-Farm Road 2110 northwest of Mount Vernon and Intersections of Highway NN and Highway 97 (06/13/2008)	
-Low water crossing on County Road 39 (09/01/2010)	
-Route DD; several other locations (04/25/2011)	
-Lawrence Avenue and Country Road 4 (04/17/2013)	
-Route AA (07/30/2013), (08/03/2013)	
-Intersection of County Road 1010 & County Road 2160 (04/03/2015)	
Aurora	1
-Church Street near Jefferson Street Intersection (05/109/2006)	
Freistatt	5
-Several roads in Freistatt Area (08/28/2004) (09/19/2009)	
-County Road 1010 (06/29/2007)	
-State Highway H (09/20/2009)	
-Farm Road 1090 (05/16/2010)	
Halltown	1
-Unspecified (05/08/2002)	
Marionville	2
-Highway 14 & T Intersection (09/19/2009)	
-Farm Road 2170 at Honey Creek, northwest of Marionville (07/25/2016)	
Miller	3
-Low water crossing at Farm Road 2037 (09/17/2006)	
-Several roads and low water crossings (08/20/2007)	
-Highway 39 near Miller (08/04/2013)	
Monett	23
-Several Farm roads in vicinity (5/6/1998)	
-County Road 2057 (5/9/1998)	
-Highway H near airport (4/23/2004)	
-Numerous Street flooding (8/28/2004), (11/1/2004), (4/24/2006), (5/9/2006), (6/11/2007) (10/8/2009), (5/1/2011), (5/30/2013), (7/9/2015)	
-Kelly Creek vicinity (3/19/2008) (8/20/2009), (7/9/2015)	
-Hwy 60 near Kyler road intersection (9/19/2009) (11/24/2010), (4/25/2011)	
-Marshall Mobile Home Park (9/19/2009)	
-Hwy 60 flooded and closed (11/24/2010) (12/26/2015)	
-Hwy 97 closed (4/25/2011)	
-Water over County Road 1020 (6/18/2015)	

Mount Vernon	13
-Farm Road 2150 south of Route 60 (04/23/2004)	
-Several farm roads and low water crossings (04/24/2004) (04/25/2011) (07/30/2013)	
-Several streets and low lying areas (05/23/2004) (06/17/2004) (11/01/2004) (05/30/2015)	
-County Roads 2130 & 1090; several low lying areas (01/12/2005)	
-Highway D near Opossum Hollow Road (06/30/2007)	
-Highway 97; White Oak Creek (09/08/2007)	
-Landrum Street; others (05/29/2015)	
-County Road 2170 (11/17/2015)	
Pierce City	7
-Highway H (05/09/2006)	
-Several locations in city limits (05/22/2006) (05/30/2013)	
-Several streets; Low water crossing flooded by Clear Creek, east of Pierce City (03/20/2007)	
-Highway 97 between Front Street and Newman Avenue (11/25/2010)	
-Highway 97, north of Highway 60 (06/18/2015)	
-County Road 1050 between Highway 37 & 60 (07/09/2015)	
Stotts City	9
-Highway 97 (05/28/2004) (05/10/2007) (04/24/2011) (05/30/2013) (08/03/2013) (06/05/2014) (11/17/2015)	
-County Road 1010 near County Road 2115 intersection (07/03/2004)	
-Numerous Roads near Spring River (06/12/2007)	
Verona	2
-County road 2220 west of Verona (01/04/2005)	
-Numerous low water crossings (12/26/2015)	
Total	91

Source: National Climatic Data Center; database only has data up to 02/28/2017.

Severity/Magnitude/Extent

Missouri has a long and active history of flooding over the past century, according to the 2010 State Hazard Mitigation Plan. Flooding along Missouri's major rivers generally results in slow-moving disasters. River crest levels are forecast several days in advance, allowing communities downstream sufficient time to take protective measures, such as sandbagging and evacuations. Nevertheless, floods exact a heavy toll in terms of human suffering and losses to public and private property. By contrast, flash flood events in recent years have caused a higher number of deaths and major property damage in many areas of Missouri.

Flooding presents a danger to life and property, often resulting in injuries, and in some cases, fatalities. Floodwaters themselves can interact with hazardous materials. Hazardous materials stored in large containers could break loose or puncture as a result of flood activity. Examples are bulk propane tanks. When this happens, evacuation of citizens is necessary.

Public health concerns may result from flooding, requiring disease and injury surveillance. Community sanitation to evaluate flood-affected food supplies may also be necessary. Private water and sewage sanitation could be impacted, and vector control (for mosquitoes and other entomology concerns) may be necessary.

When roads and bridges are inundated by water, damage can occur as the water scours materials around bridge abutments and gravel roads. Floodwaters can also cause erosion undermining road beds. In some instances, steep slopes that are saturated with water may cause mud or rock slides onto roadways. These damages can cause costly repairs for state, county, and city road and bridge maintenance departments, see **Figure 3.1** for bridges in planning area. When sewer back-up occurs, this can result in costly clean-up for home and business owners as well as present a health hazard.

National Flood Insurance Program (NFIP) Participation

Table 3.29 provides details on NFIP participation for the communities in the planning area. **Table 3.30** contains the number of policies in force, amount of insurance in force, number of closed losses, and total payments for each jurisdiction, where applicable. The time period represented by the data for closed losses is from January 1st, 1978 through March 31st, 2017.

Table 3.30. NFIP Participation in Lawrence County

Community ID #	Community Name	NFIP Participant (Y/N)	Current Effective Map Date	Regular-Emergency Program Entry Date
290198#	Lawrence County	Y	08/02/12	09/26/12
290199#	Aurora	Y	08/02/12	09/15/78
290200#	Marionville	Y	08/02/12(M)	09/18/85
290023#	Monett	Y	08/16/06	04/15/81
290202#	Mt. Vernon	Y	08/02/12	02/04/81
290203#	Pierce City	Y	08/02/12	12/28/93
290645#	Verona	Y	08/02/12(M)	08/02/12
295404#	Halltown	N	08/02/12	08/02/13
290531#	Stotts City	N	08/02/12	10/29/77

Source: NFIP Community Status Book, 9/26/2013; BureauNet, <http://www.fema.gov/national-flood-insurance-program/national-flood-insurance-program-community-status-book>; M= No elevation determined – all Zone A, C, and X: NSFHA = No Special Flood Hazard Area; E=Emergency Program

Table 3.31. NFIP Policy and Claim Statistics as of 03/31/2017

Community Name	Policies in Force	Insurance in Force	Closed Losses	Total Payments
Lawrence County	12	\$1,964,800	1	\$40,000.00
Aurora	37	\$4,794,900	1	\$25,090.85
Marionville	1	\$100,500	N/A	N/A
Mt. Vernon	6	\$1,444,000	5	\$62,054.42
Monett*	45	\$7,071,900	43	\$2,022,708.65
Pierce City	8	\$564,800	3	\$102,483.03
Verona	4	\$136,600	N/A	N/A

Source: NFIP Community Status Book, 03/31/2017; BureauNet, <http://bsa.nfipstat.fema.gov/reports/reports.html>; Closed Losses are those flood insurance claims that resulted in payment. Loss statistics are for the period from 01/01/1978 to 03/31/2017. *Monett considered part of Barry County in Community Status Book.

The communities with the most insurance payments are Monett and Pierce City. Monett has 43 total losses amounting to \$2,022,708.65 and Pierce City has three closed losses amounting to \$102,483.03.

Repetitive Loss/Severe Repetitive Loss Properties

Repetitive Loss Properties are those properties with at least two flood insurance payments of \$5,000 or more in a 10-year period. According to the Flood Insurance Administration, there are no jurisdictions included in the planning area that have repetitive loss properties.

Severe Repetitive Loss (SRL): A SRL property is defined it as a single family property (consisting of one-to-four residences) that is covered under flood insurance by the NFIP; and has (1) incurred flood-related damage for which four or more separate claims payments have been paid under flood insurance coverage with the amount of each claim payment exceeding \$5,000 and with cumulative amounts of such claims payments exceeding \$20,000; or (2) for which at least two separate claims payments have been made with the cumulative amount of such claims exceeding the reported value of the property. There are no severe repetitive loss properties in the planning.

There are no severe repetitive loss properties in the planning area.

Previous Occurrences

According to the NCDC storm event data, there have been 112 riverine flood and flash flood events recorded in Lawrence County from 1997 to 2017. Twelve of these events resulted in property damage. The most recent damaging event occurred December of 2015 when several days of heavy rainfall resulted in widespread flooding in Lawrence County and neighboring counties. Damages amounted to \$1.5 million after several roads and low water crossings were damaged. This event was declared a presidential disaster. All ten presidential disaster declarations in Lawrence County have included flooding.

The most damaging flood event in Lawrence County occurred in August 2007, when remnants of Tropical Storm Erin made its way inland to Southwest Missouri. The storm produced significant flash flooding which resulted in several water rescues and several roads and low water bridges washed out. **Table 3.31** summarizes flash flood events by year from 1997 through February 2017 in Lawrence County.

Table 3.32. NCDC Lawrence County Flash Flood Events Summary, 1997-2017

Year	# of Events	# of Deaths	# of Injuries	Property Damages	Crop Damages
1998	5	0	0	\$5,000	\$0
1999	1	0	0	\$0	\$0
2000	3	0	0	\$0	\$0
2001	2	0	0	\$4,000	\$0
2002	1	0	0	\$0	\$0
2004	13	0	0	\$0	\$0
2005	3	0	0	\$0	\$0
2006	6	0	0	\$0	\$0
2007	11	0	0	\$2,507,000	\$0
2008	5	0	1	\$1,750,000	\$0
2009	7	0	0	\$40,000	\$0
2010	5	0	0	\$0	\$0
2011	6	0	0	\$250,000	\$0
2013	9	0	0	\$0	\$0
2014	2	0	0	\$0	\$0
2015	12	1	0	\$1,700,000	\$0
Total	91	1	0	\$6,256,000	\$0

Source: NCDC, data accessed 06/14/2017

Table 3.32 summarizes riverine flood events listed in the NCDC data for Lawrence County by year. The NCDC storm event data contains 26 recorded events for riverine flooding in Lawrence County from 1997 to 2017. Only one event was recorded to cause damage at \$150,000. It is unclear where said property damage occurred due to the lack of information in event narrative.

Table 3.33. NCDC Lawrence County Riverine Flood Events Summary, 1997-2017

Year	# of Events	# of Deaths	# of Injuries	Property Damages	Crop Damages
2001	1	0	0	\$0	\$0
2002	3	0	0	\$150,000	\$0
2005	3	1	0	\$0	\$0
2007	1	0	0	\$0	\$0
2008	3	0	0	\$0	\$0
2010	3	0	0	\$0	\$0

2013	5	1	0	\$0	\$0
2015	6	0	0	\$0	\$0
2016	1	0	0	\$0	\$0
Total	26	2	0	\$150,000	\$0

Source: NCDC, data accessed 06/14/2017

Probability of Future Occurrence

There have been a total of 88 reported flood events in Lawrence County from 1997 to February 2017 in the NCDC storm event database. Of those, 68 were flash floods. Using a 20 year period of record this equates to 3.4 flash flood events per year and 100% probability of occurrence in the county in any given year. During the same time period there have been 20 riverine floods reported in the county. This equates to 1 riverine flood event every year and a 100% probability of occurrence in any given year. Eight flood and flash flood events caused a total of \$5,265,000 in property damage in the same time period. This equates to a 40% chance of a damaging event to occur in any given year and annualized losses of \$263,250.

Vulnerability

Vulnerability Overview

Flooding has been included in all ten presidential disaster declarations that have included Lawrence County. Periods of heavy rain falling at the rate of one inch per hour floods low water crossings throughout the county making many roads impassable. This creates a severe threat to motorists that attempt to drive through flood waters over the roadway. Riverine flooding occurs less frequently than flash flooding and there are no repetitive loss properties in the county; however, property damage is still likely to occur. Areas in low lying areas outside of the floodplain are frequently flooded. Flooding of streets has been reported in several of the communities and many highways are frequently being flooded. Highway 97 has experienced the most flooding and flash flooding. Other susceptible roads include Highway 65, Route AA and County Roads 1090, 2110, and 2220. Spring River is the most frequently flooded body of water. There are no schools or special district facilities in SFHAs in Lawrence County. Increases in development add to surface runoff and can exacerbate flash flooding in areas that previously have not experience flooding.

Potential Losses to Existing Development

Flood loss estimates were developed by selecting all parcels situated within 100 feet of the 100 year floodplain to compile building counts by type for each participating municipality, and the unincorporated balance of Lawrence County. It is important to note that this method created building counts for areas outside the 100 year floodplain, but in an effort to depict potential losses from flash flooding, those parcels were included. The summed improved valuations for all parcels within 100 feet of the 100 year floodplain would be more prone to flash flooding due to the proximity to natural drainage features in the area.

Potential flood losses by building type by jurisdiction are presented in **Table 3.34**.

Table 3.34. Potential Flood Losses for Building Types by Jurisdiction

Jurisdiction	Residential	Commercial	Agriculture	Total Building Count
Lawrence County				
Aurora				
Freistatt				

Halltown				
Hoberg				
Marionville				
Miller				
Monett (B)				
Monett (L)				
Mt. Vernon				
Pierce City				
Stotts City				
Verona				

Table 3.34 provides the total exposure for structures and contents by building type and jurisdictions. Losses were estimated by applying a 5% damage factor to total, exposure.

Table 3.35. Total Flood Exposure and Estimated Losses by Jurisdiction

Jurisdiction	Residential	Commercial	Agriculture	Estimated Exposure	Estimated Loss
Lawrence County					
Aurora					
Freistatt					
Halltown					
Hoberg					
Marionville					
Miller					
Monett (B)					
Monett (L)					
Mt. Vernon					
Pierce City					
Stotts City					
Verona					

The following critical facilities are located in the 100-year floodplain.

Lawrence County

- 2 water treatment facilities

Aurora

- Railroad facilities
- Water Treatment Facility

Monett

- Water Treatment Facilities

Mt. Vernon

- Mt. Vernon Public Works
- MODOT Facility

-
- Water Treatment Facilities

Pierce City

- St. Mary's Private School

Verona

- Energy Facilities

Aurora Benefit Special Road District

- Operations Facility

Impact of Previous and Future Development

Future development could impact flash and riverine flooding in the planning area. Development in low-lying areas near rivers and streams or where interior drainage systems are not adequate to provide drainage during heavy rainfall events will be at risk to flash flooding. Future development would also increase impervious surfaces causing additional water run-off and drainage problems during heavy rainfall events. Jurisdictions that participate in the NFIP include: Lawrence County, Aurora, Marionville, Monett, Mt. Vernon, Pierce City, and Verona.

Hazard Summary by Jurisdiction

All local governments in the county are at risk to flood hazards; however, as demonstrated in **Table 3.34** exposure of assets near SFHAs varies among jurisdictions. It should be noted that all of these communities can be impacted by flooding of major roads and low water crossings in the areas proximate to their corporate limits. Several incorporated areas in the county are susceptible to street flooding during periods of heavy rain as evidenced by the previous occurrences by location in **Table 3.27** and **3.28**. The greatest impact of flooding is in the unincorporated part of the county. Lawrence County is part of the NFIP program so it is able to regulate development in the floodplains. Due to the topography and many streams in the county, numerous low water crossings are damaged and create a significant hazard to public safety during flood events.

Problem Statement

Floods are frequent events and have been listed in all ten presidential disaster declarations that have included Lawrence County. Lawrence County is a participant in the NFIP along with the jurisdictions of Aurora, Marionville, Monett, Mt. Vernon, Pierce City, and Verona. These communities have passed floodplain management ordinances and have the ability to substantially regulate development in the floodplain. Their participation in the NFIP enables residents to purchase flood insurance. Street flooding in incorporated areas can be addressed through storm water management projects and enforce storm water management regulations.

Several million dollars in property damage has resulted in the numerous flood events in the past two decades. They have also resulted in the deaths of three individuals. To reduce the damage of floods to infrastructure and human life, several strategies can be implemented, such as Hazard awareness programs and maintaining low water crossings. Signage of flood prone areas should also be maintained and made visible to everyone. Projects involving the improvements to river/stream embankments can also reduce flooding to surrounding areas.

3.4.7 Land Subsidence/Sinkholes

Hazard Profile

Hazard Description

Sinkholes are common where the rock below the land surface is limestone, carbonate rock, salt beds, or rocks that naturally can be dissolved by ground water circulating through them. As the rock dissolves, spaces and caverns develop underground. The sudden collapse of the land surface above them can be dramatic and range in size from broad, regional lowering of the land surface to localized collapse. However, the primary causes of most subsidence are human activities: underground mining of coal, groundwater or petroleum withdrawal, and drainage of organic soils. In addition, sinkholes can develop as a result of subsurface void spaces created over time due to the erosion of subsurface limestone (karst).

Land subsidence occurs slowly and continuously over time, as a general rule. On occasion, it can occur abruptly, as in the sudden formation of sinkholes. Sinkhole formation can be aggravated by flooding.

In the case of sinkholes, the rock below the surface is rock that has been dissolving by circulating groundwater. As the rock dissolves, spaces and caverns form, and ultimately the land above the spaces collapse. In Missouri, sinkhole problems are usually a result of surface materials above openings into bedrock caves eroding and collapsing into the cave opening. These collapses are called “cover collapses” and geologic information can be applied to predict the general regions where collapse will occur. Sinkholes range in size from several square yards to hundreds of acres and may be quite shallow or hundreds of feet deep.

According to the U.S. Geological Survey (USGS), the most damage from sinkholes tends to occur in Florida, Texas, Alabama, Missouri, Kentucky, Tennessee, and Pennsylvania. Fifty-nine percent of Missouri is underlain by thick, carbonate rock that makes Missouri vulnerable to sinkholes. Sinkholes occur in Missouri on a fairly frequent basis. Most of Missouri's sinkholes occur naturally in the State's karst regions (areas with soluble bedrock). They are a common geologic hazard in southern Missouri, but also occur in the central and northeastern parts of the State. Missouri sinkholes have varied from a few feet to hundreds of acres and from less than one to more than 100 feet deep. The largest known sinkhole in Missouri encompasses about 700 acres in western Boone County southeast of where Interstate 70 crosses the Missouri River. Sinkholes can also vary in shape like shallow bowls or saucers whereas others have vertical walls. Some hold water and form natural ponds.

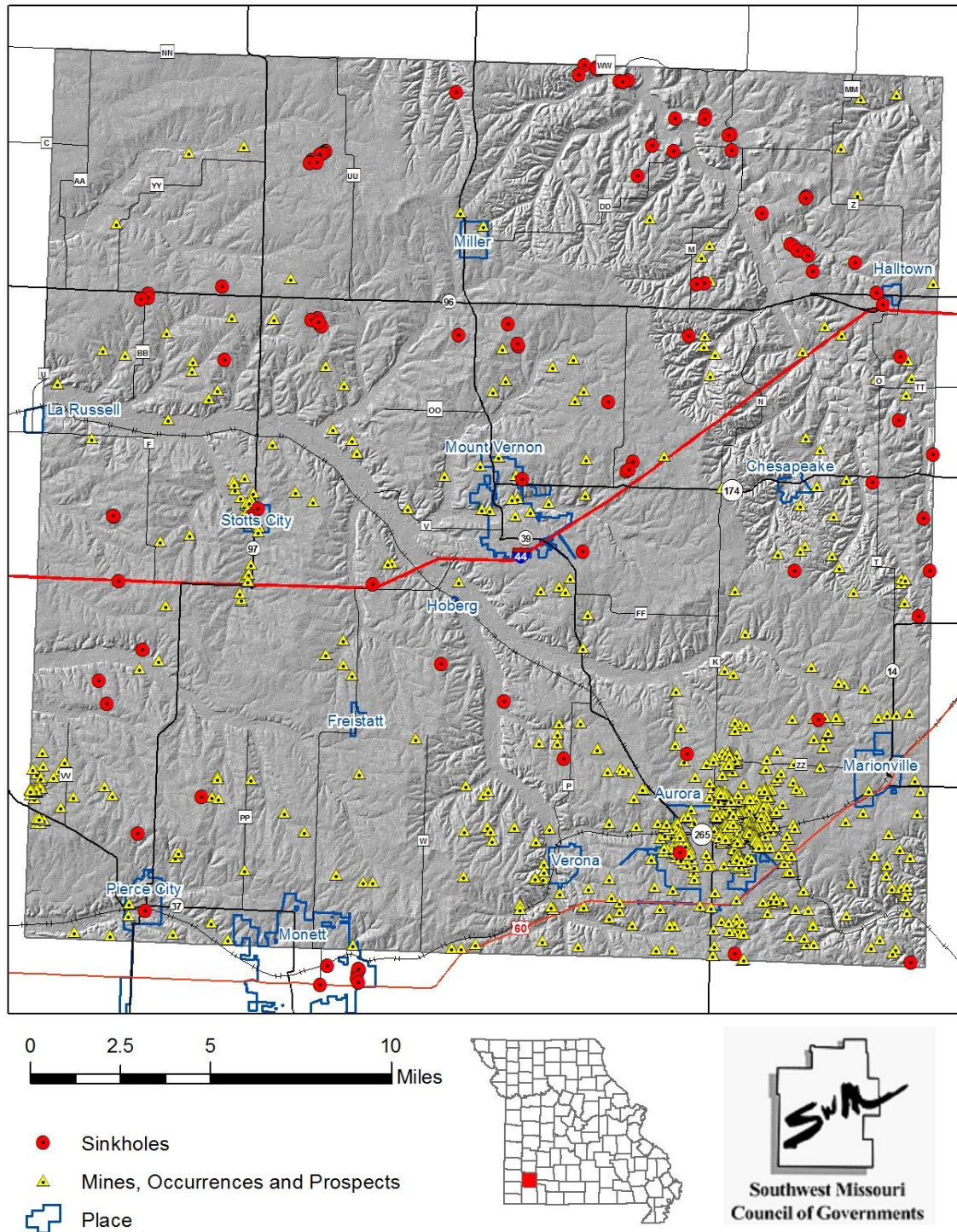
According to Missouri Department of Natural Resources, Inventory of Mines, Occurrences, and Prospects database, there are 1197 mines in Lawrence County. 73% are past producers and are no longer in use. Zinc and lead have been historically the most common commodity mined; however, the two mines currently producing, mine limestone and Sand & Gravel. 130 mines are operated on the surface, while the majority, about 922, operate underground.

Geographic Location

According to spatial data from Missouri Geological Survey, 92 sinkhole formations have been identified in Lawrence County. Seven sinkholes are located in Monett, but on the Barry County side. The largest concentrations of sinkholes reside in the Northern portion of the county. Most sinkholes in the county are located in the unincorporated county and few sinkholes reside with city limits. The cities of Aurora and Pierce City have one sinkhole while Stotts City has three

sinkholes in its city limits. Mt. Vernon and Halltown do not have sinkholes in their city limits, but are within a ½ mile of a sinkhole. **Figure 3.25** depicts the location of sinkholes and mines, occurrences, and prospects within Lawrence County.

Figure 3.26. Sinkholes and Underground Mines in Lawrence County



Map Prepared: 6/23/2017
Data source: Missouri Department of Natural Resources

Severity/Magnitude/Extent

Sinkholes vary in size and location, and these variances will determine the impact of the hazard. A sinkhole could result in the loss of a personal vehicle, a building collapse, or damage to infrastructure such as roads, water, or sewer lines. Groundwater contamination is also possible from a sinkhole. Because of the relationship of sinkholes to groundwater, pollutants captured or dumped in sinkholes could affect a community's groundwater system. Sinkhole collapse could be triggered by large earthquakes. Sinkholes located in floodplains can absorb floodwaters but make detailed flood hazard studies difficult to model.

The 2013 State Plan included only seven documented sinkhole “notable events”. The plan stated that sinkholes are common to Missouri and the probability is high that they will occur in the future. To date, Missouri sinkholes have historically not had major impacts on development nor have they caused serious damage. Thus, the severity of future events is likely to be low.

Previous Occurrences

Sinkholes are a regular occurrence in Missouri, but rarely are events of any significance. Despite the regular occurrences, there have been no major recent documented occurrences of sinkholes opened in Lawrence County.

Probability of Future Occurrence

Calculating the probability of future occurrences based on previous is impossible due to no known sinkhole events occurring in the recent past.

Vulnerability

Vulnerability Overview

Sinkholes in Missouri are a common feature where limestone and dolomite outcrop. Dolomite is a rock similar to limestone with magnesium as an additional element along with the calcium normally present in the minerals that form the rocks. While some sinkholes may be considered a slow changing nuisance; other more sudden, catastrophic collapses can destroy property, delay construction projects, contaminate ground water resources, and damage underground utilities. The entire county is underlain with limestone and dolomite bedrock.

Potential Losses to Existing Development

Sinkhole loss estimates were established using GIS processes and appraised valuations. A sinkhole point shapefile acquired from MDNR was used to generate a half-mile buffer around each feature. The buffer layer was designated as the hazard prone areas for sinkholes. The map layer of the sinkhole hazard prone areas was used as an overlay on the parcel data to generate the loss estimates from this hazard by jurisdiction. **Table 3.35** provides the building count by type and by jurisdiction based on the results of the sinkhole analysis. **Table 3.36** provides a dollar amount for total exposure by jurisdiction and estimated losses. To calculate the losses a damage factor of 0.5% was applied to the total exposure.

Table 3.36. Sinkhole Exposure by Building Type by Jurisdiction

Jurisdiction	Residential	Commercial	Agriculture	Building Count
Lawrence County				
Aurora				
Halltown				
Mt. Vernon				
Monett	362	173	2	537
Pierce City				
Stotts City				

Table 3.37. Total Sinkhole Exposure and Estimated Losses by Jurisdiction

Jurisdiction	Residential	Commercial	Agriculture	Estimated Exposure	Estimated Loss
Lawrence County					
Aurora					
Halltown					
Mt. Vernon					
Monett	\$24,474,442	\$65,473,158	\$2,303,600	\$92,251,200	\$461,256
Pierce City					
Stotts City					

Aurora, Mt. Vernon, and Pierce City school district facilities are located in sinkhole prone areas. The following are facilities within a half mile radius of an existing sinkhole.

Aurora R-VIII

- Robinson Elementary
- Pate Early Childhood Center

Mt. Vernon R-V

- Mt. Vernon Intermediate

Pierce City R-VI

- Pierce City High School
- Pierce City Middle School

The St. Mary's private school in Pierce City is also located within a half mile of a sinkhole. No other school district or private school facilities are located within half a mile of a sinkhole.

Impact of Previous and Future Development

Future development over abandoned mines and in areas of known risk to sinkhole formation in the planning area will increase vulnerability to this hazard. Population and development in these areas, especially in the cities of Aurora, Halltown, Mt. Vernon, Monett, Pierce City, Stotts City and unincorporated areas will increase exposure to sinkhole occurrence. There are currently no regulations prohibiting construction over or near known sinkholes. Future development may also

change storm runoff patterns and cause expansion or formation of sinkholes.

Hazard Summary by Jurisdiction

The risk of sinkhole damage for individual communities and school districts is limited to the amount of exposure of buildings and infrastructure. Some parts of the county are more at risk for potential sinkhole formations such as the North & Northeast portions of the county. The cities of Aurora, Halltown, Mt. Vernon, Monett, Pierce City, and Stotts City are the only jurisdictions with existing structures at risk of sinkholes; however, much of the unincorporated county is largely at risk. It is unlikely that school and special districts will be affected by sinkholes due to the localized nature of their exposure; however, Aurora, Mt. Vernon, and Pierce City school districts are at an elevated risk due to the location of school facilities within hazard prone areas.

Problem Statement

It is likely that more sinkholes will occur as development occurs within the county. Sinkholes can be remediated with fill material. Once a sinkhole has been remediated building should be prohibited at the site. Existing sinkholes can expand if surface runoff erodes the edges of the sinkhole. Storm water runoff should be diverted away from known sinkholes. The county and jurisdictions should adopt regulations prohibiting construction at least 30 feet from known sinkholes. Information about identifying potential sinkhole formation and promoting Missouri FAIR plan sinkhole insurance can be included in public outreach and hazard awareness programs. Undeveloped land that is in a sinkhole risk area can be used for park space or other recreational purposes.

3.4.8 Thunderstorm/High Winds/Lightning/Hail

Hazard Profile

Hazard Description

Thunderstorms

A thunderstorm is defined as a storm that contains lightning and thunder which is caused by unstable atmospheric conditions. When cold upper air sinks and warm moist air rises, storm clouds or 'thunderheads' develop resulting in thunderstorms. This can occur singularly, as well as in clusters or lines. The National Weather Service defines a thunderstorm as "severe" if it includes hail that is one inch or more, or wind gusts that are at 58 miles per hour or higher. At any given moment across the world, there are about 1,800 thunderstorms occurring. Severe thunderstorms most often occur in Missouri in the spring and summer, during the afternoon and evenings, but can occur at any time. Other hazards associated with thunderstorms are heavy rains resulting in flooding (discussed separately in Section 3.____) and tornadoes (discussed separately in Section 3.____).

High Winds

A severe thunderstorm can produce winds causing as much damage as a weak tornado. The damaging winds of thunderstorms include downbursts, microbursts, and straight-line winds. Downbursts are localized currents of air blasting down from a thunderstorm, which induce an outward burst of damaging wind on or near the ground. Microbursts are minimized downbursts covering an area of less than 2.5 miles across. They include a strong wind shear (a rapid change in the direction of wind over a short distance) near the surface. Microbursts may or may not include precipitation and can produce winds at speeds of more than 150 miles per hour. Damaging straight-line winds are high winds across a wide area that can reach speeds of 140 miles per hour.

Lightning

All thunderstorms produce lightning which can strike outside of the area where it is raining and is has been known to fall more than 10 miles away from the rainfall area. Thunder is simply the sound that lightning makes. Lightning is a huge discharge of electricity that shoots through the air causing vibrations and creating the sound of thunder.

Hail

According to the National Oceanic and Atmospheric Administration (NOAA), hail is precipitation that is formed when thunderstorm updrafts carry raindrops upward into extremely cold atmosphere causing them to freeze. The raindrops form into small frozen droplets. They continue to grow as they come into contact with super-cooled water which will freeze on contact with the frozen rain droplet. This frozen droplet can continue to grow and form hail. As long as the updraft forces can support or suspend the weight of the hailstone, hail can continue to grow before it hits the earth.

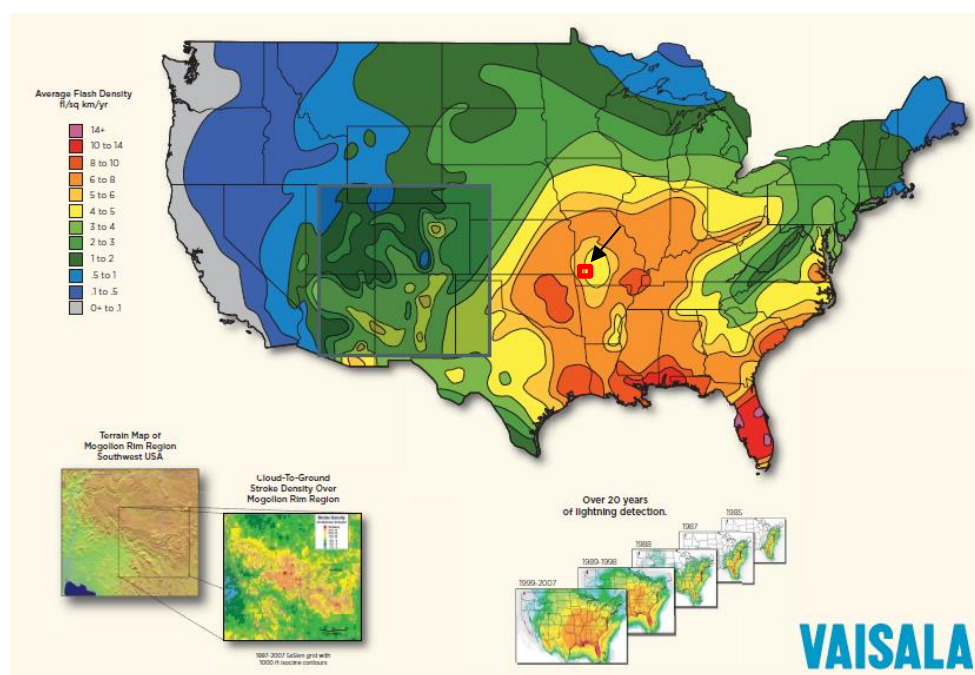
At the time when the updraft can no longer support the hailstone, it will fall down to the earth. For example, a ¼" diameter or pea sized hail requires updrafts of 24 miles per hour, while a 2 ¾" diameter or baseball sized hail requires an updraft of 81 miles per hour. According to the NOAA, the largest hailstone in diameter recorded in the United States was found in Vivian, South Dakota on July 23, 2010. It was eight inches in diameter, almost the size of a soccer ball. Soccer-ball-sized hail is the exception, but even small pea-sized hail can do damage.

Geographic Location

Thunderstorms/high winds/hail/lightning events are an area-wide hazard that can happen anywhere in the county. Although these events occur similarly throughout the planning area, they are more frequently reported in more urbanized areas. In addition, damages are more likely to occur in more densely developed urban areas, such as Aurora, Mt. Vernon, and Monett.

Figure 3.10 shows lightning frequency in the state. Lawrence County lies in the 4 to 5 and 5 to 6 flash density zones on the map.

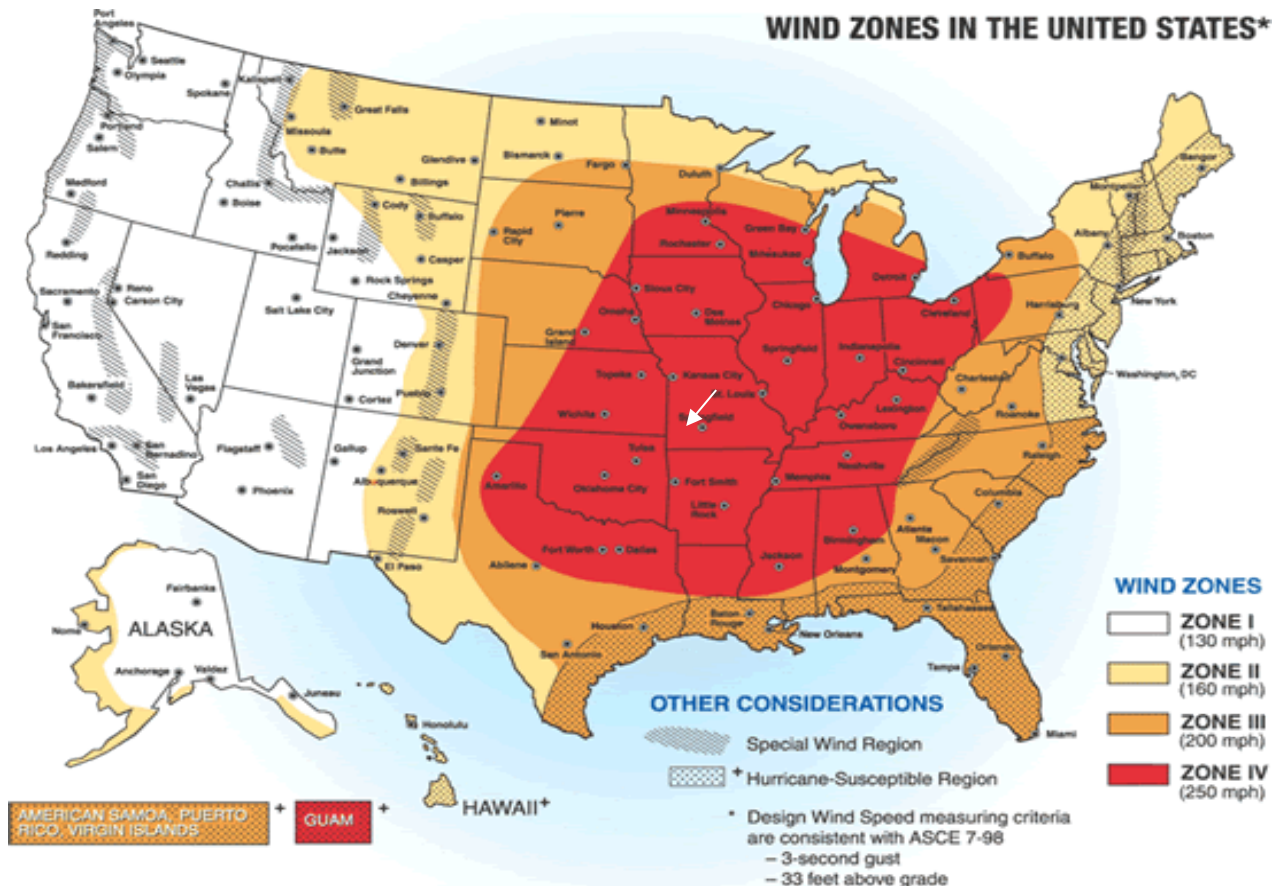
Figure 3.27. Location and Frequency of Lightning in Missouri



Source: National Weather Service,
http://www.lightningsafety.noaa.gov/stats/08_Vaisala_NLDN_Poster.pdf. Note: indicate location of planning area with a colored square or arrow.

Figure 3.11 shows wind zones in the United States. Lawrence County is located in Zone IV which can experience wind speeds of up to 250 mph.

Figure 3.28. Wind Zones in the United State



Source: FEMA 320, Taking Shelter from the Storm, 3rd edition, http://www.weather.gov/media/bis/FEMA_SafeRoom.pdf

Severity/Magnitude/Extent

Severe thunderstorm losses are usually attributed to the associated hazards of hail, downburst winds, lightning and heavy rains. Losses due to hail and high wind are typically insured losses that are localized and do not result in presidential disaster declarations. However, in some cases, impacts are severe and widespread and assistance outside state capabilities is necessary. Hail and wind also can have devastating impacts on crops. Severe thunderstorms/heavy rains that lead to flooding are discussed in the flooding hazard profile. Hailstorms cause damage to property, crops, and the environment, and can injure and even kill livestock. In the United States, hail causes more than \$1 billion in damage to property and crops each year. Even relatively small hail can shred plants to ribbons in a matter of minutes. Vehicles, roofs of buildings and homes, and landscaping are also commonly damaged by hail. Hail has been known to cause injury to humans, occasionally fatal injury.

In general, assets in Lawrence County are vulnerable to thunderstorms with lightning, high winds, and hail include people, crops, vehicles, and built structures. Although this hazard results in high annual losses, private property insurance and crop insurance usually cover the majority of losses. Considering insurance coverage as a recovery capability, the overall impact on jurisdictions is reduced.

Most lightning damages occur to electronic equipment located inside buildings. But structural damage can also occur when a lightning strike causes a building fire. In addition, lightning strikes

can cause damages to crops if fields or forested lands are set on fire. Communications equipment and warning transmitters and receivers can also be knocked out by lightning strikes.

Based on information provided by the Tornado and Storm Research Organization (TORRO), **Table 3.38** below describes typical damage impacts of the various sizes of hail.

Table 3.38. Tornado and Storm Research Organization Hailstorm Intensity Scale

Intensity Category	Diameter (mm)	Diameter (inches)	Size Description	Typical Damage Impacts
Hard Hail	5-9	0.2-0.4	Pea	No damage
Potentially Damaging	10-15	0.4-0.6	Mothball	Slight general damage to plants, crops
Significant	16-20	0.6-0.8	Marble, grape	Significant damage to fruit, crops, vegetation
Severe	21-30	0.8-1.2	Walnut	Severe damage to fruit and crops, damage to glass and plastic structures, paint and wood scored
Severe	31-40	1.2-1.6	Pigeon's egg > squash ball	Widespread glass damage, vehicle bodywork damage
Destructive	41-50	1.6-2.0	Golf ball > Pullet's egg	Wholesale destruction of glass, damage to tiled roofs, significant risk of injuries
Destructive	51-60	2.0-2.4	Hen's egg	Bodywork of grounded aircraft dented, brick walls pitted
Destructive	61-75	2.4-3.0	Tennis ball > cricket ball	Severe roof damage, risk of serious injuries
Destructive	76-90	3.0-3.5	Large orange > Soft ball	Severe damage to aircraft bodywork
Super Hailstorms	91-100	3.6-3.9	Grapefruit	Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open
Super Hailstorms	>100	4.0+	Melon	Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open

Source: Tornado and Storm Research Organization (TORRO), Department of Geography, Oxford Brookes University

Notes: In addition to hail diameter, factors including number and density of hailstones, hail fall speed and surface wind speeds affect severity. <http://www.torro.org.uk/site/hscale.php>

Straight-line winds are defined as any thunderstorm wind that is not associated with rotation (i.e., is not a tornado). It is these winds, which can exceed 100 miles per hour, which represent the most common type of severe weather. They are responsible for most wind damage related to thunderstorms. Since thunderstorms do not have narrow tracks like tornadoes, the associated wind damage can be extensive and affect entire (and multiple) counties. Objects like trees, barns, outbuildings, high-profile vehicles, and power lines/poles can be toppled or destroyed, and roofs, windows, and homes can be damaged as wind speeds increase.

The tables below (**Tables 3.28** through **Table 3.30**) summarize past crop damages as indicated by crop insurance claims between the years of 2006 and 2016. The tables illustrate the magnitude of the impact on the planning area's agricultural economy. There were no recorded crop insurance claims caused by lightning in the same time period.

Table 3.39. Crop Insurance Claims Paid in Lawrence County from Thunderstorms, 2006-2016

Crop Year	Crop Name	Cause of Loss Description	Insurance Paid
2016	Corn/Soybeans/Wheat	Excess Moisture/Precip/Rain	\$75,079.72
2012	Corn/Grain Sorghum/Soybeans/All other	Excess Moisture/Precip/Rain	\$1,061,395.00
2011	Corn/Soybeans/Wheat/All other	Excess Moisture/Precip/Rain	\$5,697,886.00
2010	Corn/Soybeans/Wheat/All other	Excess Moisture/Precip/Rain	\$917,262.00

2009	Corn/Soybeans/Wheat	Excess Moisture/Precip/Rain	\$222,237.00
Total			\$7,973,859.72

Source: USDA Risk Management Agency, Insurance Claims, <https://www.rma.usda.gov/data/cause.html>

Table 3.40. Crop Insurance Claims Paid in Lawrence County from High Winds, 2006-2016

Crop Year	Crop Name	Cause of Loss Description	Insurance Paid
2006	Soybeans	Wind/Excess Wind	\$2,750.00
Total			\$2,750.00

Source: USDA Risk Management Agency, Insurance Claims, <https://www.rma.usda.gov/data/cause.html>

Table 3.41. Crop Insurance Claims Paid in Lawrence County from Hail, 2006-2016

Crop Year	Crop Name	Cause of Loss Description	Insurance Paid
2007	Wheat/Corn	Hail	\$124,865.00
Total			\$124,865.00

Source: USDA Risk Management Agency, Insurance Claims, <https://www.rma.usda.gov/data/cause.html>

The onset of thunderstorms with lightning, high wind, and hail is generally rapid. Duration is less than six hours and warning time is generally six to twelve hours. Nationwide, lightning kills 75 to 100 people each year. Lightning strikes can also start structural and wildland fires, as well as damage electrical systems and equipment.

Previous Occurrences

Thunderstorm Wind

There are 111 thunderstorm wind events reported to the NCDC from 1997 – 2017 in Lawrence County, including portions of Monett in Barry County. There were 45 events with reported damages. The total damages from these events was \$8,822,000 in property damages, with average loss per damaging event totaling \$196,044. No injuries or deaths resulted from thunderstorm wind events.

The most damaging event in Lawrence County occurred on May 8th, 2009 which resulted in \$3 million in property damage. Reports consisted of 60-85 mph winds that damages several trees, power poles, structures, and business signs in several jurisdictions in Lawrence County. For example, one home in Miller was completely destroyed by 85 mph winds. Pierce City experienced power loss throughout the entire city.

A separate storm event in May 2009 was the costliest storm to occur in which \$4 million in property damage was sustained in Monett. An intense squall line impacted extreme southeast Kansas and the Missouri Ozarks with mainly damaging winds. This event impacted the whole of Barry County. Monett received the bulk of the damages where hundreds of structures sustained roof damage, as well as several structures to the west being completely destroyed near Highway 60.

On April 20th, 2000 Lawrence County sustained \$900,000 in property damage from thunderstorm winds. Areas most affected by the event included Mt. Vernon and the surrounding area. Winds reached a speed of 75 mph and damaged several business signs. A brick wall of a car wash was completely destroyed and winds blew apart an overhead door in the old industrial park area. Several trees and polls were also uprooted or knocked down with falling on a parked pick-up truck.

Table 3.41 provides information about damaging thunderstorm wind events in the county.

Table 3.1. NCDC Reported Events with Damages from Thunderstorm Winds, 1997-2017

Location	# of Events	Deaths	Injuries	Property Damage	Crop Damage
Lawrence County	7	0	0	\$3,907,000.00	\$0
Aurora	20	0	0	\$106,500.00	\$0
Freistatt	3	0	0	\$25,000.00	\$0
Halltown	8	0	0	\$500.00	\$0
Hoberg	1	0	0	\$0	\$0
Marionville	8	0	0	\$104,000.00	\$0
Miller	6	0	0	\$50,000.00	\$0
Monett	14	0	0	\$4,555,000	\$0
Mt. Vernon	19	0	0	\$32,000.00	\$0
Pierce City	18	0	0	\$26,000.00	\$0
Stotts City	4	0	0	\$5,000.00	\$0
Verona	3	0	0	\$11,000.00	\$0
Total	111	0	0	\$8,822,000	\$0

Source: NCDC Storm Data 03/31/2017

Hail

There are 162 hail events reported to the NCDC from 1997 – 2017 in Lawrence County, including portions of Monett in Barry County. One event recorded the highest magnitude where hailstones reached a diameter of 5 inches. No hail damages were recorded by the NCDC but this is unlikely. There were thirteen (13) events with reported damages. The most significant and costliest event occurred in November 2003 when hail caused \$6,000,000 in property damage. Several structures in the downtown area sustained minor damage and lost windows. Two car lots were significantly affected along with several home sustaining roof damage. Hailstones reached a magnitude of 2.75 inches and reported to be the size of baseballs.

Table 3.42 provides information about damaging hail events in the county.

Table 3.2. NCDC Reported Events with Damages from Hail, 1997-2017

Date	Location	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
6/8/1998	Mt. Vernon	1.75	0	0	\$5,000	\$0
4/30/2002	Chesapeake	1.75	0	0	\$25,000	\$0
11/18/2003	Aurora	2.75	0	0	\$6,000,000	\$0
10/01/2009	Mt. Vernon	1	0	0	\$15,000	\$0
5/25/2010	Mt. Vernon	1.75	0	0	\$20,000	\$0
8/20/2011	Aurora	1.75	0	0	\$10,000	\$0
8/20/2011	Aurora	2.75	0	0	\$25,000	\$0
8/20/2011	Freistatt	1.75	0	0	\$10,000	\$0
4/13/2012	Olinger	2.5	0	0	\$25,000	\$0
8/16/2012	Pierce City	2	0	0	\$50,000	\$0
8/16/2012	Monett	1.75	0	0	\$25,000	\$0
4/3/2015	Monett	1.75	0	0	\$750,000	\$0
4/3/2015	Monett	1.75	0	0	\$50,000	\$0
Total			0	0	\$7,010,000	\$0

Source: NCDC Storm Data

High Winds

There are three high wind events reported in Lawrence County to the NCDC from 1997 – 2017. All events recorded no damages to property or crops, as well as, no deaths or injuries. The magnitude of all three events were around 60 mph.

Table 3.43 provides information about damaging high winds events in the county.

Table 3.3. NCDC Reported Events and Damages from High Wind Events, 1997-2017

Location	Date	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
Lawrence County	5/13/2003	60 mph	0	0	\$0	\$0
Lawrence County	11/27/2005	60 mph	0	0	\$0	\$0
Lawrence County	5/8/2009	61 mph	0	0	\$0	\$0
Total			0	0	\$0	\$0

Source: NCDC Storm Data

Lightning

Limitations to the use of NCDC reported lightning events include the fact that only lightning events that result in fatality, injury and/or property and crop damages are in the NCDC. In the span of 1997 – 2017 there were no lightning events recorded for Lawrence County.

Probability of Future Occurrence

Thunderstorm

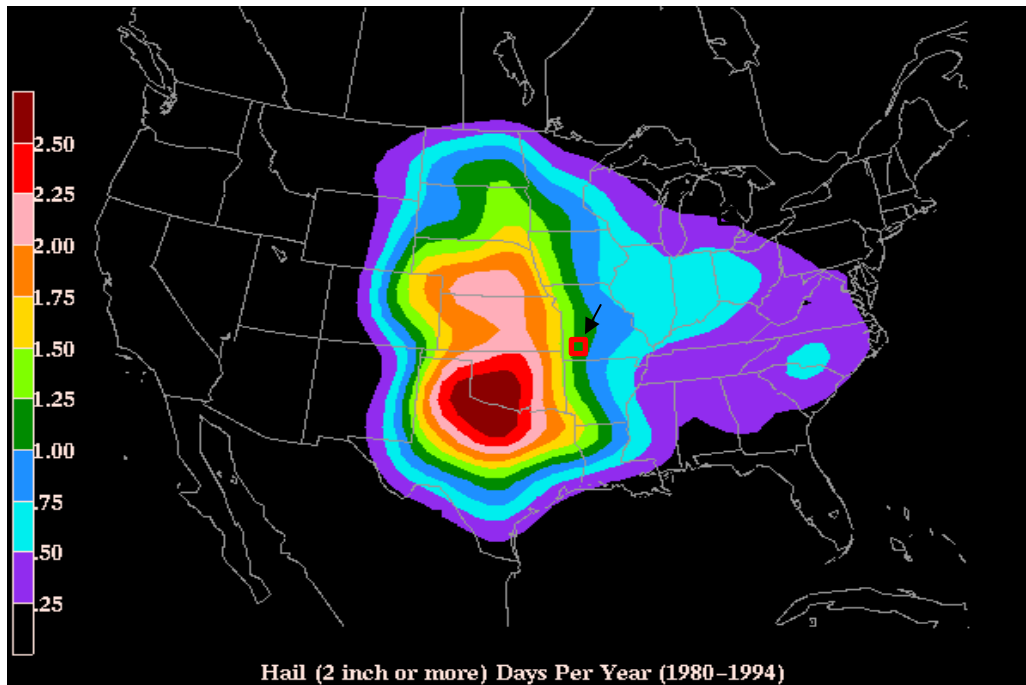
There are 111 Thunderstorm events over a 20 year period reported to the NCDC from 1997 – 2017. This equates to about 5 (5.55) thunderstorm wind occurrences in any given year with a 100% probability rate. There were 45 events that resulted in \$8,822,000 in property damage. This equates to 2 (2.25) damaging events per year with \$441,100 of annualized losses.

Hail

There have been 162 recorded hail events over a 20 year period from 1997 – 2017. This equates to about 8 hail events in any given year with a 100% probability rate. There were ten (10) events that resulted in \$6,185,000 in property damage. This equates to two damaging event every three years with annualized losses of \$309,250.

Figure 3.28 is a map based on hailstorm data from 1980-1994. It shows the probability of hailstorm occurrence (2" diameter or larger) based on number of days per year. Lawrence County is bisected by the green and blue zones on the map meaning that the county will experience hail greater than 2" in diameter one to 1.25 days per year.

Figure 3.29. Annual Hailstorm Probability (2" diameter or larger), U.S. 1980-1994



Source: NSSL, <http://www.nssl.noaa.gov/users/brooks/public.html/bighail.gif>

High Winds

There are three high wind events over a 20 year period reported to the NCDC from 1997 – 2017. This equates to a 15% probability of a high wind event in any given year. Due to events not reporting damages, calculating the probability of damages and annualized losses is not possible. It should be noted that due to the geographic location of Lawrence County in the United States, damages caused by high winds is possible in the future.

Lightning

There were no lightning events recorded in the NCDC Storm Database due to no recorded deaths, injuries or property damage. Calculating the probability of future occurrences with is not possible; however, they should expect to happen in the future.

Vulnerability

Vulnerability Overview

Thunderstorms, high wind, hail, and lightning pose varying risk for jurisdictions in Lawrence County. Downbursts resulting from thunderstorms can be just as damaging as an EF-1 tornado. Thunderstorm winds have resulted in zero injuries or deaths in Lawrence County along with \$4,267,000 in property damage. Poorly built structures, barns, outbuildings are more vulnerable to the impact of high winds during thunderstorms. Both high winds and hail can damage roofs. Hail can also damage crops and dent cars and trucks. Total hail damage recorded in the NCDC database from 1997 – 2016 has been \$6,185,000 for an annualized total of \$309,250. One hail event accounted for \$6 million in damages. Lightning can cause wildfires and structural fires, damage electrical utilities causing power outages, and sometimes fatalities.

Potential Losses to Existing Development

The average annual loss determined from historical losses for thunderstorms, high wind, hail and lightning are indicators of the potential losses to existing development. Thunderstorm wind events in the county have damaged critical facilities, schools, local governments, and private property. Potential annual losses throughout the county are: thunderstorm - \$441,100, hail - \$209,250. Potential annual losses from high winds and lightning are not applicable but should be expected to occur and cause damages in the future.

Previous and Future Development

Growth in Lawrence County is occurring at a moderate rate, with Monett, Mt. Vernon, and Aurora currently seeing the most growth in terms of population and housing built. Additional development in these areas results in the exposure of more households and businesses vulnerable to damages from high winds, hail, and lightning.

Hazard Summary by Jurisdiction

Although thunderstorms/high winds/lightning/hail events are area-wide, communities with a greater percentage of structures built prior to 1939 are considered to be more vulnerable to the impact of high wind and hail damage. Six (7) out of the eleven (11) incorporated jurisdictions in Lawrence County have over 20% of their homes built in 1939 or earlier. Out of the seven, five communities, Halltown, Miller, Pierce City, Verona, have 25% of their homes built in 1939 or earlier. Hoberg Village have almost 40% of homes built in 1939 or earlier. The most damage to property from thunderstorm high winds and hail has occurred in Aurora due to its high exposure. New construction and population growth in increasing the exposure and risk to this hazard; however, the risk to new development in Monett is somewhat mitigated by IRC 2006 building codes.

School district facilities are at risk to the damages of thunderstorms, high wind, hail and lightning. Ancillary buildings at all school districts such as storage facilities will continue to be at risk; however, risk to student populations has been mitigated by the construction of saferooms at Monett R-1 and Pierce City R-VI. Marionville R-IX school district is planning to construct FEMA saferoom in the next three to five years along with other improvements to school facilities.

Problem Statement

Poorly built structures, barns, and outbuildings are more vulnerable to the impact of high winds during thunderstorms. High winds can topple utility poles and lead to power outages. Both high winds and hail can damage roofs. Hail can also damage crops and dent cars and trucks. People are also at risk to injury and death during high wind events. Crop insurance mitigates the risk to farmers and the agriculture sector within the county. Lightning events have caused structural fires and can strike electrical utilities leading to power outages.

The risk of property damage, injury, and death in the county can be mitigated by identifying safe refuge areas in public buildings, nursing homes and other facilities that house vulnerable populations that do not have a safe room. Retrofitting school district facilities with protective filming of windows and installation of blast proof doors will provide more protection for students and staff at school facilities. Additional warnings and alerts will also provide the public and schools more time to take cover during high wind events. Education and hazard awareness programs in public schools would also increase public safety in the event of severe thunderstorm events.

3.4.9 Tornado

Some specific sources for this hazard are:

- Enhanced F Scale for Tornado Damage, NWS, www.spc.noaa.gov/faq/tornado/ef-scale.html;
- Enhanced Fujita Scale's damage indicators and degrees of damage table, NOAA Storm Prediction Center, www.spc.noaa.gov/efscale/ef-scale.html;
- Tornado Activity in the U.S. map (1950-2006), FEMA 320, Taking Shelter from the Storm, 3rd edition;
- Tornado Alley in the U.S. map, <http://www.tornadochaser.net/tornalley.html>
- Enhanced Fujita Scale, www.spc.noaa.gov/efscale/ef-scale.html
- National Climatic Data Center, <http://www.ncdc.noaa.gov/stormevents/>
- Tornado History Project, map of tornado events, <http://www.tornadohistoryproject.com/tornado/Missouri>

HazardProfile

Hazard Description

The NWS defines a tornado as “a violently rotating column of air extending from a thunderstorm to the ground.” It is usually spawned by a thunderstorm and produced when cool air overrides a layer of warm air, forcing the warm air to rise rapidly. Often, vortices remain suspended in the atmosphere as funnel clouds. When the lower tip of a vortex touches the ground, it becomes a tornado.

High winds not associated with tornadoes are profiled separately in this document in **Section _____**, Thunderstorm/High Wind/Hail/Lightning.

Essentially, tornadoes are a vortex storm with two components of winds. The first is the rotational winds that can measure up to 500 miles per hour, and the second is an uplifting current of great strength. The dynamic strength of both these currents can cause vacuums that can overpressure structures from the inside.

Although tornadoes have been documented in all 50 states, most of them occur in the central United States due to its unique geography and presence of the jet stream. The jet stream is a high-velocity stream of air that separates the cold air of the north from the warm air of the south. During the winter, the jet stream flows west to east from Texas to the Carolina coast. As the sun moves north, so does the jet stream, which at summer solstice flows from Canada across Lake Superior to Maine. During its move northward in the spring and its recession south during the fall, the jet stream crosses Missouri, causing the large thunderstorms that breed tornadoes.

A typical tornado can be described as a funnel-shaped cloud in contact with the earth's surface that is “anchored” to a cloud, usually a cumulonimbus. This contact on average lasts 30 minutes and covers an average distance of 15 miles. The width of the tornado (and its path of destruction) is usually about 300 yards. However, tornadoes can stay on the ground for upward of 300 miles and can be up to a mile wide. The National Weather Service, in reviewing tornadoes occurring in Missouri between 1950 and 1996, calculated the mean path length at 2.27 miles and the mean path area at 0.14 square mile.

The average forward speed of a tornado is 30 miles per hour but may vary from nearly stationary to 70 miles per hour. The average tornado moves from southwest to northeast, but tornadoes

have been known to move in any direction. Tornadoes are most likely to occur in the afternoon and evening, but have been known to occur at all hours of the day and night.

Geographic Location

There are no specific likely locations for future occurrences as the threat from this hazard is county-wide.

Severity/Magnitude/Extent

Tornadoes are the most violent of all atmospheric storms and are capable of tremendous destruction. Wind speeds can exceed 250 miles per hour and damage paths can be more than one mile wide and 50 miles long. Tornadoes have been known to lift and move objects weighing more than 300 tons a distance of 30 feet, toss homes more than 300 feet from their foundations, and siphon millions of tons of water from water bodies. Tornadoes also can generate a tremendous amount of flying debris or “missiles,” which often become airborne shrapnel that causes additional damage. If wind speeds are high enough, missiles can be thrown at a building with enough force to penetrate windows, roofs, and walls. However, the less spectacular damage is much more common.

Tornado magnitude is classified according to the EF- Scale (or the Enhance Fujita Scale, based on the original Fujita Scale developed by Dr. Theodore Fujita, a renowned severe storm researcher). The EF- Scale (see **Table 3.4**) attempts to rank tornadoes according to wind speed based on the damage caused. This update to the original F Scale was implemented in the U.S. on February 1, 2007.

Table 3.4. Enhanced F Scale for Tornado Damage

FUJITA SCALE			DERIVED EF SCALE		OPERATIONAL EF SCALE	
F Number	Fastest ¼-mile (mph)	3 Second Gust (mph)	EF Nu	3 Second Gust (mph)	EF Number	3 Second Gust (mph)
0	40-72	45-78	0	65-85	0	65-85
1	73-112	79-117	1	86-109	1	86-110
2	113-157	118-161	2	110-137	2	111-135
3	158-207	162-209	3	138-167	3	136-165
4	208-260	210-261	4	168-199	4	166-200
5	261-318	262-317	5	200-234	5	Over 200

Source: The National Weather Service, www.spc.noaa.gov/faq/tornado/ef-scale.html

The wind speeds for the EF scale and damage descriptions are based on information on the NOAA Storm Prediction Center as listed in **Table 3.5**. The damage descriptions are summaries. For the actual EF scale it is necessary to look up the damage indicator (type of structure damaged) and refer to the degrees of damage associated with that indicator. Information on the Enhanced Fujita Scale's damage indicators and degrees of damage is located online at www.spc.noaa.gov/efscale/ef-scale.html.

Table 3.5. Enhanced Fujita Scale with Potential Damage

Enhanced Fujita Scale			
Scale	Wind Speed (mph)	Relative Frequency	Potential Damage
EF0	65-85	53.5%	Light. Peels surface off some roofs; some damage to gutters or siding; branches broken off trees; shallow-rooted trees pushed over. Confirmed tornadoes with no reported damage (i.e. those that remain in open fields) are always rated EF0).
EF1	86-110	31.6%	Moderate. Roofs severely stripped; mobile homes overturned or badly damaged; loss of exterior doors; windows and other glass broken.
EF2	111-135	10.7%	Considerable. Roofs torn off well-constructed houses; foundations of frame homes shifted; mobile homes complete destroyed; large trees snapped or uprooted; light object missiles generated; cars lifted off ground.
EF3	136-165	3.4%	Severe. Entire stores of well-constructed houses destroyed; severe damage to large buildings such as shopping malls; trains overturned; trees debarked; heavy cars lifted off the ground and thrown; structures with weak foundations blown away some distance.
EF4	166-200	0.7%	Devastating. Well-constructed houses and whole frame houses completely levelled; cars thrown and small missiles generated.
EF5	>200	<0.1%	Explosive. Strong frame houses levelled off foundations and swept away; automobile-sized missiles fly through the air in excess of 300 ft.; steel reinforced concrete structure badly damaged; high rise buildings have significant structural deformation; incredible phenomena will occur.

Source: NOAA Storm Prediction Center, <http://www.spc.noaa.gov/efscale/ef-scale.html>

Enhanced weather forecasting has provided the ability to predict severe weather likely to produce tornadoes days in advance. Tornado watches can be delivered to those in the path of these storms several hours in advance. Lead time for actual tornado warnings is about 30 minutes. Tornadoes have been known to change paths very rapidly, thus limiting the time in which to take shelter. Tornadoes may not be visible on the ground if they occur after sundown or due to blowing dust or driving rain and hail.

Previous Occurrences

During the 24 year period from 1993 to present, there have been 11 tornadoes recorded in Lawrence County with EF/F Scale ratings ranging from EF0 to EF3 in magnitude. The data is shown in Table 3.47. The most frequent EF/F scale magnitude of the 11 recorded tornadoes from the NCDC/NOAA storm events database have been F0 and F1 magnitude, numbering four and three, respectively. They collectively account for \$600,000 in property damage. EF3/F3 tornadoes have occurred twice and have caused 90% of the property damage caused by tornadoes.

The most destructive tornado to occur in Lawrence County occurred in May of 2003 when a category-3 tornado ripped through the Pierce City community. Around 229 homes businesses, and outbuildings were destroyed with the 100-year old historic downtown district completely destroyed. Total property damage came to \$27,500,000 in Lawrence County. Five people were killed by the tornado and 33 people were injured. Three out of five of the deceased were residing in a mobile home when the tornado struck.

Another F3 tornado struck Lawrence County in March of 2006 and caused considerable damage. The tornado followed a path north of Aurora, Marionville, and Verona but did not enter the city limits; however, 21 structures were destroyed with 46 damaged. The tornado caused \$5,000,000 in total property damage. An elderly man was also struck by flying debris and killed during this event after

the tornado struck his home north of Marionville. One person was also injured.

In November of 2005, an F1 tornado struck in proximity of Mount Vernon causing \$750,000 in property damage. The tornado moved east about five miles creating a 75 yard wide path of destruction. Several homes experienced moderate to significant damage mostly being roof damage. Several trees were also uprooted. No one was killed in this event but one person was injured in their home.

A category-2 tornado occurred in December of 2002 causing seventeen people to be injured and two deaths. The Tornado touched down south of Mt. Vernon and traveled four miles northeast towards Chesapeake. 34 homes were damaged or destroyed in the event. One modular home was struck and killed one person when she was flung from her home. A trailer park was directly hit by the tornado which led to many people fleeing their mobile homes and taking shelter into nearby ditches and open fields. One person was struck by a downed tree and was killed. Total property damage amounted to \$500,000.

There are limitations to the use of NCDC tornado data that must be noted. For example, one tornado may contain multiple segments as it moves geographically. A tornado that crosses a county line or state line is considered a separate segment for the purposes of reporting to the NCDC. Also, a tornado that lifts off the ground for less than 5 minutes or 2.5 miles is considered a separate segment. If the tornado lifts off the ground for greater than 5 minutes or 2.5 miles, it is considered a separate tornado. Tornadoes reported in Storm Data and the Storm Events Database are in segments. **Table 3.6** that includes NCDC reported tornado events and damages since 1993 in the planning area

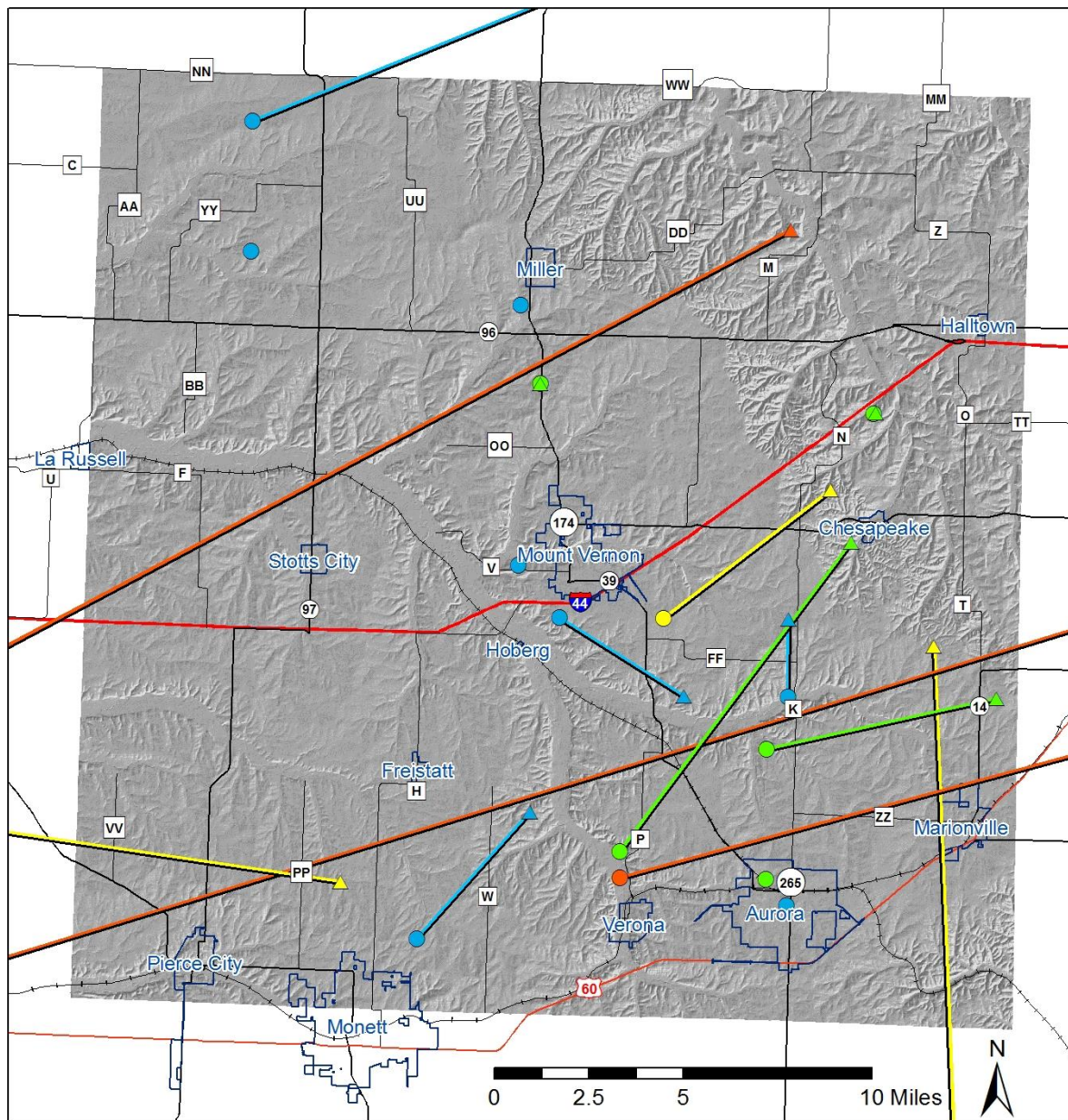
Table 3.6. Recorded Tornadoes in Lawrence County, 1993 – 2017

Date	Beginning Location	Ending Location	Length (miles)	Width (yards)	F/EF Rating	Death	Injury	Property Damage	Crop Damages
11/23/2001	Aurora	Aurora	2	200	F1	0	0	\$750,000	\$250,000
12/17/2002	Mt Vernon	Chesapeake	4	100	F2	2	17	\$500,000	\$0
05/04/2003	Pierce City	Marionville	25	880	F3	5	33	\$27,500,000	\$0
11/12/2005	Mt Vernon	Mt. Vernon	5	75	F1	0	1	\$750,000	\$0
03/12/2006	Verona	Marionville	10	200	F3	1	1	\$5,000,000	\$0
10/17/2007	Verona	Chesapeake	10.11	150	EF0	0	0	\$500,000	\$0
01/07/2008	Aurora	McKinley	6.39	50	EF0	0	0	\$75,000	\$0
03/31/2008	Albatross	Albatross	0.45	40	EF0	0	0	\$20,000	\$0
05/22/2011	Pierce City	Freistatt	7.07	800	EF2	0	0	\$300,000	\$0
10/13/2014	Spence	Spence	0.07	50	EF0	0	0	\$5,000	\$0
05/17/2015	Freistatt	Opal	4.53	100	EF1	0	0	\$100,000	\$0
Total						8	52	\$35,500,000	\$250,000

Source: National Climatic Data Center, <http://www.ncdc.noaa.gov/stormevents/>

Figure 3.18 shows historic tornado paths in the Lawrence County

Figure 3.30. Lawrence County Map of Historic Tornado Events



Tornado (F-Scale)

Lift-Off	Touchdown	Path
▲ 0	● 0	— 0
▲ 1	● 1	— 1
▲ 2	● 2	— 2
▲ 3	● 3	— 3



Southwest Missouri
Council of Governments
Map Prepared: 7/5/2017
Data source: Tornado History Project

Source: Missouri Tornado History Project, <http://www.tornadohistoryproject.com/tornado/Missouri>

There has been no recorded data in the USDA Risk Management Agency Database that refers to crop damages as a result of tornadoes in the past 10 years.

Probability of Future Occurrence

According to the NCDC storm event records there have been 11 tornado events from 1993 to March 2017. Based on the past occurrence of tornadoes in Lawrence County, there is a 46% probability that the county will experience a tornado in any given year as of 2017.

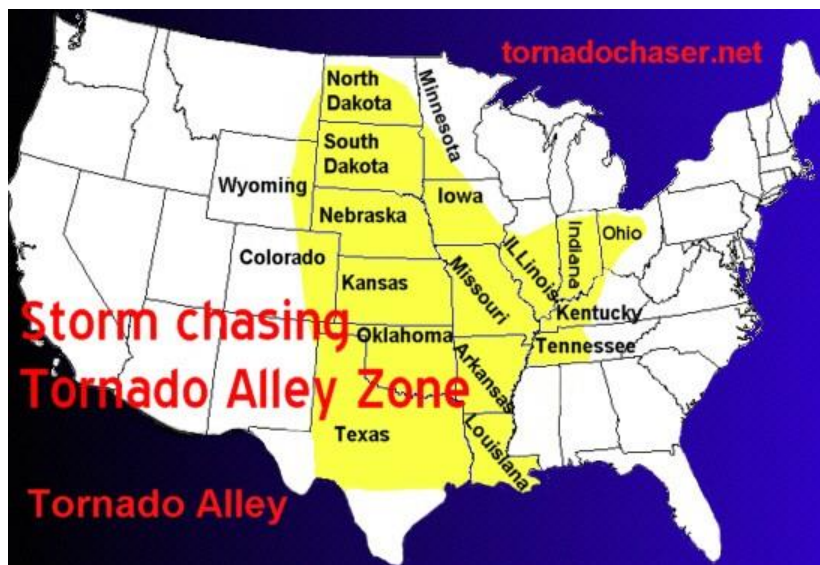
The potential severity of effects from tornadoes will continue to be high. Lawrence County will continue to experience deaths, injuries, and property damages from tornadoes. However, technological advances will facilitate earlier warnings than previously available. This, combined with a vigorous public education program and improved construction techniques, provides the potential for significant reductions in the number of deaths and injuries, as well as reduced property damage.

Vulnerability

Vulnerability Overview

Lawrence County is located in a region of the U.S. with high frequency of dangerous and destructive tornadoes referred to as “Tornado Alley” as is the entire state. **Figure 3.19** illustrates areas where dangerous tornadoes historically have occurred.

Figure 3.31. Tornado Alley in the U.S.



Source: <http://www.tornadochaser.net/tornalley.html>

The 2013 State Plan used a methodology to the vulnerability of each county in the state to determine each county's vulnerability to tornadoes. While this approach attempts to prioritize tornado vulnerable counties, it does not identify any particular geographic patterns to tornado risk. The state's analysis combined annualized losses and frequency of occurrence to determine the greatest likelihood of being impacted by a tornado. The state's vulnerability rating ranged from very high, high, and moderate. The vulnerability rating for Lawrence County was rated at high risk.

Potential Losses to Existing Development

During the 24 year period from 1993 to March 2017, a total of \$35,750,000 in property and crop losses equates to \$1,489,583 in average annual losses. The most common tornado events recorded in the county are F0 and F1 magnitude events. Four of the 11 tornado events on record have been F0 magnitude. Three have been F1 and two tornadoes have been F2 and F3. Potential losses for each jurisdiction were estimated based on the total exposure with applied damage factor of 1%. **Table 3.48** provides estimates for total losses by jurisdiction.

Table 3.7. Estimated Potential Tornado Losses by Jurisdiction

Jurisdiction	Potential Tornado Losses
Lawrence County	
City of Aurora	
Village of Freistatt	
Village of Halltown	
Village of Hoberg	
City of Marionville	
City of Miller	
City of Monett	
City of Pierce City	
City of Stotts City	
City of Verona	
Aurora R-VIII	
Marionville R-IX	
Miller R-II	
Monett R-I	
Mount Vernon R-V	
Pierce City R-VI	
Verona R-VII	

Previous and Future Development

During the 24 year period from 1993 to 2017, a total of \$35,500,000 in property and crop losses equates to \$1,489,583 in average annual losses countywide. This value indicates that potential future losses in the county will remain significant. Future development and any increase in population will increase exposure to damage; however not much is expected in the near future.

Hazard Summary by Jurisdiction

Although tornado events are area-wide hazard, communities with a greater percentage of structures built prior to 1939 are considered to be more vulnerable to the impact of high wind and hail damage. There are several jurisdictions in Lawrence County of which are comprised of more than 10% of houses built in 1939 or earlier Miller, Hoberg, Halltown, Monett, Pierce City, Verona, and Stotts City are composed of more than 20% of houses built prior to 1939. . These cities are most at risk for increased exposure and risk to tornadoes. Lawrence County, Aurora, and Monett have the largest number of houses built prior to 1939 with 2,601, 523, and 769 total homes, respectively

School and special district facilities are at risk to the damages of tornadoes. Risk to student populations has been mitigated by construction of safe rooms on the Monett R-I campus. No other school districts in Lawrence County have a school safe room.

Problem Statement

Tornadoes are the most violent of all atmospheric storms and are capable of tremendous destruction. Wind speeds can exceed 250 miles per hour and damage paths can be more than one mile wide and 50 miles long. Significant tornado events in Lawrence County have resulted in eight deaths, 52 injuries, \$35,500,000 in property damage, and \$250,000 in crop damage over the last 23 years. Information in the 2013 State Plan indicates that Lawrence County has a high vulnerability to tornados based on frequency of occurrence and previous damages.

The risk of property damage, injury, and death in the county can be mitigated by Constructing FEMA saferooms in facilities that house vulnerable populations such as nursing homes government buildings, and schools. Additionally, identifying safe refuge areas in public buildings, nursing homes and other facilities that house vulnerable populations that do not have a safe room. Retrofitting school district facilities with protective filming of windows and installation of blast proof doors will provide more protection for students and staff at school facilities. Additional warnings and alerts will also provide the public and schools more time to take cover during tornado. Cities can adopt or update and enforce IBC 2012 building codes that include construction techniques such as roof tie down straps to mitigate damage to future development.

3.4.10 Winter Weather/Snow/Ice/Severe Cold

Hazard Profile

Hazard Description

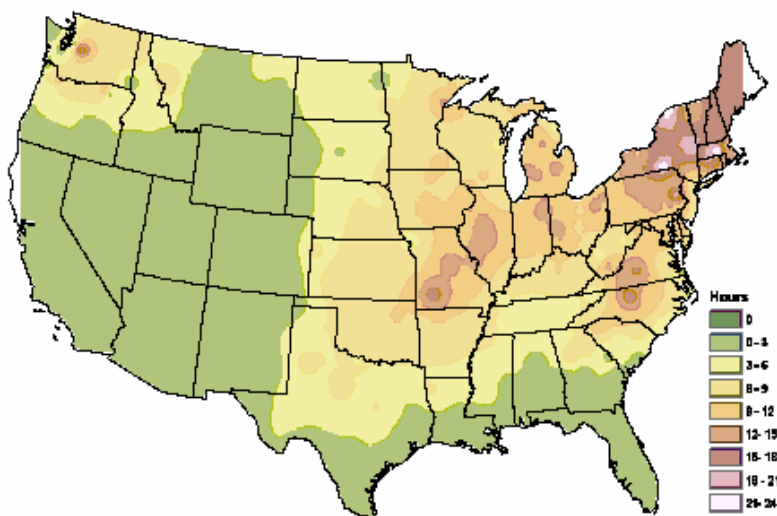
A major winter storm can last for several days and be accompanied by high winds, freezing rain or sleet, heavy snowfall, and cold temperatures. The National Weather Service describes different types of winter storm events as follows.

- **Blizzard**—Winds of 35 miles per hour or more with snow and blowing snow reducing visibility to less than $\frac{1}{4}$ mile for at least three hours.
- **Blowing Snow**—Wind-driven snow that reduces visibility. Blowing snow may be falling snow and/or snow on the ground picked up by the wind.
- **Snow Squalls**—Brief, intense snow showers accompanied by strong, gusty winds. Accumulation may be significant.
- **Snow Showers**—Snow falling at varying intensities for brief periods of time. Some accumulation is possible.
- **Freezing Rain**—Measurable rain that falls onto a surface with a temperature below freezing. This causes it to freeze to surfaces, such as trees, cars, and roads, forming a coating or glaze of ice. Most freezing-rain events are short lived and occur near sunrise between the months of December and March.
- **Sleet**—Rain drops that freeze into ice pellets before reaching the ground. Sleet usually bounces when hitting a surface and does not stick to objects.

Geographic Location

The entire county is vulnerable to heavy snow, ice, extreme cold temperatures and freezing rain. **Figure 3.31** depicts the average number of hours per year with freezing rain. Lawrence County is located in a zone that can expect 18 – 21 hours of freezing rain per year.

Figure 3.32. NWS Statewide Average Number of Hours per Year with Freezing Rain



Source: American Meteorological Society. "Freezing Rain Events in the United States." <http://ams.confex.com/ams/pdfpapers/71872.pdf>

Severity/Magnitude/Extent

Severe winter storms include extreme cold, heavy snowfall, ice, and strong winds which can push the wind chill well below zero degrees in the planning area. Heavy snow can bring a community to a

standstill by inhibiting transportation (in whiteout conditions), weighing down utility lines, and by causing structural collapse in buildings not designed to withstand the weight of the snow. Repair and snow removal costs can be significant. Ice buildup can collapse utility lines and communication towers, as well as make transportation difficult and hazardous. Ice can also become a problem on roadways if the air temperature is high enough that precipitation falls as freezing rain rather than snow.

Extreme cold often accompanies severe winter storms and can lead to hypothermia and frostbite in people without adequate clothing protection. Cold can cause fuel to congeal in storage tanks and supply lines, stopping electric generators. Cold temperatures can also overpower a building's heating system and cause water and sewer pipes to freeze and rupture. Extreme cold also increases the likelihood for ice jams on flat rivers or streams. When combined with high winds from winter storms, extreme cold becomes extreme wind chill, which is hazardous to health and safety.

The National Institute on Aging estimates that more than 2.5 million Americans are elderly and especially vulnerable to hypothermia, with the isolated elders being most at risk. About 10 percent of people over the age of 65 have some kind of bodily temperature-regulating defect, and 3-4 percent of all hospital patients over 65 are hypothermic.

Also at risk are those without shelter, those who are stranded, or who live in a home that is poorly insulated or without heat. Other impacts of extreme cold include asphyxiation (unconsciousness or death from a lack of oxygen) from toxic fumes from emergency heaters; household fires, which can be caused by fireplaces and emergency heaters; and frozen/burst pipes.

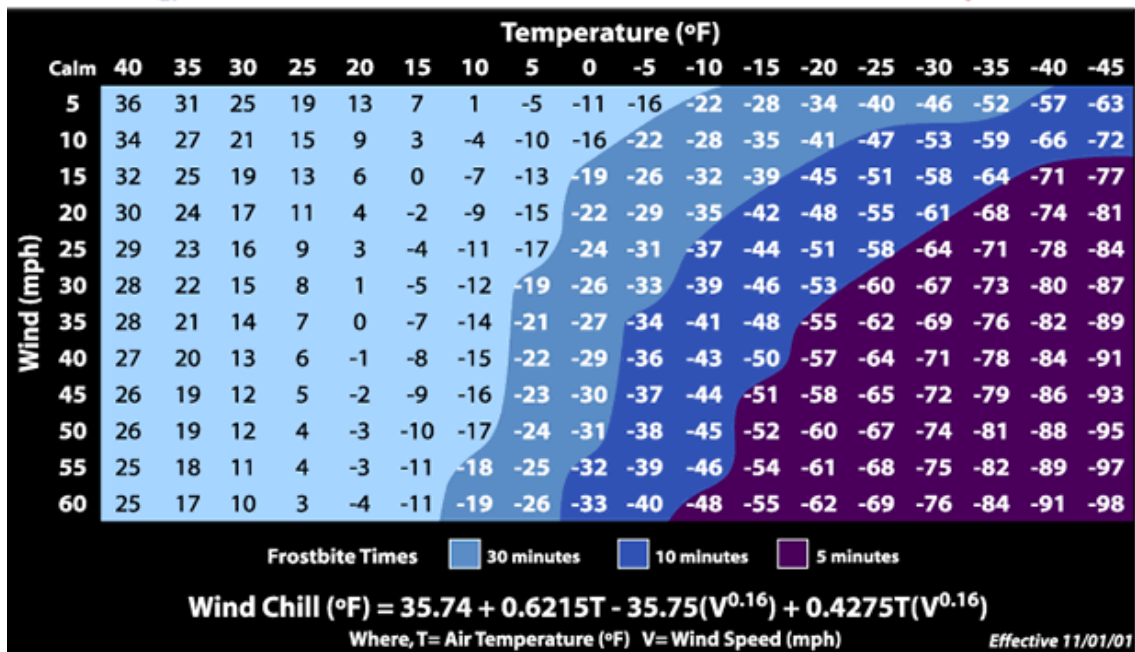
Buildings with overhanging tree limbs are more vulnerable to damage during winter storms when limbs fall. Businesses experience loss of income as a result of closure during power outages. In general heavy winter storms increase wear and tear on roadways though the cost of such damages is difficult to determine. Businesses can experience loss of income as a result of closure during winter storms.

Overhead power lines and infrastructure are also vulnerable to damages from winter storms. In particular ice accumulation during winter storm events damage to power lines due to the ice weight on the lines and equipment. Damages also occur to lines and equipment from falling trees and tree limbs weighted down by ice. Potential losses could include cost of repair or replacement of damaged facilities, and lost economic opportunities for businesses.

Secondary effects from loss of power could include burst water pipes in homes without electricity during winter storms. Public safety hazards include risk of electrocution from downed power lines. Specific amounts of estimated losses are not available due to the complexity and multiple variables associated with this hazard. Standard values for loss of service for utilities reported in FEMA's 2009 BCA Reference Guide, the economic impact as a result of loss of power is \$126 per person per day of lost service.

Wind can greatly amplify the impact of cold ambient air temperatures. Provided by the National Weather Service, **Figure 3.17** below shows the relationship of wind speed to apparent temperature and typical time periods for the onset of frostbite.

Figure 3.33. Wind Chill Chart



Source: National Weather Service, <http://www.nws.noaa.gov/om/winter/windchill.shtml>

Winter storms, cold, frost and freeze take a toll on crop production in the planning area. **Table 3.49** showing the USDA's Risk Management Agency payments for insured crop losses in the planning area as a result of cold conditions and snow from 2006 to 2016.

Table 3.8. Crop Insurance Claims Paid in Lawrence County as a Result of Cold Conditions and Snow, 2016-2006

Crop Year	Crop Name	Cause of Loss Description	Insurance Paid
2016	Corn	Cold Wet Weather	\$4,292
2008	Corn, Soybeans	Freeze, Frost	\$312,201
2007	Wheat	Frost	\$5,934
Total			\$322,427

Source: USDA Risk Management Agency, <http://www.rma.usda.gov/data/cause.htm>

Previous Occurrences

There are 20 recorded events in the NCDC database for Blizzard, Extreme Cold/Wind Chill, Frost/Freeze, Heavy Snow, Ice Storm, Sleet, and Winter Storm in Lawrence County from 1997 - 2017. **Table 3.50** includes the number of occurrences of these Winter Weather events. **Table 3.51** includes the seven weather events that caused damage, with event narratives listed following the table.

Table 3.9. NCDC Lawrence County Winter Weather Events Summary, 2007-2017

Type of Event	Number of Occurrences	# of Deaths	# of Injuries	Property Damages	Crop Damages
---------------	-----------------------	-------------	---------------	------------------	--------------

Blizzard	1	0	0	\$15,000	\$0
Frost/Freeze	1	0	0	\$0	\$1,850,000
Ice Storm	6	0	0	\$5,050,000	\$0
Winter Storm	12	0	0	\$0	\$0
TOTAL	20	0	0	\$5,065,000	\$1,850,000

Source: NCDC, data accessed 06/21/2017

Table 3.10. NCDC Lawrence County Winter Weather Events Summary, 1997-2017

Type of Event	Date	# of Deaths	# of Injuries	Property Damages	Crop Damages
Ice Storm	01/12/2007	0	0	\$5,000,000	\$0
Frost/Freeze	04/07/2007	0	0	\$0	\$1,850,000
Ice Storm	12/09/2007	0	0	\$50,000	\$0
Blizzard	02/01/2011	0	0	\$15,000	\$0
Total		0	0	\$5,065,000	\$1,850,000

Source: NCDC, data accessed 06/21/2017

January 2007 Ice Storm

A devastating ice storm impacted Southwest Missouri. Several areas experience three weeks without power. Power outages from exposed power lines and tree damage was widespread in Lawrence County causing some residents to be without power for 15 days. Ice accumulation was measured at 2 inches in the county. Total damage inflicted amounted to \$5 million in property damage.

April 2007 Frost/Freeze

Temperatures reached below freezing on the nights of the 7th, 8th, and 9th causing widespread damage to matured crops in the Missouri Ozarks. Due to unusually warm condition in March, crops grew early in the season which resulted in more exposure during the cold April temperatures. 90% of wheat crops suffered damage along with several hay crops sustaining major damage. Total crop damage in Lawrence County amounted to \$1,850,000.

December 2007 Ice Storm

A major ice storm developed over northeast Oklahoma and traveled across Missouri in the early hours of December 9th. Areas near Lamar and Stockton, MO experienced the most ice accumulation up to one and a half inches on exposed surfaces. Additional ice coating came the following day from light freezing rain during the morning. Lawrence County was recorded to have experienced one quarter inch to three quarters of ice accumulations. Minor tree and power line damage occurred in the northwest portion of the county. Total damages in the county amounted to \$50,000.

February 2011 Blizzard

A major winter storm swept across the Midwest bringing heavy snow and blizzard conditions to Lawrence County. Snow accumulation of 10 to 18 inches was observed with winds reaching upwards of 40 mph. This resulted in drifts of a few feet and reduced visibility. A school classroom roof collapse during the event causing \$15,000 in damage.

Probability of Future Occurrence

The probability for all of the different types of winter weather are included as one probability, since one storm generally includes multiple types of events. There were 21 severe winter weather events in Lawrence County from 1997 to March 2017. This equates to a 100% probability of occurrence in any given year in the planning area.

Vulnerability

Vulnerability Overview

Severe winter storms include extreme cold, heavy snowfall, ice, and strong winds which can push the wind chill well below zero degrees in the planning area. Heavy snow can bring a community to a standstill by inhibiting transportation (in whiteout conditions), weighing down utility lines, and by causing structural collapse in buildings not designed to withstand the weight of the snow. Repair and snow removal costs can be significant. Ice buildup can collapse utility lines and communication towers, as well as make transportation difficult and hazardous. People over 65 and those living in poverty have an increased risk of hypothermia and frostbite due to extreme cold and wind chill.

In the 2013 State Plan, seven factors were considered in determining overall severe winter storm vulnerability as follows: housing density, likelihood of occurrence, building exposure, crop exposure, average annual property loss ratio, average annual crop insurance claims and social vulnerability. The state ranked each of these criteria using a scale from one to five, one being lowest and five being the highest, to rank each county's vulnerability to severe winter weather. Lawrence County received a vulnerability rating of Medium-Low with Crop loss ratio and social vulnerability index of three.

Potential Losses to Existing Development

During the 20 year period from 1997 to March 2017, a total of \$5,065,000 in property loss equates to \$253,250 in average annual losses countywide.

Previous and Future Development

Increased development and any resulting increase in population will increase exposure to damage from severe winter weather; however not much growth is expected. Future commercial development can expect functional downtime and decreased revenues during periods of severe winter weather. Road construction in the county will increase the need for snow removal and salt to keep transportation lifelines open during periods of severe winter weather.

Hazard Summary by Jurisdiction

Severe winter weather can cause power outages and put structures at risk to fires when individuals in homes resort to fuel heaters. The risk of extreme cold deaths and frostbite varies among segments of the populations. People over 65 and those living below the poverty level have an increased vulnerability to severe winter weather. **Table 3.52** includes information on populations over 65 and the percent living below the poverty level by jurisdiction.

Table 3.1. Population over 65 and Percent Living Below the Poverty Level by Jurisdiction

Jurisdiction	% of Families Living Below Poverty Level	Population over 65
Lawrence County	14.5%	17%
Aurora	14.6%	16.1%

Freistatt	5.6%	32.8%
Halltown	45.5%	12.8%
Hoberg	14.5%	4.3%
Marionville	18.5%	22.1%
Miller	13.3%	16.1%
Monett	23.2%	15%
Mt. Vernon	9.9%	23.2%
Pierce City	16.8%	17.4%
Stotts City	32.4%	14.5%
Verona	22.2%	9.3%

Source: Census.gov; 2011-2015 ACS 5-year Estimates

Problem Statement

Heavy snow can bring a community to a standstill by inhibiting transportation (in whiteout conditions), weighing down utility lines, and by causing structural collapse in buildings not designed to withstand the weight of the snow. Repair and snow removal costs can be significant. Ice buildup can collapse utility lines and communication towers, as well as make transportation difficult and hazardous. People over 65 and those living in poverty have an increased risk of hypothermia and frostbite due to extreme cold and wind chill.

Providing heating and cooling centers in the county would be beneficial to the population as a good percentage live in poverty. These facilities, which could be advertised online or through the news, would provide individuals who are at risk refuge from periods of extreme cold. Public works departments and road districts can develop snow removal plans and maintain adequate snow removal equipment and salt to quickly open roads after periods of heavy snow and freezing rain. The County and cities can work with local electric providers to develop vegetation management programs in rights of way to minimize damages to falling tree limbs laden with ice resulting from ice storms to minimize power outages throughout the county.

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Note: To adjust the page-numbering to include the chapter number in front of the page number, first update the Table of Contents page numbers (right click, update field, update page numbers) and then manually add a “3” in front of each page number.

A good article resource discussing why historic preservation needs to be part of disaster planning is available at the following link:

- http://www.citylab.com/housing/2016/04/why-historic-preservation-needs-to-be-part-of-disaster-planning/477318/?utm_source=nl_link5_041116.

Additional historic preservation resources are below:

- [National Park Service’s Certified Local Government Program](https://www.nps.gov/clg/) - <https://www.nps.gov/clg/>
- [National Main Street Program](http://www.preservationnation.org/main-street/about-main-street/) - <http://www.preservationnation.org/main-street/about-main-street/>

The above are both partnerships between national and state agencies and local governments that focus on historic preservation. Communities that have these programs in place already have a good infrastructure to protect historic sites.

4 MITIGATION STRATEGY

4	MITIGATION STRATEGY	Error! Bookmark not defined.
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4.3	Implementation of Mitigation Actions	Error! Bookmark not defined.

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 updated by the Mitigation Planning Committee (MPC) based on the 2017 risk assessment. The mitigation strategy was developed through a collaborative group process. The process included review of 2013 general goal statements to guide the jurisdictions in lessening disaster impacts as well as specific mitigation actions to directly reduce vulnerability to hazards and losses. The following definitions are taken from FEMA's *Local Hazard Mitigation Review Guide* (October 1, 2012).

- **Mitigation Goals** are general guidelines that explain what you want to achieve. Goals are long-term policy statements and global visions that support the mitigation strategy. The goals address the risk of hazards identified in the plan.
- **Mitigation Actions** are specific actions, projects, activities, or processes taken to reduce or eliminate long-term risk to people and property from hazards and their impacts. Implementing mitigation actions helps achieve the plan's mission and goals.

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.

This planning effort is an update to Lawrence County's existing hazard mitigation plan approved by FEMA on March 27, 2013. Therefore, the goals from the 2017 Lawrence County Hazard Mitigation Plan were reviewed to see if they were still valid, feasible, practical, and applicable to the defined hazard impacts. The MPC conducted a discussion session during their third meeting to review and update the plan goals. To ensure that the goals developed for this update were comprehensive and supported State goals, the 2013 State Hazard Mitigation Plan goals were reviewed. The MPC also reviewed the goals from current surrounding county plans.

Goal 1 – Protect lives and property from the effects of natural hazards.

- **Objective 1.1: Promote public awareness of natural hazards and safety measures**
- **Objective 1.2: Provide adequate warning systems to alert the public of hazard events**

- ***Objective 1.3: Provide adequate shelter for the population to reduce death and injury from hazard events***
- ***Objective 1.4: Utilize prevention measures to reduce potential future loss from hazardous events***

Goal 2 - Ensure the continued operation of government and emergency services.

- ***Objective 2.1 - Strengthen multi-jurisdictional cooperation & communication among local governments, emergency services agencies, and entities responsible for critical and vulnerable facilities***
- ***Objective 2.2 - Increase and maintain appropriate emergency equipment and facilities***

Goal 3 - Ensure the functional operation of critical infrastructures serving the public and the local economy.

- ***Objective 3.1 - Utilize engineered structural modifications to natural systems and public infrastructures to reduce damaging impacts of hazards***

4.2 Identification and Analysis of Mitigation Actions

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.

During the second MPC meeting, an overview of the risk assessment was provided to the MPC members for review and the key issues were identified for specific hazards. The second meeting concluded with a brief discussion of previous mitigation actions. Each jurisdiction was asked to review previous mitigation actions and come prepared to discuss new actions at the next mitigation meeting.

Problem statements summarize the risk to the planning area presented by each hazard, and include possible methods to reduce that risk. Problem statements are new to this plan and were not included in the previous plan. Use of problem statements allowed the recognition of new and innovative strategies for mitigate risks in the planning area.

The focus of Meeting #3 was discussion of goals, strategies and actions. For a comprehensive range of mitigation actions to consider, the MPC reviewed the following information during Meeting #3:

- A list of actions proposed in the previous mitigation plan and discussing each one, determining their relevance.
- Discussion of new mitigation strategies
- Public input during meetings, responses to Data Collection Questionnaires, and other efforts to involve the public in the plan development process.

For Meeting #4, individual jurisdictions, including school and special districts, were encouraged to review the details of the risk assessment vulnerability analysis specific to their jurisdiction. The MPC

reviewed the actions from the previously approved plan for progress made since the plan had been adopted, using worksheets included in Appendix xx of this plan. Each jurisdiction was instructed to provide information regarding the “Action Status” with one of the following status choices:

- Completed, with a description of the progress,
- Not Started/Continue in Plan Update, with a discussion of the reasons for lack of progress,
- In Progress/Continue in Plan Update, with a description of the progress made to date or
- Deleted, with a discussion of the reasons for deletion.

Based on the status updates, there were xx completed actions, xx deleted actions, and xx continuing actions.

Table 4.1 provides a summary of the action statuses for each jurisdiction:

Table 4.1. Action Status Summary

Jurisdiction	Completed Actions	Deleted Actions	Continuing Actions
Lawrence County		1.3.4	1.1.3, 1.1.4, 1.1.5, 1.2.2, 1.3.1, 1.3.2, 1.3.3, 1.3.5, 1.4.1, 1.4.2, 1.4.4, 2.1.1, 2.1.2, 2.1.3, 2.1.4, 2.1.5, 2.1.6, 2.2.1, 3.1.2
City of Aurora	2.21	1.4.1	1.1.1, 1.1.2, 1.1.3, 1.1.4, 1.1.5, 1.2.1, 1.2.2, 1.3.1, 1.3.2, 1.3.3, 1.3.4, 1.3.5, 1.4.1, 1.4.2, 1.4.3, 1.4.4, 2.1.2, 2.1.3, 2.1.4, 2.1.6, 3.1.1, 3.1.2, 3.1.3, 3.1.5, 3.1.6
Village of Freistatt		1.3.4	1.1.1, 1.1.2, 1.1.3, 1.1.4, 1.2.1, 1.2.2, 1.3.1, 1.3.2, 1.3.3, 1.4.2, 1.4.3, 1.4.4, 2.1.2, 2.1.3, 2.1.4, 2.1.6, 2.2.1, 3.1.1, 3.1.2, 3.1.3, 3.1.5, 3.1.1
City of Marionville		1.3.4	1.1.1, 1.1.2, 1.1.3, 1.1.4, 1.2.1, 1.2.2, 1.3.1, 1.3.2, 1.3.3, 1.3.5, 1.4.1, 1.4.2, 1.4.3, 1.4.4, 2.1.2, 2.1.3, 2.1.4, 2.1.6, 3.1.3, 3.1.5, 3.1.6
City of Miller	1.2.2	1.1.2, 1.3.2, 1.3.4, 1.4.2, 1.4.3, 1.4.4, 2.1.4, 2.2.1, 2.1.6, 3.1.5	1.1.1, 1.1.3, 1.1.4, 1.2.1, 1.3.1, 1.3.3, 2.1.2, 2.1.3, 3.1.1, 3.1.2, 3.1.3, 3.1.6
City of Monett			1.1.1, 1.1.2, 1.1.3, 1.1.4, 1.1.5, 1.2.1, 1.2.2, 1.3.1, 1.3.2, 1.3.3, 1.3.4, 1.3.5, 1.4.1, 1.4.2, 1.4.3, 1.4.4, 2.1.2, 2.1.3, 2.1.4, 2.1.6, 2.2.1, 3.1.1, 3.1.2, 3.1.3, 3.1.5, 3.1.6
City of Mount Vernon		1.2.1	1.1.1, 1.1.2, 1.1.3, 1.1.4, 1.1.5, 1.2.2, 1.3.1, 1.3.2, 1.3.3, 1.3.4
City of Pierce City			1.1.2, 1.1.3, 1.1.4, 1.1.5, 1.2.1, 1.2.2, 1.3.1, 1.3.2
City of Verona	3.1.3, 3.1.5		1.1.1, 1.1.2, 1.1.3, 1.2.2, 1.3.1, 1.3.3, 2.1.3, 2.1.6, 3.1.5, 3.1.6

Marionville R-IX		2.1.3, 2.1.4	1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.6, 3.1.2
Miller R-II		2.1.4	1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.3, 2.1.6, 3.1.2
Monett R-I	1.3.1	2.1.4	1.1.1, 1.1.2, 1.2.2, 2.1.3, 2.1.6, 3.1.2
Mount Vernon R-V			1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.3, 2.1.4, 2.1.6, 3.1.2
Pierce City R-VI	1.3.1	2.1.4	1.1.1, 1.1.2, 1.2.2, 2.1.3, 2.1.6, 3.1.2
Verona R-VI		2.1.4	1.1.1, 1.1.2, 1.2.2, 1.3.1, 2.1.3, 2.1.6, 3.1.2
Miller Benefit Special Road District		1.3.1, 2.1.3, 2.1.4, 3.1.2	1.2.2, 1.2.3, 2.1.6, 3.1.4, 3.1.5
Green Benefit Special Road District		2.1.3, 2.1.4	1.2.2, 1.2.3, 1.3.1, 2.1.6, 3.1.2, 3.1.4, 3.1.5
Buck Prairie Special Road District			
Mt. Vernon Benefit Special Road District			
Verona Road District			

Table 4.2 provides a summary of the completed and deleted actions from the previous plan.

Table 4.2. Summary of Completed and Deleted Actions from the Previous Plan

Completed Actions	Completion Details (date, amount, funding source)
Promote the usage of NOAA radios and new communications technologies in all vulnerable and critical facilities, such as schools, medical facilities, nursing homes and day care facilities.	1.2.2 - Miller
Encourage construction of tornado safe rooms and best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) in areas of population concentration.	1.3.1 – Mt. Vernon R-V, Pierce City R-VI
Construct additional fire stations in communities and rural fire districts or fire protection associations to improve accessibility to areas impacted by natural or manmade barriers during hazard events.	2.2.1 - aurora
Deleted Actions	Reason for Deletion

Establish a process to distribute educational materials in other languages on hazards and actions to minimize risks for distribution to the non-English speaking population through the schools, major employers, and cultural organizations.	City of Miller – not applicable
Make the location of best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) and safe rooms in communities available to the public.	City of Verona – not applicable
Maintain a sufficient number of warning sirens in all incorporated communities while also maintaining current infrastructure.	City of Mount Vernon – not applicable City of Verona – not applicable
Retrofit existing critical public buildings & infrastructures where possible to provide shelter from natural hazards.	City of Miller – not applicable
Amend or update zoning ordinances to include requirement for best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) in all new manufactured home parks.	Lawrence County – not applicable due to no zoning City of Miller – not applicable City of Verona – not applicable Village of Freistatt - not applicable
Identify and designate heating and cooling refuge areas in community buildings, and make these location available to the public during extreme temperature events.	City of Verona – not applicable
Encourage the county and municipalities to maintain participation in the NFIP.	City of Aurora – not applicable
Community organizations should continue programs to provide fans, air conditioners & winter weatherization for those at risk (the elderly, low-income, younger, and handicapped).	City of Miller – not applicable due to lack of funding
Amend or update codes to include storm ready standards, such as hurricane straps.	City of Miller – not applicable
Establish and maintain participation in citizen preparedness activities such as: CERT, COAD, Neighborhood Watch, Amateur Radio, etc.	City of Miller – not applicable
Establish and maintain a database on available mitigation resources and programs that can be shared with local governments, response and preparedness agencies, social service organizations, and emergency care providers.	City of Verona – not applicable
Continue to provide radios for essential emergency personnel and a designated public official or community leader in all communities to improve the county-wide communication network.	Green Benefit Special Road District – not applicable Marionville R-IX – not applicable
Continue to increase countywide frequency repeater network, including new wireless units.	City of Miller – not applicable Marionville R-IX – not applicable Miller R-I – not applicable Mt. Vernon R-V – not applicable Pierce City R-VI – not applicable Verona R-VII – not applicable
Construct additional fire stations in communities and rural fire districts or fire protection associations to improve accessibility to areas impacted by natural or manmade barriers during hazard events.	City of Miller – not applicable
Promote the location of backup power generators in all new and existing city halls, schools, hospitals, nursing homes, fire departments and other critical or vulnerable facilities.	Miller Benefit Special Road District – not applicable

Identify and designate heating and cooling refuge areas in community buildings, and make these location available to the public during extreme temperature events.	City of Miller – not applicable
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Source: Previously approved County Hazard Mitigation Plan; Data Collection Questionnaires.

4.3 Implementation of Mitigation Actions

44 CFR Requirement §201.6(c)(3)(ii): The mitigation strategy shall include an action strategy describing how the actions identified in paragraph (c)(2)(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 benefits review of the proposed projects and their associated costs.

Jurisdictional MPC members were encouraged to meet with others in their community to finalize the actions to be submitted for the updated mitigation strategy. Throughout the MPC consideration and discussion, emphasis was placed on the importance of a benefit-cost analysis in determining project priority. The Disaster Mitigation Act requires benefit-cost review as the primary method by which mitigation projects should be prioritized. The MPC decided to pursue implementation according to when and where damage occurs, available funding, political will, jurisdictional priority, and priorities identified in the Missouri State Hazard Mitigation Plan. The benefit/cost review at the planning stage primarily consisted of a qualitative analysis, and was not the detailed process required grant funding application. For each action, the plan sets forth a narrative describing the types of benefits that could be realized from action implementation. The cost was estimated as closely as possible, with further refinement to be supplied as project development occurs.

The plan must indicate if the prioritization process and/or methodology have changed since the previous plan's adoption. If the process has changed, describe how it changed and why it changed. If the prioritization process and methodology have not changed, state this here in the plan with a description. Sample text if FEMA's suggested STAPLEE methodology is used follows: FEMA's STAPLEE methodology was used to assess the costs and benefits, overall feasibility of mitigation actions, and other issues impacting project. During the prioritization process, the MPC used worksheets to assign scores. The worksheets posed questions based on the STAPLEE elements as well as the potential mitigation effectiveness of each action. Scores were based on the responses to the questions as follows:

Definitely yes = 3 points
 Maybe yes = 2 points
 Probably no = 1
 Definitely no = 0

The following questions were asked for each proposed action.

S: Is the action socially acceptable?
 T: Is the action technically feasible and potentially successful?
 A: Does the jurisdiction have the administrative capability to successfully implement this action?
 P: Is the action politically acceptable?
 L: Does the jurisdiction have the legal authority to implement the action?
 E: Is the action economically beneficial?
 E: Will the project have an environmental impact that is either beneficial or neutral? (score "3" if positive and "2" if neutral)

Will the implemented action result in lives saved?

Will the implanted action result in a reduction of disaster damage?

The final scores are listed below in the analysis of each action. The worksheets are attached to this plan as Appendix _____. The STAPLEE final score for each action, absent other considerations, such as a localized need for a project, determined the priority. Low priority action items were those that had a total score of between 0 and 24. Moderate priority actions were those scoring between 25 and 29. High priority actions scored 30 or above. A blank STAPLEE worksheet is shown in Figure 4.1

Figure 4.1. Blank STAPLEE Worksheet

**XXXXXX COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN**

Action Title:		Jurisdiction:	
Action ID:			
STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score	
S: Is it Socially acceptable?			
T: Is it Technically feasible and potentially successful?			
A: Does the jurisdiction have the administrative capacity to execute this action?			
P: Is it Politically acceptable?			
L: Is there Legal authority to implement?			
E: Is it Economically beneficial?			
E: Will the project have either a neutral or positive impact on the natural environment? (score a 3 if positive impact, 2 if neutral impact)			
Will historic structures be saved or protected?			
Could it be implemented quickly?			
STAPLEE Score			

Mitigation Effectiveness Criteria	Evaluation Rating	Score
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives would be saved.	
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	
Mitigation Effectiveness Score		

Total Score (STAPLEE Score + Mitigation Effectiveness Score): _____

Priority Level: ☐ High (30+ points) ☐ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): _____

The goals and actions **must** be consistent with the hazards identified in the plan. For each jurisdiction, the hazards identified with the highest probability and historic damage **must** have strategy to mitigate future damages. Note that each jurisdiction participating in the plan must have mitigation actions specific to that jurisdiction that are based on the community's risk and

vulnerabilities, as well as community priorities. See *Guide* page 24. Include narrative explaining how this was done.

The plan **must** include NFIP actions for participating jurisdictions. Simply stating “The community will continue to comply with NFIP,” will not meet this requirement. The description could include, but is not limited to:

- Adoption and enforcement of floodplain management requirements, including regulating new construction in Special Flood Hazard Areas (SFHAs);
- Floodplain identification and mapping, including any local requests for map updates; or
- Description of community assistance and monitoring activities.

Jurisdictions where an FHBM or FIRM has been issued that are currently not participating in the NFIP and may meet this requirement by describing the reasons why the community does not participate. See *Guide* page 23.

Analyze each of the final mitigation actions using the following worksheet, and include the analysis in the plan, along with an introductory paragraph explaining methodology. Organize the actions by the goal statement that they fall under and include a completed worksheet for each new and continuing mitigation action.

Action Worksheet	
Name of Jurisdiction:	
Risk / Vulnerability	
Problem being Mitigated:	Provide a brief description of the problem that the action will address
Hazard(s) Addressed:	List the hazard or hazards that will be addressed by this action
Action or Project	
Action/Project Number:	Insert a unique action number for this action for future tracking purposes. This can be a combination of the jurisdiction name, followed by the goal number and action number (i.e. Joplin1.1)
Name of Action or Project:	
Action or Project Description:	Describe the action or project.
Applicable Goal Statement:	Choose the goal statement that applies to this action
Estimated Cost:	Provide an estimate of the cost to implement this action. This can be accomplished with a range of estimated costs.
Benefits:	Provide a narrative describing the losses that will be avoided by implementing this action. If dollar amounts of avoided losses are known, include them as well.
Plan for Implementation	
Responsible Organization/Department:	Which organization will be responsible for tracking this action? Be specific to include the specific department or position within a department.
Action/Project Priority:	Include the STAPLEE score and Priority (H, M, L)
Timeline for Completion:	How many months/years to complete.
Potential Fund Sources:	List specific funding sources that may be used to pay for the implementation of the action.
Local Planning Mechanisms to be Used in Implementation, if any:	

Progress Report	
Action Status	Indicate status as New, Continuing Not Started, or Continuing in Progress)
Report of Progress	For Continuing actions only, indicate the report on progress. If the action is not started, indicate any barriers encountered to initiate the action. If the action is in progress, indicate the activity that has occurred to date.

Goal 1: Protect lives and property from the effects of natural hazards.

Action Worksheet	
Name of Jurisdiction:	City of Aurora
Risk / Vulnerability	
Problem being Mitigated:	Educating the public on what to do in the event of a natural hazard
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	City of Aurora 1.1.1
Name of Action or Project:	Hazard Awareness Education
Action or Project Description:	Establish a process to distribute educational materials on hazards through schools, major employers, and cultural organizations including materials on safe generator use and developing personal/family hazard preparedness plans.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$2,500
Benefits:	The public will have a better understanding on what actions to take during a natural hazard event, potentially reducing property damage and loss of life. Reduction in building loss and medical cost.
Plan for Implementation	
Responsible Organization/Department:	Emergency Management
Action/Project Priority:	STAPLEE score: 39 Priority: High
Timeline for Completion:	3 years
Potential Fund Sources:	HMGP, PDM, Insurance companies
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in progress
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Village of Freistatt

Risk / Vulnerability	
Problem being Mitigated:	Educating the public on what to do in the event of a natural hazard
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	Village of Freistatt 1.1.1
Name of Action or Project:	Hazard Awareness Education
Action or Project Description:	Establish a process to distribute educational materials on hazards through schools, major employers, and cultural organizations including materials on safe generator use and developing personal/family hazard preparedness plans.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$0
Benefits:	The public will have a better understanding on what actions to take during a natural hazard event, potentially reducing property damage and loss of life.
Plan for Implementation	
Responsible Organization/Department:	Emergency Management
Action/Project Priority:	STAPLEE score: 24 Priority: Medium
Timeline for Completion:	1-6 months
Potential Fund Sources:	HMGP, PDM, local organizations, state funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in progress
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Marionville
Risk / Vulnerability	
Problem being Mitigated:	Educating the public on what to do in the event of a natural hazard
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	City of Marionville 1.1.1
Name of Action or Project:	Hazard Awareness Education
Action or Project Description:	Establish a process to distribute educational materials on hazards through schools, major employers, and cultural organizations including materials on safe generator use and developing personal/family hazard preparedness plans.

Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$100-400
Benefits:	The public will have a better understanding on what actions to take during a natural hazard event, potentially reducing property damage and loss of life.
Plan for Implementation	
Responsible Organization/Department:	Emergency Management, County EMA, Public Education
Action/Project Priority:	STAPLEE score: 39 Priority: High
Timeline for Completion:	1 year
Potential Fund Sources:	HMGP, PDM, private donations, educational institutions
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	New EMD

Action Worksheet	
Name of Jurisdiction:	City of Miller
Risk / Vulnerability	
Problem being Mitigated:	Educating the public on what to do in the event of a natural hazard
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	City of Miller 1.1.1
Name of Action or Project:	Hazard Awareness Education
Action or Project Description:	Establish a process to distribute educational materials on hazards through schools, major employers, and cultural organizations including materials on safe generator use and developing personal/family hazard preparedness plans.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$750-1200
Benefits:	Reduction in loss of lives and property.
Plan for Implementation	
Responsible Organization/Department:	Emergency Management, Fire department, ACAC
Action/Project Priority:	STAPLEE score: 30 Priority: High
Timeline for Completion:	18 months
Potential Fund Sources:	HMGP, PDM, Grant, Donations
Local Planning Mechanisms to be Used in Implementation, if any:	Library, schools, MSCS
Progress Report	

Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Monett
Risk / Vulnerability	
Problem being Mitigated:	Educating the public on what to do in the event of a natural hazard
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	City of Monett 1.1.1
Name of Action or Project:	Hazard Awareness Education
Action or Project Description:	Establish a process to distribute educational materials on hazards through schools, major employers, and cultural organizations including materials on safe generator use and developing personal/family hazard preparedness plans.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$0
Benefits:	The public will have a better understanding on what actions to take during a natural hazard event, potentially reducing property damage and loss of life.
Plan for Implementation	
Responsible Organization/Department:	Emergency Management
Action/Project Priority:	STAPLEE score: 27 Priority: Medium
Timeline for Completion:	1-6 months
Potential Fund Sources:	HMGP, PDM, General funds, free materials available
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A.

Action Worksheet	
Name of Jurisdiction:	City of Mount Vernon
Risk / Vulnerability	
Problem being Mitigated:	Educating the public on what to do in the event of a natural hazard
Hazard(s) Addressed:	All Hazards
Action or Project	

Action/Project Number:	City of Mount Vernon 1.1.1
Name of Action or Project:	Hazard Awareness Education
Action or Project Description:	Establish a process to distribute educational materials on hazards through schools, major employers, and cultural organizations including materials on safe generator use and developing personal/family hazard preparedness plans.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$500 - \$1,000
Benefits:	The public will have a better understanding on what actions to take during a natural hazard event, potentially reducing property damage and loss of life.
Plan for Implementation	
Responsible Organization/Department:	Emergency Management, City, School district, City Administrator
Action/Project Priority:	STAPLEE score: 32 Priority: High
Timeline for Completion:	24 months
Potential Fund Sources:	HMGP, PDM
Local Planning Mechanisms to be Used in Implementation, if any:	Develop education materials or obtain from other sources (FEMA). Distribute through school district.
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Verona
Risk / Vulnerability	
Problem being Mitigated:	Educating the public on what to do in the event of a natural hazard
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	City of Verona 1.1.1
Name of Action or Project:	Hazard Awareness Education
Action or Project Description:	Establish a process to distribute educational materials on hazards through schools, major employers, and cultural organizations including materials on safe generator use and developing personal/family hazard preparedness plans.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$100
Benefits:	The public will have a better understanding on what actions to take during a natural hazard event, potentially reducing property damage and loss of life.
Plan for Implementation	

Responsible Organization/Department:	Emergency Management, Local Government
Action/Project Priority:	STAPLEE score: 36 Priority: High
Timeline for Completion:	1 month
Potential Fund Sources:	HMGP, PDM
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Marionville R-IX
Risk / Vulnerability	
Problem being Mitigated:	Educating the public on what to do in the event of a natural hazard
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.1.1
Name of Action or Project:	Hazard Awareness Education
Action or Project Description:	Establish a process to distribute educational materials on hazards through schools, major employers, and cultural organizations including materials on safe generator use and developing personal/family hazard preparedness plans.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$0-100
Benefits:	The public will have a better understanding on what actions to take during a natural hazard event, potentially reducing property damage and loss of life.
Plan for Implementation	
Responsible Organization/Department:	School District, ELL Staff
Action/Project Priority:	STAPLEE score: 36 Priority: High
Timeline for Completion:	1 year
Potential Fund Sources:	HMGP, PDM, local funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	Only barrier would be obtaining special information to be distributed.

Action Worksheet	
Name of Jurisdiction:	Miller R-II
Risk / Vulnerability	
Problem being Mitigated:	Educating the public on what to do in the event of a natural hazard
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.1.1
Name of Action or Project:	Hazard Awareness Education
Action or Project Description:	Establish a process to distribute educational materials on hazards through schools, major employers, and cultural organizations including materials on safe generator use and developing personal/family hazard preparedness plans.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$5,000
Benefits:	The public will have a better understanding on what actions to take during a natural hazard event, potentially reducing property damage and loss of life.
Plan for Implementation	
Responsible Organization/Department:	School District
Action/Project Priority:	STAPLEE score: 33 Priority: High
Timeline for Completion:	1 year
Potential Fund Sources:	HMGP, PDM, Local Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	Lack of literature.

Action Worksheet	
Name of Jurisdiction:	Monett R-I
Risk / Vulnerability	
Problem being Mitigated:	Educating the public on what to do in the event of a natural hazard
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.1.1

Name of Action or Project:	Hazard Awareness Education
Action or Project Description:	Establish a process to distribute educational materials on hazards through schools, major employers, and cultural organizations including materials on safe generator use and developing personal/family hazard preparedness plans.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$500 - \$1,000
Benefits:	The public will have a better understanding on what actions to take during a natural hazard event, potentially reducing property damage and loss of life.
Plan for Implementation	
Responsible Organization/Department:	School Safety Director, Superintendent
Action/Project Priority:	STAPLEE score: 41 Priority: High
Timeline for Completion:	2-4 years
Potential Fund Sources:	HMGP, PDM, School Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in progress
Report of Progress	Continuing

Action Worksheet	
Name of Jurisdiction:	Mt. Vernon R-V
Risk / Vulnerability	
Problem being Mitigated:	Educating the public on what to do in the event of a natural hazard
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.1.1
Name of Action or Project:	Hazard Awareness Education
Action or Project Description:	Establish a process to distribute educational materials on hazards through schools, major employers, and cultural organizations including materials on safe generator use and developing personal/family hazard preparedness plans.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	
Benefits:	The public will have a better understanding on what actions to take during a natural hazard event, potentially reducing property damage and loss of life.
Plan for Implementation	

Responsible Organization/Department:	
Action/Project Priority:	STAPLEE score: 42 Priority: High
Timeline for Completion:	
Potential Fund Sources:	HMGP, PDM
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Pierce City R-VI
Risk / Vulnerability	
Problem being Mitigated:	Educating the public on what to do in the event of a natural hazard
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.1.1
Name of Action or Project:	Hazard Awareness Education
Action or Project Description:	Establish a process to distribute educational materials on hazards through schools, major employers, and cultural organizations including materials on safe generator use and developing personal/family hazard preparedness plans.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$250
Benefits:	The public will have a better understanding on what actions to take during a natural hazard event, potentially reducing property damage and loss of life.
Plan for Implementation	
Responsible Organization/Department:	School District
Action/Project Priority:	STAPLEE score: 35 Priority: High
Timeline for Completion:	6 months
Potential Fund Sources:	HMGP, PDM, Local Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Verona R-VIII
Risk / Vulnerability	
Problem being Mitigated:	Educating the public on what to do in the event of a natural hazard
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.1.1
Name of Action or Project:	Hazard Awareness Education
Action or Project Description:	Establish a process to distribute educational materials on hazards through schools, major employers, and cultural organizations including materials on safe generator use and developing personal/family hazard preparedness plans.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$100
Benefits:	The public will have a better understanding on what actions to take during a natural hazard event, potentially reducing property damage and loss of life.
Plan for Implementation	
Responsible Organization/Department:	Safety Department
Action/Project Priority:	STAPLEE score: 36 Priority: High
Timeline for Completion:	6 months
Potential Fund Sources:	HMGP PDM
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Aurora
Risk / Vulnerability	
Problem being Mitigated:	Educating the non-English speaking public on what to do in the event of a natural hazard.
Hazard(s) Addressed:	All Hazards
Action or Project	

Action/Project Number:	City of Aurora 1.1.2
Name of Action or Project:	Multilingual Hazard Awareness Education
Action or Project Description:	Establish a process to distribute educational materials in other languages on hazards and actions to minimize risks for distribution to the non-English speaking population through the schools, major employers, and cultural organizations.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$14,000
Benefits:	The non-English speaking public will have a better understanding on what actions to take during a natural hazard event, potentially reducing property damage and loss of life. Less structure and medical loss.
Plan for Implementation	
Responsible Organization/Department:	Emergency Management, fire police code. School district administrator
Action/Project Priority:	STAPLEE score: 42 Priority: High
Timeline for Completion:	3-4 years
Potential Fund Sources:	HMGP, PDM, insurance companies, local government
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in progress
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Village of Freistatt
Risk / Vulnerability	
Problem being Mitigated:	Educating the non-English speaking public on what to do in the event of a natural hazard.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	Village of Freistatt 1.1.2
Name of Action or Project:	Multilingual Hazard Awareness Education
Action or Project Description:	Establish a process to distribute educational materials in other languages on hazards and actions to minimize risks for distribution to the non-English speaking population through the schools, major employers, and cultural organizations.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$0

Benefits:	The non-English speaking public will have a better understanding on what actions to take during a natural hazard event, potentially reducing property damage and loss of life.
Plan for Implementation	
Responsible Organization/Department:	Emergency Management
Action/Project Priority:	STAPLEE score: 27 Priority: Medium
Timeline for Completion:	1-6 months
Potential Fund Sources:	HMGP, PDM, local or state funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing No Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Marionville
Risk / Vulnerability	
Problem being Mitigated:	Educating the non-English speaking public on what to do in the event of a natural hazard.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	City of Marionville 1.1.2
Name of Action or Project:	Multilingual Hazard Awareness Education
Action or Project Description:	Establish a process to distribute educational materials in other languages on hazards and actions to minimize risks for distribution to the non-English speaking population through the schools, major employers, and cultural organizations.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$1,000 - \$1,500
Benefits:	The non-English speaking public will have a better understanding on what actions to take during a natural hazard event, potentially reducing property damage and loss of life.
Plan for Implementation	
Responsible Organization/Department:	Emergency Management
Action/Project Priority:	STAPLEE score: 21 Priority: Low
Timeline for Completion:	8 months
Potential Fund Sources:	HMGP, PDM, private donations

Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	Marionville does not have a big population of non-English speaking residents.

Action Worksheet	
Name of Jurisdiction:	City of Monett
Risk / Vulnerability	
Problem being Mitigated:	Educating the non-English speaking public on what to do in the event of a natural hazard.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	City of Monett 1.1.2
Name of Action or Project:	Multilingual Hazard Awareness Education
Action or Project Description:	Establish a process to distribute educational materials in other languages on hazards and actions to minimize risks for distribution to the non-English speaking population through the schools, major employers, and cultural organizations.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$0
Benefits:	The non-English speaking public will have a better understanding on what actions to take during a natural hazard event, potentially reducing property damage and loss of life.
Plan for Implementation	
Responsible Organization/Department:	Emergency Management, Schools
Action/Project Priority:	STAPLEE score: 27 Priority: Medium
Timeline for Completion:	1-6 months
Potential Fund Sources:	HMGP, PDM, general funds, free state resources
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
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Name of Jurisdiction:	City of Mount Vernon
Risk / Vulnerability	
Problem being Mitigated:	Educating the non-English speaking public on what to do in the event of a natural hazard.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	City of Mount Vernon 1.1.2
Name of Action or Project:	Multilingual Hazard Awareness Education
Action or Project Description:	Establish a process to distribute educational materials in other languages on hazards and actions to minimize risks for distribution to the non-English speaking population through the schools, major employers, and cultural organizations.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$1,000 - \$1,500
Benefits:	The non-English speaking public will have a better understanding on what actions to take during a natural hazard event, potentially reducing property damage and loss of life.
Plan for Implementation	
Responsible Organization/Department:	Emergency Management, City, School District
Action/Project Priority:	STAPLEE score: 28 Priority: Medium
Timeline for Completion:	12-24 months
Potential Fund Sources:	HMGP, PDM
Local Planning Mechanisms to be Used in Implementation, if any:	Distribute through school district and Chamber office.
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Pierce City
Risk / Vulnerability	
Problem being Mitigated:	Educating the non-English speaking public on what to do in the event of a natural hazard.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	City of Pierce City 1.1.2
Name of Action or Project:	Multilingual Hazard Awareness Education

Action or Project Description:	Establish a process to distribute educational materials in other languages on hazards and actions to minimize risks for distribution to the non-English speaking population through the schools, major employers, and cultural organizations.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$0
Benefits:	The non-English speaking public will have a better understanding on what actions to take during a natural hazard event, potentially reducing property damage and loss of life.
Plan for Implementation	
Responsible Organization/Department:	Emergency Management
Action/Project Priority:	STAPLEE score: 29 Priority: Medium
Timeline for Completion:	1-6 months
Potential Fund Sources:	HMGP, PDM, organizations general fund
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Verona
Risk / Vulnerability	
Problem being Mitigated:	Educating the non-English speaking public on what to do in the event of a natural hazard.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.1.2
Name of Action or Project:	Multilingual Hazard Awareness Education
Action or Project Description:	Establish a process to distribute educational materials in other languages on hazards and actions to minimize risks for distribution to the non-English speaking population through the schools, major employers, and cultural organizations.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$100
Benefits:	The non-English speaking public will have a better understanding on what actions to take during a natural hazard event, potentially reducing property damage and loss of life.
Plan for Implementation	

Responsible Organization/Department:	Emergency Management, Local Government
Action/Project Priority:	STAPLEE score: 36 Priority: High
Timeline for Completion:	1 month
Potential Fund Sources:	HMGP, PDM
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Marionville R-IX
Risk / Vulnerability	
Problem being Mitigated:	Educating the non-English speaking public on what to do in the event of a natural hazard.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.1.2
Name of Action or Project:	Multilingual Hazard Awareness Education
Action or Project Description:	Establish a process to distribute educational materials in other languages on hazards and actions to minimize risks for distribution to the non-English speaking population through the schools, major employers, and cultural organizations.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$0-100
Benefits:	The non-English speaking public will have a better understanding on what actions to take during a natural hazard event, potentially reducing property damage and loss of life.
Plan for Implementation	
Responsible Organization/Department:	School District, ELL Staff
Action/Project Priority:	STAPLEE score: 36 Priority: High
Timeline for Completion:	1 year
Potential Fund Sources:	HMGP, PDM, Local Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	Only barrier would be obtaining specific information to be distributed.

Action Worksheet	
Name of Jurisdiction:	Miller R-II
Risk / Vulnerability	
Problem being Mitigated:	Educating the non-English speaking public on what to do in the event of a natural hazard.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.1.2
Name of Action or Project:	Multilingual Hazard Awareness Education
Action or Project Description:	Establish a process to distribute educational materials in other languages on hazards and actions to minimize risks for distribution to the non-English speaking population through the schools, major employers, and cultural organizations.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$5,000
Benefits:	The non-English speaking public will have a better understanding on what actions to take during a natural hazard event, potentially reducing property damage and loss of life.
Plan for Implementation	
Responsible Organization/Department:	School District
Action/Project Priority:	STAPLEE score: 37 Priority: High
Timeline for Completion:	1 year
Potential Fund Sources:	HMGP, PDM, Local Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	Lack of literature and finances.

Action Worksheet	
Name of Jurisdiction:	Monett R-I
Risk / Vulnerability	
Problem being Mitigated:	Educating the non-English speaking public on what to do in the event of a natural hazard.
Hazard(s) Addressed:	All Hazards

Action or Project	
Action/Project Number:	1.1.2
Name of Action or Project:	Multilingual Hazard Awareness Education
Action or Project Description:	Establish a process to distribute educational materials in other languages on hazards and actions to minimize risks for distribution to the non-English speaking population through the schools, major employers, and cultural organizations.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$500-1,000
Benefits:	The non-English speaking public will have a better understanding on what actions to take during a natural hazard event, potentially reducing property damage and loss of life.
Plan for Implementation	
Responsible Organization/Department:	School Safety Director, Superintendent
Action/Project Priority:	STAPLEE score: 40 Priority: High
Timeline for Completion:	2-4 years
Potential Fund Sources:	HMGP, PDM, School Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing In Progress
Report of Progress	Continuing

Action Worksheet	
Name of Jurisdiction:	Mt. Vernon R-V
Risk / Vulnerability	
Problem being Mitigated:	Educating the non-English speaking public on what to do in the event of a natural hazard.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.1.2
Name of Action or Project:	Multilingual Hazard Awareness Education
Action or Project Description:	Establish a process to distribute educational materials in other languages on hazards and actions to minimize risks for distribution to the non-English speaking population through the schools, major employers, and cultural organizations.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	

Benefits:	The non-English speaking public will have a better understanding on what actions to take during a natural hazard event, potentially reducing property damage and loss of life.
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	STAPLEE score: 34 Priority: High
Timeline for Completion:	2-4 years
Potential Fund Sources:	HMGP, PDM
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Pierce City R-VI
Risk / Vulnerability	
Problem being Mitigated:	Educating the non-English speaking public on what to do in the event of a natural hazard.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.1.2
Name of Action or Project:	Multilingual Hazard Awareness Education
Action or Project Description:	Establish a process to distribute educational materials in other languages on hazards and actions to minimize risks for distribution to the non-English speaking population through the schools, major employers, and cultural organizations.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$250
Benefits:	The non-English speaking public will have a better understanding on what actions to take during a natural hazard event, potentially reducing property damage and loss of life.
Plan for Implementation	
Responsible Organization/Department:	School District
Action/Project Priority:	STAPLEE score: 39 Priority: High
Timeline for Completion:	6 months
Potential Fund Sources:	HMGP, PDM, Local Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A

Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Verona R-VII
Risk / Vulnerability	
Problem being Mitigated:	Educating the non-English speaking public on what to do in the event of a natural hazard.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.1.2
Name of Action or Project:	Multilingual Hazard Awareness Education
Action or Project Description:	Establish a process to distribute educational materials in other languages on hazards and actions to minimize risks for distribution to the non-English speaking population through the schools, major employers, and cultural organizations.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$500
Benefits:	The non-English speaking public will have a better understanding on what actions to take during a natural hazard event, potentially reducing property damage and loss of life.
Plan for Implementation	
Responsible Organization/Department:	ELL Department
Action/Project Priority:	STAPLEE score: 36 Priority: High
Timeline for Completion:	1 year
Potential Fund Sources:	HMGP, PDM
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Lawrence County
Risk / Vulnerability	
Problem being Mitigated:	Educating developers on effective construction techniques that reduce the effects of natural hazards.

Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	Lawrence County 1.1.3
Name of Action or Project:	Resilient Construction Techniques
Action or Project Description:	Develop an educational campaign on construction techniques for new buildings to reduce risk of severe storm damage and distribute to mortgage institutions, home builders, realtors and other entities involved in the housing industry.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$500 - \$1,000
Benefits:	Residential, commercial, and industrial developments may become more resilient to natural hazards due to developers being aware of construction techniques that mitigate property damage from natural hazards.
Plan for Implementation	
Responsible Organization/Department:	Emergency Management
Action/Project Priority:	STAPLEE score: 32 Priority: High
Timeline for Completion:	5-10 years
Potential Fund Sources:	HMGP PDM General Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing not started
Report of Progress	No action to date.

Action Worksheet	
Name of Jurisdiction:	City of Aurora
Risk / Vulnerability	
Problem being Mitigated:	Educating developers on effective construction techniques that reduce the effects of natural hazards.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	City of Aurora 1.1.3
Name of Action or Project:	Resilient Construction Techniques

Action or Project Description:	Develop an educational campaign on construction techniques for new buildings to reduce risk of severe storm damage and distribute to mortgage institutions, home builders, realtors and other entities involved in the housing industry.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$15,000
Benefits:	Residential, commercial, and industrial developments may become more resilient to natural hazards due to developers being aware of construction techniques that mitigate property damage from natural hazards. Building loss reduction.
Plan for Implementation	
Responsible Organization/Department:	Emergency Management, City Council, Fire, Police
Action/Project Priority:	STAPLEE score: 38 Priority: High
Timeline for Completion:	2-3 years
Potential Fund Sources:	HMGP, PDM
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in progress
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Village of Freistatt
Risk / Vulnerability	
Problem being Mitigated:	Educating developers on effective construction techniques that reduce the effects of natural hazards.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	Village of Freistatt 1.1.3
Name of Action or Project:	Resilient Construction Techniques
Action or Project Description:	Develop an educational campaign on construction techniques for new buildings to reduce risk of severe storm damage and distribute to mortgage institutions, home builders, realtors and other entities involved in the housing industry.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$500 - \$1,000
Benefits:	Residential, commercial, and industrial developments may become more resilient to natural hazards due to developers being aware of construction techniques that mitigate property damage from natural hazards.

Plan for Implementation	
Responsible Organization/Department:	Emergency Management, local municipalities
Action/Project Priority:	STAPLEE score: 33 Priority: High
Timeline for Completion:	5 years
Potential Fund Sources:	HMGP, PDM, general funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing not started
Report of Progress	No action to date.

Action Worksheet	
Name of Jurisdiction:	City of Marionville
Risk / Vulnerability	
Problem being Mitigated:	Educating developers on effective construction techniques that reduce the effects of natural hazards.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	City of Marionville 1.1.3
Name of Action or Project:	Resilient Construction Techniques
Action or Project Description:	Develop an educational campaign on construction techniques for new buildings to reduce risk of severe storm damage and distribute to mortgage institutions, home builders, realtors and other entities involved in the housing industry.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$500 - \$1,000
Benefits:	Residential, commercial, and industrial developments may become more resilient to natural hazards due to developers being aware of construction techniques that mitigate property damage from natural hazards.
Plan for Implementation	
Responsible Organization/Department:	Emergency Management, Local Building Official
Action/Project Priority:	STAPLEE score: 38 Priority: High
Timeline for Completion:	2 years
Potential Fund Sources:	HMGP, PDM, local funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A

Progress Report	
Action Status	Continuing in progress
Report of Progress	Implemented building codes.

Action Worksheet	
Name of Jurisdiction:	City of Miller
Risk / Vulnerability	
Problem being Mitigated:	Educating developers on effective construction techniques that reduce the effects of natural hazards.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	City of Miller 1.1.3
Name of Action or Project:	Resilient Construction Techniques
Action or Project Description:	Develop an educational campaign on construction techniques for new buildings to reduce risk of severe storm damage and distribute to mortgage institutions, home builders, realtors and other entities involved in the housing industry.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$500 - \$1,000
Benefits:	Residential, commercial, and industrial developments may become more resilient to natural hazards due to developers being aware of construction techniques that mitigate property damage from natural hazards.
Plan for Implementation	
Responsible Organization/Department:	Emergency Management
Action/Project Priority:	STAPLEE score: 33 Priority: High
Timeline for Completion:	6 months
Potential Fund Sources:	HMGP, PDM
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in progress
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Monett

Risk / Vulnerability	
Problem being Mitigated:	Educating developers on effective construction techniques that reduce the effects of natural hazards.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	City of Monett 1.1.3
Name of Action or Project:	Resilient Construction Techniques
Action or Project Description:	Develop an educational campaign on construction techniques for new buildings to reduce risk of severe storm damage and distribute to mortgage institutions, home builders, realtors and other entities involved in the housing industry.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$500 - \$1,000
Benefits:	Residential, commercial, and industrial developments may become more resilient to natural hazards due to developers being aware of construction techniques that mitigate property damage from natural hazards.
Plan for Implementation	
Responsible Organization/Department:	Emergency Management, Municipality
Action/Project Priority:	STAPLEE score: 32 Priority: High
Timeline for Completion:	5+ years
Potential Fund Sources:	HMGP, PDM, General funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Mount Vernon
Risk / Vulnerability	
Problem being Mitigated:	Educating developers on effective construction techniques that reduce the effects of natural hazards.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	Lawrence County 1.1.3
Name of Action or Project:	Resilient Construction Techniques

Action or Project Description:	Develop an educational campaign on construction techniques for new buildings to reduce risk of severe storm damage and distribute to mortgage institutions, home builders, realtors and other entities involved in the housing industry.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$500 - \$1,000
Benefits:	Residential, commercial, and industrial developments may become more resilient to natural hazards due to developers being aware of construction techniques that mitigate property damage from natural hazards.
Plan for Implementation	
Responsible Organization/Department:	Emergency Management
Action/Project Priority:	STAPLEE score: 30 Priority: High
Timeline for Completion:	6 months
Potential Fund Sources:	HMGP, PDM
Local Planning Mechanisms to be Used in Implementation, if any:	Workshop technology Utilize Newspaper articles within community.
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Pierce City
Risk / Vulnerability	
Problem being Mitigated:	Educating developers on effective construction techniques that reduce the effects of natural hazards.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	City of Pierce City 1.1.3
Name of Action or Project:	Resilient Construction Techniques
Action or Project Description:	Develop an educational campaign on construction techniques for new buildings to reduce risk of severe storm damage and distribute to mortgage institutions, home builders, realtors and other entities involved in the housing industry.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$500 - \$1,000
Benefits:	Residential, commercial, and industrial developments may become more resilient to natural hazards due to developers being aware of construction techniques that mitigate property damage from natural hazards.

Plan for Implementation	
Responsible Organization/Department:	Emergency Management, municipality
Action/Project Priority:	STAPLEE score: 36 Priority: High
Timeline for Completion:	5+ years
Potential Fund Sources:	HMGP PDM
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	No action to date.

Action Worksheet	
Name of Jurisdiction:	City of Verona
Risk / Vulnerability	
Problem being Mitigated:	Educating developers on effective construction techniques that reduce the effects of natural hazards.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	City of Verona 1.1.3
Name of Action or Project:	Resilient Construction Techniques
Action or Project Description:	Develop an educational campaign on construction techniques for new buildings to reduce risk of severe storm damage and distribute to mortgage institutions, home builders, realtors and other entities involved in the housing industry.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$500 - \$1,000
Benefits:	Residential, commercial, and industrial developments may become more resilient to natural hazards due to developers being aware of construction techniques that mitigate property damage from natural hazards.
Plan for Implementation	
Responsible Organization/Department:	Emergency Management
Action/Project Priority:	STAPLEE score: 30 Priority: High
Timeline for Completion:	1 month
Potential Fund Sources:	HMGP PDM
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	

Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Lawrence County
Risk / Vulnerability	
Problem being Mitigated:	Educating the public on the location of refuge areas and safe rooms in the community.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	Lawrence County 1.1.4
Name of Action or Project:	Refuge Areas and Safe Room Location Education
Action or Project Description:	Make the location of best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) and safe rooms in communities available to the public.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$0
Benefits:	The public will be better informed on the location of refuge areas and safe rooms in the event of a natural hazard, mitigating the potential loss of life.
Plan for Implementation	
Responsible Organization/Department:	Emergency Management
Action/Project Priority:	STAPLEE score: 35 Priority: High
Timeline for Completion:	1-3 months
Potential Fund Sources:	HMGP PDM General & Municipalities Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in progress
Report of Progress	Funding & time.

Action Worksheet	
Name of Jurisdiction:	City of Aurora
Risk / Vulnerability	
Problem being Mitigated:	Educating the public on the location of refuge areas and safe rooms in the community.
Hazard(s) Addressed:	All Hazards

Action or Project	
Action/Project Number:	1.1.4
Name of Action or Project:	Refuge Areas and Safe Room Location Education
Action or Project Description:	Make the location of best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) and safe rooms in communities available to the public.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$6,000
Benefits:	Loss of life from tornadoes and high wind events.
Plan for Implementation	
Responsible Organization/Department:	Police, Fire, ERM management
Action/Project Priority:	STAPLEE score: 35 Priority: High
Timeline for Completion:	2 years
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Village of Freistatt
Risk / Vulnerability	
Problem being Mitigated:	Educating the public on the location of refuge areas and safe rooms in the community.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.1.4
Name of Action or Project:	Refuge Areas and Safe Room Location Education
Action or Project Description:	Make the location of best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) and safe rooms in communities available to the public.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$100
Benefits:	Reduction of loss of life.
Plan for Implementation	
Responsible Organization/Department:	City
Action/Project Priority:	STAPLEE score: 36 Priority: High
Timeline for Completion:	1-3 months
Potential Fund Sources:	General funds

Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Funding

Action Worksheet	
Name of Jurisdiction:	City of Marionville
Risk / Vulnerability	
Problem being Mitigated:	Educating the public on the location of refuge areas and safe rooms in the community.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.1.4
Name of Action or Project:	Refuge Areas and Safe Room Location Education
Action or Project Description:	Make the location of best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) and safe rooms in communities available to the public.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Reduction in loss of life.
Plan for Implementation	
Responsible Organization/Department:	Local EMD, Public Education
Action/Project Priority:	STAPLEE score: 34 Priority: High
Timeline for Completion:	On-going
Potential Fund Sources:	Local Governments
Local Planning Mechanisms to be Used in Implementation, if any:	Social Media
Progress Report	
Action Status	Continuing In Progress
Report of Progress	Keeping a list of places who open their doors during storms.

Action Worksheet	
Name of Jurisdiction:	City of Miller
Risk / Vulnerability	
Problem being Mitigated:	Educating the public on the location of refuge areas and safe rooms in the community.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.1.4
Name of Action or Project:	Refuge Areas and Safe Room Location Education

Action or Project Description:	Make the location of best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) and safe rooms in communities available to the public.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Reduction in loss of life.
Plan for Implementation	
Responsible Organization/Department:	P.D., Fire department
Action/Project Priority:	STAPLEE score: 25 Priority: Medium
Timeline for Completion:	How many months/years to complete.
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	F.D, P.D
Progress Report	
Action Status	Continuing in Progress
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Monett
Risk / Vulnerability	
Problem being Mitigated:	Educating the public on the location of refuge areas and safe rooms in the community.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.1.4
Name of Action or Project:	Refuge Areas and Safe Room Location Education
Action or Project Description:	Make the location of best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) and safe rooms in communities available to the public.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$500 or less
Benefits:	Reduction in loss of lives.
Plan for Implementation	
Responsible Organization/Department:	Municipality
Action/Project Priority:	STAPLEE score: 37 Priority: High
Timeline for Completion:	1-3 months
Potential Fund Sources:	General Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	

Action Status	Continuing in Progress
Report of Progress	Some areas marked.

Action Worksheet	
Name of Jurisdiction:	City of Mount Vernon
Risk / Vulnerability	
Problem being Mitigated:	Educating the public on the location of refuge areas and safe rooms in the community.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.1.4
Name of Action or Project:	Refuge Areas and Safe Room Location Education
Action or Project Description:	Make the location of best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) and safe rooms in communities available to the public.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	Undetermined
Benefits:	Loss of life from tornadoes and high wind events.
Plan for Implementation	
Responsible Organization/Department:	N/A
Action/Project Priority:	STAPLEE score: 29 Priority: Medium
Timeline for Completion:	N/A
Potential Fund Sources:	Grant Funding
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Pierce City
Risk / Vulnerability	
Problem being Mitigated:	Educating the public on the location of refuge areas and safe rooms in the community.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.1.4
Name of Action or Project:	Refuge Areas and Safe Room Location Education
Action or Project Description:	Make the location of best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) and safe rooms in communities available to the public.

Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$100 or less
Benefits:	Reduction in loss of lives.
Plan for Implementation	
Responsible Organization/Department:	Local government
Action/Project Priority:	STAPLEE score: 34 Priority: High
Timeline for Completion:	1-3 months
Potential Fund Sources:	General Fund
Local Planning Mechanisms to be Used in Implementation, if any:	In progress
Progress Report	
Action Status	Continuing in Progress
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Lawrence County
Risk / Vulnerability	
Problem being Mitigated:	Public awareness to homeowners and businesses to sinkhole loss policies.
Hazard(s) Addressed:	Sinkholes
Action or Project	
Action/Project Number:	1.1.5
Name of Action or Project:	Sinkhole Awareness Program
Action or Project Description:	Educate homeowners and business about the Missouri FAIR plan sinkhole loss policies for dwellings in hazard prone areas.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$0
Benefits:	Increased financial protection to homeowners and businesses.
Plan for Implementation	
Responsible Organization/Department:	Local jurisdictions
Action/Project Priority:	STAPLEE score: 24 Priority: Low
Timeline for Completion:	1-3 years
Potential Fund Sources:	Local Funding
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Aurora
Risk / Vulnerability	
Problem being Mitigated:	Public awareness to homeowners and businesses to sinkhole loss policies.
Hazard(s) Addressed:	Sinkholes
Action or Project	
Action/Project Number:	1.1.5
Name of Action or Project:	Sinkhole Awareness Program
Action or Project Description:	Educate homeowners and business about the Missouri FAIR plan sinkhole loss policies for dwellings in hazard prone areas.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Increased financial protection to homeowners and businesses and decreased building loss.
Plan for Implementation	
Responsible Organization/Department:	Police code, Fire, ERM
Action/Project Priority:	STAPLEE score: 37 Priority: High
Timeline for Completion:	2 years
Potential Fund Sources:	Local Funding
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Monett
Risk / Vulnerability	
Problem being Mitigated:	Public awareness to homeowners and businesses to sinkhole loss policies.
Hazard(s) Addressed:	Sinkholes
Action or Project	
Action/Project Number:	1.1.5
Name of Action or Project:	Sinkhole Awareness Program
Action or Project Description:	Educate homeowners and business about the Missouri FAIR plan sinkhole loss policies for dwellings in hazard prone areas.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A

Benefits:	Increased financial protection to homeowners and businesses.
Plan for Implementation	
Responsible Organization/Department:	Municipality
Action/Project Priority:	STAPLEE score: 24 Priority: Medium
Timeline for Completion:	1-5 years
Potential Fund Sources:	General Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Mount Vernon
Risk / Vulnerability	
Problem being Mitigated:	Public awareness to homeowners and businesses to sinkhole loss policies.
Hazard(s) Addressed:	Sinkholes
Action or Project	
Action/Project Number:	1.1.5
Name of Action or Project:	Sinkhole Awareness Program
Action or Project Description:	Educate homeowners and business about the Missouri FAIR plan sinkhole loss policies for dwellings in hazard prone areas.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Increased financial protection to homeowners and businesses.
Plan for Implementation	
Responsible Organization/Department:	City Code Enforcement
Action/Project Priority:	STAPLEE score: 29 Priority: Medium
Timeline for Completion:	N/A
Potential Fund Sources:	City budget
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Pierce City

Risk / Vulnerability	
Problem being Mitigated:	Public awareness to homeowners and businesses to sinkhole loss policies.
Hazard(s) Addressed:	Sinkholes
Action or Project	
Action/Project Number:	1.1.5
Name of Action or Project:	Sinkhole Awareness Program
Action or Project Description:	Educate homeowners and business about the Missouri FAIR plan sinkhole loss policies for dwellings in hazard prone areas.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Increased financial protection to homeowners and businesses.
Plan for Implementation	
Responsible Organization/Department:	Individual owners
Action/Project Priority:	STAPLEE score: 31 Priority: High
Timeline for Completion:	6 months – 1 year
Potential Fund Sources:	Local Governments
Local Planning Mechanisms to be Used in Implementation, if any:	Local Governments
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Aurora
Risk / Vulnerability	
Problem being Mitigated:	Warning the public in the event of a natural hazard.
Hazard(s) Addressed:	Tornado
Action or Project	
Action/Project Number:	1.2.1
Name of Action or Project:	Warning Siren Upkeep
Action or Project Description:	Maintain a sufficient number of warning sirens in all incorporated communities while also maintaining current infrastructure.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$1,000
Benefits:	Increased public awareness that prevents loss of life.
Plan for Implementation	
Responsible Organization/Department:	Fire
Action/Project Priority:	STAPLEE score: 47 Priority: High

Timeline for Completion:	0 years
Potential Fund Sources:	Grants, General Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Village of Freistatt
Risk / Vulnerability	
Problem being Mitigated:	Warning the public in the event of a natural hazard.
Hazard(s) Addressed:	Tornado
Action or Project	
Action/Project Number:	1.2.1
Name of Action or Project:	Warning Siren Upkeep
Action or Project Description:	Maintain a sufficient number of warning sirens in all incorporated communities while also maintaining current infrastructure.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$1,000
Benefits:	Loss of life will decrease through this strategy.
Plan for Implementation	
Responsible Organization/Department:	City
Action/Project Priority:	STAPLEE score: 38 Priority: High
Timeline for Completion:	1-3 months
Potential Fund Sources:	General funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Installed and maintenance continues.

Action Worksheet	
Name of Jurisdiction:	City of Marionville
Risk / Vulnerability	
Problem being Mitigated:	Warning the public in the event of a natural hazard.
Hazard(s) Addressed:	Tornado

Action or Project	
Action/Project Number:	1.2.1
Name of Action or Project:	Warning Siren Upkeep
Action or Project Description:	Maintain a sufficient number of warning sirens in all incorporated communities while also maintaining current infrastructure.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$600-15000
Benefits:	Loss of life will decrease through this strategy.
Plan for Implementation	
Responsible Organization/Department:	Local Government
Action/Project Priority:	STAPLEE score: 31 Priority: High
Timeline for Completion:	Completed – on-going
Potential Fund Sources:	Local Government
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	5 sirens in City limits – monthly testing and maintenance

Action Worksheet	
Name of Jurisdiction:	City of Miller
Risk / Vulnerability	
Problem being Mitigated:	Warning the public in the event of a natural hazard.
Hazard(s) Addressed:	Tornado
Action or Project	
Action/Project Number:	1.2.1
Name of Action or Project:	Warning Siren Upkeep
Action or Project Description:	Maintain a sufficient number of warning sirens in all incorporated communities while also maintaining current infrastructure.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$12,000
Benefits:	Loss of life will decrease through this strategy.
Plan for Implementation	
Responsible Organization/Department:	Fire department, police department
Action/Project Priority:	STAPLEE score: 30 Priority: High
Timeline for Completion:	2 years
Potential Fund Sources:	Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New

Report of Progress	N/A
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Action Worksheet	
Name of Jurisdiction:	City of Monett
Risk / Vulnerability	
Problem being Mitigated:	Warning the public in the event of a natural hazard.
Hazard(s) Addressed:	Tornado
Action or Project	
Action/Project Number:	1.2.1
Name of Action or Project:	Warning Siren Upkeep
Action or Project Description:	Maintain a sufficient number of warning sirens in all incorporated communities while also maintaining current infrastructure.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$8,000/year
Benefits:	Loss of life will decrease through this strategy.
Plan for Implementation	
Responsible Organization/Department:	Which organization will be responsible for tracking this action? Be specific to include the specific department or position within a department.
Action/Project Priority:	STAPLEE score: 37 Priority: High
Timeline for Completion:	0 years
Potential Fund Sources:	General Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	All are current and functioning.

Action Worksheet	
Name of Jurisdiction:	City of Pierce City
Risk / Vulnerability	
Problem being Mitigated:	Warning the public in the event of a natural hazard.
Hazard(s) Addressed:	Tornado
Action or Project	
Action/Project Number:	1.2.1
Name of Action or Project:	Warning Siren Upkeep

Action or Project Description:	Maintain a sufficient number of warning sirens in all incorporated communities while also maintaining current infrastructure.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Loss of life will decrease through this strategy.
Plan for Implementation	
Responsible Organization/Department:	Local government
Action/Project Priority:	STAPLEE score: 38 Priority: High
Timeline for Completion:	1 year
Potential Fund Sources:	Local Government
Local Planning Mechanisms to be Used in Implementation, if any:	Local Government
Progress Report	
Action Status	Continuing in Progress
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Lawrence County
Risk / Vulnerability	
Problem being Mitigated:	Improve the communication of important information to critical facilities in the event of natural hazard.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.2.2
Name of Action or Project:	NOAA Radio Implementations
Action or Project Description:	Promote the usage of NOAA radios and new communications technologies in all vulnerable and critical facilities, such as schools, medical facilities, nursing homes and day care facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Lives saved by early warning.
Plan for Implementation	
Responsible Organization/Department:	EMD
Action/Project Priority:	STAPLEE score: 29 Priority: Medium
Timeline for Completion:	On going
Potential Fund Sources:	Grants, Local Funds
Local Planning Mechanisms to be Used in Implementation, if any:	Awareness Programs
Progress Report	
Action Status	Continuing In Progress

Report of Progress	Continuing outreach to facilities.
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Action Worksheet	
Name of Jurisdiction:	City of Aurora
Risk / Vulnerability	
Problem being Mitigated:	Improve the communication of important information to critical facilities in the event of natural hazard.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.2.2
Name of Action or Project:	NOAA Radio Implementations
Action or Project Description:	Promote the usage of NOAA radios and new communications technologies in all vulnerable and critical facilities, such as schools, medical facilities, nursing homes and day care facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$1,000
Benefits:	Loss of life will decrease through this strategy.
Plan for Implementation	
Responsible Organization/Department:	Fire, EMA
Action/Project Priority:	STAPLEE score: 38 Priority: High
Timeline for Completion:	1 year
Potential Fund Sources:	Grants, Local Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Village of Freistatt
Risk / Vulnerability	
Problem being Mitigated:	Improve the communication of important information to critical facilities in the event of natural hazard.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.2.2
Name of Action or Project:	NOAA Radio Implementations
Action or Project Description:	Promote the usage of NOAA radios and new communications technologies in all vulnerable and critical facilities, such as schools, medical facilities, nursing homes and day care facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards

Estimated Cost:	\$0-100
Benefits:	Reduction in loss of lives.
Plan for Implementation	
Responsible Organization/Department:	City
Action/Project Priority:	STAPLEE score: 40 Priority: High
Timeline for Completion:	1-3 months
Potential Fund Sources:	General funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Marionville
Risk / Vulnerability	
Problem being Mitigated:	Improve the communication of important information to critical facilities in the event of natural hazard.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.2.2
Name of Action or Project:	NOAA Radio Implementations
Action or Project Description:	Promote the usage of NOAA radios and new communications technologies in all vulnerable and critical facilities, such as schools, medical facilities, nursing homes and day care facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Loss of life will decrease through this strategy.
Plan for Implementation	
Responsible Organization/Department:	Public Safety Administrator, Local EMD
Action/Project Priority:	STAPLEE score: 38 Priority: High
Timeline for Completion:	2 years
Potential Fund Sources:	Local Government, Private Donations
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Tax alerts available from news media and IRS.

Action Worksheet

Name of Jurisdiction:	City of Monett
Risk / Vulnerability	
Problem being Mitigated:	Improve the communication of important information to critical facilities in the event of natural hazard.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.2.2
Name of Action or Project:	NOAA Radio Implementations
Action or Project Description:	Promote the usage of NOAA radios and new communications technologies in all vulnerable and critical facilities, such as schools, medical facilities, nursing homes and day care facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$0
Benefits:	Reduction in loss of lives.
Plan for Implementation	
Responsible Organization/Department:	Municipality
Action/Project Priority:	STAPLEE score: 34 Priority: High
Timeline for Completion:	1-2 months
Potential Fund Sources:	Free to educate
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Already educate on usage.

Action Worksheet	
Name of Jurisdiction:	City of Mount Vernon
Risk / Vulnerability	
Problem being Mitigated:	Improve the communication of important information to critical facilities in the event of natural hazard.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.2.2
Name of Action or Project:	NOAA Radio Implementations
Action or Project Description:	Promote the usage of NOAA radios and new communications technologies in all vulnerable and critical facilities, such as schools, medical facilities, nursing homes and day care facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Loss of life will decrease through this strategy.
Plan for Implementation	
Responsible Organization/Department:	City, fire department, police department
Action/Project Priority:	STAPLEE score: 30 Priority: High

Timeline for Completion:	6 months
Potential Fund Sources:	Grants, Local Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Pierce City
Risk / Vulnerability	
Problem being Mitigated:	Improve the communication of important information to critical facilities in the event of natural hazard.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.2.2
Name of Action or Project:	NOAA Radio Implementations
Action or Project Description:	Promote the usage of NOAA radios and new communications technologies in all vulnerable and critical facilities, such as schools, medical facilities, nursing homes and day care facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Loss of life will decrease through this strategy.
Plan for Implementation	
Responsible Organization/Department:	City Government
Action/Project Priority:	STAPLEE score: 30 Priority: High
Timeline for Completion:	6 months
Potential Fund Sources:	Local Government
Local Planning Mechanisms to be Used in Implementation, if any:	Local Government
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Verona
Risk / Vulnerability	
Problem being Mitigated:	Improve the communication of important information to critical facilities in the event of natural hazard.

Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.2.2
Name of Action or Project:	NOAA Radio Implementations
Action or Project Description:	Promote the usage of NOAA radios and new communications technologies in all vulnerable and critical facilities, such as schools, medical facilities, nursing homes and day care facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$100
Benefits:	Loss of life will decrease through this strategy.
Plan for Implementation	
Responsible Organization/Department:	Local Government
Action/Project Priority:	STAPLEE score: 36 Priority: High
Timeline for Completion:	5 months
Potential Fund Sources:	Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Marionville R-IX
Risk / Vulnerability	
Problem being Mitigated:	Improve the communication of important information to critical facilities in the event of natural hazard.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.2.2
Name of Action or Project:	NOAA Radio Implementations
Action or Project Description:	Promote the usage of NOAA radios and new communications technologies in all vulnerable and critical facilities, such as schools, medical facilities, nursing homes and day care facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$500-1,000
Benefits:	Loss of life will decrease through this strategy.
Plan for Implementation	
Responsible Organization/Department:	School District
Action/Project Priority:	STAPLEE score: 31 Priority: High
Timeline for Completion:	1 month – 1 year
Potential Fund Sources:	State or Federal funds

Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	Barriers include obtaining funds for radios.

Action Worksheet	
Name of Jurisdiction:	Miller R-II
Risk / Vulnerability	
Problem being Mitigated:	Improve the communication of important information to critical facilities in the event of natural hazard.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.2.2
Name of Action or Project:	NOAA Radio Implementations
Action or Project Description:	Promote the usage of NOAA radios and new communications technologies in all vulnerable and critical facilities, such as schools, medical facilities, nursing homes and day care facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$4,000
Benefits:	Reduction in loss of life and injury prevention
Plan for Implementation	
Responsible Organization/Department:	School District
Action/Project Priority:	STAPLEE score: 39 Priority: High
Timeline for Completion:	1 year
Potential Fund Sources:	Local funding, grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	Financing and radios have halted starting action.

Action Worksheet	
Name of Jurisdiction:	Monett R-I
Risk / Vulnerability	
Problem being Mitigated:	Improve the communication of important information to critical facilities in the event of natural hazard.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.2.2
Name of Action or Project:	NOAA Radio Implementations

Action or Project Description:	Promote the usage of NOAA radios and new communications technologies in all vulnerable and critical facilities, such as schools, medical facilities, nursing homes and day care facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$500
Benefits:	Reduction in loss of life.
Plan for Implementation	
Responsible Organization/Department:	School Safety Director, Superintendent
Action/Project Priority:	STAPLEE score: 24 Priority: Low
Timeline for Completion:	1-2 years
Potential Fund Sources:	School/County funding
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Barriers having jurisdiction over other facilities besides the school district.

Action Worksheet	
Name of Jurisdiction:	Mount Vernon R-V
Risk / Vulnerability	
Problem being Mitigated:	Improve the communication of important information to critical facilities in the event of natural hazard.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.2.2
Name of Action or Project:	NOAA Radio Implementations
Action or Project Description:	Promote the usage of NOAA radios and new communications technologies in all vulnerable and critical facilities, such as schools, medical facilities, nursing homes and day care facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	STAPLEE score: 40 Priority: High
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Pierce City R-VI
Risk / Vulnerability	
Problem being Mitigated:	Improve the communication of important information to critical facilities in the event of natural hazard.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.2.2
Name of Action or Project:	NOAA Radio Implementations
Action or Project Description:	Promote the usage of NOAA radios and new communications technologies in all vulnerable and critical facilities, such as schools, medical facilities, nursing homes and day care facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$500
Benefits:	Prevent injuries and loss of life.
Plan for Implementation	
Responsible Organization/Department:	School District
Action/Project Priority:	STAPLEE score: 40 Priority: High
Timeline for Completion:	6 months
Potential Fund Sources:	Local funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Verona R-VII
Risk / Vulnerability	
Problem being Mitigated:	Improve the communication of important information to critical facilities in the event of natural hazard.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.2.2
Name of Action or Project:	NOAA Radio Implementations
Action or Project Description:	Promote the usage of NOAA radios and new communications technologies in all vulnerable and critical facilities, such as schools, medical facilities, nursing homes and day care facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$1,000
Benefits:	Reduction in loss of life and injuries.
Plan for Implementation	
Responsible Organization/Department:	Superintendent, School Board

Action/Project Priority:	STAPLEE score: 32 Priority: High
Timeline for Completion:	6 months
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Buck Prairie Special Road District
Risk / Vulnerability	
Problem being Mitigated:	Improve the communication of important information to critical facilities in the event of natural hazard.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.2.2
Name of Action or Project:	NOAA Radio Implementations
Action or Project Description:	Promote the usage of NOAA radios and new communications technologies in all vulnerable and critical facilities, such as schools, medical facilities, nursing homes and day care facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	STAPLEE score: Priority:
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Green Benefit Special Road District
Risk / Vulnerability	
Problem being Mitigated:	Improve the communication of important information to critical facilities in the event of natural hazard.
Hazard(s) Addressed:	All Hazards

Action or Project	
Action/Project Number:	1.2.2
Name of Action or Project:	NOAA Radio Implementations
Action or Project Description:	Promote the usage of NOAA radios and new communications technologies in all vulnerable and critical facilities, such as schools, medical facilities, nursing homes and day care facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Safety to employees and citizens.
Plan for Implementation	
Responsible Organization/Department:	N/A
Action/Project Priority:	STAPLEE score: 27 Priority: Medium
Timeline for Completion:	N/A
Potential Fund Sources:	Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Miller Benefit Special Road District
Risk / Vulnerability	
Problem being Mitigated:	Improve the communication of important information to critical facilities in the event of natural hazard.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.2.2
Name of Action or Project:	NOAA Radio Implementations
Action or Project Description:	Promote the usage of NOAA radios and new communications technologies in all vulnerable and critical facilities, such as schools, medical facilities, nursing homes and day care facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Safety to employees and citizens.
Plan for Implementation	
Responsible Organization/Department:	N/A
Action/Project Priority:	STAPLEE score: 24 Priority: Low
Timeline for Completion:	Less than 1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started

Report of Progress	Money issues.
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Action Worksheet	
Name of Jurisdiction:	Mount Vernon Special Road District
Risk / Vulnerability	
Problem being Mitigated:	Improve the communication of important information to critical facilities in the event of natural hazard.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.2.2
Name of Action or Project:	NOAA Radio Implementations
Action or Project Description:	Promote the usage of NOAA radios and new communications technologies in all vulnerable and critical facilities, such as schools, medical facilities, nursing homes and day care facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	STAPLEE score: Priority:
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Verona Benefit Special Road District
Risk / Vulnerability	
Problem being Mitigated:	Improve the communication of important information to critical facilities in the event of natural hazard.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	1.2.2
Name of Action or Project:	NOAA Radio Implementations
Action or Project Description:	Promote the usage of NOAA radios and new communications technologies in all vulnerable and critical facilities, such as schools, medical facilities, nursing homes and day care facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	

Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Buck Prairie Special Road District
Risk / Vulnerability	
Problem being Mitigated:	Improve the visibility of low water crossing markers for the public.
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	1.2.3
Name of Action or Project:	Low Water Crossing Marker Visibility
Action or Project Description:	Replace low water crossing markers as necessary to assist drivers in becoming more aware flood-prone areas.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	STAPLEE score: Priority:
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Green Benefit Special Road District
Risk / Vulnerability	

Problem being Mitigated:	Improve the visibility of low water crossing markers for the public.
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	1.2.3
Name of Action or Project:	Low Water Crossing Marker Visibility
Action or Project Description:	Replace low water crossing markers as necessary to assist drivers in becoming more aware flood-prone areas.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Reduction in loss of life, increased awareness.
Plan for Implementation	
Responsible Organization/Department:	N/A
Action/Project Priority:	STAPLEE score: 27 Priority: Medium
Timeline for Completion:	N/A
Potential Fund Sources:	Grants, General Fund
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	Money and time issues.

Action Worksheet	
Name of Jurisdiction:	Miller Benefit Special Road District
Risk / Vulnerability	
Problem being Mitigated:	Improve the visibility of low water crossing markers for the public.
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	1.2.3
Name of Action or Project:	Low Water Crossing Marker Visibility
Action or Project Description:	Replace low water crossing markers as necessary to assist drivers in becoming more aware flood-prone areas.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Reduction in loss of lives and damages.
Plan for Implementation	
Responsible Organization/Department:	Commissioners
Action/Project Priority:	STAPLEE score: 42 Priority: High
Timeline for Completion:	N/A
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	N/A

Progress Report	
Action Status	Continuing Not Started
Report of Progress	Money issues.

Action Worksheet	
Name of Jurisdiction:	Mount Vernon Benefit Special Road District
Risk / Vulnerability	
Problem being Mitigated:	Improve the visibility of low water crossing markers for the public.
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	1.2.3
Name of Action or Project:	Low Water Crossing Marker Visibility
Action or Project Description:	Replace low water crossing markers as necessary to assist drivers in becoming more aware flood-prone areas.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Verona Benefit Special Road District
Risk / Vulnerability	
Problem being Mitigated:	Improve the visibility of low water crossing markers for the public.
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	1.2.3
Name of Action or Project:	Low Water Crossing Marker Visibility
Action or Project Description:	Replace low water crossing markers as necessary to assist drivers in becoming more aware flood-prone areas.

Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Lawrence County
Risk / Vulnerability	
Problem being Mitigated:	Provide awareness of tornado warnings to travelers along the I-44 corridor.
Hazard(s) Addressed:	Tornado
Action or Project	
Action/Project Number:	1.2.4
Name of Action or Project:	Roadside Tornado Warning Messages
Action or Project Description:	Coordinate with Missouri Department of Transportation to incorporate tornado warning messages on the electronic roadside signs along I-44 to provide situational awareness to travelers on I-44.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Alert travelers along major travel ways – save lives.
Plan for Implementation	
Responsible Organization/Department:	EMD, 911
Action/Project Priority:	STAPLEE score: 34 Priority: High
Timeline for Completion:	1-3 months
Potential Fund Sources:	Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New

Report of Progress	N/A
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Action Worksheet	
Name of Jurisdiction:	Lawrence County
Risk / Vulnerability	
Problem being Mitigated:	Lack of tornado safe rooms
Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Action or Project	
Action/Project Number:	1.3.1
Name of Action or Project:	Tornado Safe Room Construction
Action or Project Description:	Encourage construction of tornado safe rooms and best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) in areas of population concentration.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	1 Million +
Benefits:	Loss of life from tornadoes and high winds.
Plan for Implementation	
Responsible Organization/Department:	Local jurisdictions, citizens
Action/Project Priority:	I STAPLEE score: 29 Priority: Medium
Timeline for Completion:	5+ years
Potential Fund Sources:	Grants, match funding sources.
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Aurora
Risk / Vulnerability	
Problem being Mitigated:	Lack of tornado safe rooms
Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Action or Project	
Action/Project Number:	1.3.1
Name of Action or Project:	Tornado Safe Room Construction
Action or Project Description:	Encourage construction of tornado safe rooms and best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) in areas of population concentration.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards

Estimated Cost:	\$500
Benefits:	Loss of life from tornadoes and high winds.
Plan for Implementation	
Responsible Organization/Department:	Fire, ERM Management
Action/Project Priority:	STAPLEE score: 36 Priority: High
Timeline for Completion:	How many months/years to complete.
Potential Fund Sources:	Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Village of Freistatt
Risk / Vulnerability	
Problem being Mitigated:	Lack of tornado safe rooms
Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Action or Project	
Action/Project Number:	1.3.1
Name of Action or Project:	Tornado Safe Room Construction
Action or Project Description:	Encourage construction of tornado safe rooms and best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) in areas of population concentration.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Loss of life from tornadoes and high winds.
Plan for Implementation	
Responsible Organization/Department:	Private
Action/Project Priority:	STAPLEE score: 29 Priority: Medium
Timeline for Completion:	1-5 years
Potential Fund Sources:	City and private funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Local structures in place.

Action Worksheet	
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Name of Jurisdiction:	City of Marionville
Risk / Vulnerability	
Problem being Mitigated:	Lack of tornado safe rooms
Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Action or Project	
Action/Project Number:	1.3.1
Name of Action or Project:	Tornado Safe Room Construction
Action or Project Description:	Encourage construction of tornado safe rooms and best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) in areas of population concentration.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$10,000-30,000
Benefits:	Increased public safety and decreased loss of life.
Plan for Implementation	
Responsible Organization/Department:	Building inspector, Planning & Zoning, Local Institutions
Action/Project Priority:	STAPLEE score: 28 Priority: Medium
Timeline for Completion:	2-3 years
Potential Fund Sources:	Federal/State Grants, Local Government
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Public buildings, especially new, will have storm shelters.

Action Worksheet	
Name of Jurisdiction:	City of Miller
Risk / Vulnerability	
Problem being Mitigated:	Lack of tornado safe rooms
Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Action or Project	
Action/Project Number:	1.3.1
Name of Action or Project:	Tornado Safe Room Construction
Action or Project Description:	Encourage construction of tornado safe rooms and best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) in areas of population concentration.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$350
Benefits:	Loss of life from tornadoes and high winds.
Plan for Implementation	
Responsible Organization/Department:	Fire department, police department
Action/Project Priority:	STAPLEE score: 29 Priority: Medium

Timeline for Completion:	12 months
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	Library, school
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Monett
Risk / Vulnerability	
Problem being Mitigated:	Lack of tornado safe rooms
Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Action or Project	
Action/Project Number:	1.3.1
Name of Action or Project:	Tornado Safe Room Construction
Action or Project Description:	Encourage construction of tornado safe rooms and best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) in areas of population concentration.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Loss of life from tornadoes and high winds.
Plan for Implementation	
Responsible Organization/Department:	Municipality/Private
Action/Project Priority:	STAPLEE score: 37 Priority: High
Timeline for Completion:	N/A
Potential Fund Sources:	General funds, Private funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Local shelter/refuge areas in place.

Action Worksheet	
Name of Jurisdiction:	City of Mount Vernon
Risk / Vulnerability	
Problem being Mitigated:	Lack of tornado safe rooms
Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Action or Project	

Action/Project Number:	1.3.1
Name of Action or Project:	Tornado Safe Room Construction
Action or Project Description:	Encourage construction of tornado safe rooms and best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) in areas of population concentration.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Loss of life from tornadoes and high winds.
Plan for Implementation	
Responsible Organization/Department:	Code Enforcement Officer, Emergency Management
Action/Project Priority:	STAPLEE score: 28 Priority: Medium
Timeline for Completion:	N/A
Potential Fund Sources:	Grants, Local funds
Local Planning Mechanisms to be Used in Implementation, if any:	Educational materials
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Pierce City
Risk / Vulnerability	
Problem being Mitigated:	Lack of tornado safe rooms
Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Action or Project	
Action/Project Number:	1.3.1
Name of Action or Project:	Tornado Safe Room Construction
Action or Project Description:	Encourage construction of tornado safe rooms and best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) in areas of population concentration.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Loss of life from tornadoes and high winds.
Plan for Implementation	
Responsible Organization/Department:	Local Government
Action/Project Priority:	STAPLEE score: 29 Priority: Medium
Timeline for Completion:	6 months – 1 year
Potential Fund Sources:	Individuals
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Verona
Risk / Vulnerability	
Problem being Mitigated:	Lack of tornado safe rooms
Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Action or Project	
Action/Project Number:	1.3.1
Name of Action or Project:	Tornado Safe Room Construction
Action or Project Description:	Encourage construction of tornado safe rooms and best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) in areas of population concentration.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$0
Benefits:	Loss of life from tornadoes and high winds.
Plan for Implementation	
Responsible Organization/Department:	Local Government
Action/Project Priority:	STAPLEE score: 18 Priority: Low
Timeline for Completion:	N/A
Potential Fund Sources:	Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Verona R-VII
Risk / Vulnerability	
Problem being Mitigated:	Lack of tornado safe rooms
Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Action or Project	
Action/Project Number:	1.3.1
Name of Action or Project:	Tornado Safe Room Construction
Action or Project Description:	Encourage construction of tornado safe rooms and best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) in areas of population concentration.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Loss of life from tornadoes and high winds.

Plan for Implementation	
Responsible Organization/Department:	School Board
Action/Project Priority:	STAPLEE score: 30 Priority: High
Timeline for Completion:	2 years
Potential Fund Sources:	Capital Project Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Mount Vernon R-V
Risk / Vulnerability	
Problem being Mitigated:	Lack of tornado safe rooms
Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Action or Project	
Action/Project Number:	1.3.1
Name of Action or Project:	Tornado Safe Room Construction
Action or Project Description:	Encourage construction of tornado safe rooms and best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) in areas of population concentration.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	STAPLEE score: 37 Priority: High
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Miller R-II

Risk / Vulnerability	
Problem being Mitigated:	Lack of tornado safe rooms
Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Action or Project	
Action/Project Number:	1.3.1
Name of Action or Project:	Tornado Safe Room Construction
Action or Project Description:	Encourage construction of tornado safe rooms and best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) in areas of population concentration.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$2.5 million
Benefits:	Loss of life from tornadoes and high winds.
Plan for Implementation	
Responsible Organization/Department:	School Districts, Superintendent
Action/Project Priority:	STAPLEE score: 40 Priority: High
Timeline for Completion:	2 years
Potential Fund Sources:	Grants, Bond Issue, Capital Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	Lack of financing.

Action Worksheet	
Name of Jurisdiction:	Marionville R-IX
Risk / Vulnerability	
Problem being Mitigated:	Lack of tornado safe rooms
Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Action or Project	
Action/Project Number:	1.3.1
Name of Action or Project:	Tornado Safe Room Construction
Action or Project Description:	Encourage construction of tornado safe rooms and best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) in areas of population concentration.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$500,000-1.5 million
Benefits:	Safe rooms could protect 550 individuals at K-8 th grade building, and 250 individuals at 9 th -12 th grade building.
Plan for Implementation	
Responsible Organization/Department:	School District
Action/Project Priority:	STAPLEE score: 38 Priority: High
Timeline for Completion:	1-2 years
Potential Fund Sources:	Federal/State funds, local funds

Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	Obtain funding.

Action Worksheet	
Name of Jurisdiction:	Buck Prairie Special Road District
Risk / Vulnerability	
Problem being Mitigated:	Lack of tornado safe rooms
Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Action or Project	
Action/Project Number:	1.3.1
Name of Action or Project:	Tornado Safe Room Construction
Action or Project Description:	Encourage construction of tornado safe rooms and best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) in areas of population concentration.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Verona Road District
Risk / Vulnerability	
Problem being Mitigated:	Lack of tornado safe rooms
Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Action or Project	
Action/Project Number:	1.3.1

Name of Action or Project:	Tornado Safe Room Construction
Action or Project Description:	Encourage construction of tornado safe rooms and best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) in areas of population concentration.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Mt. Vernon Benefit Special Road District
Risk / Vulnerability	
Problem being Mitigated:	Lack of tornado safe rooms
Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Action or Project	
Action/Project Number:	1.3.1
Name of Action or Project:	Tornado Safe Room Construction
Action or Project Description:	Encourage construction of tornado safe rooms and best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) in areas of population concentration.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Green Benefit Road District
Risk / Vulnerability	
Problem being Mitigated:	Lack of tornado safe rooms
Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Action or Project	
Action/Project Number:	1.3.1
Name of Action or Project:	Tornado Safe Room Construction
Action or Project Description:	Encourage construction of tornado safe rooms and best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) in areas of population concentration.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Reduction in loss of life.
Plan for Implementation	
Responsible Organization/Department:	N/A
Action/Project Priority:	STAPLEE score: 24 Priority: Low
Timeline for Completion:	N/A
Potential Fund Sources:	Grants, General Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	Money and time issues.

Action Worksheet	
Name of Jurisdiction:	Lawrence County
Risk / Vulnerability	
Problem being Mitigated:	Loss of Life
Hazard(s) Addressed:	Tornado, Severe Storms
Action or Project	
Action/Project Number:	1.3.2
Name of Action or Project:	Safe Room Construction
Action or Project Description:	Retrofit existing critical public buildings & infrastructures where possible to provide shelter from natural hazards.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$100 Million +
Benefits:	Lives and structures saved.
Plan for Implementation	
Responsible Organization/Department:	Local public entities.

Action/Project Priority:	STAPLEE score: 29 Priority: Medium
Timeline for Completion:	5+ years
Potential Fund Sources:	General funds of municipalities
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Aurora
Risk / Vulnerability	
Problem being Mitigated:	Loss of Life
Hazard(s) Addressed:	Tornado, Severe Storms
Action or Project	
Action/Project Number:	1.3.2
Name of Action or Project:	Safe Room Construction
Action or Project Description:	Retrofit existing critical public buildings & infrastructures where possible to provide shelter from natural hazards.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$250,000
Benefits:	Decreased medical loss.
Plan for Implementation	
Responsible Organization/Department:	Code, ERM management, Fire
Action/Project Priority:	STAPLEE score: 33 Priority: High
Timeline for Completion:	5 years
Potential Fund Sources:	Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Marionville
Risk / Vulnerability	
Problem being Mitigated:	Loss of Life

Hazard(s) Addressed:	Tornado, Severe Storms
Action or Project	
Action/Project Number:	1.3.2
Name of Action or Project:	Safe Room Construction
Action or Project Description:	Retrofit existing critical public buildings & infrastructures where possible to provide shelter from natural hazards.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Reduction in loss of life.
Plan for Implementation	
Responsible Organization/Department:	Local EMD, Building Official
Action/Project Priority:	STAPLEE score: 29 Priority: Medium
Timeline for Completion:	3-4 years
Potential Fund Sources:	Federal/State Grants, Program Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Trying to find funding.

Action Worksheet	
Name of Jurisdiction:	City of Mount Vernon
Risk / Vulnerability	
Problem being Mitigated:	Loss of Life
Hazard(s) Addressed:	Tornado, Severe Storms
Action or Project	
Action/Project Number:	1.3.2
Name of Action or Project:	Safe Room Construction
Action or Project Description:	Retrofit existing critical public buildings & infrastructures where possible to provide shelter from natural hazards.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Could potentially save lives.
Plan for Implementation	
Responsible Organization/Department:	City
Action/Project Priority:	STAPLEE score: 28 Priority: Medium
Timeline for Completion:	N/A
Potential Fund Sources:	City budget, grants
Local Planning Mechanisms to be Used in Implementation, if any:	Capital budget

Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Pierce City
Risk / Vulnerability	
Problem being Mitigated:	Loss of Life
Hazard(s) Addressed:	Tornado, Severe Storms
Action or Project	
Action/Project Number:	1.3.2
Name of Action or Project:	Safe Room Construction
Action or Project Description:	Retrofit existing critical public buildings & infrastructures where possible to provide shelter from natural hazards.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Reduction in loss of life.
Plan for Implementation	
Responsible Organization/Department:	Local Government
Action/Project Priority:	STAPLEE score: 33 Priority: High
Timeline for Completion:	1-5 years
Potential Fund Sources:	Private funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Village of Freistatt
Risk / Vulnerability	
Problem being Mitigated:	Loss of Life
Hazard(s) Addressed:	Tornado, Severe Storms
Action or Project	
Action/Project Number:	1.3.2
Name of Action or Project:	Safe Room Construction

Action or Project Description:	Retrofit existing critical public buildings & infrastructures where possible to provide shelter from natural hazards.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Reduction in loss of life and structures.
Plan for Implementation	
Responsible Organization/Department:	City
Action/Project Priority:	STAPLEE score: 30 Priority: High
Timeline for Completion:	20+ years
Potential Fund Sources:	Local and private funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Monett
Risk / Vulnerability	
Problem being Mitigated:	Loss of Life
Hazard(s) Addressed:	Tornado, Severe Storms
Action or Project	
Action/Project Number:	1.3.2
Name of Action or Project:	Safe Room Construction
Action or Project Description:	Retrofit existing critical public buildings & infrastructures where possible to provide shelter from natural hazards.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Reduction in loss of lives and structures.
Plan for Implementation	
Responsible Organization/Department:	Local government
Action/Project Priority:	STAPLEE score: 29 Priority: Medium
Timeline for Completion:	How many months/years to complete.
Potential Fund Sources:	Local & private funding
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Lawrence County
Risk / Vulnerability	
Problem being Mitigated:	Loss of Life
Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Action or Project	
Action/Project Number:	1.3.3
Name of Action or Project:	Safe Refuge Area Plan
Action or Project Description:	Encourage that all new public buildings have a best identified available refuge area (these do not comply with FEMA Publication 361 for safe rooms) or safe room, equipped with radios and emergency local communications.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$5,000
Benefits:	Protect lives and minimize injuries.
Plan for Implementation	
Responsible Organization/Department:	EMA
Action/Project Priority:	STAPLEE score: 31 Priority: High
Timeline for Completion:	1-3 years
Potential Fund Sources:	General funds, manpower
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Aurora
Risk / Vulnerability	
Problem being Mitigated:	Loss of Life
Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Action or Project	
Action/Project Number:	1.3.3
Name of Action or Project:	Safe Refuge Area Plan
Action or Project Description:	Encourage that all new public buildings have a best identified available refuge area (these do not comply with FEMA Publication 361 for safe rooms) or safe room, equipped with radios and emergency local communications.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$20,000
Benefits:	Protect lives and minimize injuries.
Plan for Implementation	

Responsible Organization/Department:	Code, ERM management, Fire
Action/Project Priority:	STAPLEE score: 36 Priority: High
Timeline for Completion:	5 years
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Village of Freistatt
Risk / Vulnerability	
Problem being Mitigated:	Loss of Life
Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Action or Project	
Action/Project Number:	1.3.3
Name of Action or Project:	Safe Refuge Area Plan
Action or Project Description:	Encourage that all new public buildings have a best identified available refuge area (these do not comply with FEMA Publication 361 for safe rooms) or safe room, equipped with radios and emergency local communications.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$0
Benefits:	Reduction in loss of lives.
Plan for Implementation	
Responsible Organization/Department:	City
Action/Project Priority:	STAPLEE score: 33 Priority: High
Timeline for Completion:	1-3 years
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Marionville
Risk / Vulnerability	
Problem being Mitigated:	Loss of Life

Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Action or Project	
Action/Project Number:	1.3.3
Name of Action or Project:	Safe Refuge Area Plan
Action or Project Description:	Encourage that all new public buildings have a best identified available refuge area (these do not comply with FEMA Publication 361 for safe rooms) or safe room, equipped with radios and emergency local communications.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$10,000-30,000
Benefits:	Increased safety for lives.
Plan for Implementation	
Responsible Organization/Department:	Local EMD, Building Official
Action/Project Priority:	STAPLEE score: 28 Priority: Medium
Timeline for Completion:	2-3 years
Potential Fund Sources:	Private, Federal/State Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Very little new construction in town.

Action Worksheet	
Name of Jurisdiction:	City of Miller
Risk / Vulnerability	
Problem being Mitigated:	Loss of Life
Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Action or Project	
Action/Project Number:	1.3.3
Name of Action or Project:	Safe Refuge Area Plan
Action or Project Description:	Encourage that all new public buildings have a best identified available refuge area (these do not comply with FEMA Publication 361 for safe rooms) or safe room, equipped with radios and emergency local communications.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Protect lives and minimize injuries.
Plan for Implementation	
Responsible Organization/Department:	Local EMD, Building Codes
Action/Project Priority:	STAPLEE score: 27 Priority: Medium
Timeline for Completion:	N/A
Potential Fund Sources:	Grants, Local Funds

Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Monett
Risk / Vulnerability	
Problem being Mitigated:	Loss of Life
Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Action or Project	
Action/Project Number:	1.3.3
Name of Action or Project:	Safe Refuge Area Plan
Action or Project Description:	Encourage that all new public buildings have a best identified available refuge area (these do not comply with FEMA Publication 361 for safe rooms) or safe room, equipped with radios and emergency local communications.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$0
Benefits:	Protect lives and minimize injuries.
Plan for Implementation	
Responsible Organization/Department:	Which organization will be responsible for tracking this action? Be specific to include the specific department or position within a department.
Action/Project Priority:	STAPLEE score: 35 Priority: High
Timeline for Completion:	1-3 years (on-going)
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Mount Vernon
Risk / Vulnerability	
Problem being Mitigated:	Loss of Life
Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Action or Project	
Action/Project Number:	1.3.3

Name of Action or Project:	Safe Refuge Area Plan
Action or Project Description:	Encourage that all new public buildings have a best identified available refuge area (these do not comply with FEMA Publication 361 for safe rooms) or safe room, equipped with radios and emergency local communications.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Protect lives and minimize injuries.
Plan for Implementation	
Responsible Organization/Department:	City Administrator
Action/Project Priority:	STAPLEE score: 25 Priority: Medium
Timeline for Completion:	5 years (current buildings completed)
Potential Fund Sources:	City budget
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Pierce City
Risk / Vulnerability	
Problem being Mitigated:	Loss of Life
Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Action or Project	
Action/Project Number:	1.3.3
Name of Action or Project:	Safe Refuge Area Plan
Action or Project Description:	Encourage that all new public buildings have a best identified available refuge area (these do not comply with FEMA Publication 361 for safe rooms) or safe room, equipped with radios and emergency local communications.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	City of Verona
Risk / Vulnerability	
Problem being Mitigated:	Loss of Life
Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Action or Project	
Action/Project Number:	1.3.3
Name of Action or Project:	Safe Refuge Area Plan
Action or Project Description:	Encourage that all new public buildings have a best identified available refuge area (these do not comply with FEMA Publication 361 for safe rooms) or safe room, equipped with radios and emergency local communications.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$0
Benefits:	Protect lives and minimize injuries.
Plan for Implementation	
Responsible Organization/Department:	Building inspectors
Action/Project Priority:	STAPLEE score: 25 Priority: Medium
Timeline for Completion:	5 years
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Aurora
Risk / Vulnerability	
Problem being Mitigated:	Loss of Life
Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Action or Project	
Action/Project Number:	1.3.4
Name of Action or Project:	Use Zoning Ordinance to Require Refuge Areas
Action or Project Description:	Amend or update zoning ordinances to include requirement for best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) in all new manufactured home parks.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$5,000

Benefits:	Decreased structure and medical loss.
Plan for Implementation	
Responsible Organization/Department:	Code
Action/Project Priority:	STAPLEE score: 36 Priority: High
Timeline for Completion:	3 years
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Monett
Risk / Vulnerability	
Problem being Mitigated:	Loss of Life
Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Action or Project	
Action/Project Number:	1.3.4
Name of Action or Project:	Use Zoning Ordinance to Require Refuge Areas
Action or Project Description:	Amend or update zoning ordinances to include requirement for best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) in all new manufactured home parks.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Reduction in loss of lives.
Plan for Implementation	
Responsible Organization/Department:	Local government
Action/Project Priority:	STAPLEE score: 26 Priority: Medium
Timeline for Completion:	5+ years
Potential Fund Sources:	Local funding
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	No political will.

Action Worksheet	
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Name of Jurisdiction:	City of Mount Vernon
Risk / Vulnerability	
Problem being Mitigated:	Loss of Life
Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Action or Project	
Action/Project Number:	1.3.4
Name of Action or Project:	Use Zoning Ordinance to Require Refuge Areas
Action or Project Description:	Amend or update zoning ordinances to include requirement for best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) in all new manufactured home parks.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Reduction in loss of life.
Plan for Implementation	
Responsible Organization/Department:	Which organization will be responsible for tracking this action? Be specific
Action/Project Priority:	STAPLEE score: 25 Priority: Low
Timeline for Completion:	N/A
Potential Fund Sources:	City budget
Local Planning Mechanisms to be Used in Implementation, if any:	Planning and zoning
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Pierce City
Risk / Vulnerability	
Problem being Mitigated:	Loss of Life
Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Action or Project	
Action/Project Number:	1.3.4
Name of Action or Project:	Use Zoning Ordinance to Require Refuge Areas
Action or Project Description:	Amend or update zoning ordinances to include requirement for best identified available refuge areas (these do not comply with FEMA Publication 361 for safe rooms) in all new manufactured home parks.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	

Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Lawrence County
Risk / Vulnerability	
Problem being Mitigated:	Public refuge areas for vulnerable populations.
Hazard(s) Addressed:	Extreme Heat, Winter Weather/Snow/Ice/Severe Cold
Action or Project	
Action/Project Number:	1.3.5
Name of Action or Project:	Community Extreme Temperature Refuge Areas
Action or Project Description:	Identify and designate heating and cooling refuge areas in community buildings, and make these location available to the public during extreme temperature events.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$2,000
Benefits:	Vulnerable populations such as the elderly and disabled will have a place to go in the event of extreme temperatures.
Plan for Implementation	
Responsible Organization/Department:	Local jurisdictions, EMA,
Action/Project Priority:	STAPLEE score: 35 Priority: High
Timeline for Completion:	1 year.
Potential Fund Sources:	Local funds for sirens.
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Aurora

Risk / Vulnerability	
Problem being Mitigated:	Public refuge areas for vulnerable populations.
Hazard(s) Addressed:	Extreme Heat, Winter Weather/Snow/Ice/Severe Cold
Action or Project	
Action/Project Number:	1.3.5
Name of Action or Project:	Community Extreme Temperature Refuge Areas
Action or Project Description:	Identify and designate heating and cooling refuge areas in community buildings, and make these location available to the public during extreme temperature events.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$0
Benefits:	Vulnerable populations such as the elderly and disabled will have a place to go in the event of extreme temperatures.
Plan for Implementation	
Responsible Organization/Department:	ER management, Police, Fire
Action/Project Priority:	STAPLEE score: 40 Priority: High
Timeline for Completion:	1 year
Potential Fund Sources:	Grants, Local Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Village of Freistatt
Risk / Vulnerability	
Problem being Mitigated:	Public refuge areas for vulnerable populations.
Hazard(s) Addressed:	Extreme Heat, Winter Weather/Snow/Ice/Severe Cold
Action or Project	
Action/Project Number:	1.3.5
Name of Action or Project:	Community Extreme Temperature Refuge Areas
Action or Project Description:	Identify and designate heating and cooling refuge areas in community buildings, and make these location available to the public during extreme temperature events.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Vulnerable populations such as the elderly and disabled will have a place to go in the event of extreme temperatures.
Plan for Implementation	
Responsible Organization/Department:	City
Action/Project Priority:	STAPLEE score: 36 Priority: High

Timeline for Completion:	1 year
Potential Fund Sources:	General funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Marionville
Risk / Vulnerability	
Problem being Mitigated:	Public refuge areas for vulnerable populations.
Hazard(s) Addressed:	Extreme Heat, Winter Weather/Snow/Ice/Severe Cold
Action or Project	
Action/Project Number:	1.3.5
Name of Action or Project:	Community Extreme Temperature Refuge Areas
Action or Project Description:	Identify and designate heating and cooling refuge areas in community buildings, and make these location available to the public during extreme temperature events.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$100-600
Benefits:	Vulnerable populations such as the elderly and disabled will have a place to go in the event of extreme temperatures.
Plan for Implementation	
Responsible Organization/Department:	Public Safety Administrator, EMD
Action/Project Priority:	STAPLEE score: 31 Priority: High
Timeline for Completion:	1-2 years
Potential Fund Sources:	Private funds, grants
Local Planning Mechanisms to be Used in Implementation, if any:	Social media, word of mouth.
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Churches and fire stations have opened up during extreme temperatures.

Action Worksheet	
Name of Jurisdiction:	City of Miller
Risk / Vulnerability	
Problem being Mitigated:	Public refuge areas for vulnerable populations.
Hazard(s) Addressed:	Extreme Heat, Winter Weather/Snow/Ice/Severe Cold
Action or Project	

Action/Project Number:	1.3.5
Name of Action or Project:	Community Extreme Temperature Refuge Areas
Action or Project Description:	Identify and designate heating and cooling refuge areas in community buildings, and make these location available to the public during extreme temperature events.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$500
Benefits:	Vulnerable populations such as the elderly and disabled will have a place to go in the event of extreme temperatures.
Plan for Implementation	
Responsible Organization/Department:	Fire and police departments
Action/Project Priority:	STAPLEE score: 24 Priority: High
Timeline for Completion:	Available now
Potential Fund Sources:	Donations
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Senior Center

Action Worksheet	
Name of Jurisdiction:	City of Monett
Risk / Vulnerability	
Problem being Mitigated:	Public refuge areas for vulnerable populations.
Hazard(s) Addressed:	Extreme Heat, Winter Weather/Snow/Ice/Severe Cold
Action or Project	
Action/Project Number:	1.3.5
Name of Action or Project:	Community Extreme Temperature Refuge Areas
Action or Project Description:	Identify and designate heating and cooling refuge areas in community buildings, and make these location available to the public during extreme temperature events.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$2,000-3,000
Benefits:	Maintain citizen's well-being within community.
Plan for Implementation	
Responsible Organization/Department:	Local government
Action/Project Priority:	STAPLEE score: 35 Priority: High
Timeline for Completion:	1 year
Potential Fund Sources:	General Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started

Report of Progress	N/A
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Action Worksheet	
Name of Jurisdiction:	City of Mount Vernon
Risk / Vulnerability	
Problem being Mitigated:	Public refuge areas for vulnerable populations.
Hazard(s) Addressed:	Extreme Heat, Winter Weather/Snow/Ice/Severe Cold
Action or Project	
Action/Project Number:	1.3.5
Name of Action or Project:	Community Extreme Temperature Refuge Areas
Action or Project Description:	Identify and designate heating and cooling refuge areas in community buildings, and make these location available to the public during extreme temperature events.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	City of Pierce City
Risk / Vulnerability	
Problem being Mitigated:	Public refuge areas for vulnerable populations.
Hazard(s) Addressed:	Extreme Heat, Winter Weather/Snow/Ice/Severe Cold
Action or Project	
Action/Project Number:	1.3.5
Name of Action or Project:	Community Extreme Temperature Refuge Areas
Action or Project Description:	Identify and designate heating and cooling refuge areas in community buildings, and make these location available to the public during extreme temperature events.

Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Lawrence County
Risk / Vulnerability	
Problem being Mitigated:	Reduction of damage to property from flooding.
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	1.4.1
Name of Action or Project:	NFIP Participation
Action or Project Description:	Encourage the county and municipalities to maintain participation in the NFIP.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	Cost of Floodplain Admin. & policies
Benefits:	Beneficial to future development.
Plan for Implementation	
Responsible Organization/Department:	County Commission, Local & County EMA, Floodplain Administrator
Action/Project Priority:	STAPLEE score: 25 Priority: Medium
Timeline for Completion:	On going
Potential Fund Sources:	Hourly wages, educational materials
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Encourage participation on joining.

Action Worksheet	
Name of Jurisdiction:	City of Aurora
Risk / Vulnerability	
Problem being Mitigated:	Reduction of damage to property from flooding.
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	1.4.1
Name of Action or Project:	NFIP Participation
Action or Project Description:	Encourage the county and municipalities to maintain participation in the NFIP.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$3,000
Benefits:	Beneficial to future development.
Plan for Implementation	
Responsible Organization/Department:	Code
Action/Project Priority:	STAPLEE score: 42 Priority: High
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Marionville
Risk / Vulnerability	
Problem being Mitigated:	Reduction of damage to property from flooding.
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	1.4.1
Name of Action or Project:	NFIP Participation
Action or Project Description:	Encourage the county and municipalities to maintain participation in the NFIP.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$0-3,000
Benefits:	Beneficial to future development.

Plan for Implementation	
Responsible Organization/Department:	EMD, Building Inspectors, City Clerk
Action/Project Priority:	STAPLEE score: 31 Priority: High
Timeline for Completion:	Already a member
Potential Fund Sources:	Local Governments
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing In Progress
Report of Progress	Members in NFIP

Action Worksheet	
Name of Jurisdiction:	City of Monett
Risk / Vulnerability	
Problem being Mitigated:	Reduction of damage to property from flooding.
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	1.4.1
Name of Action or Project:	NFIP Participation
Action or Project Description:	Encourage the county and municipalities to maintain participation in the NFIP.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Reduction in financial losses.
Plan for Implementation	
Responsible Organization/Department:	Local government
Action/Project Priority:	STAPLEE score: 34 Priority: High
Timeline for Completion:	0 (happening now)
Potential Fund Sources:	General funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	On-going

Action Worksheet	
Name of Jurisdiction:	City of Mount Vernon
Risk / Vulnerability	

Problem being Mitigated:	Reduction of damage to property from flooding.
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	1.4.1
Name of Action or Project:	NFIP Participation
Action or Project Description:	Encourage the county and municipalities to maintain participation in the NFIP.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	City of Pierce City
Risk / Vulnerability	
Problem being Mitigated:	Reduction of damage to property from flooding.
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	1.4.1
Name of Action or Project:	NFIP Participation
Action or Project Description:	Encourage the county and municipalities to maintain participation in the NFIP.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	

Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Indicate status as New, Continuing Not Started, or Continuing in Progress)
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Lawrence County
Risk / Vulnerability	
Problem being Mitigated:	Lack of items to deal with extreme weather for those at risk.
Hazard(s) Addressed:	Extreme Heat, Winter Weather/Snow/Ice/Severe Cold
Action or Project	
Action/Project Number:	1.4.2
Name of Action or Project:	Community Involvement Projects
Action or Project Description:	Community organizations should continue programs to provide fans, air conditioners & winter weatherization for those at risk (the elderly, low-income, younger, and handicapped).
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	No cost to county
Benefits:	Save lives and property
Plan for Implementation	
Responsible Organization/Department:	Local community organizations.
Action/Project Priority:	STAPLEE score: 20 Priority: Low
Timeline for Completion:	6-12 months
Potential Fund Sources:	Organization funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	Maintain current program

Action Worksheet	
Name of Jurisdiction:	City of Aurora
Risk / Vulnerability	
Problem being Mitigated:	Lack of items to deal with extreme weather for those at risk.
Hazard(s) Addressed:	Extreme Heat, Winter Weather/Snow/Ice/Severe Cold

Action or Project	
Action/Project Number:	1.4.2
Name of Action or Project:	Community Involvement Projects
Action or Project Description:	Community organizations should continue programs to provide fans, air conditioners & winter weatherization for those at risk (the elderly, low-income, younger, and handicapped).
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Save lives.
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	STAPLEE score: 37 Priority: High
Timeline for Completion:	2 years
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Village of Freistatt
Risk / Vulnerability	
Problem being Mitigated:	Lack of items to deal with extreme weather for those at risk.
Hazard(s) Addressed:	Extreme Heat, Winter Weather/Snow/Ice/Severe Cold
Action or Project	
Action/Project Number:	1.4.2
Name of Action or Project:	Community Involvement Projects
Action or Project Description:	Community organizations should continue programs to provide fans, air conditioners & winter weatherization for those at risk (the elderly, low-income, younger, and handicapped).
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$0
Benefits:	Well-being of individuals and families.
Plan for Implementation	
Responsible Organization/Department:	City
Action/Project Priority:	STAPLEE score: 32 Priority: High
Timeline for Completion:	1-3 months
Potential Fund Sources:	N/A

Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Marionville
Risk / Vulnerability	
Problem being Mitigated:	Lack of items to deal with extreme weather for those at risk.
Hazard(s) Addressed:	Extreme Heat, Winter Weather/Snow/Ice/Severe Cold
Action or Project	
Action/Project Number:	1.4.2
Name of Action or Project:	Community Involvement Projects
Action or Project Description:	Community organizations should continue programs to provide fans, air conditioners & winter weatherization for those at risk (the elderly, low-income, younger, and handicapped).
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$100-1,000
Benefits:	Reduce illness or death from extreme temperatures.
Plan for Implementation	
Responsible Organization/Department:	Public Safety Administrator, Local EMD.
Action/Project Priority:	STAPLEE score: 30 Priority: High
Timeline for Completion:	On-going
Potential Fund Sources:	Private donations, grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Donations by local churches and groups.

Action Worksheet	
Name of Jurisdiction:	City of Monett
Risk / Vulnerability	
Problem being Mitigated:	Lack of items to deal with extreme weather for those at risk.
Hazard(s) Addressed:	Extreme Heat, Winter Weather/Snow/Ice/Severe Cold
Action or Project	
Action/Project Number:	1.4.2

Name of Action or Project:	Community Involvement Projects
Action or Project Description:	Community organizations should continue programs to provide fans, air conditioners & winter weatherization for those at risk (the elderly, low-income, younger, and handicapped).
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$3,000-5,000
Benefits:	Reduce illness or death from extreme temperatures.
Plan for Implementation	
Responsible Organization/Department:	Municipality
Action/Project Priority:	STAPLEE score: 36 Priority: High
Timeline for Completion:	On-going
Potential Fund Sources:	Local funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing In Progress
Report of Progress	Currently provide cooling/warming centers.

Action Worksheet	
Name of Jurisdiction:	City of Mount Vernon
Risk / Vulnerability	
Problem being Mitigated:	Lack of items to deal with extreme weather for those at risk.
Hazard(s) Addressed:	Extreme Heat, Winter Weather/Snow/Ice/Severe Cold
Action or Project	
Action/Project Number:	1.4.2
Name of Action or Project:	Community Involvement Projects
Action or Project Description:	Community organizations should continue programs to provide fans, air conditioners & winter weatherization for those at risk (the elderly, low-income, younger, and handicapped).
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	City of Pierce City
Risk / Vulnerability	
Problem being Mitigated:	Lack of items to deal with extreme weather for those at risk.
Hazard(s) Addressed:	Extreme Heat, Winter Weather/Snow/Ice/Severe Cold
Action or Project	
Action/Project Number:	1.4.2
Name of Action or Project:	Community Involvement Projects
Action or Project Description:	Community organizations should continue programs to provide fans, air conditioners & winter weatherization for those at risk (the elderly, low-income, younger, and handicapped).
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	STAPLEE score: Priority:
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	City of Aurora
Risk / Vulnerability	
Problem being Mitigated:	Lack of storm ready standards.
Hazard(s) Addressed:	Earthquakes, Thunderstorm, Tornado
Action or Project	
Action/Project Number:	1.4.3
Name of Action or Project:	Code Updates for Storm Ready Standards
Action or Project Description:	Amend or update codes to include storm ready standards, such as hurricane straps.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A

Benefits:	Decreased building and medical loss.
Plan for Implementation	
Responsible Organization/Department:	Code
Action/Project Priority:	STAPLEE score: 31 Priority: High
Timeline for Completion:	2 years
Potential Fund Sources:	Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Village of Freistatt
Risk / Vulnerability	
Problem being Mitigated:	Lack of storm ready standards.
Hazard(s) Addressed:	Earthquakes, Thunderstorm, Tornado
Action or Project	
Action/Project Number:	1.4.3
Name of Action or Project:	Code Updates for Storm Ready Standards
Action or Project Description:	Amend or update codes to include storm ready standards, such as hurricane straps.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Reduction in loss of lives and structural damages.
Plan for Implementation	
Responsible Organization/Department:	City
Action/Project Priority:	STAPLEE score: 42 Priority: High
Timeline for Completion:	3-6 months
Potential Fund Sources:	General funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Ordinance in place.

Action Worksheet	
Name of Jurisdiction:	City of Marionville
Risk / Vulnerability	
Problem being Mitigated:	Lack of storm ready standards.
Hazard(s) Addressed:	Earthquakes, Thunderstorm, Tornado
Action or Project	
Action/Project Number:	1.4.3
Name of Action or Project:	Code Updates for Storm Ready Standards
Action or Project Description:	Amend or update codes to include storm ready standards, such as hurricane straps.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	Updated Currently
Benefits:	Prevent loss of property.
Plan for Implementation	
Responsible Organization/Department:	Building Inspector
Action/Project Priority:	STAPLEE score: 34 Priority: High
Timeline for Completion:	N/A
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Building Codes Amended

Action Worksheet	
Name of Jurisdiction:	City of Monett
Risk / Vulnerability	
Problem being Mitigated:	Lack of storm ready standards.
Hazard(s) Addressed:	Earthquakes, Thunderstorm, Tornado
Action or Project	
Action/Project Number:	1.4.3
Name of Action or Project:	Code Updates for Storm Ready Standards
Action or Project Description:	Amend or update codes to include storm ready standards, such as hurricane straps.

Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Reduction in loss of lives and structures.
Plan for Implementation	
Responsible Organization/Department:	Local Government.
Action/Project Priority:	STAPLEE score: 28 Priority: Medium
Timeline for Completion:	5+ years
Potential Fund Sources:	Local funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing In Progress
Report of Progress	Lack of political will.

Action Worksheet	
Name of Jurisdiction:	City of Mount Vernon
Risk / Vulnerability	
Problem being Mitigated:	Lack of storm ready standards.
Hazard(s) Addressed:	Earthquakes, Thunderstorm, Tornado
Action or Project	
Action/Project Number:	1.4.3
Name of Action or Project:	Code Updates for Storm Ready Standards
Action or Project Description:	Amend or update codes to include storm ready standards, such as hurricane straps.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	City of Pierce City
Risk / Vulnerability	
Problem being Mitigated:	Lack of storm ready standards.
Hazard(s) Addressed:	Earthquakes, Thunderstorm, Tornado
Action or Project	
Action/Project Number:	1.4.3
Name of Action or Project:	Code Updates for Storm Ready Standards
Action or Project Description:	Amend or update codes to include storm ready standards, such as hurricane straps.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	Provide an estimate of the cost to implement this action. This can be accomplished with a range of estimated costs.
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Lawrence County
Risk / Vulnerability	
Problem being Mitigated:	Increased public participation and response efficiency to the mitigation of natural hazards.
Hazard(s) Addressed:	Tornado, Sever Thunderstorm, Flood, Winter Weather, Drought, Extreme Heat, Earthquake, Dam Failure, Wildfire
Action or Project	
Action/Project Number:	1.4.4
Name of Action or Project:	Citizen Preparedness

Action or Project Description:	Establish and maintain participation in citizen preparedness activities such as: CERT, COAD, Neighborhood Watch, Amateur Radio, etc.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	Provide an estimate of the cost to implement this action. This can be accomplished with a range of estimated costs.
Benefits:	Preparedness = lives & property saved.
Plan for Implementation	
Responsible Organization/Department:	EMA, 911, LE
Action/Project Priority:	STAPLEE score: 23 Priority: Low
Timeline for Completion:	1-3 years
Potential Fund Sources:	EMA funds, Local jurisdictions
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Varied level of participation

Action Worksheet	
Name of Jurisdiction:	City of Aurora
Risk / Vulnerability	
Problem being Mitigated:	Increased public participation and response efficiency to the mitigation of natural hazards.
Hazard(s) Addressed:	Tornado, Sever Thunderstorm, Flood, Winter Weather, Drought, Extreme Heat, Earthquake, Dam Failure, Wildfire
Action or Project	
Action/Project Number:	1.4.4
Name of Action or Project:	Citizen Preparedness
Action or Project Description:	Establish and maintain participation in citizen preparedness activities such as: CERT, COAD, Neighborhood Watch, Amateur Radio, etc.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$7,000
Benefits:	Decreased medical loss.
Plan for Implementation	
Responsible Organization/Department:	ER management, Fire, Police
Action/Project Priority:	STAPLEE score: 35 Priority: High
Timeline for Completion:	3 years
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	

Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Village of Freistatt
Risk / Vulnerability	
Problem being Mitigated:	Increased public participation and response efficiency to the mitigation of natural hazards.
Hazard(s) Addressed:	Tornado, Sever Thunderstorm, Flood, Winter Weather, Drought, Extreme Heat, Earthquake, Dam Failure, Wildfire
Action or Project	
Action/Project Number:	1.4.4
Name of Action or Project:	Citizen Preparedness
Action or Project Description:	Establish and maintain participation in citizen preparedness activities such as: CERT, COAD, Neighborhood Watch, Amateur Radio, etc.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$0-100
Benefits:	Reduction in loss of lives and property.
Plan for Implementation	
Responsible Organization/Department:	City, individual committees
Action/Project Priority:	STAPLEE score: 32 Priority: High
Timeline for Completion:	1-3 months
Potential Fund Sources:	General funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Marionville
Risk / Vulnerability	
Problem being Mitigated:	Increased public participation and response efficiency to the mitigation of natural hazards.
Hazard(s) Addressed:	Tornado, Sever Thunderstorm, Flood, Winter Weather, Drought, Extreme Heat, Earthquake, Dam Failure, Wildfire
Action or Project	
Action/Project Number:	1.4.4
Name of Action or Project:	Citizen Preparedness
Action or Project Description:	Establish and maintain participation in citizen preparedness activities such as: CERT, COAD, Neighborhood Watch, Amateur Radio, etc.

Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Increased awareness and reduction in loss of life.
Plan for Implementation	
Responsible Organization/Department:	Public Safety Administrator, Local EMD
Action/Project Priority:	STAPLEE score: 33 Priority: High
Timeline for Completion:	On-going
Potential Fund Sources:	Private donations, grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Monett
Risk / Vulnerability	
Problem being Mitigated:	Increased public participation and response efficiency to the mitigation of natural hazards.
Hazard(s) Addressed:	Tornado, Sever Thunderstorm, Flood, Winter Weather, Drought, Extreme Heat, Earthquake, Dam Failure, Wildfire
Action or Project	
Action/Project Number:	1.4.4
Name of Action or Project:	Citizen Preparedness
Action or Project Description:	Establish and maintain participation in citizen preparedness activities such as: CERT, COAD, Neighborhood Watch, Amateur Radio, etc.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Reduction in loss of lives and property.
Plan for Implementation	
Responsible Organization/Department:	Local government.
Action/Project Priority:	STAPLEE score: 30 Priority: High
Timeline for Completion:	1-2 years
Potential Fund Sources:	Local funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Involved in COAD locally. Have local amateur radio.

Action Worksheet	
Name of Jurisdiction:	City of Mount Vernon
Risk / Vulnerability	
Problem being Mitigated:	Increased public participation and response efficiency to the mitigation of natural hazards.
Hazard(s) Addressed:	Tornado, Sever Thunderstorm, Flood, Winter Weather, Drought, Extreme Heat, Earthquake, Dam Failure, Wildfire
Action or Project	
Action/Project Number:	1.4.4
Name of Action or Project:	Citizen Preparedness
Action or Project Description:	Establish and maintain participation in citizen preparedness activities such as: CERT, COAD, Neighborhood Watch, Amateur Radio, etc.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	City of Pierce City
Risk / Vulnerability	
Problem being Mitigated:	Increased public participation and response efficiency to the mitigation of natural hazards.
Hazard(s) Addressed:	Tornado, Sever Thunderstorm, Flood, Winter Weather, Drought, Extreme Heat, Earthquake, Dam Failure, Wildfire
Action or Project	
Action/Project Number:	1.4.4
Name of Action or Project:	Citizen Preparedness
Action or Project Description:	Establish and maintain participation in citizen preparedness activities such as: CERT, COAD, Neighborhood Watch, Amateur Radio, etc.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards

Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	STAPLEE score: Priority:
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Goal 2: Ensure the continued operation of government and emergency services.

Action Worksheet	
Name of Jurisdiction:	Lawrence County
Risk / Vulnerability	
Problem being Mitigated:	Loss of Life
Hazard(s) Addressed:	All Hazards.
Action or Project	
Action/Project Number:	2.1.1
Name of Action or Project:	Continuation of emergency operations & satellite EOCs
Action or Project Description:	Continue to equip the county emergency operations center & satellite EOCs.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$2,000
Benefits:	Assists in preparedness, response & resource allocation to save lives & property.
Plan for Implementation	
Responsible Organization/Department:	EMA, 911
Action/Project Priority:	STAPLEE score: 41 Priority: High
Timeline for Completion:	On going
Potential Fund Sources:	County EMA funds, local EMA funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Ongoing and continually updating

Action Worksheet	
Name of Jurisdiction:	Lawrence County
Risk / Vulnerability	
Problem being Mitigated:	Access to information on mitigation resources.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.2
Name of Action or Project:	Database Mitigation Resources
Action or Project Description:	Establish and maintain a database on available mitigation resources and programs that can be shared with local governments, response and preparedness agencies, social service organizations, and emergency care providers.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$500-1,000
Benefits:	Save lives & property
Plan for Implementation	
Responsible Organization/Department:	Local and county EMA, 911
Action/Project Priority:	STAPLEE score: 34 Priority: High
Timeline for Completion:	Ongoing
Potential Fund Sources:	EMA (local & county), 911
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Ongoing, fluid information

Action Worksheet	
Name of Jurisdiction:	City of Aurora
Risk / Vulnerability	
Problem being Mitigated:	Access to information on mitigation resources.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.2
Name of Action or Project:	Database Mitigation Resources
Action or Project Description:	Establish and maintain a database on available mitigation resources and programs that can be shared with local governments, response and preparedness agencies, social service organizations, and emergency care providers.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards

Estimated Cost:	N/A
Benefits:	Quick access to valuable information allows for quick implementation during hazardous events.
Plan for Implementation	
Responsible Organization/Department:	ER management, Code
Action/Project Priority:	STAPLEE score: 30 Priority: High
Timeline for Completion:	5 years
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Village of Freistatt
Risk / Vulnerability	
Problem being Mitigated:	Access to information on mitigation resources.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.2
Name of Action or Project:	Database Mitigation Resources
Action or Project Description:	Establish and maintain a database on available mitigation resources and programs that can be shared with local governments, response and preparedness agencies, social service organizations, and emergency care providers.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$500-1,000
Benefits:	Reduction in loss of lives and property.
Plan for Implementation	
Responsible Organization/Department:	City
Action/Project Priority:	STAPLEE score: 38 Priority: High
Timeline for Completion:	On-going
Potential Fund Sources:	General funds, 911
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	County 911 cooperation

Action Worksheet	
Name of Jurisdiction:	City of Marionville
Risk / Vulnerability	
Problem being Mitigated:	Access to information on mitigation resources.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.2
Name of Action or Project:	Database Mitigation Resources
Action or Project Description:	Establish and maintain a database on available mitigation resources and programs that can be shared with local governments, response and preparedness agencies, social service organizations, and emergency care providers.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$1,000-5,000
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	EMD and County
Action/Project Priority:	STAPLEE score: Priority:
Timeline for Completion:	2 years
Potential Fund Sources:	Local governments, donations, educational institutions
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing In Progress
Report of Progress	Data base maintained.

Action Worksheet	
Name of Jurisdiction:	City of Miller
Risk / Vulnerability	
Problem being Mitigated:	Access to information on mitigation resources.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.2
Name of Action or Project:	Database Mitigation Resources
Action or Project Description:	Establish and maintain a database on available mitigation resources and programs that can be shared with local governments, response and preparedness agencies, social service organizations, and emergency care providers.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$100

Benefits:	Quick access to valuable information for quick implementation during hazardous events.
Plan for Implementation	
Responsible Organization/Department:	Administration
Action/Project Priority:	STAPLEE score: 25 Priority: Medium
Timeline for Completion:	6 months
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	Council
Progress Report	
Action Status	New
Report of Progress	Council

Action Worksheet	
Name of Jurisdiction:	City of Monett
Risk / Vulnerability	
Problem being Mitigated:	Access to information on mitigation resources.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.2
Name of Action or Project:	Database Mitigation Resources
Action or Project Description:	Establish and maintain a database on available mitigation resources and programs that can be shared with local governments, response and preparedness agencies, social service organizations, and emergency care providers.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$500-1,000
Benefits:	Reduction in loss of life and property.
Plan for Implementation	
Responsible Organization/Department:	Local government.
Action/Project Priority:	STAPLEE score: 34 Priority: High
Timeline for Completion:	0 years (on-going)
Potential Fund Sources:	Local funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Constantly maintain/updating files

Action Worksheet	
Name of Jurisdiction:	City of Mount Vernon
Risk / Vulnerability	
Problem being Mitigated:	Access to information on mitigation resources.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.2
Name of Action or Project:	Database Mitigation Resources
Action or Project Description:	Establish and maintain a database on available mitigation resources and programs that can be shared with local governments, response and preparedness agencies, social service organizations, and emergency care providers.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	Provide an estimate of the cost to implement this action. This can be accomplished with a range of estimated costs.
Benefits:	Quick access to valuable information for quick implementation during hazardous events.
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	City of Pierce City
Risk / Vulnerability	
Problem being Mitigated:	Access to information on mitigation resources.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.2
Name of Action or Project:	Database Mitigation Resources
Action or Project Description:	Establish and maintain a database on available mitigation resources and programs that can be shared with local governments, response and

	preparedness agencies, social service organizations, and emergency care providers.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Lawrence County
Risk / Vulnerability	
Problem being Mitigated:	County-wide awareness.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.3
Name of Action or Project:	Communication Network
Action or Project Description:	Continue to provide radios for essential emergency personnel and a designated public official or community leader in all communities to improve the county-wide communication network.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$600,000-800,000
Benefits:	Communication essential for coordinating response & safety
Plan for Implementation	
Responsible Organization/Department:	Local & county 911, LE, FIRE
Action/Project Priority:	STAPLEE score: 38 Priority: High
Timeline for Completion:	5 years
Potential Fund Sources:	Need a new tax for communication network
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started

Report of Progress	N/A
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Action Worksheet	
Name of Jurisdiction:	City of Aurora
Risk / Vulnerability	
Problem being Mitigated:	County-wide awareness.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.3
Name of Action or Project:	Communication Network
Action or Project Description:	Continue to provide radios for essential emergency personnel and a designated public official or community leader in all communities to improve the county-wide communication network.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$20,000
Benefits:	Medical
Plan for Implementation	
Responsible Organization/Department:	Police, Fire, ERM management
Action/Project Priority:	STAPLEE score: 36 Priority: High
Timeline for Completion:	3 years
Potential Fund Sources:	Grants, budget
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Village of Freistatt
Risk / Vulnerability	
Problem being Mitigated:	County-wide awareness.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.3
Name of Action or Project:	Communication Network
Action or Project Description:	Continue to provide radios for essential emergency personnel and a designated public official or community leader in all communities to improve the county-wide communication network.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$150,000

Benefits:	Reduction in loss of lives and property.
Plan for Implementation	
Responsible Organization/Department:	City
Action/Project Priority:	STAPLEE score: 33 Priority: High
Timeline for Completion:	How many months/years to complete.
Potential Fund Sources:	No funding available
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Marionville
Risk / Vulnerability	
Problem being Mitigated:	County-wide awareness.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.3
Name of Action or Project:	Communication Network
Action or Project Description:	Continue to provide radios for essential emergency personnel and a designated public official or community leader in all communities to improve the county-wide communication network.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$500-1,000
Benefits:	Limits loss of life and property damage.
Plan for Implementation	
Responsible Organization/Department:	N/A
Action/Project Priority:	STAPLEE score: 25 Priority: Medium
Timeline for Completion:	N/A
Potential Fund Sources:	Local government, grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Emergency personnel have been provided with radios.

Action Worksheet	
Name of Jurisdiction:	City of Miller

Risk / Vulnerability	
Problem being Mitigated:	County-wide awareness.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.3
Name of Action or Project:	Communication Network
Action or Project Description:	Continue to provide radios for essential emergency personnel and a designated public official or community leader in all communities to improve the county-wide communication network.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$5,000-6,000
Benefits:	Reduction in loss of life.
Plan for Implementation	
Responsible Organization/Department:	Police and fire department
Action/Project Priority:	STAPLEE score: 27 Priority: Medium
Timeline for Completion:	5 years
Potential Fund Sources:	Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	No money.

Action Worksheet	
Name of Jurisdiction:	City of Monett
Risk / Vulnerability	
Problem being Mitigated:	County-wide awareness.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.3
Name of Action or Project:	Communication Network
Action or Project Description:	Continue to provide radios for essential emergency personnel and a designated public official or community leader in all communities to improve the county-wide communication network.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$200,000
Benefits:	Reduction in loss of lives and property.
Plan for Implementation	
Responsible Organization/Department:	Local government.
Action/Project Priority:	STAPLEE score: 38 Priority: High
Timeline for Completion:	On-going
Potential Fund Sources:	Local funds

Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Combination old/need new. Having problems with county-wide communications.

Action Worksheet	
Name of Jurisdiction:	City of Mount Vernon
Risk / Vulnerability	
Problem being Mitigated:	County-wide awareness.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.3
Name of Action or Project:	Communication Network
Action or Project Description:	Continue to provide radios for essential emergency personnel and a designated public official or community leader in all communities to improve the county-wide communication network.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	City of Pierce City
Risk / Vulnerability	
Problem being Mitigated:	County-wide awareness.

Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.3
Name of Action or Project:	Communication Network
Action or Project Description:	Continue to provide radios for essential emergency personnel and a designated public official or community leader in all communities to improve the county-wide communication network.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	City of Verona
Risk / Vulnerability	
Problem being Mitigated:	County-wide awareness.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.3
Name of Action or Project:	Communication Network
Action or Project Description:	Continue to provide radios for essential emergency personnel and a designated public official or community leader in all communities to improve the county-wide communication network.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$0
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	City
Action/Project Priority:	STAPLEE score: 32 Priority: High

Timeline for Completion:	3 years
Potential Fund Sources:	Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Verona R-VII
Risk / Vulnerability	
Problem being Mitigated:	County-wide awareness.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.3
Name of Action or Project:	Communication Network
Action or Project Description:	Continue to provide radios for essential emergency personnel and a designated public official or community leader in all communities to improve the county-wide communication network.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Reduction in loss of life and injury.
Plan for Implementation	
Responsible Organization/Department:	Superintendent
Action/Project Priority:	STAPLEE score: 28 Priority: Medium
Timeline for Completion:	3 years
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Pierce City R-VI
Risk / Vulnerability	
Problem being Mitigated:	County-wide awareness.
Hazard(s) Addressed:	All Hazards

Action or Project	
Action/Project Number:	2.1.3
Name of Action or Project:	Communication Network
Action or Project Description:	Continue to provide radios for essential emergency personnel and a designated public official or community leader in all communities to improve the county-wide communication network.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$10,000
Benefits:	Reduction in loss of life and injury.
Plan for Implementation	
Responsible Organization/Department:	School District
Action/Project Priority:	STAPLEE score: 29 Priority: Medium
Timeline for Completion:	1 year
Potential Fund Sources:	Local funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Mount Vernon R-V
Risk / Vulnerability	
Problem being Mitigated:	County-wide awareness.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.3
Name of Action or Project:	Communication Network
Action or Project Description:	Continue to provide radios for essential emergency personnel and a designated public official or community leader in all communities to improve the county-wide communication network.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	STAPLEE score:18 Priority: Low
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	

Progress Report	
Action Status	Indicate status as New, Continuing Not Started, or Continuing in Progress)
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Monett R-I
Risk / Vulnerability	
Problem being Mitigated:	County-wide awareness.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.3
Name of Action or Project:	Communication Network
Action or Project Description:	Continue to provide radios for essential emergency personnel and a designated public official or community leader in all communities to improve the county-wide communication network.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$1,500
Benefits:	Reduction in loss of life.
Plan for Implementation	
Responsible Organization/Department:	School Safety Director
Action/Project Priority:	STAPLEE score: 33 Priority: High
Timeline for Completion:	Complete, but continuing.
Potential Fund Sources:	Individual organizations.
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	It is continued, working to expand it each year.

Action Worksheet	
Name of Jurisdiction:	Miller R-II
Risk / Vulnerability	
Problem being Mitigated:	County-wide awareness.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.3

Name of Action or Project:	Communication Network
Action or Project Description:	Continue to provide radios for essential emergency personnel and a designated public official or community leader in all communities to improve the county-wide communication network.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$10,000
Benefits:	Reduction in loss of life and injury.
Plan for Implementation	
Responsible Organization/Department:	School Districts, Director of Safety
Action/Project Priority:	STAPLEE score: 27 Priority: Medium
Timeline for Completion:	1 year
Potential Fund Sources:	Local Funds, Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Radios are distributed to individuals.

Action Worksheet	
Name of Jurisdiction:	Buck Prairie Special Road District
Risk / Vulnerability	
Problem being Mitigated:	County-wide awareness.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.3
Name of Action or Project:	Communication Network
Action or Project Description:	Continue to provide radios for essential emergency personnel and a designated public official or community leader in all communities to improve the county-wide communication network.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

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Action Worksheet	
Name of Jurisdiction:	Verona Road District
Risk / Vulnerability	
Problem being Mitigated:	County-wide awareness.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.3
Name of Action or Project:	Communication Network
Action or Project Description:	Continue to provide radios for essential emergency personnel and a designated public official or community leader in all communities to improve the county-wide communication network.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Mt. Vernon Benefit Road District
Risk / Vulnerability	
Problem being Mitigated:	County-wide awareness.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.3
Name of Action or Project:	Communication Network

Action or Project Description:	Continue to provide radios for essential emergency personnel and a designated public official or community leader in all communities to improve the county-wide communication network.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Lawrence County
Risk / Vulnerability	
Problem being Mitigated:	Countywide frequency repeater network
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.4
Name of Action or Project:	Countywide Network Increase
Action or Project Description:	Continue to increase countywide frequency repeater network, including new wireless units
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$600,000-800,000
Benefits:	Communication is essential for coordinating response and safety.
Plan for Implementation	
Responsible Organization/Department:	911, EMA, LE, FIRE
Action/Project Priority:	STAPLEE score: 40 Priority: High
Timeline for Completion:	1-5 years
Potential Fund Sources:	Need new funding source

Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Aurora
Risk / Vulnerability	
Problem being Mitigated:	Countywide frequency repeater network
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.4
Name of Action or Project:	Countywide Network Increase
Action or Project Description:	Continue to increase countywide frequency repeater network, including new wireless units
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$20,000
Benefits:	Communication is essential for coordinating response and safety.
Plan for Implementation	
Responsible Organization/Department:	Police, Fire, ER management
Action/Project Priority:	STAPLEE score: 35 Priority: High
Timeline for Completion:	4 years
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Village of Freistatt
Risk / Vulnerability	
Problem being Mitigated:	Countywide frequency repeater network

Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.4
Name of Action or Project:	Countywide Network Increase
Action or Project Description:	Continue to increase countywide frequency repeater network, including new wireless units
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$100,000
Benefits:	Reduction in loss of lives.
Plan for Implementation	
Responsible Organization/Department:	City/County
Action/Project Priority:	STAPLEE score: 31 Priority: High
Timeline for Completion:	5+ years
Potential Fund Sources:	Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Marionville
Risk / Vulnerability	
Problem being Mitigated:	Countywide frequency repeater network
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.4
Name of Action or Project:	Countywide Network Increase
Action or Project Description:	Continue to increase countywide frequency repeater network, including new wireless units
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$8,000-20,000
Benefits:	Increased awareness for emergency personnel, which allows for a faster response.
Plan for Implementation	
Responsible Organization/Department:	Local EMD, Public Safety Administrator
Action/Project Priority:	STAPLEE score: 29 Priority: Medium
Timeline for Completion:	N/A
Potential Fund Sources:	Grants

Local Planning Mechanisms to be Used in Implementation, if any:	Local Government, Public Entities
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Established and maintained

Action Worksheet	
Name of Jurisdiction:	City of Monett
Risk / Vulnerability	
Problem being Mitigated:	Countywide frequency repeater network
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.4
Name of Action or Project:	Countywide Network Increase
Action or Project Description:	Continue to increase countywide frequency repeater network, including new wireless units
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$300,000
Benefits:	Reduction in loss of lives and property. Officer safety.
Plan for Implementation	
Responsible Organization/Department:	Local/County government
Action/Project Priority:	STAPLEE score: 38 Priority: High
Timeline for Completion:	5+ years
Potential Fund Sources:	Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	Funding barrier

Action Worksheet	
Name of Jurisdiction:	City of Mount Vernon
Risk / Vulnerability	
Problem being Mitigated:	Countywide frequency repeater network
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.4

Name of Action or Project:	Countywide Network Increase
Action or Project Description:	Continue to increase countywide frequency repeater network, including new wireless units
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	City of Pierce City
Risk / Vulnerability	
Problem being Mitigated:	Countywide frequency repeater network
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.4
Name of Action or Project:	Countywide Network Increase
Action or Project Description:	Continue to increase countywide frequency repeater network, including new wireless units
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Mount Vernon R-V
Risk / Vulnerability	
Problem being Mitigated:	Countywide frequency repeater network
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.4
Name of Action or Project:	Countywide Network Increase
Action or Project Description:	Continue to increase countywide frequency repeater network, including new wireless units
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	STAPLEE score: 40 Priority: High
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Buck Prairie Special Road District
Risk / Vulnerability	
Problem being Mitigated:	Countywide frequency repeater network
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.4
Name of Action or Project:	Countywide Network Increase
Action or Project Description:	Continue to increase countywide frequency repeater network, including new wireless units

Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Verona Road District
Risk / Vulnerability	
Problem being Mitigated:	Countywide frequency repeater network
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.4
Name of Action or Project:	Countywide Network Increase
Action or Project Description:	Continue to increase countywide frequency repeater network, including new wireless units
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	

Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Mt. Vernon Benefit Road District
Risk / Vulnerability	
Problem being Mitigated:	Countywide frequency repeater network
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.1.4
Name of Action or Project:	Countywide Network Increase
Action or Project Description:	Continue to increase countywide frequency repeater network, including new wireless units
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Lawrence County
Risk / Vulnerability	
Problem being Mitigated:	Efficiency to examine plans from schools and medical facilities.
Hazard(s) Addressed:	All Hazards.
Action or Project	

Action/Project Number:	2.1.5
Name of Action or Project:	Community Plan Coordination
Action or Project Description:	Collect & coordinate plans from schools and medical facilities, such as emergency operations plans, floor plans, and others that may apply.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$1,000-2,000
Benefits:	Save lives & property
Plan for Implementation	
Responsible Organization/Department:	911, EMA, Schools, Hospitals
Action/Project Priority:	STAPLEE score: 36 Priority: High
Timeline for Completion:	6 months – 1 year
Potential Fund Sources:	New Funding Needed
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Fluid Documents

Action Worksheet	
Name of Jurisdiction:	Lawrence County
Risk / Vulnerability	
Problem being Mitigated:	Efficiency of public officials to respond to natural hazard events.
Hazard(s) Addressed:	All natural hazards
Action or Project	
Action/Project Number:	2.1.6
Name of Action or Project:	NIMS Training
Action or Project Description:	All elected officials, public administrators, community stakeholders and responders will participate in the National Incident Management System (NIMS) and WebEOC training programs.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	Time & \$1,000
Benefits:	Resource, situational awareness and communication that would save lives and property.
Plan for Implementation	
Responsible Organization/Department:	EMA, Mayors, Commissioners
Action/Project Priority:	STAPLEE score: 32 Priority: High
Timeline for Completion:	6 months – 1 years
Potential Fund Sources:	EMA, department funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	

Action Status	Continuing in Progress
Report of Progress	Staff changes make this difficult

Action Worksheet	
Name of Jurisdiction:	City of Aurora
Risk / Vulnerability	
Problem being Mitigated:	Efficiency of public officials to respond to natural hazard events.
Hazard(s) Addressed:	All natural hazards
Action or Project	
Action/Project Number:	2.1.6
Name of Action or Project:	NIMS Training
Action or Project Description:	All elected officials, public administrators, community stakeholders and responders will participate in the National Incident Management System (NIMS) and WebEOC training programs.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$2,000
Benefits:	N/A
Plan for Implementation	
Responsible Organization/Department:	All departments
Action/Project Priority:	STAPLEE score: 35 Priority: High
Timeline for Completion:	2 years
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Village of Freistatt
Risk / Vulnerability	
Problem being Mitigated:	Efficiency of public officials to respond to natural hazard events.
Hazard(s) Addressed:	All natural hazards
Action or Project	
Action/Project Number:	2.1.6
Name of Action or Project:	NIMS Training
Action or Project Description:	All elected officials, public administrators, community stakeholders and responders will participate in the National Incident Management System (NIMS) and WebEOC training programs.

Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$100-500
Benefits:	Reduction in loss of lives.
Plan for Implementation	
Responsible Organization/Department:	City
Action/Project Priority:	STAPLEE score: 34 Priority: High
Timeline for Completion:	1 year
Potential Fund Sources:	General funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Marionville
Risk / Vulnerability	
Problem being Mitigated:	Efficiency of public officials to respond to natural hazard events.
Hazard(s) Addressed:	All natural hazards
Action or Project	
Action/Project Number:	2.1.6
Name of Action or Project:	NIMS Training
Action or Project Description:	All elected officials, public administrators, community stakeholders and responders will participate in the National Incident Management System (NIMS) and WebEOC training programs.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$200-500
Benefits:	Reduction in loss of lives and property with increased training.
Plan for Implementation	
Responsible Organization/Department:	Local EMD, Mayor
Action/Project Priority:	STAPLEE score: 34 Priority: High
Timeline for Completion:	1-2 years
Potential Fund Sources:	Local Government
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet

Name of Jurisdiction:	City of Miller
Risk / Vulnerability	
Problem being Mitigated:	Efficiency of public officials to respond to natural hazard events.
Hazard(s) Addressed:	All natural hazards
Action or Project	
Action/Project Number:	2.1.6
Name of Action or Project:	NIMS Training
Action or Project Description:	All elected officials, public administrators, community stakeholders and responders will participate in the National Incident Management System (NIMS) and WebEOC training programs.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Reduction in loss of lives and property with increased training.
Plan for Implementation	
Responsible Organization/Department:	Local EMD
Action/Project Priority:	STAPLEE score: 21 Priority: Low
Timeline for Completion:	N/A
Potential Fund Sources:	Local funds, Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Monett
Risk / Vulnerability	
Problem being Mitigated:	Efficiency of public officials to respond to natural hazard events.
Hazard(s) Addressed:	All natural hazards
Action or Project	
Action/Project Number:	2.1.6
Name of Action or Project:	NIMS Training
Action or Project Description:	All elected officials, public administrators, community stakeholders and responders will participate in the National Incident Management System (NIMS) and WebEOC training programs.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$100-5000
Benefits:	Reduction in loss of life and property.
Plan for Implementation	
Responsible Organization/Department:	N/A

Action/Project Priority:	STAPLEE score: 36 Priority: High
Timeline for Completion:	On-going
Potential Fund Sources:	General Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Getting everyone to participate is a barrier.

Action Worksheet	
Name of Jurisdiction:	City of Mount Vernon
Risk / Vulnerability	
Problem being Mitigated:	Efficiency of public officials to respond to natural hazard events.
Hazard(s) Addressed:	All natural hazards
Action or Project	
Action/Project Number:	2.1.6
Name of Action or Project:	NIMS Training
Action or Project Description:	All elected officials, public administrators, community stakeholders and responders will participate in the National Incident Management System (NIMS) and WebEOC training programs.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	City of Pierce City
Risk / Vulnerability	
Problem being Mitigated:	Efficiency of public officials to respond to natural hazard events.

Hazard(s) Addressed:	All natural hazards
Action or Project	
Action/Project Number:	2.1.6
Name of Action or Project:	NIMS Training
Action or Project Description:	All elected officials, public administrators, community stakeholders and responders will participate in the National Incident Management System (NIMS) and WebEOC training programs.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	City of Verona
Risk / Vulnerability	
Problem being Mitigated:	Efficiency of public officials to respond to natural hazard events.
Hazard(s) Addressed:	All natural hazards
Action or Project	
Action/Project Number:	2.1.6
Name of Action or Project:	NIMS Training
Action or Project Description:	All elected officials, public administrators, community stakeholders and responders will participate in the National Incident Management System (NIMS) and WebEOC training programs.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$0
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	Local Government

Action/Project Priority:	STAPLEE score: 29 Priority: Medium
Timeline for Completion:	2 years
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	Provide classes at City Hall.
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Verona R-VII
Risk / Vulnerability	
Problem being Mitigated:	Efficiency of public officials to respond to natural hazard events.
Hazard(s) Addressed:	All natural hazards
Action or Project	
Action/Project Number:	2.1.6
Name of Action or Project:	NIMS Training
Action or Project Description:	All elected officials, public administrators, community stakeholders and responders will participate in the National Incident Management System (NIMS) and WebEOC training programs.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	The more people that are trained, the better opportunity to provide safety for the community.
Plan for Implementation	
Responsible Organization/Department:	School District
Action/Project Priority:	STAPLEE score: 26 Priority: Medium
Timeline for Completion:	N/A
Potential Fund Sources:	Grants, Local Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Pierce City R-VI
Risk / Vulnerability	

Problem being Mitigated:	Efficiency of public officials to respond to natural hazard events.
Hazard(s) Addressed:	All natural hazards
Action or Project	
Action/Project Number:	2.1.6
Name of Action or Project:	NIMS Training
Action or Project Description:	All elected officials, public administrators, community stakeholders and responders will participate in the National Incident Management System (NIMS) and WebEOC training programs.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$30,000
Benefits:	Reduction in loss of life and injury.
Plan for Implementation	
Responsible Organization/Department:	School District
Action/Project Priority:	STAPLEE score: 20 Priority: Low
Timeline for Completion:	3 years
Potential Fund Sources:	Grants, Local Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Mount Vernon R-V
Risk / Vulnerability	
Problem being Mitigated:	Efficiency of public officials to respond to natural hazard events.
Hazard(s) Addressed:	All natural hazards
Action or Project	
Action/Project Number:	2.1.6
Name of Action or Project:	NIMS Training
Action or Project Description:	All elected officials, public administrators, community stakeholders and responders will participate in the National Incident Management System (NIMS) and WebEOC training programs.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	Which organization will be responsible for tracking this action? Be specific to include the specific department or position within a department.
Action/Project Priority:	STAPLEE score: 36 Priority: High
Timeline for Completion:	

Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Indicate status as New, Continuing Not Started, or Continuing in Progress)
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Monett R-I
Risk / Vulnerability	
Problem being Mitigated:	Efficiency of public officials to respond to natural hazard events.
Hazard(s) Addressed:	All natural hazards
Action or Project	
Action/Project Number:	2.1.6
Name of Action or Project:	NIMS Training
Action or Project Description:	All elected officials, public administrators, community stakeholders and responders will participate in the National Incident Management System (NIMS) and WebEOC training programs.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$500
Benefits:	Reduction in loss of life.
Plan for Implementation	
Responsible Organization/Department:	County
Action/Project Priority:	STAPLEE score: 23 Priority: Low
Timeline for Completion:	4+ years
Potential Fund Sources:	School Board, County, City Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Miller R-II
Risk / Vulnerability	
Problem being Mitigated:	Efficiency of public officials to respond to natural hazard events.
Hazard(s) Addressed:	All natural hazards
Action or Project	

Action/Project Number:	2.1.6
Name of Action or Project:	NIMS Training
Action or Project Description:	All elected officials, public administrators, community stakeholders and responders will participate in the National Incident Management System (NIMS) and WebEOC training programs.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$30,000
Benefits:	The more people that are trained, the better opportunity to provide safety for the community.
Plan for Implementation	
Responsible Organization/Department:	School District, Director of Safety
Action/Project Priority:	STAPLEE score: 20 Priority: Low
Timeline for Completion:	3 years
Potential Fund Sources:	Grants, Local Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	Lack of finances and computer hardware and software.

Action Worksheet	
Name of Jurisdiction:	Marionville R-IX
Risk / Vulnerability	
Problem being Mitigated:	Efficiency of public officials to respond to natural hazard events.
Hazard(s) Addressed:	All natural hazards
Action or Project	
Action/Project Number:	2.1.6
Name of Action or Project:	NIMS Training
Action or Project Description:	All elected officials, public administrators, community stakeholders and responders will participate in the National Incident Management System (NIMS) and WebEOC training programs.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	The more people that are trained, the better opportunity to provide safety for the community.
Plan for Implementation	
Responsible Organization/Department:	County officials, School District
Action/Project Priority:	STAPLEE score: 31 Priority: High
Timeline for Completion:	1 year
Potential Fund Sources:	Local Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A

Progress Report	
Action Status	New
Report of Progress	Finding appropriate training sessions which meet criteria.

Action Worksheet	
Name of Jurisdiction:	Miller Benefit Special Road District
Risk / Vulnerability	
Problem being Mitigated:	Efficiency of public officials to respond to natural hazard events.
Hazard(s) Addressed:	All natural hazards
Action or Project	
Action/Project Number:	2.1.6
Name of Action or Project:	NIMS Training
Action or Project Description:	All elected officials, public administrators, community stakeholders and responders will participate in the National Incident Management System (NIMS) and WebEOC training programs.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Gives beneficial information to workers.
Plan for Implementation	
Responsible Organization/Department:	Road Supervisor
Action/Project Priority:	STAPLEE score: 37 Priority: High
Timeline for Completion:	N/A
Potential Fund Sources:	Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Buck Prairie Special Road District
Risk / Vulnerability	
Problem being Mitigated:	Efficiency of public officials to respond to natural hazard events.
Hazard(s) Addressed:	All natural hazards
Action or Project	
Action/Project Number:	2.1.6
Name of Action or Project:	NIMS Training
Action or Project Description:	All elected officials, public administrators, community stakeholders and responders will participate in the National Incident Management System (NIMS) and WebEOC training programs.

Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	Provide an estimate of the cost to implement this action. This can be accomplished with a range of estimated costs.
Benefits:	Provide a narrative describing the losses that will be avoided by implementing this action. If dollar amounts of avoided losses are known, include them as well.
Plan for Implementation	
Responsible Organization/Department:	Which organization will be responsible for tracking this action? Be specific to include the specific department or position within a department.
Action/Project Priority:	Include the STAPLEE score and Priority (H, M, L)
Timeline for Completion:	How many months/years to complete.
Potential Fund Sources:	List specific funding sources that may be used to pay for the implementation of the action.
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Indicate status as New, Continuing Not Started, or Continuing in Progress)
Report of Progress	For Continuing actions only, indicate the report on progress. If the action is not started, indicate any barriers encountered to initiate the action. If the action is in progress, indicate the activity that has occurred to date.
Action Worksheet	
Name of Jurisdiction:	Verona Road District
Risk / Vulnerability	
Problem being Mitigated:	Efficiency of public officials to respond to natural hazard events.
Hazard(s) Addressed:	All natural hazards
Action or Project	
Action/Project Number:	2.1.6
Name of Action or Project:	NIMS Training
Action or Project Description:	All elected officials, public administrators, community stakeholders and responders will participate in the National Incident Management System (NIMS) and WebEOC training programs.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	Provide an estimate of the cost to implement this action. This can be accomplished with a range of estimated costs.

Benefits:	Provide a narrative describing the losses that will be avoided by implementing this action. If dollar amounts of avoided losses are known, include them as well.
Plan for Implementation	
Responsible Organization/Department:	Which organization will be responsible for tracking this action? Be specific to include the specific department or position within a department.
Action/Project Priority:	Include the STAPLEE score and Priority (H, M, L)
Timeline for Completion:	How many months/years to complete.
Potential Fund Sources:	List specific funding sources that may be used to pay for the implementation of the action.
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Indicate status as New, Continuing Not Started, or Continuing in Progress)
Report of Progress	For Continuing actions only, indicate the report on progress. If the action is not started, indicate any barriers encountered to initiate the action. If the action is in progress, indicate the activity that has occurred to date.
Action Worksheet	
Name of Jurisdiction:	Mt. Vernon Benefit Road District
Risk / Vulnerability	
Problem being Mitigated:	Efficiency of public officials to respond to natural hazard events.
Hazard(s) Addressed:	All natural hazards
Action or Project	
Action/Project Number:	2.1.6
Name of Action or Project:	NIMS Training
Action or Project Description:	All elected officials, public administrators, community stakeholders and responders will participate in the National Incident Management System (NIMS) and WebEOC training programs.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	Provide an estimate of the cost to implement this action. This can be accomplished with a range of estimated costs.

Benefits:	Provide a narrative describing the losses that will be avoided by implementing this action. If dollar amounts of avoided losses are known, include them as well.
Plan for Implementation	
Responsible Organization/Department:	Which organization will be responsible for tracking this action? Be specific to include the specific department or position within a department.
Action/Project Priority:	Include the STAPLEE score and Priority (H, M, L)
Timeline for Completion:	How many months/years to complete.
Potential Fund Sources:	List specific funding sources that may be used to pay for the implementation of the action.
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Indicate status as New, Continuing Not Started, or Continuing in Progress)
Report of Progress	For Continuing actions only, indicate the report on progress. If the action is not started, indicate any barriers encountered to initiate the action. If the action is in progress, indicate the activity that has occurred to date.

Action Worksheet	
Name of Jurisdiction:	Green Benefit Road District
Risk / Vulnerability	
Problem being Mitigated:	Efficiency of public officials to respond to natural hazard events.
Hazard(s) Addressed:	All natural hazards
Action or Project	
Action/Project Number:	2.1.6
Name of Action or Project:	NIMS Training
Action or Project Description:	All elected officials, public administrators, community stakeholders and responders will participate in the National Incident Management System (NIMS) and WebEOC training programs.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Reduction in loss of life.
Plan for Implementation	
Responsible Organization/Department:	N/A

Action/Project Priority:	STAPLEE score: 36 Priority: High
Timeline for Completion:	N/A
Potential Fund Sources:	Grants, General Fund
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Lawrence County
Risk / Vulnerability	
Problem being Mitigated:	Accessibility of fire stations to areas.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.2.1
Name of Action or Project:	Construction of Fire Stations
Action or Project Description:	Construct additional fire stations in communities and rural fire districts or fire protection associations to improve accessibility to areas impacted by natural or manmade barriers during hazard events.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	No cost to county
Benefits:	Better response time means lives and property saved.
Plan for Implementation	
Responsible Organization/Department:	Local fire jurisdictions
Action/Project Priority:	STAPLEE score: 32 Priority: High
Timeline for Completion:	5 years
Potential Fund Sources:	Tax funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Village of Freistatt

Risk / Vulnerability	
Problem being Mitigated:	Accessibility of fire stations to areas.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.2.1
Name of Action or Project:	Construction of Fire Stations
Action or Project Description:	Construct additional fire stations in communities and rural fire districts or fire protection associations to improve accessibility to areas impacted by natural or manmade barriers during hazard events.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Reduction in loss of lives and property.
Plan for Implementation	
Responsible Organization/Department:	City
Action/Project Priority:	STAPLEE score: 41 Priority: High
Timeline for Completion:	3-5 years
Potential Fund Sources:	Local government
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Marionville
Risk / Vulnerability	
Problem being Mitigated:	Accessibility of fire stations to areas.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.2.1
Name of Action or Project:	Construction of Fire Stations
Action or Project Description:	Construct additional fire stations in communities and rural fire districts or fire protection associations to improve accessibility to areas impacted by natural or manmade barriers during hazard events.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$400,000
Benefits:	Reduce loss of lives and property with faster response time.
Plan for Implementation	
Responsible Organization/Department:	Fire department, Board of Aldermen
Action/Project Priority:	STAPLEE score: 23 Priority: Low
Timeline for Completion:	5+ years

Potential Fund Sources:	Grants, Loans
Local Planning Mechanisms to be Used in Implementation, if any:	N/a
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Fire Stations are already constructed, not cost feasible.

Action Worksheet	
Name of Jurisdiction:	City of Monett
Risk / Vulnerability	
Problem being Mitigated:	Accessibility of fire stations to areas.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.2.1
Name of Action or Project:	Construction of Fire Stations
Action or Project Description:	Construct additional fire stations in communities and rural fire districts or fire protection associations to improve accessibility to areas impacted by natural or manmade barriers during hazard events.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$1,000,000
Benefits:	Reduction in loss of life and property.
Plan for Implementation	
Responsible Organization/Department:	Local Government
Action/Project Priority:	STAPLEE score: 34 Priority: High
Timeline for Completion:	5+ years
Potential Fund Sources:	Local funding/Tax
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	Financial barrier

Action Worksheet	
Name of Jurisdiction:	City of Mount Vernon
Risk / Vulnerability	
Problem being Mitigated:	Accessibility of fire stations to areas.
Hazard(s) Addressed:	All Hazards

Action or Project	
Action/Project Number:	2.2.1
Name of Action or Project:	Construction of Fire Stations
Action or Project Description:	Construct additional fire stations in communities and rural fire districts or fire protection associations to improve accessibility to areas impacted by natural or manmade barriers during hazard events.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	Provide an estimate of the cost to implement this action. This can be accomplished with a range of estimated costs.
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	City of Pierce City
Risk / Vulnerability	
Problem being Mitigated:	Accessibility of fire stations to areas.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	2.2.1
Name of Action or Project:	Construction of Fire Stations
Action or Project Description:	Construct additional fire stations in communities and rural fire districts or fire protection associations to improve accessibility to areas impacted by natural or manmade barriers during hazard events.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	Provide an estimate of the cost to implement this action. This can be accomplished with a range of estimated costs.
Benefits:	

Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Goal 3: Ensure the functional operation of critical infrastructures serving the public and the local economy.

Action Worksheet	
Name of Jurisdiction:	City of Aurora
Risk / Vulnerability	
Problem being Mitigated:	Hazards impacting wastewater treatment facilities.
Hazard(s) Addressed:	Flooding, Earthquakes, Tornados
Action or Project	
Action/Project Number:	3.1.1
Name of Action or Project:	Wastewater Treatment
Action or Project Description:	Maintain appropriate operations of wastewater treatment facilities and reduce &/or eliminate hazard risks.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	N/A
Plan for Implementation	
Responsible Organization/Department:	N/A
Action/Project Priority:	STAPLEE score: 32 Priority: High
Timeline for Completion:	N/A
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Village of Freistatt
Risk / Vulnerability	
Problem being Mitigated:	Hazards impacting wastewater treatment facilities.
Hazard(s) Addressed:	Flooding, Earthquakes, Tornados
Action or Project	
Action/Project Number:	3.1.1
Name of Action or Project:	Wastewater Treatment
Action or Project Description:	Maintain appropriate operations of wastewater treatment facilities and reduce &/or eliminate hazard risks.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Maintain water resource and health benefits
Plan for Implementation	
Responsible Organization/Department:	City
Action/Project Priority:	STAPLEE score: 26 Priority: High
Timeline for Completion:	1-3 years
Potential Fund Sources:	Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	System is being maintained.

Action Worksheet	
Name of Jurisdiction:	City of Marionville
Risk / Vulnerability	
Problem being Mitigated:	Hazards impacting wastewater treatment facilities.
Hazard(s) Addressed:	Flooding, Earthquakes, Tornados
Action or Project	
Action/Project Number:	3.1.1
Name of Action or Project:	Wastewater Treatment
Action or Project Description:	Maintain appropriate operations of wastewater treatment facilities and reduce &/or eliminate hazard risks.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$5,000-10,000

Benefits:	Reduce property damage and environmental damage.
Plan for Implementation	
Responsible Organization/Department:	Board of Aldermen, Sewer Department
Action/Project Priority:	STAPLEE score: 36 Priority: High
Timeline for Completion:	On-going
Potential Fund Sources:	Local government, Loans, Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Facilities maintained and upgraded as needed

Action Worksheet	
Name of Jurisdiction:	City of Miller
Risk / Vulnerability	
Problem being Mitigated:	Hazards impacting wastewater treatment facilities.
Hazard(s) Addressed:	Flooding, Earthquakes, Tornados
Action or Project	
Action/Project Number:	3.1.1
Name of Action or Project:	Wastewater Treatment
Action or Project Description:	Maintain appropriate operations of wastewater treatment facilities and reduce &/or eliminate hazard risks.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$1.5 million
Benefits:	N/A
Plan for Implementation	
Responsible Organization/Department:	Water & sewer departments
Action/Project Priority:	STAPLEE score: 29 Priority: Medium
Timeline for Completion:	5 years
Potential Fund Sources:	Grants
Local Planning Mechanisms to be Used in Implementation, if any:	Council & engineers
Progress Report	
Action Status	Continuing In Progress
Report of Progress	Slow progress

Action Worksheet	
Name of Jurisdiction:	City of Monett

Risk / Vulnerability	
Problem being Mitigated:	Hazards impacting wastewater treatment facilities.
Hazard(s) Addressed:	Flooding, Earthquakes, Tornadoes
Action or Project	
Action/Project Number:	3.1.1
Name of Action or Project:	Wastewater Treatment
Action or Project Description:	Maintain appropriate operations of wastewater treatment facilities and reduce &/or eliminate hazard risks.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Water resource
Plan for Implementation	
Responsible Organization/Department:	Local Government
Action/Project Priority:	STAPLEE score: 34 Priority: High
Timeline for Completion:	0 years
Potential Fund Sources:	Local funding
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	New WWT in place.

Action Worksheet	
Name of Jurisdiction:	City of Mount Vernon
Risk / Vulnerability	
Problem being Mitigated:	Hazards impacting wastewater treatment facilities.
Hazard(s) Addressed:	Flooding, Earthquakes, Tornadoes
Action or Project	
Action/Project Number:	3.1.1
Name of Action or Project:	Wastewater Treatment
Action or Project Description:	Maintain appropriate operations of wastewater treatment facilities and reduce &/or eliminate hazard risks.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	Provide an estimate of the cost to implement this action. This can be accomplished with a range of estimated costs.
Benefits:	

Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	City of Pierce City
Risk / Vulnerability	
Problem being Mitigated:	Hazards impacting wastewater treatment facilities.
Hazard(s) Addressed:	Flooding, Earthquakes, Tornados
Action or Project	
Action/Project Number:	3.1.1
Name of Action or Project:	Wastewater Treatment
Action or Project Description:	Maintain appropriate operations of wastewater treatment facilities and reduce &/or eliminate hazard risks.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	STAPLEE score: Priority:
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet

Name of Jurisdiction:	City of Verona
Risk / Vulnerability	
Problem being Mitigated:	Hazards impacting wastewater treatment facilities.
Hazard(s) Addressed:	Flooding, Earthquakes, Tornados
Action or Project	
Action/Project Number:	3.1.1
Name of Action or Project:	Wastewater Treatment
Action or Project Description:	Maintain appropriate operations of wastewater treatment facilities and reduce &/or eliminate hazard risks.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	STAPLEE score: 31 Priority: High
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Indicate status as New, Continuing Not Started, or Continuing in Progress)
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Lawrence County
Risk / Vulnerability	
Problem being Mitigated:	Access to backup power generators in public buildings.
Hazard(s) Addressed:	Earthquakes, Thunderstorms, Tornado, Winter Weather
Action or Project	
Action/Project Number:	3.1.2
Name of Action or Project:	Backup Power Generators
Action or Project Description:	Promote the location of backup power generators in all new and existing city halls, schools, hospitals, nursing homes, fire departments and other critical or vulnerable facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$180,000 per site
Benefits:	Protect lives and property.
Plan for Implementation	

Responsible Organization/Department:	County and local EMA & Administration
Action/Project Priority:	STAPLEE score: 30 Priority: High
Timeline for Completion:	1 year
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Aurora
Risk / Vulnerability	
Problem being Mitigated:	Access to backup power generators in public buildings.
Hazard(s) Addressed:	Earthquakes, Thunderstorms, Tornado, Winter Weather
Action or Project	
Action/Project Number:	3.1.2
Name of Action or Project:	Backup Power Generators
Action or Project Description:	Promote the location of backup power generators in all new and existing city halls, schools, hospitals, nursing homes, fire departments and other critical or vulnerable facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$100,000
Benefits:	Medical
Plan for Implementation	
Responsible Organization/Department:	Code, ER Management
Action/Project Priority:	STAPLEE score: 33 Priority: High
Timeline for Completion:	5 years
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Village of Freistatt
Risk / Vulnerability	
Problem being Mitigated:	Access to backup power generators in public buildings.

Hazard(s) Addressed:	Earthquakes, Thunderstorms, Tornado, Winter Weather
Action or Project	
Action/Project Number:	3.1.2
Name of Action or Project:	Backup Power Generators
Action or Project Description:	Promote the location of backup power generators in all new and existing city halls, schools, hospitals, nursing homes, fire departments and other critical or vulnerable facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$100
Benefits:	Equipment breakdown and delays in restoration.
Plan for Implementation	
Responsible Organization/Department:	City
Action/Project Priority:	STAPLEE score: 38 Priority: High
Timeline for Completion:	1-3 months
Potential Fund Sources:	General funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Marionville
Risk / Vulnerability	
Problem being Mitigated:	Access to backup power generators in public buildings.
Hazard(s) Addressed:	Earthquakes, Thunderstorms, Tornado, Winter Weather
Action or Project	
Action/Project Number:	3.1.2
Name of Action or Project:	Backup Power Generators
Action or Project Description:	Promote the location of backup power generators in all new and existing city halls, schools, hospitals, nursing homes, fire departments and other critical or vulnerable facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$1,000-3,000
Benefits:	Reduce loss of property.
Plan for Implementation	
Responsible Organization/Department:	Local EMD, Public Safety Administrator
Action/Project Priority:	STAPLEE score:32 Priority: High
Timeline for Completion:	1-2 years
Potential Fund Sources:	Private donations, local Government
Local Planning Mechanisms to be Used in Implementation, if any:	N/A

Progress Report	
Action Status	Continuing in Progress
Report of Progress	Fire department has one, but it can be moved.

Action Worksheet	
Name of Jurisdiction:	City of Miller
Risk / Vulnerability	
Problem being Mitigated:	Access to backup power generators in public buildings.
Hazard(s) Addressed:	Earthquakes, Thunderstorms, Tornado, Winter Weather
Action or Project	
Action/Project Number:	3.1.2
Name of Action or Project:	Backup Power Generators
Action or Project Description:	Promote the location of backup power generators in all new and existing city halls, schools, hospitals, nursing homes, fire departments and other critical or vulnerable facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$100
Benefits:	Increased safety for the public.
Plan for Implementation	
Responsible Organization/Department:	Fire department
Action/Project Priority:	STAPLEE score: 20 Priority: Low
Timeline for Completion:	6-12 months
Potential Fund Sources:	Donations
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Monett
Risk / Vulnerability	
Problem being Mitigated:	Access to backup power generators in public buildings.
Hazard(s) Addressed:	Earthquakes, Thunderstorms, Tornado, Winter Weather
Action or Project	
Action/Project Number:	3.1.2
Name of Action or Project:	Backup Power Generators
Action or Project Description:	Promote the location of backup power generators in all new and existing city halls, schools, hospitals, nursing homes, fire departments and other critical or vulnerable facilities.

Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$100,000 per site
Benefits:	Save lives and property during power outages.
Plan for Implementation	
Responsible Organization/Department:	EOC, FIRE
Action/Project Priority:	STAPLEE score: 31 Priority: High
Timeline for Completion:	1.5 years
Potential Fund Sources:	General Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Some buildings currently have backup generators.

Action Worksheet	
Name of Jurisdiction:	City of Mount Vernon
Risk / Vulnerability	
Problem being Mitigated:	Access to backup power generators in public buildings.
Hazard(s) Addressed:	Earthquakes, Thunderstorms, Tornado, Winter Weather
Action or Project	
Action/Project Number:	3.1.2
Name of Action or Project:	Backup Power Generators
Action or Project Description:	Promote the location of backup power generators in all new and existing city halls, schools, hospitals, nursing homes, fire departments and other critical or vulnerable facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Indicate status as New, Continuing Not Started, or Continuing in Progress)
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	City of Pierce City
Risk / Vulnerability	
Problem being Mitigated:	Access to backup power generators in public buildings.
Hazard(s) Addressed:	Earthquakes, Thunderstorms, Tornado, Winter Weather
Action or Project	
Action/Project Number:	3.1.2
Name of Action or Project:	Backup Power Generators
Action or Project Description:	Promote the location of backup power generators in all new and existing city halls, schools, hospitals, nursing homes, fire departments and other critical or vulnerable facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	STAPLEE score: Priority:
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Indicate status as New, Continuing Not Started, or Continuing in Progress
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Marionville R-IX
Risk / Vulnerability	
Problem being Mitigated:	Access to backup power generators in public buildings.
Hazard(s) Addressed:	Earthquakes, Thunderstorms, Tornado, Winter Weather
Action or Project	
Action/Project Number:	3.1.2
Name of Action or Project:	Backup Power Generators
Action or Project Description:	Promote the location of backup power generators in all new and existing city halls, schools, hospitals, nursing homes, fire departments and other critical or vulnerable facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards

Estimated Cost:	\$10,000-20,000
Benefits:	Reduction in loss of life.
Plan for Implementation	
Responsible Organization/Department:	School District
Action/Project Priority:	STAPLEE score: 28 Priority: Medium
Timeline for Completion:	1 year
Potential Fund Sources:	Federal/Local funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	District could not justify the expense associated with the purchasing of generators.

Action Worksheet	
Name of Jurisdiction:	Mount Vernon R-V
Risk / Vulnerability	
Problem being Mitigated:	Access to backup power generators in public buildings.
Hazard(s) Addressed:	Earthquakes, Thunderstorms, Tornado, Winter Weather
Action or Project	
Action/Project Number:	3.1.2
Name of Action or Project:	Backup Power Generators
Action or Project Description:	Promote the location of backup power generators in all new and existing city halls, schools, hospitals, nursing homes, fire departments and other critical or vulnerable facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	STAPLEE score: 35 Priority: High
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Indicate status as New, Continuing Not Started, or Continuing in Progress)
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Verona R-VII
Risk / Vulnerability	
Problem being Mitigated:	Access to backup power generators in public buildings.
Hazard(s) Addressed:	Earthquakes, Thunderstorms, Tornado, Winter Weather
Action or Project	
Action/Project Number:	3.1.2
Name of Action or Project:	Backup Power Generators
Action or Project Description:	Promote the location of backup power generators in all new and existing city halls, schools, hospitals, nursing homes, fire departments and other critical or vulnerable facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$10,000
Benefits:	Reduction in loss of life.
Plan for Implementation	
Responsible Organization/Department:	School District
Action/Project Priority:	STAPLEE score: 27 Priority: Medium
Timeline for Completion:	N/A
Potential Fund Sources:	Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Pierce City R-VI
Risk / Vulnerability	
Problem being Mitigated:	Access to backup power generators in public buildings.
Hazard(s) Addressed:	Earthquakes, Thunderstorms, Tornado, Winter Weather
Action or Project	
Action/Project Number:	3.1.2
Name of Action or Project:	Backup Power Generators
Action or Project Description:	Promote the location of backup power generators in all new and existing city halls, schools, hospitals, nursing homes, fire departments and other critical or vulnerable facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$500,000
Benefits:	The ability to have power will help provide a community response during the time of a power outage.

Plan for Implementation	
Responsible Organization/Department:	School District
Action/Project Priority:	STAPLEE score: 21 Priority: Low
Timeline for Completion:	
Potential Fund Sources:	FEMA Grants, Local Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Monett R-I
Risk / Vulnerability	
Problem being Mitigated:	Access to backup power generators in public buildings.
Hazard(s) Addressed:	Earthquakes, Thunderstorms, Tornado, Winter Weather
Action or Project	
Action/Project Number:	3.1.2
Name of Action or Project:	Backup Power Generators
Action or Project Description:	Promote the location of backup power generators in all new and existing city halls, schools, hospitals, nursing homes, fire departments and other critical or vulnerable facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$1 Million
Benefits:	Reduction in loss of life.
Plan for Implementation	
Responsible Organization/Department:	N/A
Action/Project Priority:	STAPLEE score: 17 Priority: Low
Timeline for Completion:	4+ years
Potential Fund Sources:	Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Miller R-II
Risk / Vulnerability	
Problem being Mitigated:	Access to backup power generators in public buildings.

Hazard(s) Addressed:	Earthquakes, Thunderstorms, Tornado, Winter Weather
Action or Project	
Action/Project Number:	3.1.2
Name of Action or Project:	Backup Power Generators
Action or Project Description:	Promote the location of backup power generators in all new and existing city halls, schools, hospitals, nursing homes, fire departments and other critical or vulnerable facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$500,000
Benefits:	The ability to have power will help provide a community response during the time of a power outage.
Plan for Implementation	
Responsible Organization/Department:	School District, Director of Safety
Action/Project Priority:	STAPLEE score: 20 Priority: Low
Timeline for Completion:	3 years
Potential Fund Sources:	Grants, Capitol Project Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	1.1.1 Continuing Not Started
Report of Progress	Lack of Finances.

Action Worksheet	
Name of Jurisdiction:	Miller Benefit Special Road District (didn't fill out)
Risk / Vulnerability	
Problem being Mitigated:	Access to backup power generators in public buildings.
Hazard(s) Addressed:	Earthquakes, Thunderstorms, Tornado, Winter Weather
Action or Project	
Action/Project Number:	3.1.2
Name of Action or Project:	Backup Power Generators
Action or Project Description:	Promote the location of backup power generators in all new and existing city halls, schools, hospitals, nursing homes, fire departments and other critical or vulnerable facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	STAPLEE score: 23 Priority: Low
Timeline for Completion:	
Potential Fund Sources:	

Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Indicate status as New, Continuing Not Started, or Continuing in Progress)
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Buck Prairie Special Road District
Risk / Vulnerability	
Problem being Mitigated:	Access to backup power generators in public buildings.
Hazard(s) Addressed:	Earthquakes, Thunderstorms, Tornado, Winter Weather
Action or Project	
Action/Project Number:	3.1.2
Name of Action or Project:	Backup Power Generators
Action or Project Description:	Promote the location of backup power generators in all new and existing city halls, schools, hospitals, nursing homes, fire departments and other critical or vulnerable facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	Provide an estimate of the cost to implement this action. This can be accomplished with a range of estimated costs.
Benefits:	Provide a narrative describing the losses that will be avoided by implementing this action. If dollar amounts of avoided losses are known, include them as well.
Plan for Implementation	
Responsible Organization/Department:	Which organization will be responsible for tracking this action? Be specific to include the specific department or position within a department.
Action/Project Priority:	Include the STAPLEE score and Priority (H, M, L)
Timeline for Completion:	How many months/years to complete.
Potential Fund Sources:	List specific funding sources that may be used to pay for the implementation of the action.
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Indicate status as New, Continuing Not Started, or Continuing in Progress)

Report of Progress	For Continuing actions only, indicate the report on progress. If the action is not started, indicate any barriers encountered to initiate the action. If the action is in progress, indicate the activity that has occurred to date.
Action Worksheet	
Name of Jurisdiction:	Verona Road District
Risk / Vulnerability	
Problem being Mitigated:	Access to backup power generators in public buildings.
Hazard(s) Addressed:	Earthquakes, Thunderstorms, Tornado, Winter Weather
Action or Project	
Action/Project Number:	3.1.2
Name of Action or Project:	Backup Power Generators
Action or Project Description:	Promote the location of backup power generators in all new and existing city halls, schools, hospitals, nursing homes, fire departments and other critical or vulnerable facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	Provide an estimate of the cost to implement this action. This can be accomplished with a range of estimated costs.
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Indicate status as New, Continuing Not Started, or Continuing in Progress)
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Mt. Vernon Benefit Road District
Risk / Vulnerability	
Problem being Mitigated:	Access to backup power generators in public buildings.

Hazard(s) Addressed:	Earthquakes, Thunderstorms, Tornado, Winter Weather
Action or Project	
Action/Project Number:	3.1.2
Name of Action or Project:	Backup Power Generators
Action or Project Description:	Promote the location of backup power generators in all new and existing city halls, schools, hospitals, nursing homes, fire departments and other critical or vulnerable facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	How many months/years to complete.
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Green Benefit Road District
Risk / Vulnerability	
Problem being Mitigated:	Access to backup power generators in public buildings.
Hazard(s) Addressed:	Earthquakes, Thunderstorms, Tornado, Winter Weather
Action or Project	
Action/Project Number:	3.1.2
Name of Action or Project:	Backup Power Generators
Action or Project Description:	Promote the location of backup power generators in all new and existing city halls, schools, hospitals, nursing homes, fire departments and other critical or vulnerable facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$15,000
Benefits:	Reduction in loss of life.
Plan for Implementation	
Responsible Organization/Department:	N/A
Action/Project Priority:	STAPLEE score: 36 Priority: High
Timeline for Completion:	N/A
Potential Fund Sources:	Grants

Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	Money issues.

Action Worksheet	
Name of Jurisdiction:	City of Aurora
Risk / Vulnerability	
Problem being Mitigated:	Public access to water in case of natural hazard.
Hazard(s) Addressed:	Earthquakes, Tornado, Winter Weather
Action or Project	
Action/Project Number:	3.1.3
Name of Action or Project:	Backup Power Generators
Action or Project Description:	Provide backup generators for all water towers & wastewater treatment facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$0
Benefits:	Decreased medical loss.
Plan for Implementation	
Responsible Organization/Department:	Code, ER management
Action/Project Priority:	STAPLEE score: 35 Priority: High
Timeline for Completion:	0 years
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Village of Freistatt
Risk / Vulnerability	
Problem being Mitigated:	Public access to water in case of natural hazard.
Hazard(s) Addressed:	Earthquakes, Tornado, Winter Weather
Action or Project	
Action/Project Number:	3.1.3
Name of Action or Project:	Backup Power Generators

Action or Project Description:	Provide backup generators for all water towers & wastewater treatment facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$180,000
Benefits:	Equipment breakdown/ delays in restoration
Plan for Implementation	
Responsible Organization/Department:	City
Action/Project Priority:	STAPLEE score: 38 Priority: High
Timeline for Completion:	1-3 years
Potential Fund Sources:	Grants
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Marionville
Risk / Vulnerability	
Problem being Mitigated:	Public access to water in case of natural hazard.
Hazard(s) Addressed:	Earthquakes, Tornado, Winter Weather
Action or Project	
Action/Project Number:	3.1.3
Name of Action or Project:	Backup Power Generators
Action or Project Description:	Provide backup generators for all water towers & wastewater treatment facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Protect loss of property.
Plan for Implementation	
Responsible Organization/Department:	Board of Aldermen
Action/Project Priority:	STAPLEE score:32 Priority: High
Timeline for Completion:	N/A
Potential Fund Sources:	Local Government
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Treatment Plan has a backup generator.

Action Worksheet	
Name of Jurisdiction:	City of Miller
Risk / Vulnerability	
Problem being Mitigated:	Public access to water in case of natural hazard.
Hazard(s) Addressed:	Earthquakes, Tornado, Winter Weather
Action or Project	
Action/Project Number:	3.1.3
Name of Action or Project:	Backup Power Generators
Action or Project Description:	Provide backup generators for all water towers & wastewater treatment facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	N/A
Action/Project Priority:	STAPLEE score: 28 Priority: Medium
Timeline for Completion:	N/A
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	N/A
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Monett
Risk / Vulnerability	
Problem being Mitigated:	Public access to water in case of natural hazard.
Hazard(s) Addressed:	Earthquakes, Tornado, Winter Weather
Action or Project	
Action/Project Number:	3.1.3
Name of Action or Project:	Backup Power Generators
Action or Project Description:	Provide backup generators for all water towers & wastewater treatment facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$500,000+
Benefits:	Water Resources
Plan for Implementation	

Responsible Organization/Department:	Local Government
Action/Project Priority:	STAPLEE score: 35 Priority: High
Timeline for Completion:	0 years (in progress)
Potential Fund Sources:	Local funding
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Generators currently in place.

Action Worksheet	
Name of Jurisdiction:	City of Mount Vernon
Risk / Vulnerability	
Problem being Mitigated:	Public access to water in case of natural hazard.
Hazard(s) Addressed:	Earthquakes, Tornado, Winter Weather
Action or Project	
Action/Project Number:	3.1.3
Name of Action or Project:	Backup Power Generators
Action or Project Description:	Provide backup generators for all water towers & wastewater treatment facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	STAPLEE score: Priority:
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Indicate status as New, Continuing Not Started, or Continuing in Progress
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	City of Pierce City
Risk / Vulnerability	
Problem being Mitigated:	Public access to water in case of natural hazard.
Hazard(s) Addressed:	Earthquakes, Tornado, Winter Weather

Action or Project	
Action/Project Number:	3.1.3
Name of Action or Project:	Backup Power Generators
Action or Project Description:	Provide backup generators for all water towers & wastewater treatment facilities.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	STAPLEE score: Priority:
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Indicate status as New, Continuing Not Started, or Continuing in Progress)
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Miller Benefit Special Road District
Risk / Vulnerability	
Problem being Mitigated:	Damage to personal property from flooding.
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	3.1.4
Name of Action or Project:	Low Water Crossing Improvements
Action or Project Description:	Upgrade low water crossings that flood frequently.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Save money from damages that would occur.
Plan for Implementation	
Responsible Organization/Department:	N/A
Action/Project Priority:	STAPLEE score: 31 Priority: High
Timeline for Completion:	N/A
Potential Fund Sources:	Grants

Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Buck Prairie Special Road District
Risk / Vulnerability	
Problem being Mitigated:	Damage to personal property from flooding.
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	3.1.4
Name of Action or Project:	Low Water Crossing Improvements
Action or Project Description:	Upgrade low water crossings that flood frequently.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	Provide an estimate of the cost to implement this action. This can be accomplished with a range of estimated costs.
Benefits:	Provide a narrative describing the losses that will be avoided by implementing this action. If dollar amounts of avoided losses are known, include them as well.
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Indicate status as New, Continuing Not Started, or Continuing in Progress)
Report of Progress	

Action Worksheet	
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Name of Jurisdiction:	Verona Road District
Risk / Vulnerability	
Problem being Mitigated:	Damage to personal property from flooding.
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	3.1.4
Name of Action or Project:	Low Water Crossing Improvements
Action or Project Description:	Upgrade low water crossings that flood frequently.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Indicate status as New, Continuing Not Started, or Continuing in Progress)
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Mt. Vernon Benefit Road District
Risk / Vulnerability	
Problem being Mitigated:	Damage to personal property from flooding.
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	3.1.4
Name of Action or Project:	Low Water Crossing Improvements
Action or Project Description:	Upgrade low water crossings that flood frequently.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	Provide an estimate of the cost to implement this action. This can be accomplished with a range of estimated costs.

Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Green Benefit Road District
Risk / Vulnerability	
Problem being Mitigated:	Damage to personal property from flooding.
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	3.1.4
Name of Action or Project:	Low Water Crossing Improvements
Action or Project Description:	Upgrade low water crossings that flood frequently.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Reduction in loss of life.
Plan for Implementation	
Responsible Organization/Department:	N/A
Action/Project Priority:	STAPLEE score: 37 Priority: High
Timeline for Completion:	3 years
Potential Fund Sources:	Grants, General Fund
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Lawrence County
Risk / Vulnerability	
Problem being Mitigated:	Buildup of debris in flooded areas.
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	3.1.5
Name of Action or Project:	Debris & Overgrowth Cleanup
Action or Project Description:	Clean up debris & overgrowth from drainage channels & under bridges.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$50,000-75,000
Benefits:	Lives and property from ice and flood events.
Plan for Implementation	
Responsible Organization/Department:	Local road districts
Action/Project Priority:	STAPLEE score: 29 Priority: Medium
Timeline for Completion:	Ongoing
Potential Fund Sources:	Local budget funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Aurora
Risk / Vulnerability	
Problem being Mitigated:	Buildup of debris in flooded areas.
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	3.1.5
Name of Action or Project:	Debris & Overgrowth Cleanup
Action or Project Description:	Clean up debris & overgrowth from drainage channels & under bridges.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards

Estimated Cost:	N/A
Benefits:	N/A
Plan for Implementation	
Responsible Organization/Department:	Public works
Action/Project Priority:	STAPLEE score: 34 Priority: High
Timeline for Completion:	2 years
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Village of Freistatt
Risk / Vulnerability	
Problem being Mitigated:	Buildup of debris in flooded areas.
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	3.1.5
Name of Action or Project:	Debris & Overgrowth Cleanup
Action or Project Description:	Clean up debris & overgrowth from drainage channels & under bridges.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$2,000
Benefits:	Avoid hazardous conditions.
Plan for Implementation	
Responsible Organization/Department:	City
Action/Project Priority:	STAPLEE score: 36 Priority: High
Timeline for Completion:	On-going
Potential Fund Sources:	General funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	On-going work.

Action Worksheet	
Name of Jurisdiction:	City of Marionville
Risk / Vulnerability	
Problem being Mitigated:	Buildup of debris in flooded areas.
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	3.1.5
Name of Action or Project:	Debris & Overgrowth Cleanup
Action or Project Description:	Clean up debris & overgrowth from drainage channels & under bridges.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$200-500
Benefits:	Protect property.
Plan for Implementation	
Responsible Organization/Department:	Street department.
Action/Project Priority:	STAPLEE score:32 Priority: High
Timeline for Completion:	On-going
Potential Fund Sources:	Local government
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing In Progress
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Monett
Risk / Vulnerability	
Problem being Mitigated:	Buildup of debris in flooded areas.
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	3.1.5
Name of Action or Project:	Debris & Overgrowth Cleanup
Action or Project Description:	Clean up debris & overgrowth from drainage channels & under bridges.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	\$3,000

Benefits:	Reduction in loss of lives and property. Alleviate flooding, fire, and power loss potential.
Plan for Implementation	
Responsible Organization/Department:	Streets, Public works
Action/Project Priority:	STAPLEE score: 41 Priority: High
Timeline for Completion:	On-going
Potential Fund Sources:	General funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Continual

Action Worksheet	
Name of Jurisdiction:	City of Mount Vernon
Risk / Vulnerability	
Problem being Mitigated:	Buildup of debris in flooded areas.
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	3.1.5
Name of Action or Project:	Debris & Overgrowth Cleanup
Action or Project Description:	Clean up debris & overgrowth from drainage channels & under bridges.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	Provide an estimate of the cost to implement this action. This can be accomplished with a range of estimated costs.
Benefits:	Provide a narrative describing the losses that will be avoided by implementing this action. If dollar amounts of avoided losses are known, include them as well.
Plan for Implementation	
Responsible Organization/Department:	Which organization will be responsible for tracking this action? Be specific to include the specific department or position within a department.
Action/Project Priority:	Include the STAPLEE score and Priority (H, M, L)
Timeline for Completion:	How many months/years to complete.
Potential Fund Sources:	List specific funding sources that may be used to pay for the implementation of the action.

Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Indicate status as New, Continuing Not Started, or Continuing in Progress)
Report of Progress	For Continuing actions only, indicate the report on progress. If the action is not started, indicate any barriers encountered to initiate the action. If the action is in progress, indicate the activity that has occurred to date.
Action Worksheet	
Name of Jurisdiction:	City of Pierce City
Risk / Vulnerability	
Problem being Mitigated:	Buildup of debris in flooded areas.
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	3.1.5
Name of Action or Project:	Debris & Overgrowth Cleanup
Action or Project Description:	Clean up debris & overgrowth from drainage channels & under bridges.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	Provide an estimate of the cost to implement this action. This can be accomplished with a range of estimated costs.
Benefits:	Provide a narrative describing the losses that will be avoided by implementing this action. If dollar amounts of avoided losses are known, include them as well.
Plan for Implementation	
Responsible Organization/Department:	Which organization will be responsible for tracking this action? Be specific to include the specific department or position within a department.
Action/Project Priority:	Include the STAPLEE score and Priority (H, M, L)
Timeline for Completion:	How many months/years to complete.
Potential Fund Sources:	List specific funding sources that may be used to pay for the implementation of the action.

Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Indicate status as New, Continuing Not Started, or Continuing in Progress)
Report of Progress	For Continuing actions only, indicate the report on progress. If the action is not started, indicate any barriers encountered to initiate the action. If the action is in progress, indicate the activity that has occurred to date.
Action Worksheet	
Name of Jurisdiction:	City of Stotts City
Risk / Vulnerability	
Problem being Mitigated:	Buildup of debris in flooded areas.
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	3.1.5
Name of Action or Project:	Debris & Overgrowth Cleanup
Action or Project Description:	Clean up debris & overgrowth from drainage channels & under bridges.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	Provide an estimate of the cost to implement this action. This can be accomplished with a range of estimated costs.
Benefits:	Provide a narrative describing the losses that will be avoided by implementing this action. If dollar amounts of avoided losses are known, include them as well.
Plan for Implementation	
Responsible Organization/Department:	Which organization will be responsible for tracking this action? Be specific to include the specific department or position within a department.
Action/Project Priority:	Include the STAPLEE score and Priority (H, M, L)
Timeline for Completion:	How many months/years to complete.
Potential Fund Sources:	List specific funding sources that may be used to pay for the implementation of the action.
Local Planning Mechanisms to be Used in Implementation, if any:	

Progress Report	
Action Status	Indicate status as New, Continuing Not Started, or Continuing in Progress)
Report of Progress	For Continuing actions only, indicate the report on progress. If the action is not started, indicate any barriers encountered to initiate the action. If the action is in progress, indicate the activity that has occurred to date.

Action Worksheet	
Name of Jurisdiction:	Miller Benefit Special Road District
Risk / Vulnerability	
Problem being Mitigated:	Buildup of debris in flooded areas.
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	3.1.5
Name of Action or Project:	Debris & Overgrowth Cleanup
Action or Project Description:	Clean up debris & overgrowth from drainage channels & under bridges.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Mitigate future damage.
Plan for Implementation	
Responsible Organization/Department:	Commissions, Road Supervisor
Action/Project Priority:	STAPLEE score: 44 Priority: High
Timeline for Completion:	How many months/years to complete.
Potential Fund Sources:	Funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	continuing in Progress
Report of Progress	Debris and overgrowth is removed as needed.

Action Worksheet	
Name of Jurisdiction:	Buck Prairie Special Road District
Risk / Vulnerability	
Problem being Mitigated:	Buildup of debris in flooded areas.

Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	3.1.5
Name of Action or Project:	Debris & Overgrowth Cleanup
Action or Project Description:	Clean up debris & overgrowth from drainage channels & under bridges.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	Provide an estimate of the cost to implement this action. This can be accomplished with a range of estimated costs.
Benefits:	Provide a narrative describing the losses that will be avoided by implementing this action. If dollar amounts of avoided losses are known, include them as well.
Plan for Implementation	
Responsible Organization/Department:	Which organization will be responsible for tracking this action? Be specific to include the specific department or position within a department.
Action/Project Priority:	Include the STAPLEE score and Priority (H, M, L)
Timeline for Completion:	How many months/years to complete.
Potential Fund Sources:	List specific funding sources that may be used to pay for the implementation of the action.
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Indicate status as New, Continuing Not Started, or Continuing in Progress)
Report of Progress	For Continuing actions only, indicate the report on progress. If the action is not started, indicate any barriers encountered to initiate the action. If the action is in progress, indicate the activity that has occurred to date.
Action Worksheet	
Name of Jurisdiction:	Verona Road District
Risk / Vulnerability	
Problem being Mitigated:	Buildup of debris in flooded areas.
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	3.1.5

Name of Action or Project:	Debris & Overgrowth Cleanup
Action or Project Description:	Clean up debris & overgrowth from drainage channels & under bridges.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	Provide an estimate of the cost to implement this action. This can be accomplished with a range of estimated costs.
Benefits:	Provide a narrative describing the losses that will be avoided by implementing this action. If dollar amounts of avoided losses are known, include them as well.
Plan for Implementation	
Responsible Organization/Department:	Which organization will be responsible for tracking this action? Be specific to include the specific department or position within a department.
Action/Project Priority:	Include the STAPLEE score and Priority (H, M, L)
Timeline for Completion:	How many months/years to complete.
Potential Fund Sources:	List specific funding sources that may be used to pay for the implementation of the action.
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Indicate status as New, Continuing Not Started, or Continuing in Progress)
Report of Progress	For Continuing actions only, indicate the report on progress. If the action is not started, indicate any barriers encountered to initiate the action. If the action is in progress, indicate the activity that has occurred to date.
Action Worksheet	
Name of Jurisdiction:	Mt. Vernon Benefit Road District
Risk / Vulnerability	
Problem being Mitigated:	Buildup of debris in flooded areas.
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	3.1.5
Name of Action or Project:	Debris & Overgrowth Cleanup
	Clean up debris & overgrowth from drainage channels & under bridges.

Action or Project Description:	
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	Provide an estimate of the cost to implement this action. This can be accomplished with a range of estimated costs.
Benefits:	Provide a narrative describing the losses that will be avoided by implementing this action. If dollar amounts of avoided losses are known, include them as well.
Plan for Implementation	
Responsible Organization/Department:	Which organization will be responsible for tracking this action? Be specific to include the specific department or position within a department.
Action/Project Priority:	Include the STAPLEE score and Priority (H, M, L)
Timeline for Completion:	How many months/years to complete.
Potential Fund Sources:	List specific funding sources that may be used to pay for the implementation of the action.
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Indicate status as New, Continuing Not Started, or Continuing in Progress)
Report of Progress	For Continuing actions only, indicate the report on progress. If the action is not started, indicate any barriers encountered to initiate the action. If the action is in progress, indicate the activity that has occurred to date.

Action Worksheet	
Name of Jurisdiction:	Green Benefit Road District
Risk / Vulnerability	
Problem being Mitigated:	Buildup of debris in flooded areas.
Hazard(s) Addressed:	Flooding
Action or Project	
Action/Project Number:	3.1.5
Name of Action or Project:	Debris & Overgrowth Cleanup
Action or Project Description:	Clean up debris & overgrowth from drainage channels & under bridges.

Applicable Goal Statement:	Protect lives and property from the effects of natural hazards
Estimated Cost:	N/A
Benefits:	Reduction in loss of life.
Plan for Implementation	
Responsible Organization/Department:	N/A
Action/Project Priority:	STAPLEE score: 43 Priority: High
Timeline for Completion:	N/A
Potential Fund Sources:	Grants, General Fund
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing Not Started
Report of Progress	Lack of money, time, and manpower.

Action Worksheet	
Name of Jurisdiction:	Lawrence County
Risk / Vulnerability	
Problem being Mitigated:	Wildfires caused by fires not properly controlled.
Hazard(s) Addressed:	Wildfires
Action or Project	
Action/Project Number:	3.1.6
Name of Action or Project:	Burn Bans
Action or Project Description:	Implement burn restrictions during time of weather conditions conducive to the spread of wildfire.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$0
Benefits:	Save lives and property from fires and during high risk.
Plan for Implementation	
Responsible Organization/Department:	EMA, FIRE, LE, 911
Action/Project Priority:	STAPLEE score: 36 Priority: High
Timeline for Completion:	1-3 months
Potential Fund Sources:	Not needed
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Aurora

Risk / Vulnerability	
Problem being Mitigated:	Wildfires caused by fires not properly controlled.
Hazard(s) Addressed:	Wildfires
Action or Project	
Action/Project Number:	3.1.6
Name of Action or Project:	Burn Bans
Action or Project Description:	Implement burn restrictions during time of weather conditions conducive to the spread of wildfire.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$0
Benefits:	Decreased structure loss.
Plan for Implementation	
Responsible Organization/Department:	Fire
Action/Project Priority:	STAPLEE score: 43 Priority: High
Timeline for Completion:	0 years
Potential Fund Sources:	Local Funding
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	Village of Freistatt
Risk / Vulnerability	
Problem being Mitigated:	Wildfires caused by fires not properly controlled.
Hazard(s) Addressed:	Wildfires
Action or Project	
Action/Project Number:	3.1.6
Name of Action or Project:	Burn Bans
Action or Project Description:	Implement burn restrictions during time of weather conditions conducive to the spread of wildfire.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$0
Benefits:	Reduction in loss of lives and property.
Plan for Implementation	
Responsible Organization/Department:	City

Action/Project Priority:	STAPLEE score: 47 Priority: High
Timeline for Completion:	1-3 months
Potential Fund Sources:	General funds
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Ordinances in place

Action Worksheet	
Name of Jurisdiction:	City of Marionville
Risk / Vulnerability	
Problem being Mitigated:	Wildfires caused by fires not properly controlled.
Hazard(s) Addressed:	Wildfires
Action or Project	
Action/Project Number:	3.1.6
Name of Action or Project:	Burn Bans
Action or Project Description:	Implement burn restrictions during time of weather conditions conducive to the spread of wildfire.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$0
Benefits:	Reduction of avoidable wildfires caused by human error will reduce damage to properties.
Plan for Implementation	
Responsible Organization/Department:	Fire Department, Fire Chief, EMD's
Action/Project Priority:	STAPLEE score: 45 Priority: High
Timeline for Completion:	As needed
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	Social Media
Progress Report	
Action Status	Continuing in Progress
Report of Progress	Keep informed of weather and conditions

Action Worksheet	
Name of Jurisdiction:	City of Miller
Risk / Vulnerability	
Problem being Mitigated:	Wildfires caused by fires not properly controlled.
Hazard(s) Addressed:	Wildfires

Action or Project	
Action/Project Number:	3.1.6
Name of Action or Project:	Burn Bans
Action or Project Description:	Implement burn restrictions during time of weather conditions conducive to the spread of wildfire.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$0
Benefits:	Reduction in loss of lives and property due to wildfires.
Plan for Implementation	
Responsible Organization/Department:	Fire department
Action/Project Priority:	STAPLEE score: 30 Priority: High
Timeline for Completion:	3 years
Potential Fund Sources:	Local Funding
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	New
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Monett
Risk / Vulnerability	
Problem being Mitigated:	Wildfires caused by fires not properly controlled.
Hazard(s) Addressed:	Wildfires
Action or Project	
Action/Project Number:	3.1.6
Name of Action or Project:	Burn Bans
Action or Project Description:	Implement burn restrictions during time of weather conditions conducive to the spread of wildfire.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$0
Benefits:	Reduction in loss of lives and property.
Plan for Implementation	
Responsible Organization/Department:	Local fire, local government
Action/Project Priority:	STAPLEE score: 38 Priority: High
Timeline for Completion:	0 years
Potential Fund Sources:	Local Funding
Local Planning Mechanisms to be Used in Implementation, if any:	N/A

Progress Report	
Action Status	Continuing in Progress
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Mount Vernon
Risk / Vulnerability	
Problem being Mitigated:	Wildfires caused by fires not properly controlled.
Hazard(s) Addressed:	Wildfires
Action or Project	
Action/Project Number:	3.1.6
Name of Action or Project:	Burn Bans
Action or Project Description:	Implement burn restrictions during time of weather conditions conducive to the spread of wildfire.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	
Action/Project Priority:	
Timeline for Completion:	
Potential Fund Sources:	
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status	Indicate status as New, Continuing Not Started, or Continuing in Progress)
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	City of Pierce city
Risk / Vulnerability	
Problem being Mitigated:	Wildfires caused by fires not properly controlled.
Hazard(s) Addressed:	Wildfires
Action or Project	
Action/Project Number:	3.1.6
Name of Action or Project:	Burn Bans
Action or Project Description:	Implement burn restrictions during time of weather conditions conducive to the spread of wildfire.

Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$
Benefits:	Reduction of avoidable wildfires caused by human error will reduce damage to properties.
Plan for Implementation	
Responsible Organization/Department:	Local commissions and councils
Action/Project Priority:	STAPLEE score: Priority:
Timeline for Completion:	6-18 months
Potential Fund Sources:	Local Funding
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	
Action Status	Indicate status as New, Continuing Not Started, or Continuing in Progress)
Report of Progress	N/A

Action Worksheet	
Name of Jurisdiction:	City of Verona
Risk / Vulnerability	
Problem being Mitigated:	Wildfires caused by fires not properly controlled.
Hazard(s) Addressed:	Wildfires
Action or Project	
Action/Project Number:	3.1.6
Name of Action or Project:	Burn Bans
Action or Project Description:	Implement burn restrictions during time of weather conditions conducive to the spread of wildfire.
Applicable Goal Statement:	Protect lives and property from the effects of natural hazards.
Estimated Cost:	\$0
Benefits:	Reduction of avoidable wildfires caused by human error will reduce damage to properties.
Plan for Implementation	
Responsible Organization/Department:	Local commissions and councils
Action/Project Priority:	STAPLEE score: 31 Priority: High
Timeline for Completion:	6-18 months
Potential Fund Sources:	Local funding
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Progress Report	

Action Status	Continuing Not Started
Report of Progress	N/A