BARTON COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

2018

Compiled by the Harry S Truman Coordination Council,
a Missouri Regional Council of Governments

Revised by: Tony Robyn, Environmental Planner

CONTRIBUTORS

Barton County Hazard Mitigation Planning Committee

Jurisdictional Representatives

Name	Title	Jurisdiction/Agency/Organization
Tom Ryan	Emergency Management Director	Barton County
Mike Davis	Presiding Commissioner	Barton County
Ben Reed	Commissioner	Barton County
Jeff Tucker	Commissioner	Barton County
Kristina Crockett	County Clerk	Barton county
Judy Fast	Commission Secretary	Barton County
Rick Johnson	County Assessor	Barton County
Barbra Parish	Collector/Treasurer	Barton County
Dixie Taylor	Mayor	Golden City
Walt Nims	Prior Mayor	Golden City
Ray Lynch	Public Works Director	Golden City
Bree Pettengill	City Collector	Golden City
Barbara Chapparell	City Clerk	Golden City
Lynn Calton	City Administrator	Lamar
Rusty Rives	Chief of Police/Interim City Administrator	Lamar Police Department
Russ Worsley	City Administrator	Lamar
Vickie Pugh	City Clerk	Lamar Heights
Jerry Marti	Mayor	Lamar Heights
Dorris Fast	City Clerk	Liberal
Jason Higgins	City Clerk	Mindenmines
Gebelin, Mike	City Council	Mindenmines
Steven Brigham	Superintendent	Golden City R-III School District
Keith Rook	Superintendent	Golden City R-III School District
Zach Harris	Superintendent	Lamar R-I School District
Bill Harvey	Superintendent	Liberal R-II School District

Stakeholder Representatives

Name	Title	Agency/Organization
Sandy Alexander	Animal Control Officer	Lamar Police Department
Larry Beatty	Fire Chief	Lamar Fire Department
Richard Cooper	Staff writer	Lamar Democrat (newspaper)
Rick Davied	Fire Chief	Liberal Fire Department
Joel Dermott	Administrator	Barton County Health Department
Beth Harris	RN	Barton County Health Department
Shea Lane	Director of Disaster Preparedness and Response	Catholic Charities of Southern Mo
Sterling Martin	Community Representative	COAD/Farmer
Bruce Pettus	Incident Management Coordinator	MODOT
Bill Rawlings	Retired Fire Chief	Lamar
Kristy Runion	RN	Barton County Health Department
Denise Russell	Area Coordinator - Reg D	SEMA
Mitch Shaw	Deputy	Barton County Sherriff Department

Dayne Shoff	Fire Fighter	Lamar Fire Department
Paul Stebbins	Asst. Director of nursing/ER	Barton County Memorial Hospital
Julie Stolting	Disaster Program Specialist	American Red Cross
Crystal Thomas	Assistant	Barton County Public Administration
Kaylee Timmons	COAD Animal unit	Barton County Health Department
Angie Schlichting	RN	Barton County Health Department
Lori Taffner	Environmental Public Health Specialist	Barton County Health Department
Jacob Good	Fire Chief	Jasper Fire Department
Kathy Macomber	Community Development Specialist	MU Extension
Billy Jeffery	Fire Chief	Sheldon Fire Department

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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. Barton 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 December 3, 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 County Multi-Hazard Mitigation Plan is a multi-jurisdictional plan that covers the following 9 jurisdictions that participated in the planning process:

- Unincorporated Barton County
- City of Golden City
- City of Lamar
- City of Lamar Heights
- City of Liberal
- City of Mindenmines
- Golden City R-3 School District
- Lamar R-1 School District
- Liberal R-2 School District

Barton County and the entities listed above developed a Multi-Jurisdictional Hazard Mitigation Plan that was approved by FEMA on December 3, 2013 (hereafter referred to as the *2013 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 Barton County and participating jurisdictions. The MPC updated the risk assessment that identified and profiled hazards that pose a risk to Barton 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:

Goal 1: Increase internal capabilities to mitigate the effects of natural hazards.

Goal 2: Enhance existing or design new policies that will reduce the potential damaging effects of hazards without hindering other community goals through punitive constraints.

Goal 3: Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.

Goal 4: Protect public health, safety, and welfare by increasing the public awareness of natural disasters and their probable severity through the coordination of all educational programs to foster both individual and public responsibility in mitigating risks due to those hazards.

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 E, 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.

- Unincorporated Barton County
- City of Golden City
- City of Lamar
- City of Lamar Heights
- City of Liberal
- City of Mindenmines
- Golden City R-3 School District
- Lamar R-1 School District
- Liberal R-2 School District

Model Resolution

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

A RESOLUTION OF THE (*LOCAL GOVERNING BODY /SCHOOL DISTRICT*) ADOPTING THE (*PLAN NAME*)

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

1.1 Purpose *1.1*

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1.1 PURPOSE

Hazard mitigation is any sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards. Mitigation activities may be implemented prior to, during or after an incident. However, it has been demonstrated that hazard mitigation is most effective when based on an inclusive, comprehensive, long-term plan that is developed before a disaster occurs (http://www.fema.gov/what-mitigation).

FEMA has implemented the various hazard mitigation planning provisions through the Code of Federal Regulations (CFR) at 44 CFR Part 201. The CFR provisions set forth the mitigation plan requirement for local and Tribal governments as a condition of receiving FEMA hazard mitigation assistance. Under 44 CFR § 201.6, local governments, schools or other publicly funded districts must have adopted an FEMA-approved local hazard mitigation plan in place in order to apply for hazard mitigation project grants. 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 it for approval every five (5) years in order to continue to be eligible for mitigation project grant funding. The 2018 Barton County Multi-Jurisdictional Natural Hazard Mitigation Plan, from here on referred to as the Plan, is a revision of the previous five-year update approved on December 3, 2013.

The Plan is a major rewrite of the 2011 Plan and reflects changes in priorities and development, and the continued commitment of local governments to mitigate the impact of natural hazards in

Barton County. Local jurisdictions that participated in the 2013 Plan and are continuing participation in the 2018 include:

- Barton County
- City of Golden City
- City of Lamar
- City of Lamar Heights
- City of Liberal
- City of Mindenmines
- Golden City R-3 School District
- Lamar R-1 School District
- Liberal R-2 School District

Local jurisdictions that did not participate in the 2013 or 2018 Plan include:

- Village of Milford

The local mitigation plan is the representation of the jurisdiction's 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

This 2018 update to the Plan involved review, evaluation, and amendment of the existing Plan. It addresses the same natural hazards that were addressed in the original Plan, with man-made/technological hazards not addressed except in the context of cascading damages.

The Plan is organized into five chapters. 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 June, 2016. The Plan chapters 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 by chapter in the update.

Table 1.1. Changes Made in Plan Update

Chapter	Changes/Updates Made
1 – Introduction & Planning Process	• General Format Changes • The history of the original plan and the process of updating it were outlined.
2-Profile & Capabilities	• General Format Changes • All Census and economic demographic data was updated. • Expanded jurisdictional Profiles and Mitigation Capabilities section.
3-Risk Assessment	• General Format Changes • Updated Assets at Risk, Critical Facilities, Land Use Development Sections. • All Hazard Event Data was updated and new risk and vulnerability analysis were performed using the new data. • Added problem Statements
4-Mitigation Strategies	• General Format Changes • Updated Goals & Objectives • All previous action plans were updated and new action plans added. • Updated cost benefit review method using STAPLEE scores
5-Plan Maintenance	• General Format Changes • 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.

Barton County contracted with the Harry S Truman Coordinating Council (HSTCC) to facilitate the update of the multi-jurisdictional, local hazard mitigation plan. In fulfillment of this role, HSTCC:

- Assist in establishing a Mitigation Planning Committee (MPC) as defined by the Disaster Mitigation Act (DMA),
- Find out if the MPC established for the previously approved plan was a standing committee that met in the interim, and set forth any changes in the MPC membership and procedures since adoption of the previous plan,
- Assess whether there was adherence to the process set forth in the previously approved plan for maintenance (example, did the MPC meet regularly as specified in the previously approved plan), and explain how adherence occurred, and/or why it did not occur,
- Ensure the updated plan meets the DMA requirements as established by federal regulations and follows the most current planning guidance of the Federal Emergency

Management Agency (FEMA),

- Facilitate the entire plan development process,
- Identify the data that MPC participants could provide and conduct the research and documentation necessary to augment that data,
- Assist in soliciting public input,
- Produce the draft and final plan update in a FEMA-approvable document and coordinate the Missouri State Emergency Management Agency (SEMA) and (FEMA) plan reviews.

Table 1.2 shows the MPC members and the entities they represent, along with their titles. All participating jurisdictions were represented on the MPC, whether it's by direct or indirect participation.

Table 1.2. Jurisdictional Representatives & Stakeholders Barton County MPC

Name	Title/Department	Jurisdiction/Agency /Organization
Tom Ryan	Emergency Management Director	Barton County
Mike Davis	Presiding Commissioner	Barton County
Ben Reed	Commissioner	Barton County
Jeff Tucker	Commissioner	Barton County
Kristina	County Clerk	Barton county
Judy Fast	Commission Secretary	Barton County
Rick Johnson	County Assessor	Barton County
Barbra Parish	Collector/Treasurer	Barton County
Dixie Taylor	Mayor	Golden City
Walt Nims	Mayor	Golden City
Ray Lynch	Public Works Director	Golden City
Bree	City Collector	Golden City
Barbara	City Clerk	Golden City
Lynn Calton	City Administrator	Lamar
Rusty Rives	Chief of Police/Interim City Administrator	Lamar Police Department
Russ	City Administrator	Lamar
Vickie Pugh	City Clerk	Lamar Heights
Jerry Marti	Mayor	Lamar Heights
Dorris Fast	City Clerk	Liberal
Jason	City Clerk	Mindenmines
Gebelin, Mike	City Council	Mindenmines
Steven	Superintendent	Golden City R-III School District
Keith Rook	Superintendent	Golden City R-III School District
Zach Harris	Superintendent	Lamar R-I School District
Bill Harvey	Superintendent	Liberal R-II School District
Sandy Alexander	Animal Control Officer	Lamar Police Department
Larry Beatty	Fire Chief	Lamar Fire Department
Richard Cooper	Staff writer	Lamar Democrat (newspaper)
Rick Davied	Fire Chief	Liberal Fire Department
Joel Dermott	Administrator	Barton County Health Department
Beth Harris	RN	Barton County Health Department
Shea Lane	Director of Disaster Preparedness and Response	Catholic Charities of Southern Mo
Sterling Martin	Community Representative	COAD/Farmer

Bruce Pettus	Incident Management Coordinator	MODOT
Bill Rawlings	Retired Fire Chief	Lamar
Kristy Runion	RN	Barton County Health Department
Denise Russell	Area Coordinator - Reg D	SEMA
Mitch Shaw	Deputy	Barton County Sherriff Department
Dayne Shoff	Fire Fighter	Lamar Fire Department
Paul Stebbins	Asst. Director of nursing/ER	Barton County Memorial Hospital
Julie Stolting	Disaster Program Specialist	American Red Cross
Crystal Thomas	Assistant	Barton County Public Administration
Kaylee Timmons	COAD Animal unit	Barton county Health Department
Angie Schlichting	RN	Barton county Health Department
Lori Taffner	Environmental Public Health Specialist	Barton county Health Department
Jacob Good	Fire Chief	Jasper Fire Department
Kathy Macomber	Community Development Specialist	MU Extension
Billy Jeffery	Fire Chief	Sheldon Fire Department

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.

Hazard mitigation is defined as "sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards" and its purpose is to lessen the negative impact of a disaster on community's economic, social, and environmental well-being. Outreach programs that increase the public's awareness of hazard risks, projects to protect critical facilities, and the removal of structures from flood hazard areas are all examples of mitigation actions. Local mitigation actions and concepts can also be incorporated into land use plans and building codes. Local governments have the responsibility to protect the health, safety, and welfare of their citizens. Proactive mitigation policies and actions help reduce risk and create safer, more disaster-resilient communities. Mitigation is an investment in a community's future safety and sustainability by facilitating:

- The protection of public safety and prevention of loss of life and injury.
- The reduction of harm to existing and future development.
- The prevention of damage to a community's unique assets.

The importance of active public participation in such an endeavor is obvious, but can be difficult to obtain in reality. A paper published in the Journal of Environmental Planning and Management in 2003* notes "*the disquieting reality that citizens are not always interested in participating, and that some types of plans fail to receive public attention."* The paper goes on to state that involving the public in technical decision making is often *"a formidable challenge".* Nowhere is this difficulty more apparent than in small rural communities like those in Barton

County. However, despite this, all of Barton County's communities participated in the planning process, with the exception of the Village of Milford.

During the initial scoping meeting with emergency management and county commissions it was decided that the best method for the county would be to use the existing quarterly LEPC meetings for the mitigation planning meetings. Those small jurisdictions and school districts that did not attend the LEPC meetings were contacted by phone and one-on-one jurisdictional meetings were set up with HSTCC staff. The combination of the LEPC and additional jurisdictional and school district representatives with from on be referred to as "the MPC".

The DMA requires each jurisdiction to participate in the planning process and officially adopt the plan. Minimum criteria for participation must be met by each jurisdiction in order to be considered a "participant." These plan participation requirements were defined at the first planning meeting, and include the following:

- Designation of a representative from each participating jurisdiction to serve on the MPC;
- Participation in at least one LEPC meeting or participation in at least one-on-one meeting with HSTCC staff.
- Provide sufficient information to support plan development by completion and return of Data Collection Questionnaires and validating/correcting critical facility inventories.
- Provide progress reports on mitigation actions from the previously approved plan and identify new mitigation actions with prioritization for the plan update.
- Provide documentation to show time donated to the planning effort.
- Review and comment on plan drafts.
- Assists with soliciting input from the public, local officials, and other interested parties about.the planning process and provide an opportunity for them to comment on the plan.
- Formal adoption of the mitigation plan prior to submittal to FEMA for final approval.

Table 1.3 shows the participation of each jurisdiction at the planning meetings, the provision of responses to the Data Collection Questionnaire, the assessment of previous mitigation actions, the identification and prioritization of new actions. Reference sign-in sheets and other documentation located in appendix B.

Table 1.3. Jurisdictional Participation in Planning Process

Jurisdiction	Meeting Participation	Data Collection Questionnaire	Previous Action Assessment	STAPLEEs for New & Continuing Actions	Plan Review / Comments	Plan Adoption
Barton County	x	x	x	x	x	x
City of Golden City	x	x	x	x	x	x
City of Lamar	x	x	x	x	x	x
City of Lamar Heights	x	x	x	x	x	x
City of Liberal	x	x	x	x	x	x

City of Mindenmines	x	x	x	x	x	x
Village of Milford	Non-Participant					
Golden City R-3 School District	x	x	x	x	x	x
Lamar R-1 School District	x	x	x	x	x	x
Liberal R-2 School District	x	x	x	x	x	x

1.4.2 The Planning Steps

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 allowed 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*.

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)

The initial "scoping" process consisted of meeting with the county commissioners and emergency management director; it was decided to use the existing quarterly LEPC meetings to facilitate the mitigation planning process. Because the planning meetings were shared with regular LEPC business, the information was separated into 4 meeting instead of 3. For those jurisdictions that did not actively participate in the LEPC, one-on-one jurisdictional meetings were conducted to present the necessary information to all jurisdictions and school districts. The kick-off meeting was held on August 10, 2017, topics discussed included the DMA of 2000, Grant Programs linked to approved plan, planning tasks & the multi-jurisdictional approach, participation requirements, public involvement, a brief discussion of hazards included, and a general timeline for completing the plan update. **Table 1.5** shows a summary of topics discussed at all planning meetings.

Table 1.5. Schedule of MPC Meetings

Meeting	Topic	Date
Kick-off Meeting	General Information about the HMP including participation requirements, public involvement, data collection questionnaire's, discussions of hazards, timeline, etc.	8/10/2017
Meeting #2	Public survey update, new plan format, risk assessment update, update mitigation goals, begin updating mitigation actions	11/9/2017
Meeting #3	Overall progress update, public survey summary, risk assessment summary	3/29/2018
Meeting #4	Progress update	4/10/2018
Meeting #5	Progress update	8/9/2018

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.

To fulfill the require of soliciting public input during the planning process and prior to plan approval, the MPC decided that it was not necessary to hold a public meeting. The regular LEPC are already open to the public. The public survey was used and distributed widely throughout the county, several jurisdictions, county emergency management, and other agencies posted the survey on their websites or social media, some school districts distributed the survey to all teachers and staff, and some locations throughout the county had hard copies available. There were a total of 101 public surveys completed; the results showed that the public perception of each natural hazard does align with that of the MPC. The complete results of the public survey are documented in Appendix C.

To solicit public input on the plan draft prior to approval, a public notice was posted in the local newspaper, the Lamar Democrat, on July 18, 2018. Documentation can be found in Appendix B. The document will be posted on HSTCC's website and available for download and a hard copy will be made available at the county courthouse. The public comment period remained open until August 20, 2018.

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

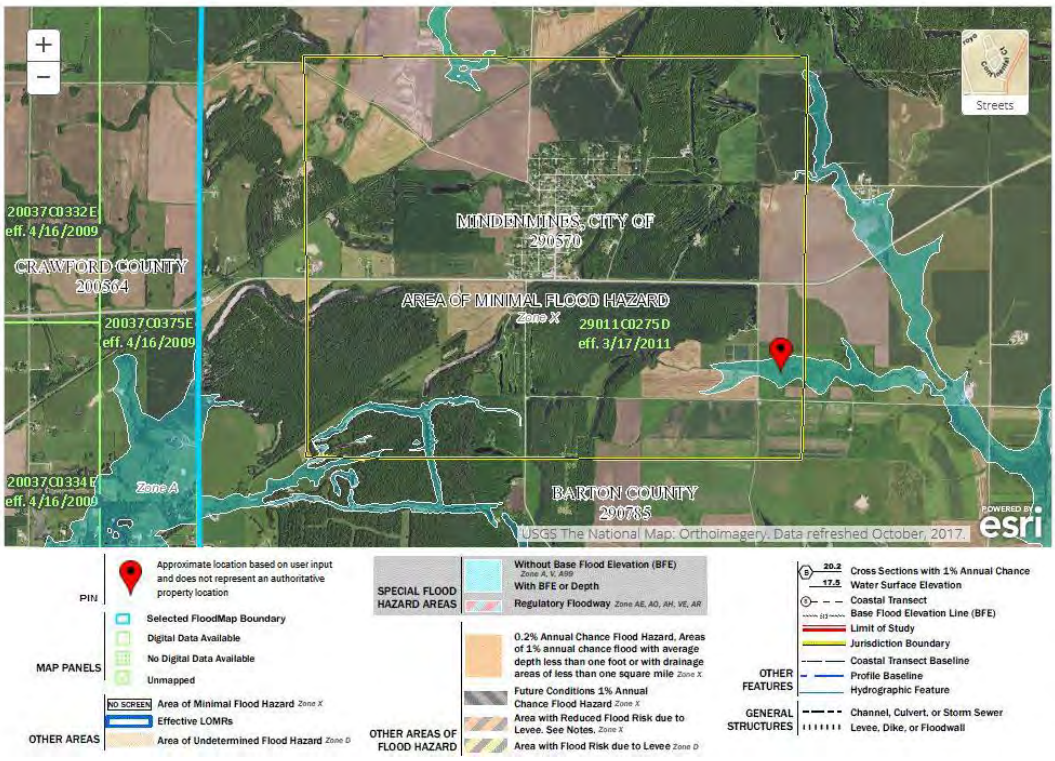
44 CFR Requirement 201.6(b): An open public involvement process is essential to the development of an effective plan. In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include: (2) An opportunity for neighboring communities, local 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.

The existing LEPC already includes several representatives from neighboring communities, businesses, academia, and other non-profit Interests. A complete listing of agencies included is documented on the LEPC sign-sheets in Appendix B.

Coordination with FEMA Risk MAP Project

There was no coordination with FEMA RiskMAP projects during the update of this plan, as any ongoing efforts were unknown. However, it does appear that Barton County has an effective FIRM. **Figure 1.1** shows the locations of RiskMAP deployed watershed and current projects through the State of Missouri.

Figure 1.1. Map of RiskMAP projects



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.

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

During the second meeting on November 9, 2016, the MPC identified and profiled their hazards, which was accomplished by reviewing:

- 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 results of this process can be reviewed in Section 3 of this document, the Risk Assessment.

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 demographic data from the US Census, Census of Agriculture, Division of Labor, GIS structures dataset, HAZUS, and Data Collection Questionnaires.

Potential losses to existing development were estimates came from the 2013 State Hazard Mitigation Plan. These estimates were created using HAZUS software, which uses geo-referenced data to calculate the exposure for a selected area, characterizing the level or intensity of the hazard affecting the exposed area in order to calculate potential losses in terms of economic losses, structural damage, etc.

Step 6: Set Goals (Handbook Task 6)

The MPC conducted a discussion session during their second 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. Discussion of the previously approved goals involved determining the application of the goals and objectives to today and validity of the language used. It was determined that the goals and objectives still applied today. However, upon reviewing the Mitigation Actions in greater detail, some redundancy was noted in that the exact same actions were appearing under multiple goals and objectives. Therefore, to reduce said redundancy some changes were suggested and will be reviewed with the MPC during the 4th planning meeting. These changes are detailed in Section 4 – Mitigation Strategies. The goals and objectives for the 2018 updated plan are as follows:

Goal 1: Increase internal capabilities to mitigate the effects of natural hazards.

Objective 1.1: Enhance capability to conduct hazard risk assessments, demonstrate funding needs, and track mitigation activities throughout the county.

Objective 1.2: Ensure that current emergency services are adequate to protect public health and safety.

Goal 2: Enhance existing or design new policies that will reduce the potential damaging effects of hazards without hindering other community goals through punitive constraints.

Objective 2.1: Increase control over development in the floodplain to ensure lives and properties are not at risk to future flood conditions.

Objective 2.2: Preserve the natural and beneficial functions of the county's floodplains and wetlands through continued support of natural resource protection policies and by discouraging growth in environmentally sensitive areas.

Objective 2.3: Ensure that new construction is completed using severe weather/ high wind resistant design techniques and materials in accordance with the minimum requirements of the International Building Codes that will limit damage caused by high winds and reduce the amount of wind-borne debris.

Objective 2.4: Increase the amount and range of community severe weather/ tornado community shelters and private and/or public safe rooms throughout the County.

Goal 3: Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.

Objective 3.1: Maximize the use of available hazard mitigation grant programs to protect the most vulnerable populations and structures.

Objective 3.2: Decrease the number of properties located within the FEMA designated 100-year floodplain by 25% by the year 2020.

Objective 3.3: Ensure that all vital/ critical facilities are protected from the effects of natural hazards to the maximum extent possible.

Goal 4: Protect public health, safety, and welfare by increasing the public awareness of natural disasters and their probable severity through the coordination of all educational programs to foster both individual and public responsibility in mitigating risks due to those hazards.

Objective 4.1: Increase the level of knowledge and awareness on the hazards that threaten the area by educating property owners, financial institutions, and County residents on the affordable, individual mitigation and preparedness measures that can be taken before the next hazard event.

Objective 4.2: Increase the number of residents that maintain an active NFIP flood insurance policy by 10% by the year 2020.

Step 7: Review Possible Mitigation Actions and Activities

After the second meeting and prior to the third meeting, each jurisdiction and school district completed an assessment of previous actions from the 2013 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.

MPC members were encouraged to continue forward only those actions that substantively addressed long-terms risks identified in the risk assessment. They were also provided a link to the FEMA's publication, *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards (January 2013).* This document was developed by FEMA as a resource for identification of a range of potential mitigation actions for reducing risk to natural hazards and disasters.

Step 8: Draft an Action Plan

The focus of the third meeting, held on March 29, 2018, was to update the mitigation strategies and draft an action plan. Each member of the MPC was asked to provide a written status update and progress report of all the previous actions for their respective communities. Their responses were used to begin drafting the action plans for each jurisdiction. After the third meeting one-on-one jurisdictional meetings were conducted to review the drafted action plans and discuss potential new actions. All actions were developed using an action worksheet and a STAPLEE prioritization worksheet for each new and continuing action. After reviewing past and proposed mitigation activities and prioritizing them with the STAPLEE process, a final action plan was drafted for each jurisdiction. Action worksheets and STAPLEE worksheets are documented in Appendix D.

Step 9: Adopt the Plan (Handbook Task 8)

Once the first draft of the plan was completed the governing body of each jurisdiction was presented with adoption resolutions. 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 and documented in Appendix E.

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

During the fourth meeting, held on May 10, 2018, the MPC agreed on a strategy for plan implementation and maintenance. This process, which is detailed in Section 5 of this document, includes reviews annually and in the event of any significant hazard, as well as provisions for the five-year update process.

2 PLANNING AREA PROFILE AND CAPABILITIES

2 PLANNING AREA PROFILE AND CAPABILITIES 2.1

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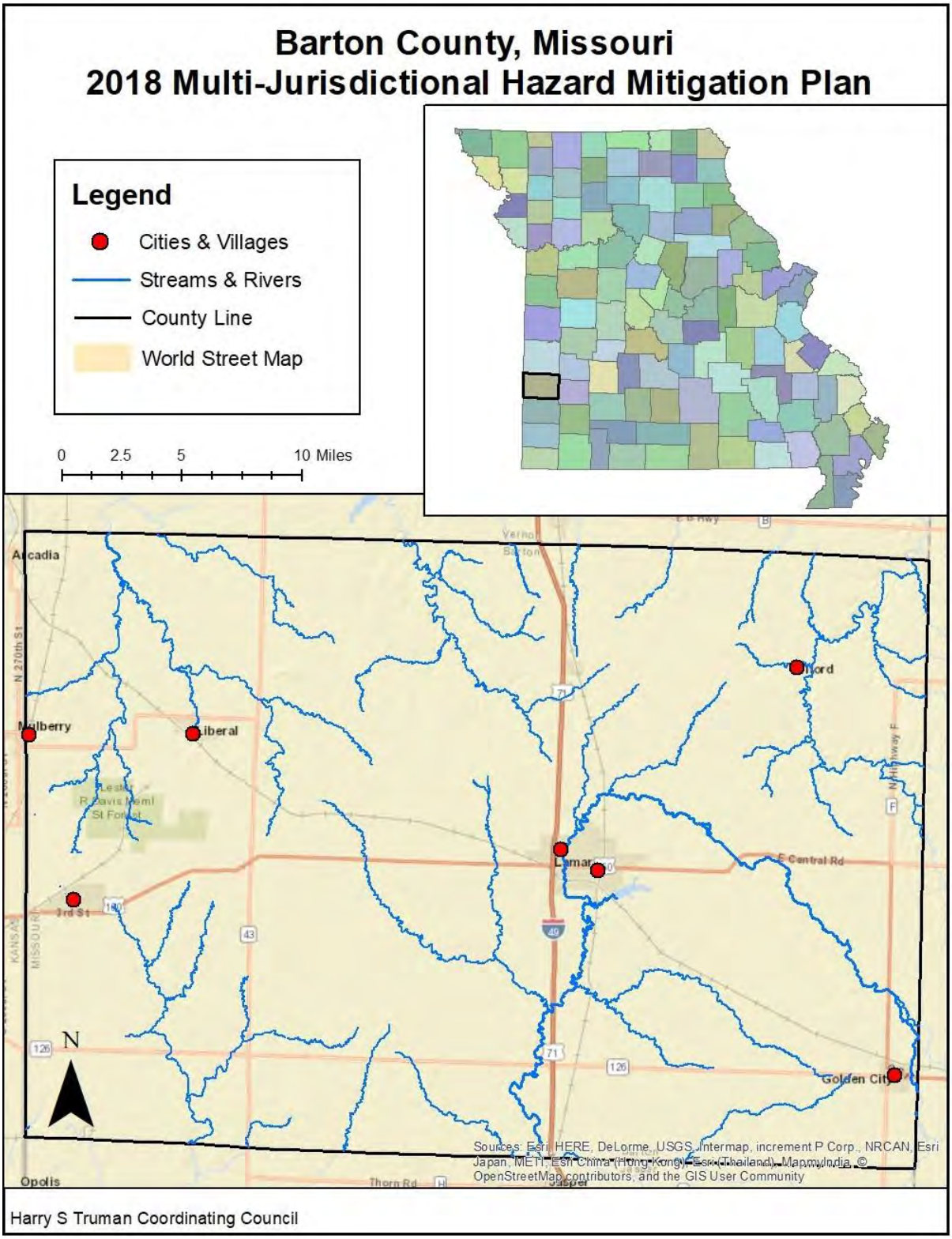
2.1 Barton County Planning Area Profile

The total population in Barton County as of the 2015 Census Population Estimates is 12,166 persons. In comparison, the total population in 2000 was 12,541 persons. From 2000 to 2015 Barton County has experienced a -2.99 percent decline in total population. In comparison, the state of Missouri has seen a population increase of 8.73 percent from 2000-2015, and the USA has seen a population increase of 14.21 percent from 2000-2015.

The median household income in Barton County in 2015 was $37,467 in 2015 and $29,275 in 2000, for an increase of 21.86 percent from 2000 to 2015. In comparison, the median household income for the State of Missouri increased by 21.25 percent from 2000-2015; and in 2015 was 22.2 percent higher than that of Barton County. The median household income for the entire USA increased 22.07 percent from 2000-2015; and in 2015 was 30.47 percent higher than that of Barton County.

The median household value was not available for 2000 therefore a comparison will be made from 2010 to 2015 instead. In 2015 the median home value for Barton County was $93,500 and in 2010 was $84,000, for an increase of 10.16 percent from 2010 to 2015. In Comparison, the median home value for the State of Missouri increased by only 0.5 percent from 2010 to 2015; and in 2015 was 32.44 percent greater than that of Barton County. The median home value for the entire USA decreased by -5.49 percent from 2010 to 2015; and in 2015 was 47.65 percent greater than that of Barton County.

Figure 2.1. Map of Barton county



2.1.2 Geography, Geology and Topography

Barton County, Missouri is located in the Southwest portion of Missouri and has a total area of 597 square miles, of which approximately 592.2 square miles is land and approximately 4.8 square miles is water. Bordering Counties include Jasper County to the South, Vernon County to the North, Cedar County to the Northeast, Dade County to the East, and Crawford County, Kansas to the West.

Barton County is primarily a rural County. There are 5 small cities and villages, but only one significant urban area. The City of Lamar is the County seat and combined with the adjacent City of Lamar Heights forms the only urban center in Barton County. The primary land use in Barton County is agricultural (cropland and pasture). Out of approximately 380,160 acres total, Barton County utilizes 332,209 acres for farmland, that equals 87.4% of land area is used for agriculture. 67.4% of Agricultural Land is used for cropland and 20.3% is used for pastureland.

Barton County is in the Western “Osage” Plains region of Missouri where the topography is mostly flat with gently rolling plains. Despite there being little noticeable change in elevation, there lies a ridge known as the Ozark Divide which separates the county into two distinct watersheds. North of the Ozark Divide, water flows Northeast into the Osage River Basin which enters the Missouri River after traveling through the Harry S Truman Reservoir and the Lake of the Ozarks in Central Missouri. South of the Ozark Divide, water flows Southwest into the Spring River Basin which flows through Kansas and into Oklahoma where it enters the Grand Lake ‘O the Cherokees and eventually flows into the Arkansas River. **Figure 2.2** shows the Spring River Watershed basin, and **Figure 2.3** shows the Osage River Watershed basin.

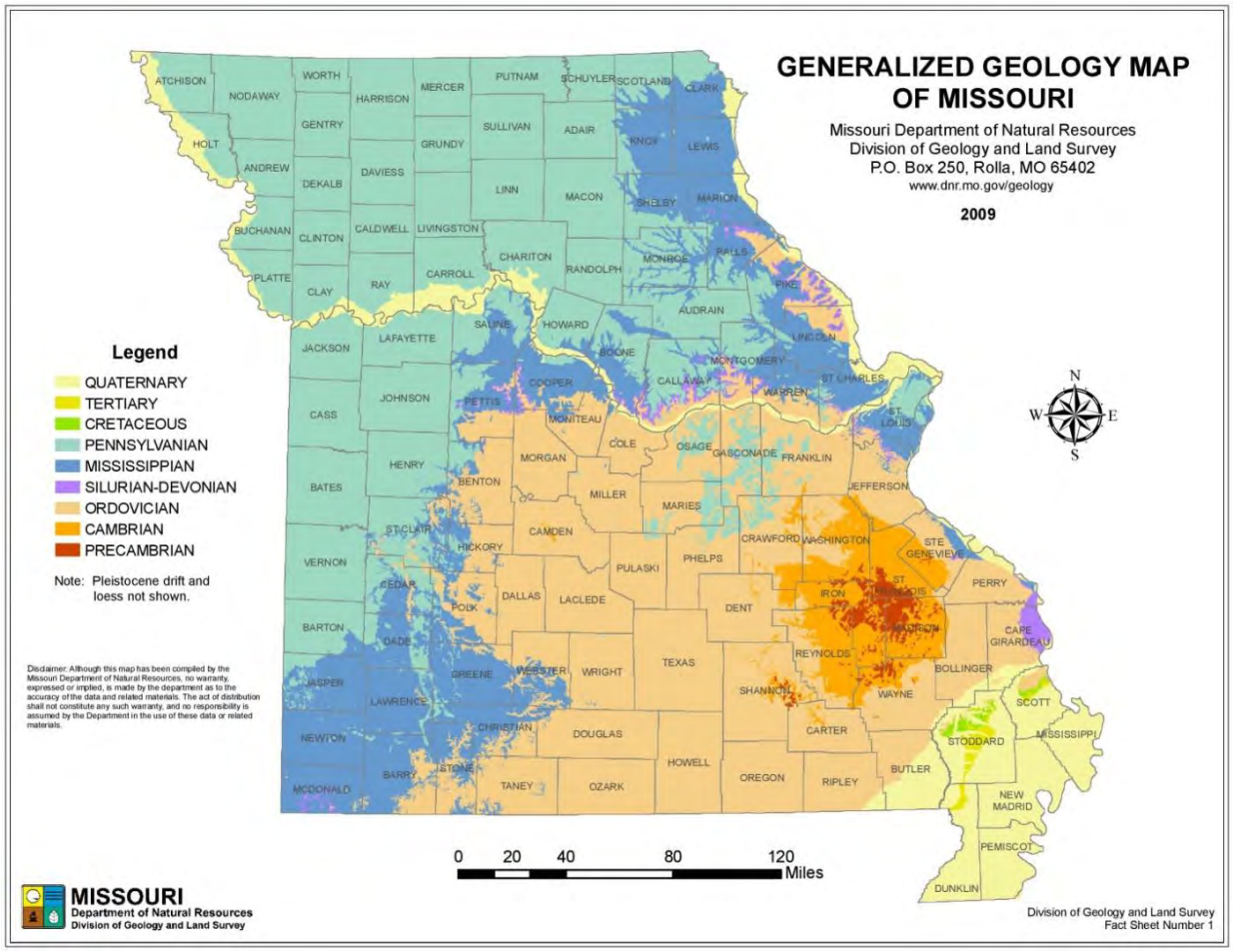
Figure 2.4 shows the general geology map of Missouri, most of Barton County is classified as being in the Pennsylvanian Period, only a small portion of the southeast corner of the county is classified as the Mississippian Period. The term "Carboniferous" is used throughout the world to describe both of these periods, although in the United States it has been separated into the Mississippian (early Carboniferous) and the Pennsylvanian (late Carboniferous) Subsystems. This division was established to distinguish the coal-bearing layers of the Pennsylvanian from the mostly limestone Mississippian and is a result of differing stratigraphy.

The stratigraphy of the Mississippian can be easily distinguished from that of the Pennsylvanian. The Mississippian environment of North America was heavily marine with seas covering parts of the continent. As a result, most Mississippian rocks are limestone, which are composed of the remains of crinoids, lime-encrusted green algae, or calcium carbonate shaped by waves. The North American Pennsylvanian environment was alternately terrestrial and marine, with the transgression and regression of the seas caused by glaciation. These environmental conditions, with the vast amount of plant material provided by the extensive coal forests, allowed for the formation of coal. Plant material did not decay when the seas covered them, and pressure and heat eventually built up over millions of years to transform the plant material to coal.

Figure 2.2. Spring River Watershed

Figure 2.3. Osage River Watershed

Figure 2.4. Generalized Geology Map



Sources of Data:

- FEMA Flood Insurance Study (if recent). This can be accessed from the FEMA Flood Map Service Center, https://msc.fema.gov/portal
- Environmental Protection Agency Website for watershed details, http://cfpub.epa.gov/surf/locate/index.cfm

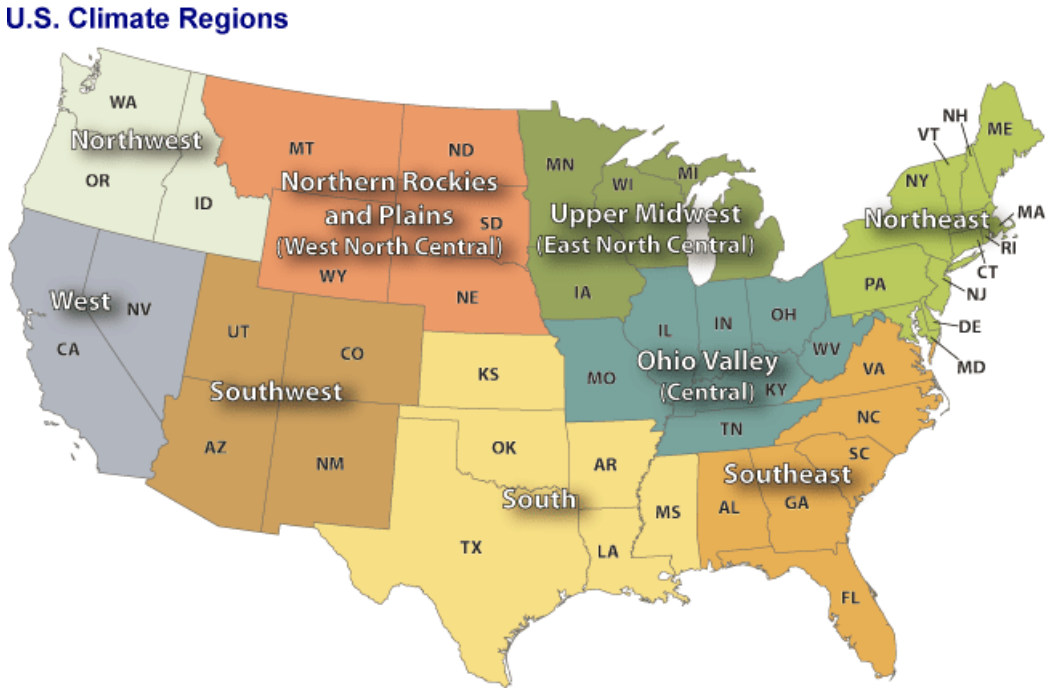
2.1.3 Climate

There are a number of factors to consider when discussing a region's climate, such as latitude, elevation, proximity to large waterbodies, mountains or other surface features, atmospheric oceanic currents. These factors work together to control the amount precipitation, range of temperature, and type of weather phenomena's a region receives throughout the year.

Temperature range and precipitation levels are typically the determining factors for which climate classification is assigned to a region.

Figure 2.5 shows U.S. climate regions as defined the National Centers for Environmental Information. Missouri is classified in the Ohio Valley or Central Climate Region, this region experiences a continental climate with strong seasonal variation in temperature and precipitation, warm summers and cool winters are typical of this region. Barton County however, is located on the far west side of the central climate region, bordered on the west by the South Climate Region. The South Climate Region experiences more of a semi-tropical climate with less seasonal variation of temperature resulting in warmer winters. The boundary between climate types is not stationary, but rather fluctuates from year to year, or even month to month as the atmospheric currents fluctuate. Barton County's climate is likely to experience characteristics typical of both the Central and South climate regions.

Figure 2.5. U.S. Climate Regions



Source: National Oceanic and Atmospheric Administration, National Centers for environmental Information: https://www.ncdc.noaa.gov/monitoring-references/maps/us-climate-regions.php

Table 2.1 shows average annual climate statistics for Barton County including average annual temperature, average high temperature in July, average low temperature in January, average annual precipitation, and average annual snowfall. **Figure 2.4** shows a climate graph for Lamar, Missouri which is the central urban area and county seat for Barton County. This graph compares

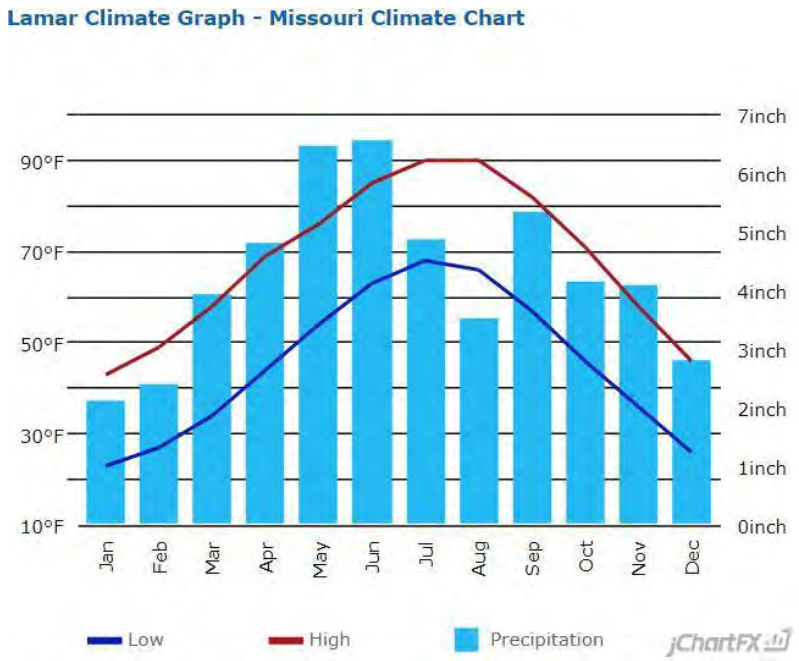
average high temperature, average low temperatures, and average precipitation for each month. The bell curve displayed in this graph is typical of a region that experiences a continental climate.

Table 2.1. Barton County Climate Statistics

Average Annual Temperature (°F)	Average High Temperature, July (°F)	Average Low Temperature, January (°F)	Annual Precipitation Average (in.)	Annual Snowfall Average (in)
56.7°F	90°F	23°F	51.13 in.	10 in.

http://www.usclimatedata.com/climate/lamar/missouri/united-states/usmo0493

Figure 2.6. Climate Graph



http://www.usclimatedata.com/climate/lamar/missouri/united-states/usmo0493

- FEMA Flood Insurance Study (if recent). This can be accessed from the FEMA Flood Map Service Center, https://msc.fema.gov/portal
- High Plains Regional Climate Center, http://www.hprcc.unl.edu/data/historical/index.php?state=mo&action=select_state&submit=Select+State
-
- Missouri Historical Agricultural Weather Database, University of Missouri Extension, http://agebb.missouri.edu/weather/history/index.asp

2.1.4 Population/Demographics

Table 2.2 shows the overall population changes in Barton County from 2000 to 2010 to 2015. The population in Barton County has seen a steady decline from 2000 to 2010 decreasing by -1.12 percent. According to the most recent population estimates this decline has continued through 2015 decreasing by an additional -1.94 percent, for a total population decrease of -3.08 percent from 2000 to 2015. The only jurisdiction that has not seen a population decrease during this 15 year period is the City of Lamar which increase by 2.36 percent from 2000-2010, and then decrease by -1.68 percent from 2010 to 2015, for a total increase of 0.72 percent from 2000 to 2015.

This overall population decrease in Barton County is in contrast to the State and National Population changes during the same 15 year period. From 2000 to 2015 the State of Missouri's population increased by 8.03 percent and the United States population increased by 12.44 percent.

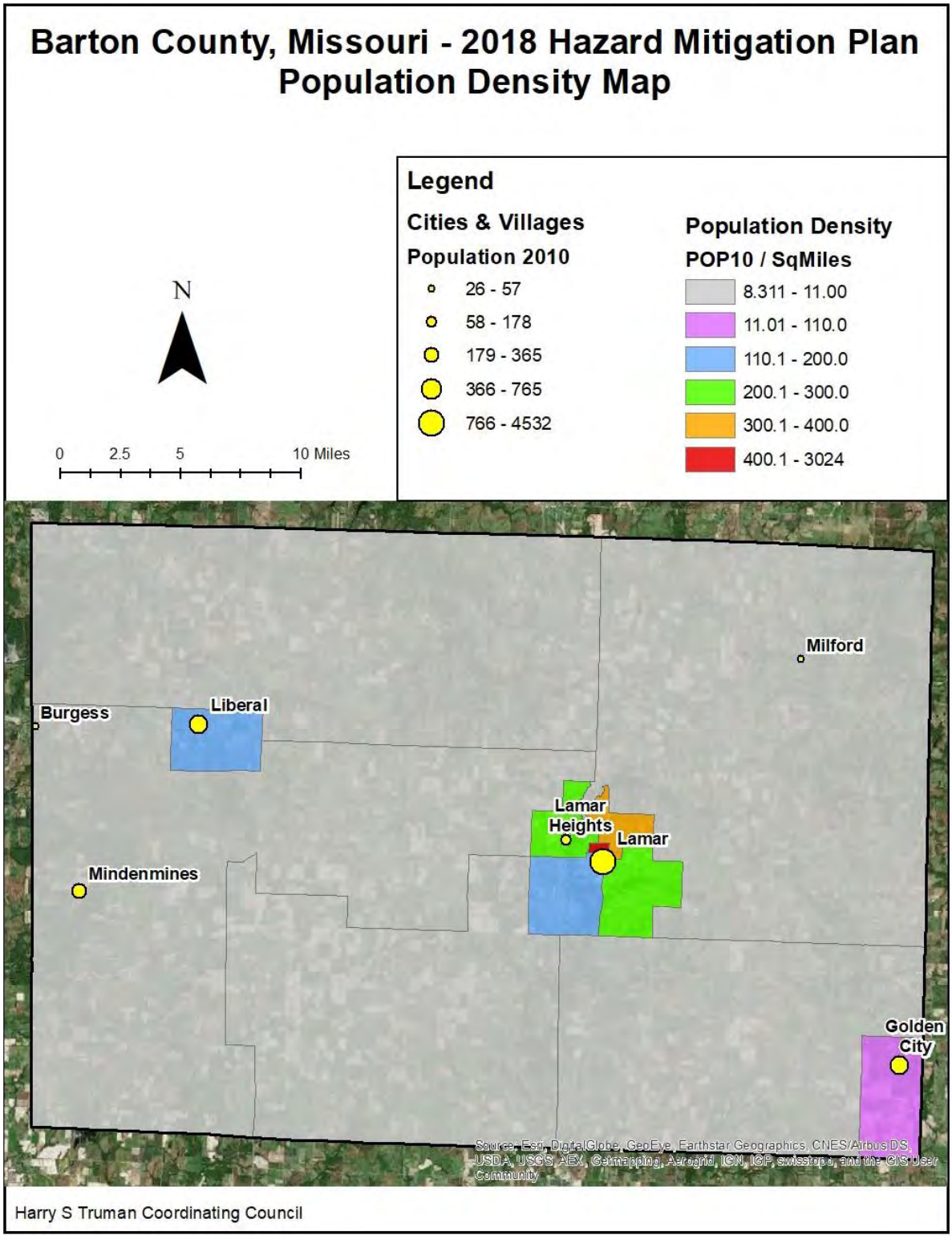
Table 2.2. Barton County Population 2000-2010-2015 by Community

Jurisdiction	2000 Census Population	2010 Census Population	2015 Population Estimates	2000-2010 % Change	2010-2015 % Change	2000-2015 % Change
Barton County	12,541	12,402	12,166	-1.11%	-1.90%	-2.99%
City of Golden City	884	765	578	-13.46%	-24.44%	-34.62%
City of Lamar	4,425	4,532	4,457	2.42%	-1.65%	0.72%
City of Lamar Heights	216	178	200	-17.59%	12.36%	-7.41%
City of Liberal	779	759	739	-2.57%	-2.64%	-5.13%
City of Mindenmines	409	365	270	-10.76%	-26.03%	-33.99%
Unincorporated Barton county	5,922	5,720	5,832	-3.41%	1.96%	-1.52%
Missouri	5,595,211	5,988,927	6,083,672	7.04%	1.58%	8.73%
USA	281,421,906	308,745,538	321,418,820	9.71%	4.10%	14.21%

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

The population density map (**Figure 2.7**) is based on the 2010 official census data and shows the county's population density in comparison to the population of each incorporated jurisdiction. The largest city in Barton County is Lamar with a population of 4,532. The areas surrounding Lamar also have the overall highest-density populations (red, orange, and green areas on the map). The medium-to-low density areas (blue and purple on the map) include the areas surrounding Liberal, Golden City, and an area Southwest of Lamar. The very low-density areas (gray on the map) include a large majority of the unincorporated areas of the county as well as Mindenmines.

Figure 2.7. Barton County Population Density



Certain populations may be more susceptible to injury or death during a hazard event, including those under age 5, age 65 and older, and those with compromised immune systems due to illness or disease. Data is not readily available for the populations with compromised immune systems. Barton County population under five is 6.73% and the population over 65 is 17.19%, these numbers are comparable to the National and State age distribution, see **Table 2.3**. There are approximately 4,929 households in Barton County. Of the total households, 3,422 are family households and 1,507 are non-family households. The average family size in Barton County is 3.01 persons and the average household size is 2.5 persons. These numbers are also comparable to the state and national household and family size. See **Table 2.4.**

Table 2.3. Barton County Age Distribution

Jurisdiction	Percent Under 5	Percent 5-19	Percent 20-64	Percent 65 & Over
Barton County	6.73%	28.47%	54.34%	17.19%
Missouri	6.15%	16.72%	61.43%	15.70%
USA	6.19%	16.72%	62.23%	14.86%

2010 Census

Table 2.4. Barton County Households

Jurisdiction	Family Households	Non-Family Households	Total Households	Average Family Size	Average Household Size
Barton County	3,422	1,507	4,929	3.01	2.5
Missouri	1,552,133	823,478	2,375,611	3.00	2.45
USA	77,538,296	39,177,996	116,716,292	3.14	2.58

2011-2015 American Community Survey 5-Year Estimates

Table 2.5 shows a comparison between per capita income, median household income, and median home values from 2010 to 2015. The per capita income estimate increased 8.0 percent in the 5 year period, this may suggest that the county may be better equipped to prevent injury and death during a hazard event. However, in the same 5-year period median household income only increased 0.56 percent while median home values increased by 12.56 percent. This higher increase in property value may leave some households susceptible to costly damage during a hazard event. The year each home was built can also affect the vulnerability during a hazard event; older homes have a higher vulnerability and are likely to receive more damage. **Table 2.6.**

Table 2.5. Barton County Estimated Household Income and Homes Values 2010-2015

	Per Capita Income 2010	Per Capita Income 2015	Median Household Income 2010	Median Household Income 2015	Median Home Values 2010	Median Home Values 2015
Barton County	$19,117	$20,780	$43,763	$44,013	$71,000	$81,200
Percent Change	8.0 %		0.56 %		12.56 %	

Table 2.6. Barton County Year Home Built

Place	Year Home Built 2015					
	2010 or Later	2000-2009	1980-1999	1960-1979	1940-1959	1939 or Earlier
Barton County	1.57%	14.89%	27.72%	26.64%	16.01%	13.17%

Table 2.7 shows additional economic and demographic data that can also affect the population's vulnerability to hazard events.

Table 2.7. Unemployment, Poverty, Education, and Language Percentage Demographics in Barton County

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)
Barton County	5,427	3.7%	18.8%	86.9%	16.7%	2.5%
City of Golden City	227	4.5%	31.8%	82.6%	8.0%	1.3%
City of Lamar	1,979	1.9%	16.5%	86.6%	18.2%	5.0%
City of Lamar Heights	92	8.7%	18.5%	82.8%	24.8%	1.0%
City of Liberal	343	5.8%	8.6%	84.7%	9.1%	0.6%
City of Mindenmines	124	4.9%	26.2%	86.9%	6.8%	2.7%
State	3,053,938	4.7%	11.1%	88.4%	27.1%	6.0%
Nation	159,913,288	5.2%	11.3%	86.7%	29.8%	21.0%

Source: U.S. Census, 2011-2015 American Community Survey, 5-year Estimates.

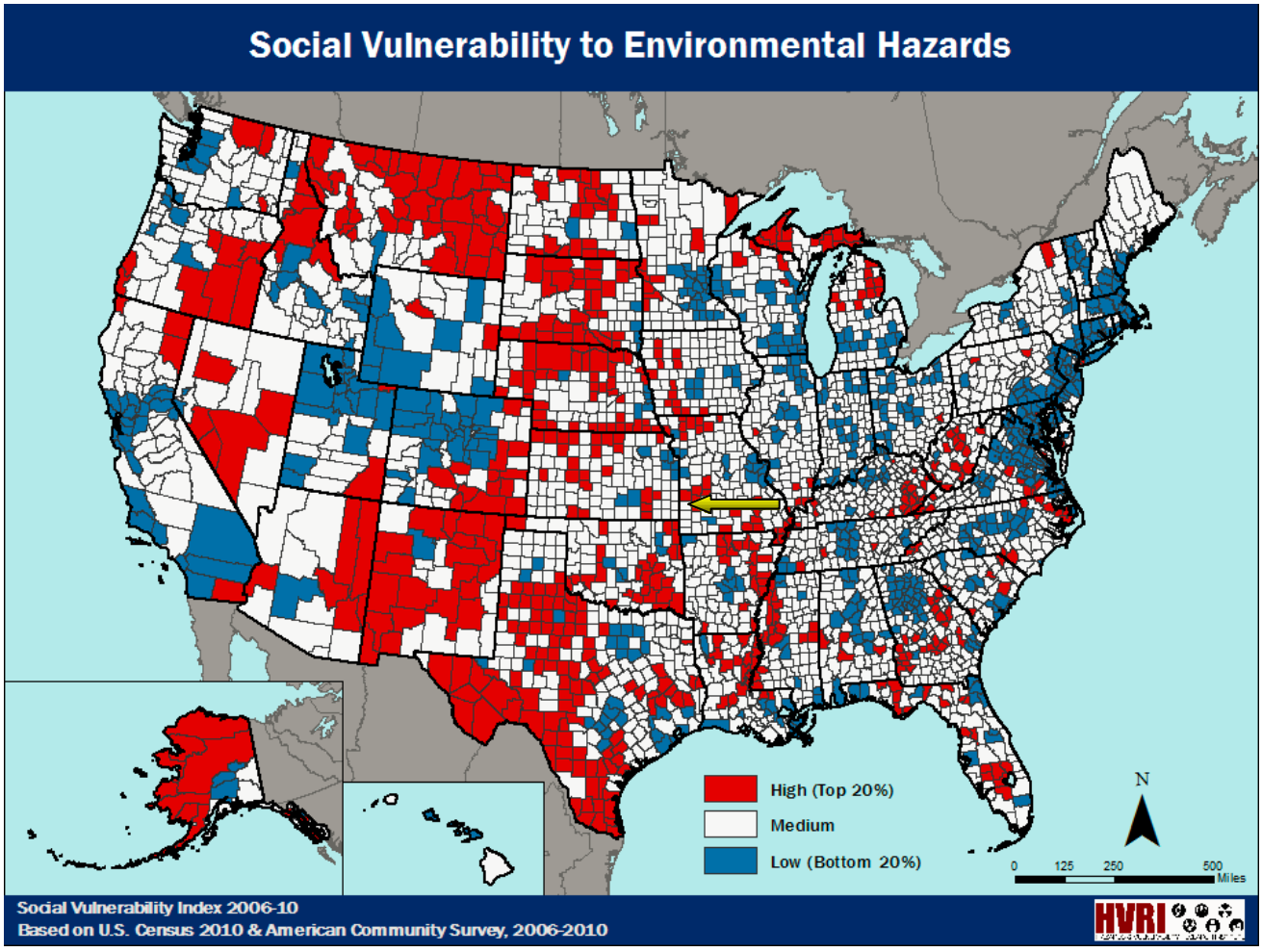
Population/Demographics Sources:

- U.S. Census Bureau, American Factfinder, http://factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t

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 30 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 States Census Bureau.

In **Figure 2.5**, according to the SoVI rating and the map from HVRI website, Barton County has a medium social vulnerability to Environmental Hazards.

Figure 2.8. Social Vulnerability



2.1.5 History

Barton County was formed from Jasper County on December 12, 1855; Barton County was organized and named after David Barton, the first Missouri Senator. Barton County was ravaged by the Missouri-Kansas Border Wars in 1854-1859, by Quantrill and his raiders. The county seat of Lamar Missouri is located 120 miles south of Kansas City at the junction of Interstate-49 and Highway-160.

The town of Lamar originated in 1852 when George E. Ward built a saw mill and store where Lamar now stands. The City was built on land originally owned by Mr. Ward and his son-in-law Joseph Parry, named by Mrs. George Ward in honor of the military president Mirabeau Lamar of the Republic of Texas. Lamar is also famous as the birthplace of President Harry S. Truman in 1884, is also near the resting place for Urilla Earp, the first wife of Wyatt Earp who served as the first constable of Lamar in 1870-71.

Current attractions in Lamar are the Aquatic Park, Stilabower Public Observatory, the Harry S. Truman Birthplace, the City Park and Lake, Old North Dam, Thiebaud Auditorium and the Barco Drive-In Theatre. The annual Lamar Free Fair is known as the largest free fair in the State of Missouri, and Barton County is also known as the leading grain producer in the State of Missouri.

The City of Liberal, located a few miles northwest from the Junction of Highway-160 and Highway-43, was founded by George Walser in 1880. The city was originally founded as an atheist utopia, named after the Liberal League in Lamar. It was to be a city without churches or saloons, instead offering experimental programs, such as liberal Sunday morning instruction for children and intellectual lectures for adults on Sunday evenings. By 1910, when its founder passed, the experiment in creating a town for non-believers had failed. Today, few reminders remain of the town's origins, other than Darwin Street and a cemetery designed by Walser. Liberal of today has seven churches, a tavern on its outskirts, and a history unlike any town in America.

The City of Mindenmines is located along Highway 160 about 4 miles east of Frontenac Kansas. The city was founded by Captain J. R. Tucker in 1883 and named *Minden*. But only a year later the name was changed to *Mindenmines* (spelled *Minden Mines* from 1884 to 1895) because the mail got mixed up with that of Mendon, Missouri. The suffix was added because the chief occupation of the local inhabitants was coal mining.

The City of Golden City is located in the far southwest corner of the county at the junction of Highway 160 and Highway 126. Golden City was established in 1867 as a stop on the Butterfield Stagecoach Line. It takes its name from a nearby area known as Golden Grove. In reality the mining was done by Native Americans mining an outcropping of exceptionally fine flint, early settlers thought these flint mines were Spanish gold mines.

2.1.6 Occupations

Table 2.8 shows occupation statistics for the incorporated cities and the county as a whole.

Table 2.8. **Occupation Statistics, Barton County, Missouri**

Place	Total # Employed	Management, Business, Science, and Arts Occupations	Service Occupations	Sales and Office Occupations	Natural Resources, Construction, and Maintenance Occupations	Production, Transportation, and Material Moving Occupations
Barton County	5,075	28.9%	12.5%	26.6%	10.6%	21.4%
City of Golden City	206	16.5%	21.4%	12.1%	16.0%	34.0%
City of Lamar	1,912	32.3%	8.8%	29.1%	5.5%	24.2%
Village of Lamar Heights	78	38.5%	5.1%	29.5%	11.5%	15.4%
City of Liberal	759	8.3%	6.5%	8.7%	6.1%	10.9%
City of Mindenmines	113	15.9%	17.7%	25.7%	15.9%	24.8%

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

2.1.7 Agriculture

Table 2.9 shows agricultural statistics for Barton County in comparison with the State of Missouri and the United States agricultural statistics. Agriculture makes up 8.1 percent of the workforce in Barton County compared to only 2 percent for the Missouri and the U.S.

Table 2.9. Agricultural Statistics, Barton County, Missouri

Place	Total # of Farms	Total Farm Acres	Acres per farm	Total Cropland Acres	Irrigated Land Acres	Top Crops	Market Value of Products Sold, avg per Farm	Total Farm Jobs	% of Workforce
Barton County	940	332,209	353	223,964	11,144	corn, hay	$127,807	442	8.1%
Missouri	99,171	43,944,490	285	15,259,319	1,180,886	Soybean	$9,164,886	56,543	2%
U.S.	2,109,303	914,527,657	434	389,690,414	55,822,231	Corn	$187,097	2,109,303	2%

Source: http://www.agcensus.usda.gov/Publications/2012/Full_Report/Census_by_State/Missouri/index.asp

2.1.8 FEMA Hazard Mitigation Assistance Grants in Planning Area

Table 2.10 shows FEMA Hazard Mitigation Assistance Grants in Barton County. The only grant listed is for a new saferoom for Liberal R-II school district which is currently in the planning phase.

Table 2.10. FEMA HMA Grants in County from 1993-20__

Project Type	Sub applicant	Award Date	Project Total
Saferoom	Liberal R-II	Pending	1,350,000
Total			**1,350,000**

Source: Missouri State Emergency Management Agency, https:/www.fema.gov/openfema-dataset-hazard-mitigation-grants-v1

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 Barton County

Barton County includes 6 incorporated municipalities and several small unicorporated communities. The municipalities participating in the 2018 update of the Barton County Multi-Jurisdictional Hazard Mitigation Plan include the City of Golden City, the City of Lamar, the City of Lamar Heights, the City of Liberal, and the City of Mindenmines. The village of Milford did not participate in the 2013 plan and has declined to participate in this plan update.

By Missouri Statute (Section 48.020.1) Barton County is defined as a third-Class County, meaning its assessed valuation is less than six hundred million dollars. The county government functions through the Barton County Commission, a three-member Board with final authority. Barton County government can administer county structures, infrastructures, and finances. The Harry S Truman Coordinating Council (HSTCC) is the regional planning commission that assists member communities with support related activities to facilitate community goals and projects through state and federal funding programs. The incorporated municipalities in Barton County have autonomy from County Regulation and conduct their own business on varying scales and through varying structures.

Departments within Barton County's government include:

- Board of Commissioners: Presiding Commissioner, District One Commissioner, and District Two Commissioner
- County Assessor
- Clerk Circuit Court
- County Collector/Treasurer
- County Clerk
- Prosecuting Attorney
- Public Administrator
- Recorder of Deeds
- Sheriff
- Coroner
- Associate Circuit Judge
- Emergency Management

Mitigation Initiatives/Capabilities

The Barton County Emergency Management Department (EMD) oversees the preparation of emergency or disastrous events. The Emergency Management Department consists of the Emergency Management Director, County Commissioners, County Sheriff's Department, and Municipal Police and Fire Departments. The duties of the EMD include the writing of an Emergency Operations Plans, coordinating intergovernmental emergency response and preparedness agencies, and implementing measures identified in the Emergency Operations Plans that increase preparedness and response times. The joint communication between the agencies generally encourages cooperation between jurisdictions on all disaster response and preparedness.

The Barton County EMD and Local Emergency Planning Committee (LEPC) also collaborate with the Harry S Truman Coordinating Council to update the Hazard Mitigation Plan every 5 years as required by FEMA. The existing Hazard Mitigation Plan identifies facilities of specific importance that require special protection and/or attention in case of a hazardous event. The plan promotes and maintains mutual assistance agreements among the various and usually overlapping agencies, the agencies participates in exercises and drills to maintain awareness, develops procedures to circumvent transportation and utility closures, and identifies vulnerability with the existing civic infrastructure.

The Immediate Response Information System (IRIS) has been adopted by Barton County and all cities, villages and the school system within the County. All emergency responses to disasters, large or small, are conducted utilizing NIMS procedures.

The majority of Hazard Mitigation Planning emphasizes on floodplain management regulations and the participation in the National Flood Insurance Program (NFIP) through County Floodplain ordinances. There are also city floodplain ordinances that limit the amount and type of construction in the floodplain. Jurisdictions with floodplain ordinances include: the City of Lamar, City of Golden City, City of Lamar Heights, City of Liberal and Barton County. Other mitigation measures conducted throughout Barton County include:

- School students have received moderate training about hazards and emergency programs, conducting drills and organizing information intensive awareness. The average citizen lacks this training in hazard and emergency safety and common sense. The public sector has received substantial training due to exposure and exercises.
- Due to the severity of tornadoes, awareness to the susceptibility and unpredictability of natural hazards, particularly tornados occurrences throughout the County, has increased the preparedness and response of residents of Barton County. There is a total of 17 tornado sirens throughout the county.

Table 2.11. Barton County Mitigation Capabilities

Capabilities	Status Including Date of Document or Policy
Planning Capabilities	
Comprehensive Plan	No
Builder's Plan	No
Capital Improvement Plan	No

Local Emergency Operations Plan	N/A
County Emergency Operations Plan	Yes,
Local Recovery Plan	N/A
County Recovery Plan	Yes
City Mitigation Plan	N/A
County Mitigation Plan	Yes, 2013
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
NoCritical Facilities Plan (Mitigation/Response/Recovery)	No
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
Program	
Zoning/Land Use Restrictions	Yes
Codes Building Site/Design	No
National Flood Insurance Program (NFIP) Participant	Yes
NFIP Community Rating System (CRS) Participating Community	Yes
Hazard Awareness Program	No
National Weather Service (NWS) Storm Ready	No
Building Code Effectiveness Grading (BCEGs)	No
ISO Fire Rating	No
Economic Development Program	No
Land Use Program	No
Public Education/Awareness	No
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	No
Studies/Reports/Maps	
Hazard Analysis/Risk Assessment (Local)	N/A

Hazard Analysis/Risk Assessment (County)	Yes, 2013
Flood Insurance Maps	Yes
FEMA Flood Insurance Study (Detailed)	Yes
Evacuation Route Map	Yes
Critical Facilities Inventory	Yes
Vulnerable Population Inventory	No
Land Use Map	No
Staff/Department	
Building Code Official	No
Building Inspector	No
Mapping Specialist (GIS)	Yes
Engineer	No
Development Planner	No
Public Works Official	No
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	Yes
County Emergency Management Commission	Yes
Sanitation Department	No
Transportation Department	No
Economic Development Department	No
Housing Department	No
Planning Consultant	No
Regional Planning Agencies	No
Historic Preservation	No
Non-Governmental Organizations (NGOs)	
American Red Cross	No
Salvation Army	Yes
Veterans Groups	Yes
Environmental Organization	No
Homeowner Associations	No
Neighborhood Associations	No
Chamber of Commerce	Yes
Community Organizations (Lions, Kiwanis, etc.	No
Financial Resources	
Apply for Community Development Block Grants	No
Fund projects through Capital Improvements funding	No
Authority to levy taxes for specific purposes	No
Fees for water, sewer, gas, or electric services	No
Impact fees for new development	No
Incur dept through general obligation bonds	No
Incur debt through special tax bonds	No

Incur debt through private activities	No
Withhold spending in hazard prone areas	No

2.2.2 Golden City

The city of Golden City is located in the southeast portion of the county at the intersection of Highway 160, Highway 126, and Highway 37. Golden City is defined as a fourth-class city run by a Mayor and a six member City Council. Additional city staff include:

- City clerk
- Police Chief
- Fire Chief
- City Collector/Treasurer
- City Engineer
- Public Works Director
- Emergency Management Coordinator/Floodplain Administrator

Population and demographics:

- 2010 Population: 884
- 2015 Population: 729
- 2015 Median Household Income: $24,938
- 2015 Total Housing Units: 373
- 2015 Median Gross rent: $477
- 2015 Median Housing Value: $49,600
- 2015 Housing built prior to 1939: 154 (41.3%)
- 2015 Mobile Home Count: 27 (7.2%)
- New construction since 2013 HMP: New Dollar General Store

Utilities:

- Water and Sewer: City of Golden City
- Electric: Empire Electric
- Gas: Spire
- Trash: City of Golden City

Law enforcement is provided by the Barton County Sheriff's Department. The Golden City Volunteer Fire Department provides fire protection services and a first responders unit for emergency medical and response services. Ambulance services are provided by Barton County Ambulance District

Specific mitigation initiatives from the data collection questionnaire for local governments: School

- Fire Safety Programs
- One outdoor warning siren, activated by Barton County Emergency Management.
- FEMA storm shelter at Golden City school.

Table 2.12. Golden City Mitigation Capabilities

Capabilities	Status Including Date of Document or Policy
Planning Capabilities	
Comprehensive Plan	N/A
Builder's Plan	N/A
Capital Improvement Plan	N/A
Local Emergency Operations Plan	Yes, 2008
County Emergency Operations Plan	Yes

Local Recovery Plan	N/A
County Recovery Plan	N/A
City Mitigation Plan	Yes, Dec 2013
County Mitigation Plan	Yes, Dec 2013
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	No
Firewise or other fire mitigation plan	No
NoCritical Facilities Plan (Mitigation/Response/Recovery)	No
Policies/Ordinance	
Zoning Ordinance	N/A
Building Code	N/A
Floodplain Ordinance	6/04/2012
Subdivision Ordinance	N/A
Tree Trimming Ordinance	N/A
Nuisance Ordinance	Yes
Storm Water Ordinance	No
Drainage Ordinance	No
Site Plan Review Requirements	No
Historic Preservation Ordinance	No
Landscape Ordinance	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	Yes
Hazard Awareness Program	No
National Weather Service (NWS) Storm Ready	No
Building Code Effectiveness Grading (BCEGs)	N/A
ISO Fire Rating	7
Economic Development Program	No
Land Use Program	No
Public Education/Awareness	No
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)	Yes, 2013
Hazard Analysis/Risk Assessment (County)	Yes, 2013
Flood Insurance Maps	Yes
FEMA Flood Insurance Study (Detailed)	Yes
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, part-time
Development Planner	No
Public Works Official	Yes, full-time
Emergency Management Coordinator	Yes, part-time
NFIP Floodplain Administrator	Yes, part-time
Bomb and/or Arson Squad	No
Emergency Response Team	No
Hazardous Materials Expert	No
Local Emergency Planning Committee	Yes
County Emergency Management Commission	Yes
Sanitation Department	No
Transportation Department	No
Economic Development Department	No
Housing Department	No
Planning Consultant	HSTCC
Regional Planning Agencies	HSTCC
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.	No
Financial Resources	
Apply for Community Development Block Grants	Yes
Fund projects through Capital Improvements funding	Yes
Authority to levy taxes for specific purposes	Yes
Fees for water, sewer, gas, or electric services	Yes
Impact fees for new development	No
Incur dept through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activities	No
Withhold spending in hazard prone areas	No

2.2.3 Lamar

The city of Lamar is located at the intersection of I-49 and Highway 160. Lamar is defined as a fourth class city run by a Mayor and an eight member City Council. Lamar also has planning commission whose goal is to promote responsible development and efficient use of the city's resources. Additional city staff includes:

- City Administrator
- City clerk
- Police Chief
- City Attorney
- Assistant City Attorney
- Fire Chief
- City Collector
- City Treasurer
- City Physician
- Building Inspector
- City Engineer
- Municipal Court Judge

Population and demographics:

- 2010 Population: 4,425
- 2015 Population: 4,532
- 2015 Median Household Income: $39,742
- 2015 Total Housing Units: 2,050
- 2015 Median Gross rent: $568
- 2015 Median Housing Value: $96,200
- 2015 Housing built 1939 or earlier: 246 (12%)
- 2015 Mobile Home Count: 87 (4.2%)
- New construction since 2013 HMP: x new single-family homes and x new commercial building.

Utilities:

- Water and Sewer: City of Lamar
- Electric: City of Lamar
- Gas: Spire
- Trash: City of Lamar

Law enforcement is provided by the Lamar Police Department. The Lamar Fire Department provides fire protection services and a first responders unit for emergency medical and response services. Ambulance services are provided by Barton County Ambulance District.

Specific mitigation initiatives from the data collection questionnaire for local governments:

- 5 outdoor warning sirens, activated by the Fire Department.
- Public storm shelter in Memorial Hall basement (not constructed in accordance with FEMA standards).
- Oxygen tanks and generators available for emergencies.

Table 2.13. Lamar Mitigation Capabilities

Capabilities	Status Including Date of Document or Policy
Planning Capabilities	
Comprehensive Plan	1994
Builder's Plan	IBC 2006
Capital Improvement Plan	No
Local Emergency Operations Plan	Yes
County Emergency Operations Plan	Yes
Local Recovery Plan	No
County Recovery Plan	N/A
City Mitigation Plan	Yes, 2013
County Mitigation Plan	Yes, 2013
Debris Management Plan	No
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
NoCritical Facilities Plan (Mitigation/Response/Recovery)	No
Policies/Ordinance	
Zoning Ordinance	Yes
Building Code	IBC 2006
Floodplain Ordinance	2011
Subdivision Ordinance	Yes
Tree Trimming Ordinance	Yes
Nuisance Ordinance	Yes
Storm Water Ordinance	Yes
Drainage Ordinance	Yes
Site Plan Review Requirements	Yes
Historic Preservation Ordinance	No
Landscape Ordinance	No
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	Yes
Hazard Awareness Program	No
National Weather Service (NWS) Storm Ready	No
Building Code Effectiveness Grading (BCEGs)	No
ISO Fire Rating	5
Economic Development Program	Yes
Land Use Program	Yes
Public Education/Awareness	No
Property Acquisition	No
Planning/Zoning Boards	Yes
Stream Maintenance Program	No
Tree Trimming Program	No
Engineering Studies for Streams	Yes

(Local/County/Regional)	
Mutual Aid Agreements	Yes
Studies/Reports/Maps	
Hazard Analysis/Risk Assessment (Local)	Yes, 2013
Hazard Analysis/Risk Assessment (County)	Yes, 2013
Flood Insurance Maps	Yes
FEMA Flood Insurance Study (Detailed)	Yes
Evacuation Route Map	No
Critical Facilities Inventory	No
Vulnerable Population Inventory	No
Land Use Map	Yes
Staff/Department	
Building Code Official	Yes
Building Inspector	Yes
Mapping Specialist (GIS)	No
Engineer	Yes
Development Planner	No
Public Works Official	Yes
Emergency Management Coordinator	Yes
NFIP Floodplain Administrator	Yes
Bomb and/or Arson Squad	No
Emergency Response Team	Yes
Hazardous Materials Expert	No
Local Emergency Planning Committee	Yes
County Emergency Management Commission	Yes
Sanitation Department	Yes
Transportation Department	Yes
Economic Development Department	Yes
Housing Department	No
Planning Consultant	HSTCC
Regional Planning Agencies	HSTCC
Historic Preservation	No
Non-Governmental Organizations (NGOs)	
American Red Cross	No
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
Financial Resources	
Apply for Community Development Block Grants	Yes
Fund projects through Capital Improvements funding	Yes
Authority to levy taxes for specific purposes	Yes
Fees for water, sewer, gas, or electric services	Yes
Impact fees for new development	No
Incur dept through general obligation bonds	Yes
Incur debt through special tax bonds	Yes

Incur debt through private activities	No
Withhold spending in hazard prone areas	Yes

2.2.4 Lamar Heights

The city of Lamar Heights is located at adjacent to the City of Lamar between I-49 and North Fork Spring River. Lamar Heights is defined as a fourth-class city run by a Mayor and a 4 member City Council. Additional city staff includes:

- City clerk
- Floodplain Administrator

Population and demographics:

- 2010 Population: 216
- 2015 Population: 200
- 2015 Median Household Income: $28,036
- 2015 Total Housing Units: 100
- 2015 Median Gross rent: $480
- 2015 Median Housing Value: $132,100
- 2015 Housing built prior to 1939: 2 (2%)
- 2015 Mobile Home Count: 25 (25%)
- New construction since 2013 HMP: none

Utilities:

- Water: Barton County Rural water District 1
- Sewer: Private septic systems
- Electric: City of Lamar/REA/KCPL
- Gas: Spire

Law enforcement is provided by the Barton County Sheriff's Department. The Lamar Fire Department provides fire protection services and a first responders unit for emergency medical and response services. Ambulance services are provided by Barton County Ambulance District.

Specific mitigation initiatives from the data collection questionnaire for local governments:

- 2 outdoor warning sirens, activated by Barton County Emergency Management.

Table 2.14. Lamar Heights Mitigation Capabilities

Capabilities	Status Including Date of Document or Policy
Planning Capabilities	
Comprehensive Plan	No
Builder's Plan	No
Capital Improvement Plan	No
Local Emergency Operations Plan	No
County Emergency Operations Plan	Yes
Local Recovery Plan	No
County Recovery Plan	No

City Mitigation Plan	Yes, 2013
County Mitigation Plan	Yes, 2013
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
NoCritical Facilities Plan (Mitigation/Response/Recovery)	No
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
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	Yes
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	
Land Use Program	No
Public Education/Awareness	No
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	No
Studies/Reports/Maps	
Hazard Analysis/Risk Assessment (Local)	Yes, 2013
Hazard Analysis/Risk Assessment (County)	Yes, 2013
Flood Insurance Maps	Yes
FEMA Flood Insurance Study (Detailed)	Yes
Evacuation Route Map	No
Critical Facilities Inventory	No
Vulnerable Population Inventory	No
Land Use Map	No
Staff/Department	
Building Code Official	Yes, 2013

Building Inspector	Yes, 2013
Mapping Specialist (GIS)	Yes, 2013
Engineer	Yes, 2013
Development Planner	N/A
Public Works Official	N/A
Emergency Management Coordinator	No
NFIP Floodplain Administrator	Yes
Bomb and/or Arson Squad	No
Emergency Response Team	No
Hazardous Materials Expert	Yes, 2013
Local Emergency Planning Committee	Yes, 2013
County Emergency Management Commission	Yes
Sanitation Department	N/A
Transportation Department	No
Economic Development Department	No
Housing Department	No
Planning Consultant	No
Regional Planning Agencies	Yes, 2013
Historic Preservation	Yes, 2013
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.	No
Financial Resources	
Apply for Community Development Block Grants	No
Fund projects through Capital Improvements funding	Yes
Authority to levy taxes for specific purposes	No
Fees for water, sewer, gas, or electric services	No
Impact fees for new development	No
Incur dept through general obligation bonds	No
Incur debt through special tax bonds	No
Incur debt through private activities	No
Withhold spending in hazard prone areas	No

2.2.5 Liberal

The city of Liberal is in the northwest portion of the county along Route K just west of Highway 43. Liberal is defined as a fourth-class city run by a Mayor and a 4-member City Council. Additional city staff includes:

- City manager
- City clerk
- Public works Director
- Emergency Management/Floodplain Administrator

Population and demographics:

- 2010 Population: 779
- 2015 Population: 739
- 2015 Median Household Income: $32,045
- 2015 Total Housing Units: 433
- Median Gross rent: $470
- Median Housing Value: $46,300
- Housing built prior to 1939: 155 (35.8%)
- Mobile Home Count: 46 (10.6%)
- New construction since 2011 HMP: A few new houses on Brookfield Drive.

Utilities:

- Water and Sewer: City of Liberal
- Electric: City of Liberal
- Gas: City of Liberal

Law enforcement is provided by the Barton County Sherriff's Department. The Liberal Volunteer Rural Fire Department provides fire protection services and a first responders unit for emergency medical and response services. Ambulance services are provided by Barton County Ambulance District.

Specific mitigation initiatives from the data collection questionnaire for local governments:

- 2 outdoor warning sirens, activated by Barton County Emergency Management.

Table 2.15. Liberal Mitigation Capabilities

Capabilities	Status Including Date of Document or Policy
Planning Capabilities	
Comprehensive Plan	No
Builder's Plan	No
Capital Improvement Plan	No
Local Emergency Operations Plan	Yes, 2012
County Emergency Operations Plan	Yes, 2009
Local Recovery Plan	No
County Recovery Plan	No
City Mitigation Plan	Yes, 2013
County Mitigation Plan	Yes, 2013
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
NoCritical Facilities Plan (Mitigation/Response/Recovery)	No
Policies/Ordinance	
Zoning Ordinance	No
Building Code	No
Floodplain Ordinance	Yes, 2011
Subdivision Ordinance	No
Tree Trimming Ordinance	No
Nuisance Ordinance	Yes
Storm Water Ordinance	Yes
Drainage Ordinance	Yes
Site Plan Review Requirements	No
Historic Preservation Ordinance	No
Landscape Ordinance	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	Yes
Hazard Awareness Program	No
National Weather Service (NWS) Storm Ready	No
Building Code Effectiveness Grading (BCEGs)	No
ISO Fire Rating	7
Economic Development Program	No
Land Use Program	No
Public Education/Awareness	No
Property Acquisition	No
Planning/Zoning Boards	No
Stream Maintenance Program	No
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, 2013
Hazard Analysis/Risk Assessment (County)	Yes, 2013
Flood Insurance Maps	Yes
FEMA Flood Insurance Study (Detailed)	Yes
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	No
Development Planner	No
Public Works Official	Yes, full time
Emergency Management Coordinator	Yes
NFIP Floodplain Administrator	Yes

Bomb and/or Arson Squad	No
Emergency Response Team	Yes
Hazardous Materials Expert	No
Local Emergency Planning Committee	Yes
County Emergency Management Commission	Yes
Sanitation Department	No
Transportation Department	No
Economic Development Department	No
Housing Department	No
Planning Consultant	HSTCC
Regional Planning Agencies	HSTCC
Historic Preservation	No
Non-Governmental Organizations (NGOs)	
American Red Cross	No
Salvation Army	No
Veterans Groups	Yes
Environmental Organization	No
Homeowner Associations	No
Neighborhood Associations	No
Chamber of Commerce	Yes
Community Organizations (Lions, Kiwanis, etc.	Yes
Financial Resources	
Apply for Community Development Block Grants	N/A
Fund projects through Capital Improvements funding	N/A
Authority to levy taxes for specific purposes	N/A
Fees for water, sewer, gas, or electric services	Yes
Impact fees for new development	No
Incur dept through general obligation bonds	N/A
Incur debt through special tax bonds	N/A
Incur debt through private activities	No
Withhold spending in hazard prone areas	No

2.2.6 Mindenmines

The city of Mindenmines is located on Hwy 160 near the Missouri-Kansas state line. Mindenmines is defined as a 4th class city run by a Mayor and a four-member City Council. Additional city staff includes:

- City clerk
- Public Works Director
- Emergency Management

Population and demographics:

- 2010 Population: 409
- 2015 Population: 270

- 2015 Median Household Income: $27,708
- 2015 Total Housing Units: 162
- Median Gross rent: $510
- Median Housing Value: $31,400
- Housing built prior to 1939: 44 (27.2%)
- Mobile Home Count: 34 (21%)
- New construction since 2011 HMP: none

Utilities:

- Water and Sewer: City of Mindenmines
- Electric: City of Mindenmines

Law enforcement is provided by the Mindenmines Police Department. The Mindenmines Volunteer Fire Department provides fire protection services and a first responders unit for emergency medical and response services.

Specific mitigation initiatives from the data collection questionnaire for local governments:

- 2 outdoor warning sirens, activated by Barton County Emergency Management.

Table 2.16. Mindenmines Mitigation Capabilities

Capabilities	Status Including Date of Document or Policy
Planning Capabilities	
Comprehensive Plan	No
Builder's Plan	No
Capital Improvement Plan	No
Local Emergency Operations Plan	Yes
County Emergency Operations Plan	Yes
Local Recovery Plan	No
County Recovery Plan	No
City Mitigation Plan	Yes, Dec. 2013
County Mitigation Plan	Yes, Dec. 2013
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
No Critical Facilities Plan (Mitigation/Response/Recovery)	No
Policies/Ordinance	
Zoning Ordinance	No
Building Code	No
Floodplain Ordinance	No
Subdivision Ordinance	No
Tree Trimming Ordinance	No
Nuisance Ordinance	Yes
Storm Water Ordinance	Yes

Drainage Ordinance	No
Site Plan Review Requirements	No
Historic Preservation Ordinance	No
Landscape Ordinance	No
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	No
Tree Trimming Program	Yes
Engineering Studies for Streams (Local/County/Regional)	
Mutual Aid Agreements	Yes
Studies/Reports/Maps	
Hazard Analysis/Risk Assessment (Local)	Yes, 2013
Hazard Analysis/Risk Assessment (County)	Yes, 2013
Flood Insurance Maps	Yes
FEMA Flood Insurance Study (Detailed)	No
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	No
Development Planner	No
Public Works Official	Yes, full time
Emergency Management Coordinator	Yes, part time
NFIP Floodplain Administrator	No
Bomb and/or Arson Squad	No
Emergency Response Team	Yes, part time
Hazardous Materials Expert	No
Local Emergency Planning Committee	Yes
County Emergency Management Commission	Yes
Sanitation Department	No
Transportation Department	No
Economic Development Department	No
Housing Department	No
Planning Consultant	No
Regional Planning Agencies	No
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.	No
Financial Resources	
Apply for Community Development Block Grants	Yes
Fund projects through Capital Improvements funding	Yes
Authority to levy taxes for specific purposes	Yes
Fees for water, sewer, gas, or electric services	Yes
Impact fees for new development	No
Incur dept through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activities	No
Withhold spending in hazard prone areas	No

2.2.7 Mitigation Capabilities Summary by Jurisdiction

Table 2.17 summarizes the mitigation capabilities of each jurisdiction and the unincorporated county.

Table 2.17. Mitigation Capabilities Summary Table

CAPABILITIES	Barton County	Golden City	Lamar	Lamar Heights	Liberal	Mindenmines
Planning Capabilities						
Comprehensive Plan	No	N/A	Yes	No	No	No
Builder's Plan	No	N/A	Yes	No	No	No
Capital Improvement Plan	No	N/A	No	No	No	No
Local Emergency Operations Plan	N/A	Yes	Yes	No	Yes	Yes
County Emergency Operations Plan	Yes,	Yes	Yes	Yes	Yes	Yes
Local Recovery Plan	N/A	N/A	No	No	No	No
County Recovery Plan	Yes	N/A	N/A	No	No	No
City Mitigation Plan	N/A	Yes	Yes	Yes	Yes	Yes
County Mitigation Plan	Yes	Yes	Yes	Yes	Yes	Yes
Debris Management Plan	No	N/A	No	No	No	No
Economic Development Plan	No	N/A	Yes	No	No	No
Transportation Plan	No	N/A	No	No	No	No
Land-use Plan	No	N/A	Yes	No	No	No
Flood Mitigation Assistance (FMA) Plan	No	N/A	No	No	No	No
Watershed Plan	No	No	No	No	No	No
Firewise or other fire mitigation plan	No	No	No	No	No	No
Critical Facilities Plan (Mitigation/Response/Recovery)	No	No	No	No	No	No
Policies/Ordinance						

CAPABILITIES	Barton County	Golden City	Lamar	Lamar Heights	Liberal	Mindenmines
Zoning Ordinance	No	N/A	Yes	No	No	No
Building Code	No	N/A	Yes	No	No	No
Floodplain Ordinance	Yes	Yes	Yes	Yes	Yes	No
Subdivision Ordinance	No	N/A	Yes	No	No	No
Tree Trimming Ordinance	No	N/A	Yes	No	No	No
Nuisance Ordinance	No	Yes	Yes	No	Yes	Yes
Storm Water Ordinance	No	No	Yes	No	Yes	Yes
Drainage Ordinance	No	No	Yes	No	Yes	No
Site Plan Review Requirements	No	No	Yes	No	No	No
Historic Preservation Ordinance	No	No	No	No	No	No
Landscape Ordinance	No	No	No	No	No	No
Program						
Zoning/Land Use Restrictions	No	No	Yes	No	No	No
Codes Building Site/Design	No	No	Yes	No	No	No
National Flood Insurance Program (NFIP) Participant	Yes	Yes	Yes	Yes	Yes	No
NFIP Community Rating System (CRS) Participating Community	Yes	Yes	Yes	Yes	Yes	No
Hazard Awareness Program	No	No	No	No	No	No
National Weather Service (NWS) Storm Ready	Yes	No	No	No	No	No

CAPABILITIES	Barton County	Golden City	Lamar	Lamar Heights	Liberal	Mindenmines
Building Code Effectiveness Grading (BCEGs)	No	N/A	No	No	No	No
ISO Fire Rating	No	7	5	N/A	7	N/A
Economic Development Program	No	No	Yes		No	No
Land Use Program	No	No	Yes	No	No	No
Public Education/Awareness	No	No	No	No	No	No
Property Acquisition	No	No	No	No	No	No
Planning/Zoning Boards	No	No	Yes	No	No	No
Stream Maintenance Program	No	No	No	No	No	No
Tree Trimming Program	No	No	No	No	Yes	Yes
Engineering Studies for Streams (Local/County/Regional)	No	No	Yes	No	No	
Mutual Aid Agreements	No	Yes	Yes	No	Yes	Yes
Studies/Reports/Maps						
Hazard Analysis/Risk Assessment (Local)	N/A	Yes, 2013	Yes, 2013	Yes, 2013	Yes, 2013	Yes, 2013
Hazard Analysis/Risk Assessment (County)	Yes, 2013	Yes, 2013	Yes, 2013	Yes, 2013	Yes, 2013	Yes, 2013
Flood Insurance Maps	Yes	Yes	Yes	Yes	Yes	Yes
FEMA Flood Insurance Study (Detailed)	Yes	Yes	Yes	Yes	Yes	Yes
Evacuation Route Map	Yes	No	No	No	No	No
Critical Facilities Inventory	Yes	No	No	No	No	No
Vulnerable Population Inventory	No	No	No	No	No	No
Land Use Map	No	No	Yes	No	No	No
Staff/Department						
Building Code Official	No	No	Yes	No	No	No
Building Inspector	No	No	Yes	No	No	No
Mapping Specialist (GIS)	Yes	No	No	No	No	No

CAPABILITIES	Barton County	Golden City	Lamar	Lamar Heights	Liberal	Mindenmines
Engineer	No	Yes	Yes	No	No	No
Development Planner	No	No	No	No	No	No
Public Works Official	No	Yes	Yes	No	Yes	Yes
Emergency Management Coordinator	Yes	Yes	Yes	No	Yes	Yes
NFIP Floodplain Administrator	Yes	Yes	Yes	Yes	Yes	No
Bomb and/or Arson Squad	No	No	No	No	No	No
Emergency Response Team	No	No	Yes	No	Yes	Yes
Hazardous Materials Expert	No	No	No	No	No	No
Local Emergency Planning Committee	Yes	Yes	Yes	No	Yes	Yes
County Emergency Management Commission	Yes	Yes	Yes	No	Yes	Yes
Sanitation Department	No	No	Yes	No	No	No
Transportation Department	No	No	Yes	No	No	No
Economic Development Department	No	No	Yes	No	No	No
Housing Department	No	No	No	No	No	No
Planning Consultant	No	HSTCC	HSTCC	No	HSTCC	No
Regional Planning Agencies	No	HSTCC	HSTCC	No	HSTCC	No
Historic Preservation	No	No	No	No	No	No
Non-Governmental Organizations (NGOs)						
American Red Cross	No	No	No	No	No	No
Salvation Army	Yes	No	No	No	No	No
Veterans Groups	Yes	No	Yes	No	Yes	No
Environmental Organization	No	No	No	No	No	No
Homeowner Associations	No	No	Yes	No	No	No
Neighborhood Associations	No	No	No	No	No	No
Chamber of Commerce	Yes	No	Yes	No	Yes	No
Community Organizations (Lions, Kiwanis, etc.	Yes	No	Yes	No	Yes	No
Financial Resources						

CAPABILITIES	Barton County	Golden City	Lamar	Lamar Heights	Liberal	Mindenmines
Apply for Community Development Block Grants	No	Yes	Yes	No	N/A	Yes
Fund projects through Capital Improvements funding	No	Yes	Yes	Yes	N/A	Yes
Authority to levy taxes for specific purposes	No	Yes	Yes	No	N/A	Yes
Fees for water, sewer, gas, or electric services	No	Yes	Yes	No	Yes	Yes
Impact fees for new development	No	No	No	No	No	No
Incur dept through general obligation bonds	No	Yes	Yes	No	N/A	Yes
Incur debt through special tax bonds	No	Yes	Yes	No	N/A	Yes
Incur debt through private activities	No	No	No	No	No	No
Withhold spending in hazard prone areas	No	No	Yes	No	No	No

Source: Data Collection Questionnaires, date

2.2.8 Public School District Profiles and Mitigation Capabilities

This section provides general information about participating school districts in the plan. There are three school districts with facilities in Barton County. There are three public school districts with facilities inside Barton County. These school districts include: Golden City R-3, Lamar R-1, and Liberal R-2. Golden City R-3 houses elementary, middle school and high school all in one main building. Both Lamar R-1 and Liberal R-2 have separate building each for elementary, middle school, and high school. Other school district boundaries include areas of Barton County, but do not have any facilities within the county. Bronaugh R-7 and Sheldon R-8 participate in Vernon Co unties Hazard Mitigation Plan while Jasper County R-5 participates in Jasper Counties Hazard Mitigation Plan.

Table 2.12 shows building enrollment for each of the three school districts in Barton County. **Figure 2.9** shows a map of all school districts in Barton County.

Table 2.18. Barton County School Districts - Buildings and Enrollment Data, 2017

District Name	Building Name	Building Enrolment
Lamar R-I	East Elementary (PK-2)	271
	Lamar Elementary (3-5)	285
	Lamar Middle School (6-8)	300
	Lamar High School (9-12)	398
	Lamar Career and Tech Center	53
Liberal R-II	Liberal Elementary (K-5)	181
	Liberal Middle School (6-8)	90
	Liberal High School (9-12)	154
Golden City R-III	Golden City Elementary (K-6)	102
	Golden City High School (7-12)	91

Source: http://mcds.dese.mo.gov/quickfacts/Pages/District-and-School-Information.aspx

Figure 2.9. School Districts in Barton County

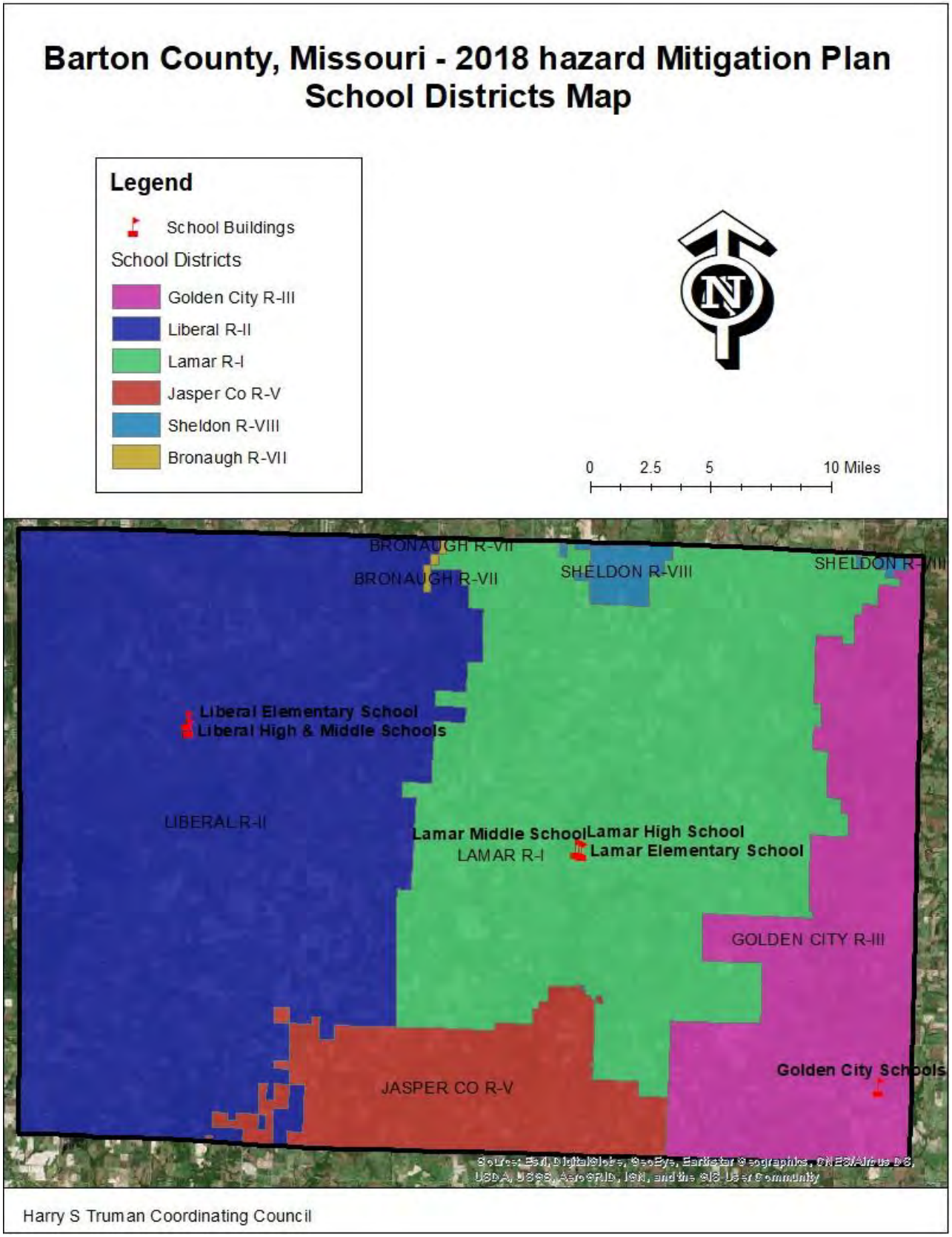


Table 2.13 below shows a summary of the mitigation capabilities for each school district.

Table 2.19. Summary of Mitigation Capabilities-School District in Barton County

Capability	Lamar R-I	Liberal R-II	Golden City R-III
Planning Elements			
Master Plan/ Date	Yes/Additional Saferooms	Yes/2/26/2010	Yes, 2017
Capital Improvement Plan/Date	Yes/Additional Saferooms	Yes/4/17/2014	N/A
School Emergency Plan / Date Shelter in place protocols Evacuation protocols	Yes/Vary by building-housed in individual buildings	Yes/4/17/2014	Yes, 2017
Weapons Policy/Date	Yes/Board Policy	Yes/4/17/2014	Yes, 2017
Personnel Resources			
Full-Time Building Official (Principal)	Yes	Yes/Superintendent of Schools & Building Principals	Yes/Principal & Superintendent
Emergency Manager	Yes	Yes/Superintendent of Schools	Yes/Principal & Superintendent
Grant Writer	No	Yes/Superintendent of Schools	N/A
Public Information Officer	Yes	Yes/Superintendent of Schools	Yes/Principal & Superintendent
Financial Resources			
Capital Improvements Project Funding	Yes/saferoom project	Yes	Yes
Local Funds	Yes/saferoom project	Yes	Yes
General Obligation Bonds	Yes	Yes	Yes
Special Tax Bonds	Yes	Yes	Yes
Private Activities/Donations	Possibly	Yes	Possibly
State And Federal Funds/Grants	Yes	Yes	Yes
Other			
Public Education Programs		Yes/The school district works with Barton County Emergency Management to send educational brochures that inform students and parents on various safety procedures.	No
Public Address/Emergency Alert System	Intercom and alarm systems in each building	Intercom and Alarm systems on each campus	Yes, in conjunction with cities new storm system
NOAA Weather Radios	Yes	Yes	Yes
Tornado Shelter/Saferoom	Yes at middle school	No	Basement shelter
Fire Evacuation Training	Yes	Yes	Yes

Tornado Sheltering Exercises	Yes	Yes	Yes
Lock-Down Security Training	Yes	Yes	Yes
Campus Police	SRO in conjunction with Lamar PD	The city of Liberal provides police protect during school hours.	No. Golden City Police Department
Mitigation Programs	In progress	In progress	In progress

Source: Data Collection Questionnaire for School Districts and educational Institutions

3 Risk Assessment

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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 planning area, 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 Barton County 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.

The risk assessment for Barton County and its jurisdictions followed the methodology described in the Local Mitigation Planning Handbook (March 2013).

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

       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 Barton County. The natural hazards that can affect the county have been identified in the 2013 Barton 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. The 2013 Missouri State Plan also addresses human-caused, and technological hazards; however, these will not be included in this plan update because in Missouri local plans are only required to include natural hazards.

The LEPC 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 LEPC determined to include only natural hazards.

The LEPC 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.

3.1.1 Review of Existing Mitigation Plans

The Barton County Hazard Mitigation Plan varies slightly from the Missouri State Plan (2013). The hazards identified in this 2018 update are listed in **Table 3.1.1** showing a comparison with the 2013 update as well as the 2013 State Hazard Mitigation Plan.

Minor changes were made to the hazards between the 2013 and 2018 updates. Severe Thunderstorms and Tornadoes were more clearly separated; therefore, in the 2018 update Severe Thunderstorms encapsulate high winds, hail, lightening and heavy rainfall, while Tornadoes are now discussed as an individual hazard. The Heatwave hazard section was changed to Extreme Heat.

2013 State	2013 Barton County	2018 Barton County
Tornadoes	Tornadoes/Severe Thunderstorms & High Winds/Hail	Tornadoes
Severe Thunderstorm (Damaging Winds, Hail, and Lightning)		Severe Thunderstorms (high winds, lighting, hail)
Riverine Flooding (Major and Flash)	Flood	Flooding (Riverine & Flash)
Severe Winter Weather (Snow and Ice)	Severe Winter Weather (snow, Ice, & extreme Cold)	Severe Winter Weather (snow, ice, & extreme cold)
Drought	Drought	Drought

Extreme Temperatures	Excessive Heat	Extreme Heat
Earthquake	Earthquakes	Earthquakes
Dam Failure	Dam Failure	Dam Failure
Fires (Structural, Urban, and Wild)	Wildfires	Wildfires
Levee Failure	N/A	N/A
Land Subsidence / Sinkholes	N/A	N/A

Hazards Excluded
Natural hazards that are excluded from the Missouri State Hazard Mitigation Plan because they do not threaten the State of Missouri will also continue to be excluded from the Barton County Hazard Mitigation Plan. The risk of coastal storms, hurricanes, tsunamis, avalanches, and volcanic activity does not exist within Barton County or the State of Missouri due to its geographic location, soil profile, and geologic structure. Therefore, these hazards are not profiled in the 2018 update. Sinkholes are a common occurrence in most of Southwest Missouri due to Karst topography and mining activities, however in Barton County the topography, geology, and soil profile is different and sinkholes are not likely to have a notable impact, therefore sinkholes with not be profiled in the 2018 update. Additionally, there are no levees in or near Barton County, therefore that hazard continues to be excluded from the Barton County plan.

3.1.2 Review Disaster Declaration History

Disasters always occur at the local level and the citizens, local governments, and volunteer agencies are the first to respond and cope with the damage. Local governments are responsible for the initial response and recovery and must maintain control of all assets used. Local governments must plan and prepare for this role with the support of the State and Federal government. Local jurisdictions then turn to State government when they do not have enough resources to respond to a disaster.

Federal and/or State disaster 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.

Table 3.1 lists the federal FEMA disaster declarations that included the Barton County from 1990 to 2017.

Table 3.1. FEMA Disaster Declarations that included Barton Missouri, 1990-2017

Disaster Number	Description	Declaration Date Incident Period	Individual Assistance (IA) Public Assistance (PA)
4317	Flood	6/2/2017 4/28/2017 to 5/11/2017	PA
4250	Flood	1/21/2016 12/23/2015 to 1/9/2016	PA
4130	Severe Storm(s)	7/18/2013 5/29/2013 to 6/10/2013	PA
1961	Severe Storm(s)	3/23/2011 1/31/2011 to 2/5/2011	PA
1847	Severe Storm(s)	6/19/2009 5/8/2009 to 5/16/2009	PA
1749	Severe Storm(s)	3/19/2008 3/17/2008 to 5/9/2008	IA, PA
1736	Severe Ice Storm	12/27/2007 12/6/2007 to 12/15/2007	PA
1676	Severe Ice Storm	1/15/2007 1/12/2007 to 1/22/2007	PA
1463	Severe Storm(s)	5/6/2003 5/4/2003 to 5/30/2003	IA, PA
1412	Severe Storm(s)	5/6/2002 4/24/2002 to 6/10/2002	IA, PA
1403	Severe Ice Storm	2/6/2002 1/29/2002 to 2/13/2002	IA, PA
1253	Severe Storm(s)	10/14/1998 10/4/1998 to 10/11/1998	IA, PA
1054	Severe Storm(s)	6/2/1995 5/13/1995 to 6/23/1995	IA, PA
995	Flood	7/9/1993 6/10/1993 to 10/25/1993	IA, PA

Source: Federal Emergency Management Agencyhttp://www.fema.gov/disasters

3.1.3 Research Additional Sources

A variety of sources were researched for data on natural hazards. Primary sources included FEMA, SEMA, National Climate Data Center (NCEI) and National Oceanic and Atmospheric Administration (NOAA). The U.S. Geological Survey (USGS) and the Center for Earthquake Research and Information (CERI) were major sources for earthquake information. The Missouri Department of Natural Resources (MDNR) Dam Safety Division provided information concerning dams and the Missouri Department of Conservation (MDC). Other information sources included county officials; existing city, county, regional and state plans; and information from local officials. The additional sources of data on locations and past impacts of hazards in Barton County include:

- Missouri Hazard Mitigation Plans (2010 and 2013)
- Previously approved planning area Hazard Mitigation Plan (date)

- 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 Centers for Environmental Information (NCEI);
- 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)

The only centralized source of data for many of the weather-related hazards is the National Oceanic and Atmospheric Administration's (NOAA) National Centers for Environmental Information (NCEI). Although it is usually the best and most current source, there are limitations to the data which should be noted. The NCEI 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 NCEI 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 NCEI should be cautious as the NWS does not guarantee the accuracy or validity of the information.

The NCEI 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 March 2014, 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.

1. Tornado: From 1950 through 1954, only tornado events were recorded.
2. 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.
3. All Event Types (48 from Directive 10-1605): From 1996 to present, 48 event types are recorded as defined in NWS Directive 10-1605.

Injuries and deaths caused by a storm event are reported on an area-wide basis. When reviewing a table resulting from an NCEI 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 considered under this plan are Dam Failure, Drought, Earthquakes, Extreme Heat, Flooding (Riverine and Flash), Severe Thunderstorms (High Winds, Hail, and Lighting), Severe Winter Weather (Blizzard, Ice Storm, and Severe Cold), and Tornadoes, and Wildfires.

The majority of jurisdictions have the possibility of being affected by each of the hazards. However, not all jurisdictions would be affected by dam failure. An "X" indicates a potential impact, and "-" indicates the hazard is not applicable for that jurisdiction.

Table 3.2. Hazards Identified for Each Jurisdiction

Jurisdiction	Dam Failure	Drought	Earthquake	Extreme Heat	Wildfires	Flooding (River and Flash)	Severe Winter Weather	Thunderstorm/Lightning/Hail/High Wind	Tornado
Barton County	x	x	x	x	x	x	x	x	x
City of Golden City	-	x	x	x	x	x	x	x	x
City of Lamar	x	x	x	x	x	x	x	x	x
Village of Lamar Heights	x	x	x	x	x	x	x	x	x
City of Liberal	-	x	x	x	x	x	x	x	x
City of Mindenmines	-	x	x	x	x	x	x	x	x
Golden City R-3 School District	-	x	x	x	x	x	x	x	x
Lamar R-1 School District	-	x	x	x	x	x	x	x	x
Liberal R-2 School District	-	x	x	x	x	x	x	x	x

3.1.5 Multi-Jurisdictional Risk Assessment

For this multi-jurisdictional hazard mitigation plan, the risk assessment evaluates each jurisdiction's risks where they deviate from the risks facing the entire county. Barton County has a total of 597 square miles and is fairly uniform in terms of climate and geography. The majority of development is located in and near the city of Lamar which is located at the junction of Interstate-49 and Highway-160. Apart from noted exceptions, there is very little variance of hazards and vulnerability across the county.

The hazards listed above are profiled individually in section 3.4 by alphabetical order. The level of information presented in these hazard profiles varies by hazard based on availability of data. Each hazard's profile assesses risks on a county level and when appropriate on a jurisdictional level. Some hazards (i.e. flooding) vary in risk throughout the county; these variations are explained in each profile. As for assets at risk, the central urbanized area (Lamar) has more assets that are also at a greater density; therefore, Lamar has a greater vulnerability to natural hazards. Being a rural county, many areas have agricultural assets (crops/livestock) that are vulnerable to hail damages and drought.

The hazards that vary across the planning area in terms of risk include dam failure, flash flood, grass or wildland fire, river flood, and flash flood. These differences in vulnerability are detailed in each hazard profile under a separate heading.

3.2 Assets at Risk

This section assesses Barton County's 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 Barton County Assessor, the Barton County Structures dataset downloaded from Missouri Spatial Data information Service (MSDIS), local jurisdiction data collection questionnaires, and HAZUS MH 2.2. Minimal development has occurred in Barton County since the previous update.

3.2.1 Total Exposure of Population and Structures

Unincorporated County and Incorporated Cities

In **Table 3.3**, population data is based on 2010 Census Bureau data. Unfortunately, accurate building count data with usage classifications and building value data was not available for this plan update. Residential building counts and associated exposure values were estimated using data from U.S. 3.10 Census Bureau 2010-2014 American Community Survey5-year estimates. This dataset includes a count of housing units by type, the unit types include 1 unit attached and detached, 2 units, 3 to 4 units, 5 to 9 units, 10 to 19 units, and 20 or more units, and mobile homes. To estimate the building counts, 1 unit attached and detached have been added together for the single-family structures, mobile homes could also be considered single family however due to their structural instability mobile homes have been left in a classification of their own. Multi-family structures have been estimated based on the unit type (number of units per structure) and the total number of units of that type. Median home value is also included in this data set and was used to estimate exposure

values for all residential buildings by multiplying the median home value by the number of residential structures. The contents exposure values were calculated by factoring a multiplier (derived from the HAZUS MH 2.1) to the building exposure values based on usage type. The contents exposure multiplier for Residential buildings is defined as 50% of the building exposure.

Table 3.3. Max. Population and Residential Building Exposure by Jurisdiction- 2010

Jurisdiction	2010 Population	Estimated Building Counts, Residential					Estimated Exposure Value of Residential Structures			
		Total Housing Units	Single Family Structures	Multi Family Structures	Mobile Homes	Total Residential Structures	Median Value of Residential Structure	Building Exposure Value	Contents Exposure Value	Total Exposure Value
Barton County Total	12,402	5,618	4,590	109	654	5,353	$84,000	$449,628,000	$224,814,000	$674,442,000
Golden City	765	404	322	17	34	373	$44,300	$16,530,229	$8,265,114	$24,795,343
Lamar	4,532	2,109	1,742	56	137	1,935	$80,700	$156,171,793	$78,085,896	$234,257,689
Lamar Heights	178	84	52	10	13	75	$187,500	$13,968,750	$6,984,375	$20,953,125
Liberal	759	445	301	16	94	411	$54,600	$22,428,900	$11,214,450	$33,643,350
Mindenmines	365	165	122	5	27	154	$53,300	$8,185,357	$4,092,679	$12,278,036
Unincorporated Barton County	5,803	2,411	2,051	6	349	2,406	$84,000	$202,104,000	$101,052,000	$303,156,000

Sources: Population: 2010 U.S. Census;
Residential Building Count and Exposure: U.S. Census 2010-2014 American Community Survey 5-Year Estimates
http://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml
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%).

Table 3.4 shows the number of establishments for commercial and industrial businesses based on data from the U.S. Census Bureau Geography Area Series: 2012 County Business Patterns. This data set includes a count of business establishments by usage type in Barton County. Industrial establishments include the following usage types: Mining, quarrying, and oil and gas extraction, manufacturing, and transportation and warehousing. All other usage types have been included in the commercial establishments. This data set is not a building count as each establishment may include multiple buildings. Also, this data is only available on a county-wide basis and does not specify the number of establishments for the incorporated cities, nor does it include adequate exposure values. Better data is expected to be available for the next plan update (2023).

There is better data available for agricultural establishments from the 2012 USDA Census of Agriculture. **Table 3.5** shows the number of farms and associated exposure values for Barton County. This data is only available on a county-wide basis and does not specify if any of the farms are within the limits of any incorporated cities. This data does include land values and building values in one category, it is important to note that land values are typically 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. Land values are closely tied to the value of products sold and crop insurance, therefore it is deemed appropriate to include the land value in this data set for agricultural establishment.

Table 3.4. Business Establishments Exposure by Usage Type

Jurisdiction	Commercial # of Establishments	Industrial # of Establishments	Total # of Business Establishments
Barton County	227	28	255

Source: U.S. Census Bureau Geography Area Series: 2012 County Business Patterns

Table 3.5. Agricultural establishments with Exposure Values

Jurisdiction	Agricultural # of Establishments	Exposure Value of Products Sold, avg per farm	Estimated Exposure Value of Land and Buildings avg per farm	Estimated Exposure Value of All Machinery & Equipment avg per farm	Total Exposure Value
Barton County	940	127,807	743,857	126,076	$937,875,600

Source: 2012 USDA Census of Agriculture

Additional discussion is needed for schools and special districts, 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 exposure values and contents exposure values. These numbers will represent the total enrollment and building count for the public school districts in Barton County.

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

Public School District	Enrolment 2017	Building Count	Building Exposure ($)	Contents Exposure ($)	Total Exposure ($)
Golden City R-3 School District	192	6	$9,051,057	$1,451,401	$10,502,458
Lamar R-1 School District	1,307	5	$29,949,240	$2,222,774	$32,172,014
Liberal R-2 School District	425	4	$11,100,080	$2,340,970	$13,441,050

Source: http://mcds.dese.mo.gov/quickfacts/Pages/District-and-School-Information.aspx., 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. 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:

Bridges:

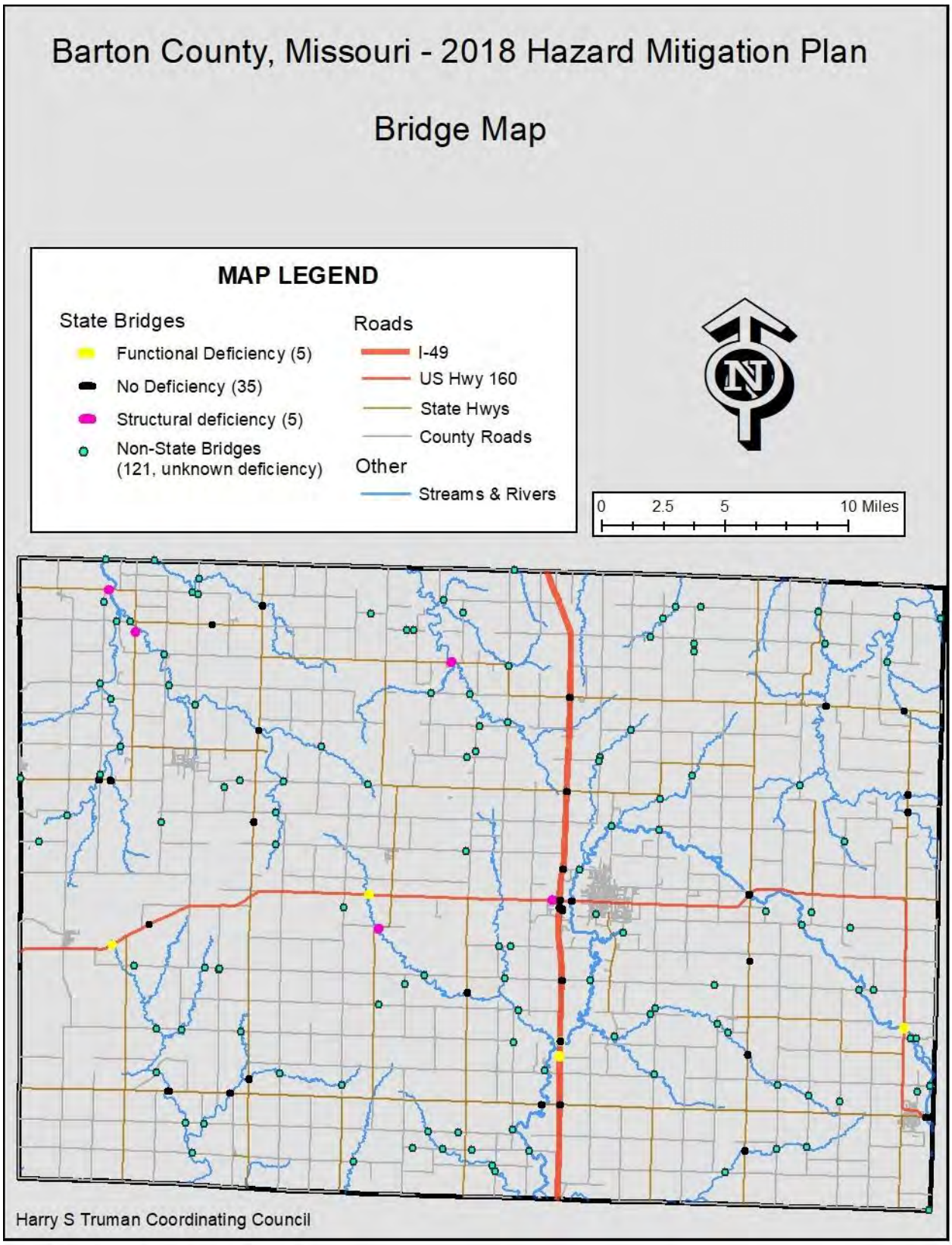
The National Bridge Inventory (NBI) database is compiled by the U.S Department of Transportation Federal Highway Administration and contains detailed technical, engineering, and inspection data on all bridges in the U.S. This information is used to evaluate the bridges and place them into one of three deficiency classifications: structural deficiency, functional deficiency, or no deficiency. The Missouri Department of Transportation has provided the NBI data set for Barton County, the location and deficiency classifications are shown in **Figure 3.1**. There are a total of 45 state bridges in Barton County, 5 of which has a structural deficiency, 5 have a functional deficiency, and 35 have no deficiency. There are also 121 non-state bridges, these bridges do not have the same level of data included and do not have a deficiency classification. It is likely that the majorities of these non-state bridges are low-water crossing and may be subject to frequent flooding.

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 or Oil Facility	Nursing Homes/Assisted	Police Station	Potable Water Facility	Rail	Sanitary Pump Stations	School Facilities	Stormwater Pump Stations	Tier II Chemical Facility	Wastewater Facility
City of Golden City			x				x	x	x					x	x	x	x	x		x			x
City of Lamar	x		x		x	x	x	x	x		x	x	x		x	x	x	x		x			x
City of Lamar Heights									x									x					
City of Liberal							x	x	x							x	x	x		x			x
City of Mindenmines							x		x														
Unincorporated Barton County			x	x		x	x	x	x		x	x	x			x	x	x					

Source: Data Collection Questionnaires; HAZUS, etc.

Figure 3.1. Barton County Bridges



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.

This plan includes specific natural, historic, cultural, and economic assets in the planning area, which could include the following:
• Threatened and Endangered Species
• Natural Resources
• Historic Resources
• Economic Resources
• Agribusiness

Threatened and Endangered Species:

Table 3.8 shows Federally Threatened, Endangered, Proposed and Candidate Species in the county.

Table 3.8. Threatened and Endangered Species in Barton County

Common Name	Scientific Name	Status	Habitat
Indiana bat	*Myotis sodalis*	Endangered	Hibernates in caves and mines; roosts and forages in small stream corridors with well-developed riparian woods and upland forests
Northern long-eared bat	*Myotis septentrionalis*	Threatened	Hibernates in caves and mines - swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests during spring and
Gray bat	*Myotis grisescens*	Endangered	Hibernates in deep caves and mines. Roosts in caves along rivers and forages in well-developed riparian wood.
Arkansas darter	*Etheostoma cragini*	Candidate	Rivers
Neosho mucket	*Lampsilis rafinesqueana*	Endangered	Rivers

Mead's milkweed	*Asclepsias meadii*	Threatened	Virgin prairies

Source: U.S. Fish and Wildlife Service, http://www.fws.gov/midwest/Endangered/lists/missouri-cty.html; see also http://ecos.fws.gov/ipac/ and select 'Initial Project Scoping" > Select the radio button for State/county list (under "Define your project location") > select Missouri > select County > select Continue > select the project type " Federal Grant / Loan Related" > select Continue

Natural Resources:

The Missouri Department of Conservation (MDC) provides a database of lands the MDC owns, leases, or manages for public use. The Missouri Department of Natural Resources (MDNR) also owns and manages lands for public use and provides a similar database. See **Table 3.9**.

Table 3.9. Conservation Areas in Barton County

Area Name	Location	Owned/maintained by
Bethel Prairie Conservation Area	Barton County. From Lamar, take I-49 south, then Highway 126 west 4 miles.	MDC
Buffalo Wallow Prairie Conservation Area	Barton County. 8.5 miles North of Lamar on I-49	MDC
Buschwacker Lake Conservation Area	Barton and Vernon Counties. Near Hwy 43.	MDC
Clear Creek Conservation Area	Barton and Vernon Counties. From Sheldon, take Route B east a little more than 0.75 mile, then NE 10th Lane south, and NE 100th Road east, then NE 20th Lane south, then NE 90th Road east.	MDC
Comstock Prairie Conservation Area	Barton County. From the junction of Highway 43 and NW 100th Road south of Bronaugh, take NW 100th Road west 1 mile.	MDC
The Lester R Davis Memorial Forest	Barton County. From Mindenmines, take Main Street north from Highway 160, then 9th Street west, and SW 150th Lane north, then West Central Road east to the area. Entrance to the area is on the southernmost boundary of Prairie State Park.	MDC
Dorris Creek Prairie Conservation Area	Barton County. From I-49/Highway 71 exit 70 south of Lamar, take Highway 126 east 4 miles, and SE 40 Lane (gravel) south 1 mile.	MDC
Drywood Conservation Area	Barton County. From Liberal, take Highway 43 north, then Route V west 4 miles, then Route K south 0.50 mile.	MDC
Mo-No-Prairie Conservation Area	Barton County. From Lamar, take I-49/Highway 71 north to exit 80, then Route DD west 4 miles.	MDC
Mon-Shon Prairie Conservation Area	Barton County. From the junction of Highway 126 and SW State Line Lane in Barton County, take SW State Line Lane south 2.50 miles.	MDC
Pa Sole Prairie Conservation Area	Barton County. From I-49/Highway 71 exit 70 south of Lamar, take Highway 126 east 6 miles, then SE 50 Lane north 1.25 miles.	MDC
Pawhuska Prairie Natural Area	Barton County. From the junction of Highway 160 and Route HH east of Lamar, take Route HH north 3 miles, then NE 30 Road west 0.50 mile.	MDC - leased
Redwing Prairie Conservation Area	Barton County. From the junction of Highway 43 and NW 30th Road east of Liberal, take NW 30th Road east 2.50 miles.	MDC

Edward B. and Marie O. Risch Conservation Area	Barton County. From Sheldon, take Route B east 6 miles, then Route A south about 2 miles, and NE 90th Road west to the area.	MDC
Shawnee Trail Conservation Area	Barton County. From Mindenmines take Highway 160 east, then Route M south 1 mile to the area.	MDC
Treaty Line Prairie Conservation Area	Barton County. From Lamar, take Highway 160 east approximately 4 miles, then SE 40th Lane south 1.50 miles, and SE 20th Road East 0.50 mile.	MDC
Prairie State Park	128 NW 150th Ln, Mindenmines, MO 64769	MDNR
Risch Conservation Area	1 mile west from St N Hwy A on NE 90th Rd	MDC

Source: Missouri Department of Conservation: http://mdc4.mdc.mo.gov/applications/moatlas/AreaList.aspx?txtUserID=guest&txtAreaNm=s; Missouri Department of natural Resources State Parks: https://mostateparks.com/find-a-park?region=6

Table 3.10 lists additional parks and recreation areas that areas were identified through community websites and google maps.

Table 3.10. Parks and Recreation in Barton County

Park Name	Location	City
Lamar Access	Barton County. From Lamar, take Northeast 15th Lane (off Truman) north 2 miles.	City of Lamar
Lamar City Park	1909 Walnut St	Lamar
Lamar City Aquatic Park	1903 Walnut St	Lamar
Lamar Country Club Golf Course	2 SE 20th Rd, # A	Lamar
Lamar Lake Access	SE 20thLn & SE 15th Rd	Lamar
Wheeler Park	Wheeler Dr. & 8th St.	Lamar
Barco Drive-In Theater	Highway 160 east & SE 25th Ln.	Lamar
Liberal City Park	N Denton St. & NW 40th Rd	Liberal
Golden City Park	Highway 160 & Parkview Dr.	Golden City
Community Park	Iantha, an unincorporated community. From Lamar take Highway 60 West 5.4 miles, then North on Hwy W for 1.4 miles.	Barton County

County and City websites.

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.

When a natural hazard occurs, historic places require special consideration because many historic resources were built prior to modern building codes and flood plain regulations. Protecting historic resources is not only important for community identities, but in many cases

they are important for local economies.

The Barton County Historical Society maintains a museum in the basement of the historic Barton County Courthouse, built in 1888. The museum houses an interesting collection of historical items from Barton County, and a variety of publications are available for viewing. The Barton County Courthouse is considered historic by locals; however it is not listed on the National register for Historic Places. **Table 3.11** shows the only property in Barton County that is listed on the National Register for Historic Places is the birthplace of President Harry S Truman.

Communities that have a historical society in place or participate in partnership with national or state programs that focus on preservation have a good infrastructure in place to protect historical resources. The National Park Service's Certified Local Government Program is a partnership with the State Historic Preservation Offices and local communities, it is a Federal Preservation Program to help communities preserve irreplaceable character of historic places. Another such program is the National Main Street Center's Main Street America Programs. This movement is the leading voice for preservation-based economic development and community revitalization across the country.

Table 3.11. Barton County Properties on the National Register of Historic Places

Property	Address	City	Date Listed
Harry S Truman Birthplace State Historic Site Harry S Truman Birthplace Memorial	North Corner of 11th Street and Truman Avenue	Lamar	6/23/1969

Source: Missouri Department of natural Resources – Missouri National Register Listings by County
http://dnr.mo.gov/shpo/mnrlist.htm

Economic Resources: Table 3.12 shows major non-governmental employers in Barton County with over 100 employees.

Table 3.12. Major Non-Government Employers in Barton County

Employer Name	Main Locations	Product or Service	Employees
Cox Barton County Hospital	Lamar	Medical	200
Walmart	Lamar	Retail	250
Lamar R-1 School District	Lamar	Education	140

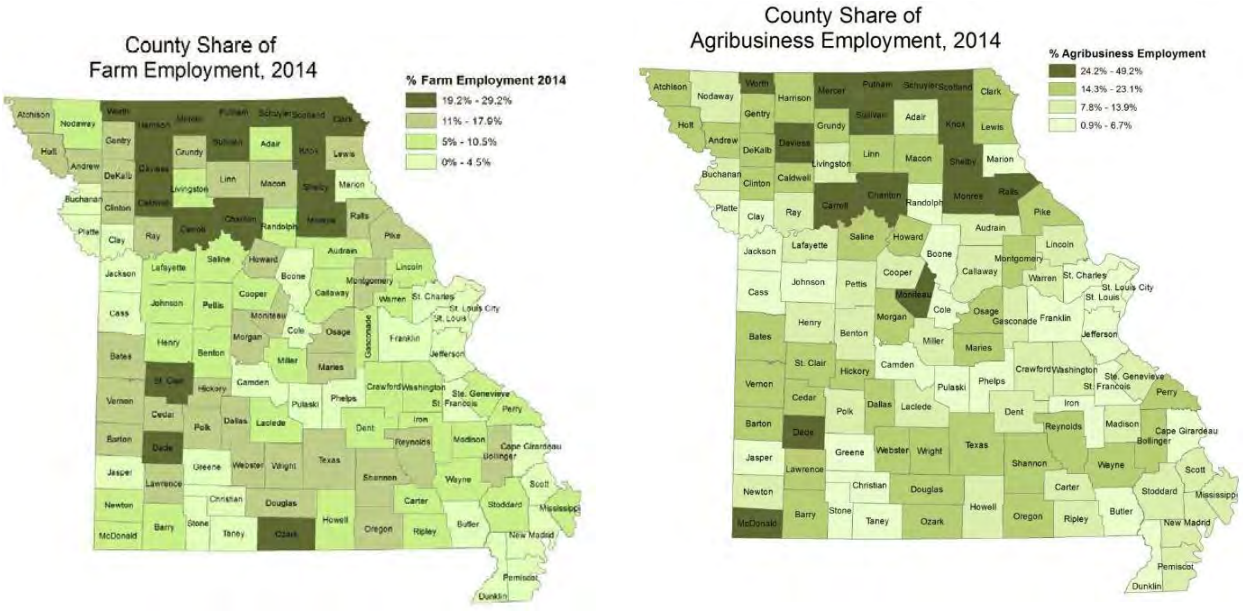
Source: Data Collection Questionnaires; local Economic Development Commissions

Agribusiness

Agribusiness is comprised of not only farming (animal and crop production), but also includes supporting industries which provide inputs and outputs related to the agriculture industry. Missouri's farm and agribusiness sectors include crops, livestock, industries supporting farm production, and farm-related industries. Top agribusiness industries are pesticides and chemical manufacturing plants, farm supplies manufacturing, and meat and poultry processing plants.

Figure 3.2 show the State-wide County share of farm employment and agribusiness employment. Barton County has a medium to high percentage of both farm employment and of agribusiness employment. The total percentage of agribusiness employment in Barton County is 17.6 percent. For additional economic indicators for agriculture in Barton County see **Table 2.9** in Section 2- Profile and Capabilities.

Table 3.13. Agribusiness Jobs in Barton County



Source: Department of Economic Development Missouri Economic Research and Information Center, Missouri Economic Research Brief Economic Contribution of Agribusiness: https://www.missourieconomy.org/pdfs/agribusiness_economic_contribution.pdf

3.3 Land Use and Development

Population growth or decline is generally accompanied by increases or decreases in the number of housing units. **Table 3.14** shows Barton County's population changes in comparison with the change in housing units. Most jurisdictions in Barton County do show some correlation between population and housing units.

Table 3.14. County Population Growth & Housing Unit Changes, 2000-2010-2015

Jurisdiction	2000-2010 Population % Change	2000-2010 Housing Units % Change	2010-2015 Population % Change	2010-2015 Housing Units % Change	Overall % Change 2000-2015 Population	Overall % Change 2000-2015 Housing Units
Barton County Total	-1.11%	3.41%	-1.90%	-0.43%	-2.99%	2.99%
City of Golden City	-13.46%	-7.63%	-24.44%	-5.36%	-34.62%	-13.40%
City of Lamar	2.42%	4.95%	-1.65%	-2.39%	0.72%	2.68%
City of Lamar Heights	-17.59%	-13.33%	12.36%	10.00%	-7.41%	-2.00%
City of Liberal	-2.57%	0.82%	-2.64%	15.94%	-5.13%	16.63%
City of Mindenmines	-10.76%	-4.79%	-26.03%	-3.09%	-33.99%	-8.02%
Unincorporated Barton county	-3.41%	5.56%	1.96%	-1.15%	-1.52%	4.47%

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

3.3.1 Future Land Use and Development

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. Barton County does not have a comprehensive plan or future-land use plan, nor does any of its incorporated cities, so much of the information was provided in the community data collection questionnaires. Over all, there is little anticipated future development in Barton County.

Golden City
The City of Golden City is a small community and expects to stay that way. The city does not have zoning, or a land use plan. The community has experienced a significant decline in population and housing units, and the only reported Development since the last plan update was a new Dollar General Store. The city does not anticipate any future development

Lamar
The City of Lamar is a medium sized rural community and may see some growth in the future but is not expected to see significant growth over the next 5 years. The city does have zoning, a land use plan, and a comprehensive plan; although the comprehensive plan has not been updated since 1994. The has seen a small increase in population and housing units, and has reported recent development from a few local businesses. Any future development in the city is expected to occur west of I-49.

Lamar heights
The City of Lamar Heights is a small rural community that is surrounded by the City of Lamar. The city does not have a zoning ordinance or land use plan. The city has seen a steady decline in population and housing units and did not report any recent development. Lamar Heights does not anticipate any future development.

Liberal
The City of Liberal is a small rural community and expects to stay that way. Liberal does not have a zoning ordinance or land use plan. The city has seen a decrease in population, but a significant increase in housing units, and did not report any additional development since the previous plan update. The only anticipated development in Liberal is the construction of a new community FEMA safe room and gymnasium at Liberal High School campus.

Mindenmines
The City of Mindenmines is a small rural community and is expected to stay that way. The city does not have a zoning ordinance or a land use plan. The community has seen a significant decrease in both population and housing units and did not report any recent development. Mindenmines does not expect any future development.

Unincorporated Barton County
The unincorporated areas of Barton County are sparsely populated and that is not expected to change. The county has seen a decrease in population and an increase in housing units. The county has reported some development from Amish and Mennonite groups. The only anticipated development in the unincorporated county is the future construction of a wind mill farms by Empire District Electric Company. The wind mill farms will be located on the west side of the county near Mindenmines and the southeast corner near Golden City.

School District's Future Development

The only school district that has indicated plans for future development is Liberal R-II. The school district has received a FEMA Mitigation Grant and passed a bond issue for construction of a new FEMA safe room and gymnasium at the Liberal High School campus.

3.4 Hazard Profiles, Vulnerability, and Problem Statements

Each hazard 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.

Each hazard identified in Section **3.1.4** will be profiled individually in this section in alphabetical order. 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.
Tables are a good way to convey this data. Events are included for the previous 20 years if available for hazards that are random in occurrence, such as tornadoes. Hazard events that occur more than once annually may include data for only the previous 10 years. Judgment was used for retrieval of enough data on which to base a solid probability calculation. Some hazard events occur many times annually and retrieving data for all events can become cumbersome. When this is the case, searches can be limited by criteria such as severity (for example, an NCEI search for hail could be limited to events with hail sizes of 2.0" and above).

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 Barton 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.

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. Flooding, earthquakes, blockages, landslides, lack of maintenance, improper operation and poor construction can all cause a dam to fail. When a dam failure occurs, an enormous amount of water is suddenly released, destroying infrastructure and flooding the area downstream of the dam. Dams can fail for many reasons; the most common are as follows:

- **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 Barton 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.

Both the Missouri Department of Natural Resources and the National Inventory of Dams (USACE) have separate hazard classifications for dams. The risk analysis includes information about **all** High Hazard and Class I dams from both the NID and the MDNR databases.

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 (1) to nine (9) 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: National Inventory of Dams

Geographic Location

Dams in Planning Area

The U.S. Army Corps of Engineers (USACE) National Inventory of Dams (NID) recognizes 35 dams in Barton County most of which are low hazard dams used primarily for fish and wildlife ponds and irrigation purposes. The Lamar Lake dam is the only high hazard dam in Barton County and is located inside the City of Lamar on a tributary to North Fork Spring River. The dam is 26 feet high, has a drainage area of 3,100 acres, and a normal storage capacity of approximately 2,086 acre-feet. An acre foot is defined as the volume of one acre of surface area to the depth of one foot. Lamar Lake is primarily used for recreation purposes and it is the primary water supply reservoir for the city of Lamar.

There are also two dams listed as significant hazard. The Murphy Dam is in the northern part of the county on Little Dry Wooded Creek, this dam is 25 feet high with a normal storage capacity of 22 acre-feet. The Bob Rice Irrigation Dam is not built yet, but will be located in the northeast portion of the county on a tributary to Horse Creek. If this dam is built it will be 39 feet high with a normal storage capacity of 125 acre-feet.

The Missouri Department of Natural Resources (MDNR) currently recognizes 41 dams in Barton County, none of these dams are listed with a hazard class of 1. The Lamar Lake dam is listed with a hazard class 2. MDNR regulates dams in Missouri that are 35 feet high and greater, currently none of the dams in Barton County are state regulated because they are all under 35 feet, however if the Bob Rice Irrigation Dam is built then it will be the only regulated dam in Barton County. **Table 3.17** shows additional information about the three high hazard and significant hazard dams, and **Figure 3.2** shows the locations of all dams in Barton County.

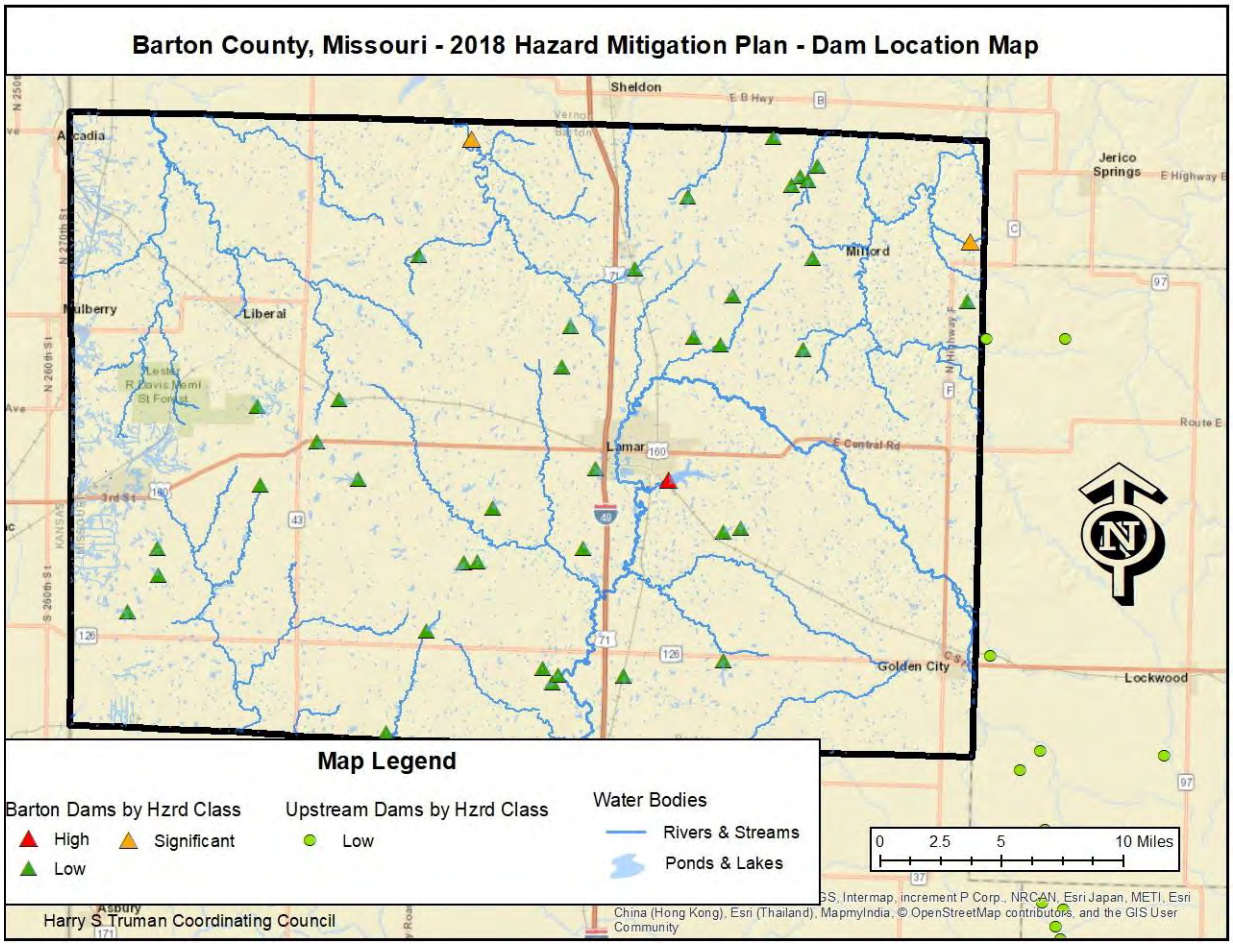
In addition to the high hazard dams identified, the MPC has expressed concern for another dam located just outside of the Southwest portion of Lamar. This dam is classified as low hazard by NID and class 3 by MDNR. However, due to the very close proximity of this dam to I-49 if this dam where ever to fail it could flood the interstate rendering it impassable. This would create a major problem for many because I-49 is a major transportation route.

Table 3.17. High Hazard Dams in Barton County

Dam Name	Dam Height (Ft)	Normal Storage (Acre-Ft)	River	Nearest City	Distance To Nearest City (Miles)	Dam Owner	NID Hazard Class	MDNR Hazard Class	State Regulated
Lamar Lake Dam	26	1,582	Tributary to North Fork Spring River	Lamar	0	City of Lamar	High	2	No
Murphy Dam	25		Little Dry Wood Creek	Nevada	16	unknown	Significant	3	No
Bob Rice Irrigation Dam (Not Built)	39						Significant	3	Yes

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=838:12By 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.

Figure 3.2. Dam Locations in Barton County



Source: U.S. Army Corps of Engineers, Missouri Department of Natural Resources

Upstream Dams Outside the Planning Area

Due to the topography in Barton County and the directional flow of the watersheds, the only upstream dams are located to the east of Barton County. These low hazard dams are not expected to have an impact on Barton County should they fail. **Figure 3.2** shows locations of the upstream dams.

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.

Inundation maps are not available for the dams in Barton County and no inspections occur because none of the dams are regulated by the state, therefore it is difficult to accurately assess the severity/magnitude of dam failure in Barton County. If the Lamar Lake dam were to fail there are several homes and businesses downstream of the dam that would likely be impacted.

Previous Occurrences

Having reviewed the Missouri State Hazard Mitigation Plan (2010 & 2013), the 2013 Barton County Hazard Mitigation Plan and Stanford University's National Performance of Dams Program, there are no records of any dam failure in Barton County.

Probability of Future Occurrence

Given that there are very few high hazard dams and none have ever failed, there is a low probability of a dam failure in Barton County. While regular inspections would allow for increased monitoring of dam deficiencies, only one of the dams is subject to regulations. A probability calculation is not possible because there are no records of a dam failure in the county.

Vulnerability

Vulnerability Overview

A review of the State Hazard Mitigation Plan for dams did not include a vulnerability analysis for Barton County, because none of the dams in the planning area are regulated by the state. The State did not have sufficient data on which to base a vulnerability analysis for Dam Failure at the time of the development of this plan.

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

Areas downstream of the Lamar Lake dam may be impacted in the event of a dam failure; there are several homes and businesses in this area. However, an inundation map has not been developed therefore there is insufficient data to specify the extent of vulnerability.

Impact of Previous and Future Development

Development in the Lamar area since the previous plan update has been concentrated in the area west of I-49, and although there is no planned future development it is expected the any future development will occur in the same area west of I-49. Future development is not expected in the area downstream of the Lamar Lake dam.

Hazard Summary by Jurisdiction

Lamar, Lamar Heights, and a portion of the unincorporated county south of Lamar are the only jurisdictions in Barton County that are vulnerable to dam failure. There are no school district facilities in the areas downstream of the Lamar Lake Dam.

Problem Statement

The only high hazard dam in Barton county does not have inundation areas mapped; and because it is not state regulated there are no regular inspections of the dam, and there is not an Emergency Action Plan (EAP) in place. Without an inundation map, it is not possible to accurately predict which properties are most vulnerable to dam failure. Regular inspection and maintenance schedules for dams greatly reduce the probability of dam failure by identifying and fixing problems prior to dam failure. Emergency plans written for dams include procedures for notification and coordination with local law enforcement and other governmental agencies, information on the potential inundation area, plans for warning and evacuation, and procedures for making emergency repairs.

3.4.2 Drought

Some specific sources for this hazard are:

- Maps of effects of drought, National Drought Mitigation Center (NDMC) located at the University of Nebraska in Lincoln; http://www.drought.unl.edu/.
- Historical drought impacts, National Drought Mitigation Center (NDMC) located at the University of Nebraska in Lincoln; at http://droughtreporter.unl.edu/ .
- Recorded low precipitation, NOAA Regional Climate Center, (http://www.hprcc.unl.edu).
- Water shortages, Missouri's Drought Response Plan, Missouri Department of Natural Resources, http://dnr.mo.gov/pubs/WR69.pdf
- Populations served by groundwater by county, USGS-NWIS, http://maps.waterdata.usgs.gov/mapper/index.html
- Census of Agriculture, http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_2_County_Level/Missouri/and http://www.agcensus.usda.gov/Publications/2012/Online_Resources/County_Profiles/Missouri/
- USDA Risk Management Agency, Insurance Claims, http://www.rma.usda.gov/data/cause.htm
- Natural Resources Defense Council, http://www.nrdc.org/globalWarming/watersustainability/

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. Because of this broad scope of drought, the entirety of Barton County is susceptible to this hazard. However, drought most directly impacts the agricultural sector, therefore areas within the county where there is extensive agricultural land use can experience significant impacts.

According to the 2012 US Census of Agriculture 86.95% of land in Barton County is classified as farmland (332,209 out of 382,080 total acres). Of the agricultural land, 67.42% (223,964 acres) are used for cropland. This large percentage of agriculture land will make the impacts of drought significantly felt by the residents and the economy of Barton County.

Severity/Magnitude/Extent

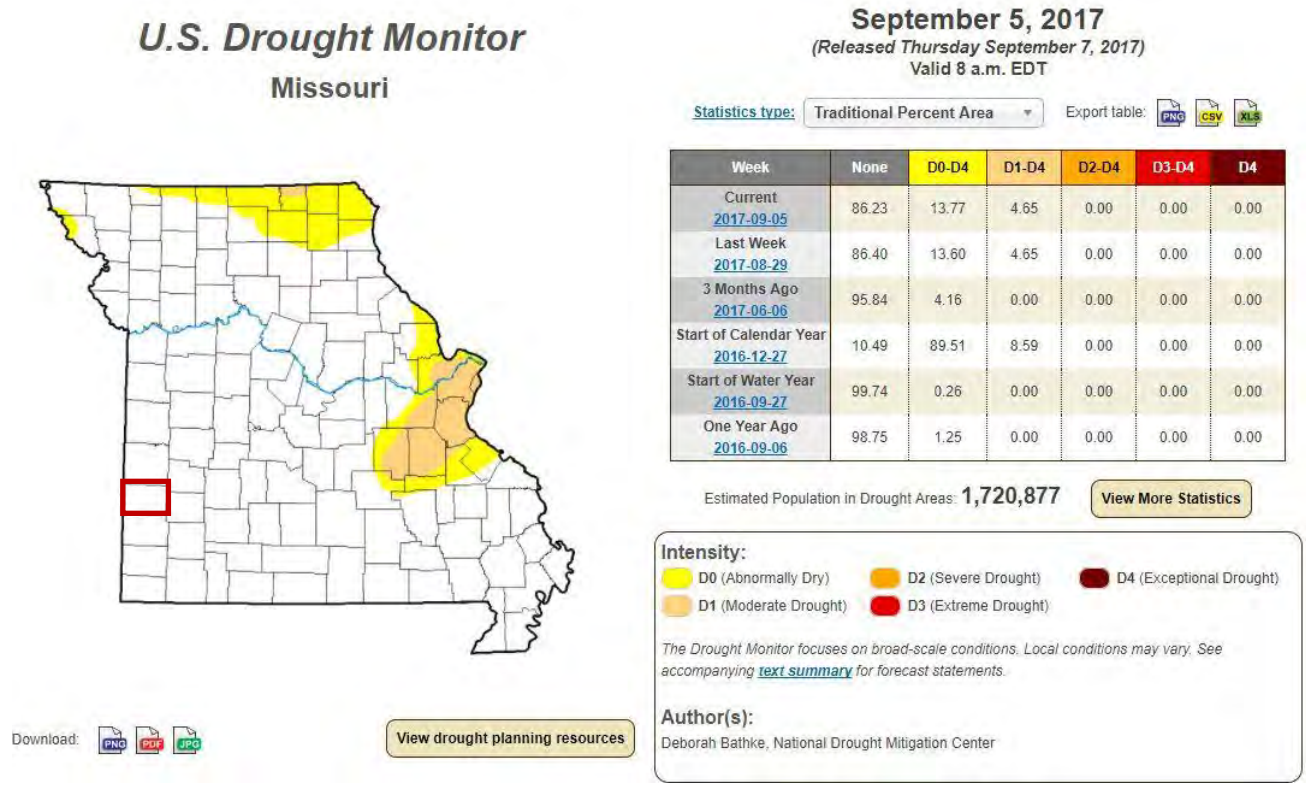
The National Drought Monitor Center at the University of Nebraska at Lincoln summarized the potential severity of drought as follows. Drought can create economic impacts on agriculture and related sectors, including forestry and fisheries, because of the reliance of these sectors on surface and subsurface 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 shows a recent map of Missouri from the U.S. Drought Monitor. This map is an example of the extent of the geographic area that could be in drought at any given moment in time, it is only a snapshot of conditions at a given moment in time.

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.

Figure 3.3. U.S. Drought Monitor Map of Missouri on September 5, 2017



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

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 many incorporated communities in Barton County rely on wells for their water supply, as do many rural residents and agricultural producers. Barton County and Southern Missouri in general, have abundant groundwater resources making it less susceptible to problems caused by insufficient precipitation. However, in the event of long term drought with the severity to reduce ground water levels, the impacts can be felt significantly throughout the county.

Previous Occurrences

The NCEI Storm events data base shows 19 drought events occurring in Barton County from 1996 to 2016. Many of these events were multiple reports from persistent drought events that lasted several months. These NCEI reports were combined by consecutive months in drought into 5 distinct drought periods during the 20-year time period.
Table 3.18 summarizes these drought periods. The driest year occurred from June 2012 to March 2013.

Table 3.18. Drought Events in Barton County 1996-2016

Duration	# of consecutive months in drought	Magnitude	Property Damage $	Crop Damage $
7/1/1999 to 10/31/1999	4	-	0	20K
8/10/2000 to 9/15/2000	2	-	0	0
1/1/2006 to 4/30/2006	4	Severe/Extreme	0	0
7/1/2011 to 9/30/2011	5	Moderate/Severe	0	15K
10/1/2011 to 10/31/2011		Severe/Extreme		
11/1/2011 to 11/30/2011		Moderate/Severe		
6/1/2012 to 7/31/2012	10	Severe/Extreme	1.2M**	19.02M*
8/1/2012 to 8/31/2012		Extreme/Exceptional		
9/1/2012 to 11/30/2012		Moderate/Severe		
12/1/2012 to 3/31/2013		Severe		
Totals	**25**		**1.2M****	**19.55M***

Source: National Centers for Environmental Information
*Monetary crop loss figures reported to the NCEI are estimates using information from the National Agricultural Statistics database, local FSA and USDA offices and other local, state or federal agency information. Crop damage estimates are not reflective of actual insurance claims.
**Livestock losses reported were listed as property losses.

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

- **1999** - Dry weather along with periods of above normal temperatures reduced crop yields and greatly reduced the quality of hay, corn, and soybeans grown in 1999. Hot weather in July and August also reduced the milk yield of dairy cattle. The dry weather is also already taking a toll on the winter wheat crop. 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.

- **2000** - Drought conditions persisted from August through the second week of September before much needed rainfall began to relieve the drought during the middle part of the month. Very high temperatures also continued through the first part of the week, providing additional drying of the sub-surface moisture. These conditions allowed for the continuation of short-term dryness, lower yields of soybeans, and above normal fire danger. Soybean yields were reduced from normally 26-31 bushels per acre, to 20 bushels per acre. West central and south-central Missouri were especially hit hard during this period. No other significant losses were noted.

- **2006** – Very dry conditions persisted across southwest Missouri and extreme southeast Kansas, receiving less than two inches of precipitation for the entire month. The United States Drought Monitor had analyzed severe to extreme drought conditions over most of southwest Missouri and southeast Kansas beginning in January and persisting through April. No significant losses were noted.

- **2011** – Dry conditions began to impact portions of the Missouri Ozarks in July as drought developed over western and southern portions of Missouri at the start of the month. By the end of July, severe drought had advanced into southwestern portions of Missouri. Significant portions of the southwestern district were especially hard hit during the month of July with as much as 80 to 90% of crops in very poor condition. As a result of the limited rainfall combined with the excessive heat that occurred during the summer, the USDA Service center in Barton County indicated that crop losses reached 80 percent. In addition, pastures and farm stock ponds dried up. This drought began in July and persisted through the month of November.

- **2012 - 2013** – A persistent upper level high pressure ridge over the central portions of the country caused more extreme heat and dry conditions for the area. Drought conditions ranged from severe to extreme to exceptional across southwest Missouri and Southcentral Missouri and persisted from June 2012 through March 2013. Numerous heat related illnesses were reported across southwestern Missouri. As a result of the limited rainfall combined with the excessive heat, the USDA Service center in Barton County indicated that crop losses were 75 percent of the spring planting. Many farmers and ranchers reported having to feed hay as pastures stopped growing and became dry through the month which added to operation costs.

Probability of Future Occurrence

Over a period of 20 years (240 months), Barton County was in drought for a total of 25 months. 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 10.42% 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 ten 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

Determining the direct and indirect costs associated with drought is difficult because of the broad impacts of drought and the difficulty of establishing when droughts begin and end. According to data from the USDA Risk Management Agency, from 2001 to 2016 there was $102,101,030 in insured crop loss payments resulting from drought conditions in Barton County. The total annualized loss in this timeframe is $6,806,735. This figure is the baseline for estimating potential loss due to drought on an annual basis. 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.

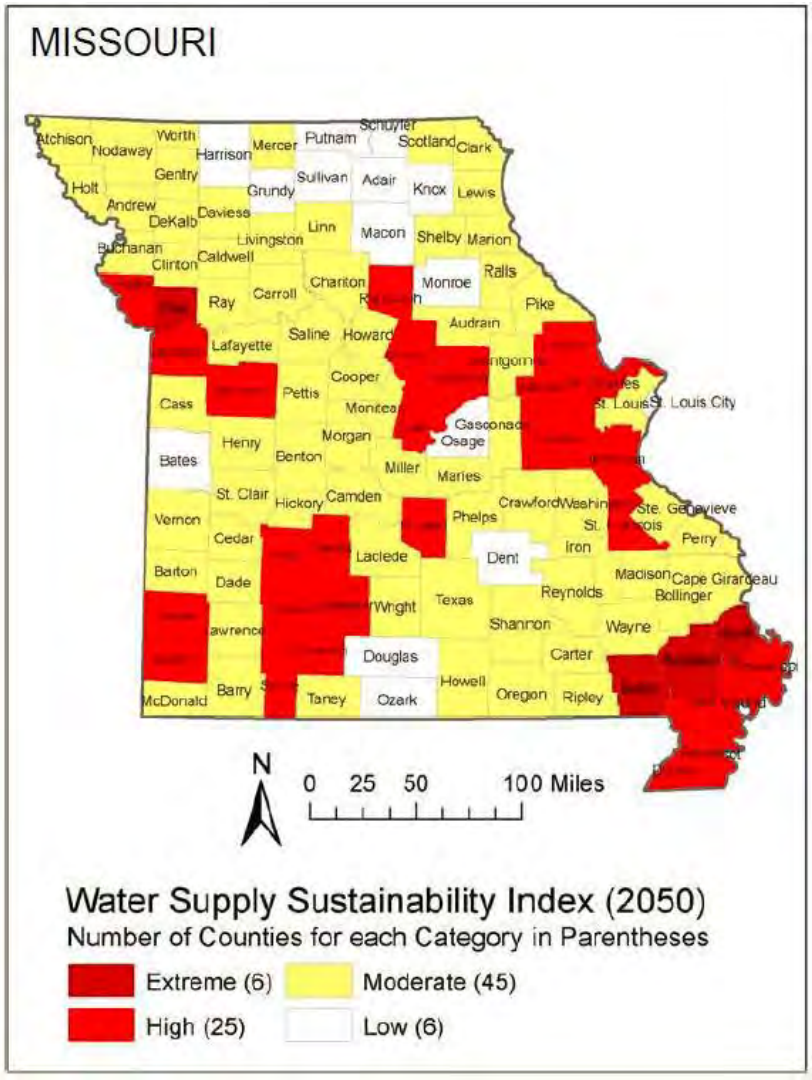
Impact of Climate Change

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. **Figure 3.4** shows the projected water sustainability index for 2050. Barton County is shown as having moderate water supply sustainability.

Figure 3.4. Water Supply Sustainability Index [2050]



Hazard Summary by Jurisdiction

There is no variance by jurisdiction to this threat since drought conditions would be the same in small communities as those experienced in rural areas, but the magnitude would be different. The greatest impact would be felt in the unincorporated parts of the county due to the farming and livestock industry. These impacts are mitigated somewhat by the purchase of crop insurance. The smaller communities and jurisdictions would feel less of an impact from drought conditions with only lawns and local garden.
In addition, building foundations could be weakened due to shrinking and expanding soils.

Communities that rely solely on groundwater wells are more susceptible to water shortages due to groundwater reduction. The only surface water supply source is located in Lamar at the Lamar City Lake, when surface water is low the city of Lamar also supplements the water supply with a groundwater well. All other jurisdictions and the unincorporated county rely solely on groundwater wells.

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.

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_lg.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

The State of Missouri Emergency Management Agency (SEMA) defines earthquakes as shifts in the Earth's crust causing the surface to become unstable. This instability manifests into a release of energy ranging in intensity from slight tremors to large shocks. The earth's crust is made up of gigantic plates, commonly referred to as tectonic plates. 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 Pressures on the North Atlantic ridge affecting the eastern side of the North American plate and movements along the San Andreas Fault by the Pacific plate have reactivated the subterranean faults in the Mississippi embayment. 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.

Another type of earthquake is defined by the U. S. Geological Survey (USGS) as *induced earthquakes*. Induced earthquakes are caused by wastewater injection wells. This wastewater is produced at oil and gas extraction wells and mostly consists of saltwater that up comes up along with the oil and gas. In some case, the injected wastewater consists of extracted hydraulic fracturing fluids. Most injection wells are not associated with induced earthquakes, a combination of many factors is necessary for induced earthquakes to occur. These factors include: the injection rate and total volume injected; the presence of faults that are large enough to produce earthquakes; and the presence of pathways for the fluids to travel from the injection site to the faults. Earth's crust is pervasively fractured at depth by faults which can sustain high stresses without slipping because natural "tectonic" stress and the weight of the overlying rock push the opposing fault blocks together. The injected wastewater counteracts the frictional forces on faults and pries them apart causing induced earthquakes to occur.

Geographic Location

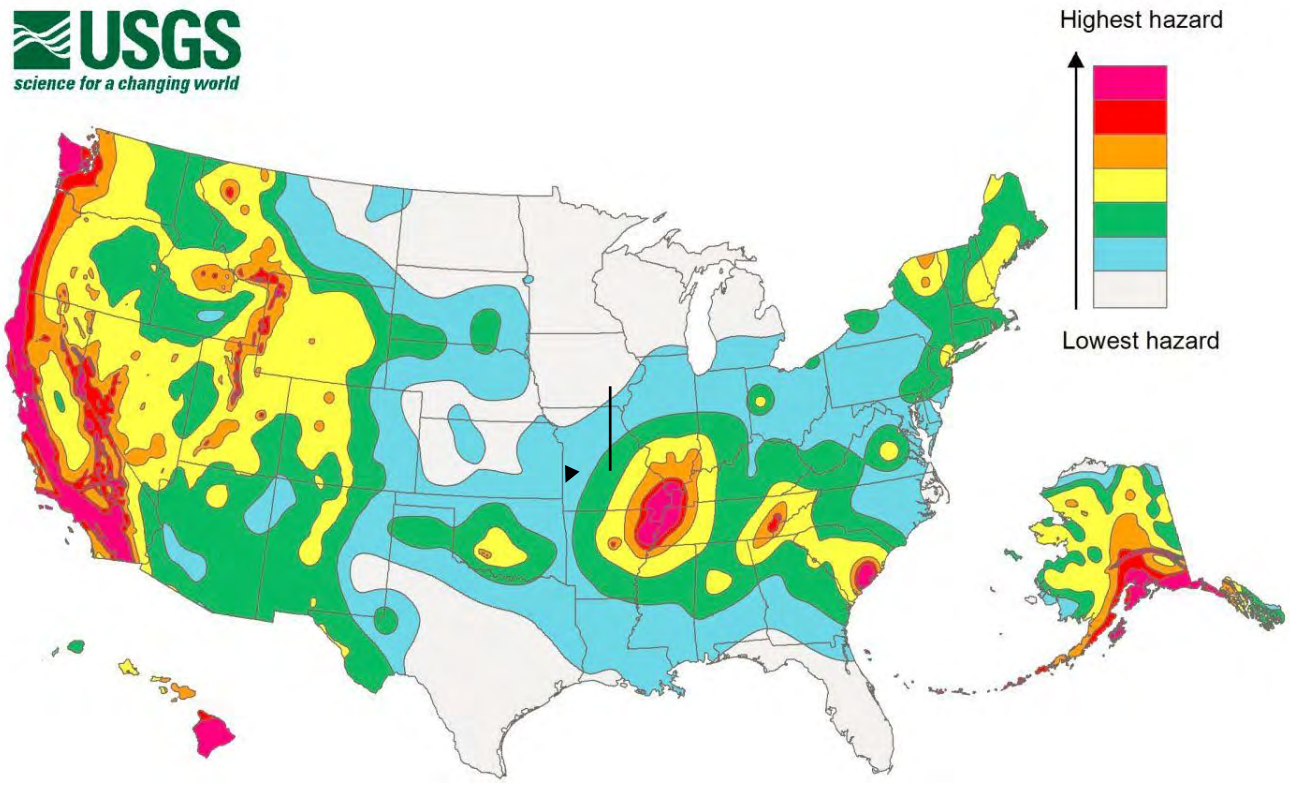
Two earthquake zones could affect Barton County: the New Madrid Seismic Zone and the Nemaha Ridge Seismic Zone.

The New Madrid is a major seismic zone that is a prolific source of intraplate earthquakes. It lies within the central Mississippi Valley, extending through southeast Missouri. While the epicenter of an earthquake in the New Madrid would be far away from Barton County, aftershocks would be felt throughout the county. Earthquake intensity would not vary across the county.

The other seismic zone of relevance, the Nemaha Ridge, is located in central Kansas, extending from Omaha, NE to Oklahoma City, OK. The Nemaha Ridge is a buried granite mountain range characterized by long term uplift which has been attributed to isostatic uplift. The most active portion of the Nemaha Ridge is currently located in Central and Northern Oklahoma where induced earthquakes are on the rise.

Figure 3.7 shows the geographic location of seismic hazards in the U.S. The black arrow points to Barton County's location and the map shows a relatively low seismic hazard for the county.

Figure 3.5. United States Seismic Hazard Map



Severity/Magnitude/Extent

The 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 a 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.

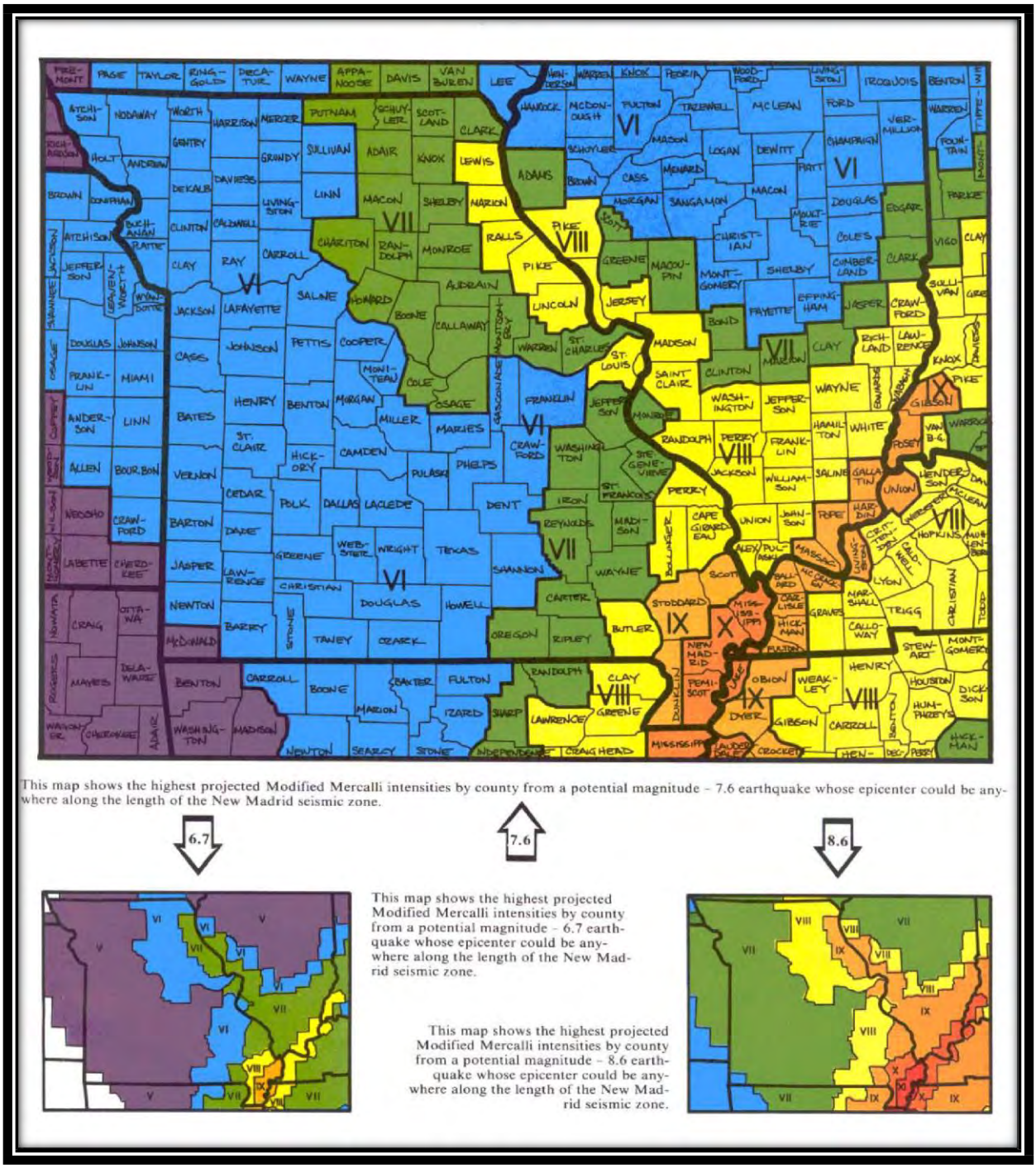
Figure 3.6 shows the highest projected Modified Mercalli intensities by county from a potential magnitude 7.6 earthquake whose epicenter could be anywhere along the length of the New Madrid Seismic Zone. Barton County has the next to lowest classification of all counties in Missouri, a VI classification on the Modified Mercalli Intensity Scale. This means that all of Barton County will feel movement and some property damage is likely to occur. The secondary maps in **Figure 3.8** show the same regional intensities for a 6.7 and 8.6 earthquake. The classification for a magnitude 6.7 earthquake is a V, which means movement felt will not be as intense and property damage is not likely. The classification for a magnitude 8.6 earthquake is a VII, which means the movement felt will be more intense and property damage will be more significant.

Projected Modified Mercalli intensities are not available for the Nemaha Ridge as they are for the New Madrid. However, the USGS developed an internet-based program called “Did You Feel It?” (DYFI). The DYFI program taps into the abundant information available about earthquakes from people who actually experience them. DYFI works with the vast number of internet users to get a more complete description of what people experience, the effects of an earthquake, and the extent of damage. This information can easily be translated in the Modified Mercalli Intensity Scale.

Figure 3.7 shows the DYFI maps of two earthquakes that occurred on the same day, November 5, 2011, in central Oklahoma. Barton County and the surrounding area did feel some movement with both of these earthquakes. The first earthquake occurred at 2:12 AM with a magnitude of 4.7, the intensity rating was a II to III which means some people felt weak movement. The second earthquake occurred at 10:53 PM with a magnitude of 5.6, the intensity rating was a III to IV which means most people felt some light movement but there was no property damage.

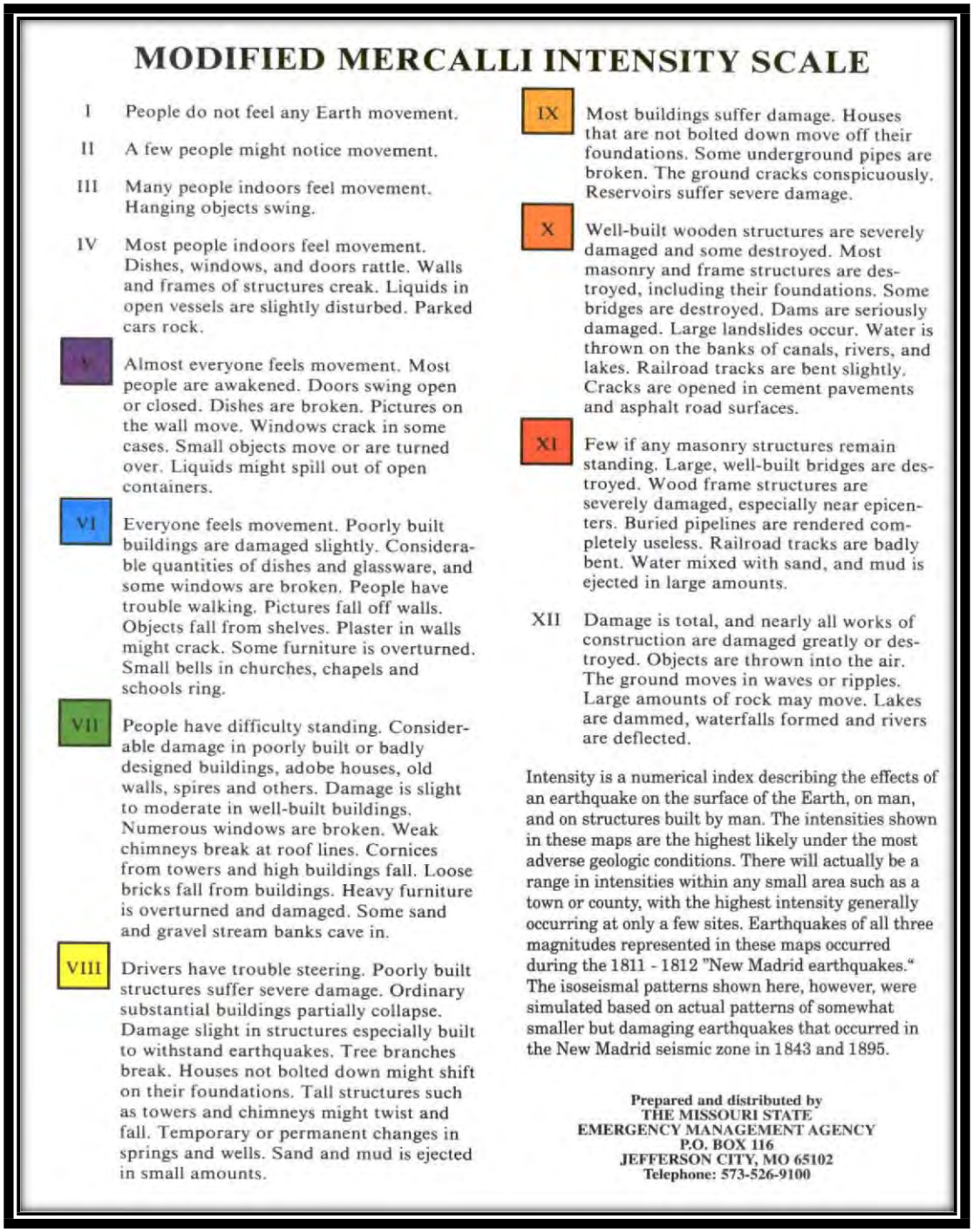
Overall, the severity of earthquakes that may be felt in Barton County are not expected to be intense enough to cause property damage, injury, or death.

Figure 3.6. Impact Zones for Earthquake Along the New Madrid Fault



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

PROJECTED EARTHQUAKE INTENSITIES



MODIFIED MERCALLI INTENSITY SCALE

I People do not feel any Earth 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 and frames of structures creak. Liquids in open vessels are slightly disturbed. Parked cars rock.

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 and glassware, and some 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, spires and others. Damage is slight to moderate in well-built buildings. Numerous windows are broken. Weak chimneys break at roof lines. 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 might shift on their foundations. Tall structures such as towers and chimneys might twist and fall. Temporary or permanent changes in springs and wells. Sand and mud is ejected in small amounts.

IX Most buildings suffer damage. Houses that are not bolted down move off their foundations. Some underground pipes are broken. The ground cracks conspicuously. Reservoirs suffer severe damage.

X Well-built wooden structures are severely damaged and some destroyed. Most masonry and frame structures are destroyed, including their foundations. Some bridges are destroyed. Dams are seriously damaged. Large landslides occur. Water is thrown on the banks of canals, rivers, and lakes. Railroad tracks are bent slightly. Cracks are opened in cement pavements and asphalt road surfaces.

XI Few if any masonry structures remain standing. Large, well-built bridges are destroyed. Wood frame structures are severely damaged, especially near epicenters. Buried pipelines are rendered completely useless. Railroad tracks are badly bent. Water mixed with sand, and mud is ejected in large amounts.

XII Damage is total, and nearly all works of construction are damaged greatly or destroyed. Objects are thrown into the air. The ground moves in waves or ripples. Large amounts of rock may move. Lakes are dammed, waterfalls formed and rivers are deflected.

Intensity is a numerical index describing the effects of an earthquake on the surface of the Earth, on man, and on structures built by man. The intensities shown in these maps are the highest likely under the most adverse geologic conditions. There will actually be a range in intensities within any small area such as a town or county, with the highest intensity generally occurring at only a few sites. Earthquakes of all three magnitudes represented in these maps occurred during the 1811 - 1812 "New Madrid earthquakes." The isoseismal patterns shown here, however, were simulated based on actual patterns of somewhat smaller but damaging earthquakes that occurred in the New Madrid seismic zone in 1843 and 1895.

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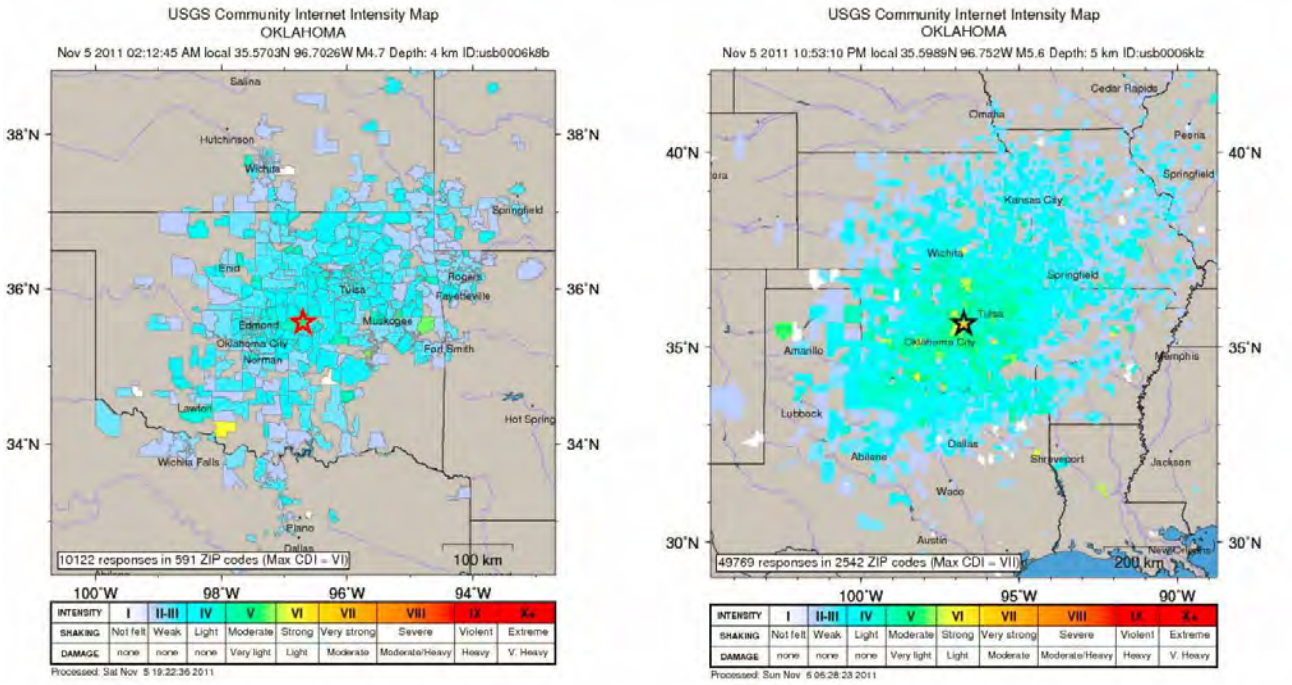
Figure 3.7. USGS Did You Feel It? Maps – Oklahoma November 5, 2011



Previous Occurrences

New Madrid Seismic Zone

Historically, this area has been the site of some of the largest earthquakes in North America. Between 1811 and 1812, 4 catastrophic earthquakes, with magnitude estimates greater than 7.0, occurred during a 3-month period. Hundreds of aftershocks followed over a period of several years. The largest earthquakes to have occurred since then were on January 4, 1843 and October 31, 1895 with magnitude estimates of 6.0 and 6.2 respectively. In addition to these events, seven events of Mw >= 5.0 have occurred in the area during the 20th century.

Throughout the past twenty-five years, earthquakes with magnitudes of 4.6 or less have occurred in central and extreme southeastern Missouri in 1990, 1992, 1998 and 2003.

Nemaha Ridge

Historically, the most severe Kansas earthquake recorded was on April 24, 1867 near Manhattan, and was an estimated magnitude 5.5. According to the Kansas Geological Survey, at least 125 earthquakes were recorded between 1867 and 1989. Most of these were micro-earthquakes, which are defined as earthquakes that are too small to be felt.

Throughout the past 25 years, two earthquakes of note were the 3.1 magnitude on March 31, 1993, close to the Cooper Nuclear Power Station in Brownville, NE and a 3.1 on March 23, 2007, near Effingham, KS.

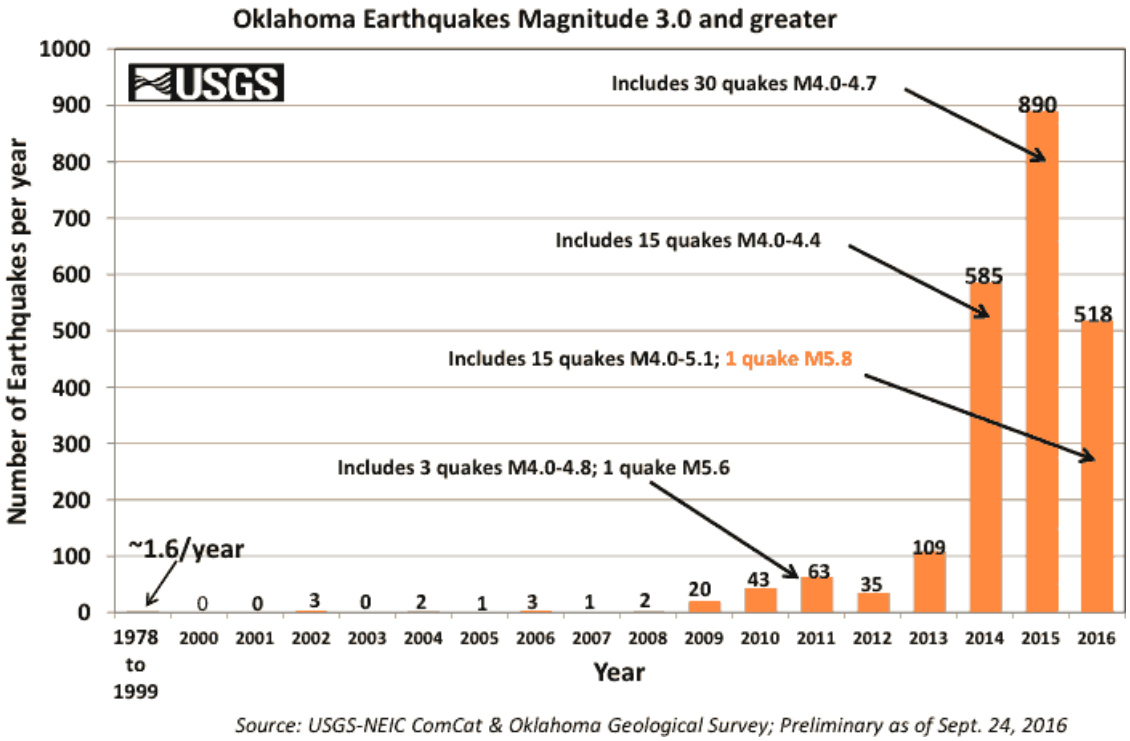
Since 2009, seismic activity in Central and Northern Oklahoma, as well as Southern Kansas, has significantly increased due to induced seismicity. **Figure 3.8** shows that prior to 2009 there was at most 3

earthquakes per year with a magnitude of 3 or greater. Then, in 2009 that number rose to 20 and continued to rise thereafter, with the most significant increase occurring in the last four years. In 2013 there were 109 earthquakes, in 2014 there were 585 earthquakes, in 2015 there were 890 earthquakes, and in 2016 there were 518 earthquakes. Of this increase in earthquakes, there has also been an increase in the magnitude. In 2011, out of 63 earthquakes there were 3 with a magnitude between 4.0 and 4.8 and one with a magnitude of 5.6. In 2014, out of 585 earthquakes there were 15 with a magnitude between 4.0 and 4.4. In 2015, out of 890 earthquakes there were 30 with a magnitude between 4.0 and 4.7. Finally, in 2016, out of 518 earthquakes, there have been 15 with a magnitude between 4.0 and 5.1 and one earthquake with a magnitude of 5.8.

Based on the information available on the USGS DYFI website, these earthquakes in Oklahoma are felt to some extent in Barton County. The intensity felt in Barton County does vary slightly depending on the magnitude of the earthquake as well as the geographic location of the epicenter. Generally, with a magnitude of 4.0 or greater some people in Barton County notice slight tremors, and with a magnitude of 5.0 or greater most people in Barton County will feel slight tremors.

Ultimately, the most significant earthquake events (M 5.0+) occur far enough away from Barton County that only slight tremors are felt. No property damage has been reported from earthquakes felt in Barton County, and there are no earthquake events on record whose epicenter is in Barton County.

Figure 3.8. Oklahoma Seismicity 1978-2016



Source: USGS-NEIC ComCat & Oklahoma Geological Survey; Preliminary as of Sept. 24, 2016

Probability of Future Occurrence

New Madrid

On average about 200 earthquakes per year are detected along the New Madrid fault line; however these earthquakes have not been strong enough to affect Barton County. The last New Madrid earthquake that may have been felt in Barton County occurred in 1968 in Southern Illinois, this

magnitude 5.5 earthquake was felt in all or portions of 23 states. The Center for Earthquake Research and Information (CERI) at the University of Memphis has computed conditional probabilities of a magnitude 6.0 earthquake in the New Madrid seismic zone. The probability for an earthquake of magnitude 6.0 or greater along the New Madrid fault line is 25 to 40 percent over a 50-year time period. An earthquake of this magnitude would most certainly be felt in Barton County, however, damages would be minimal if any (refer back to **Figure 3.6**) An earthquake with a magnitude equal to or greater than that of the 1811- 1812 quakes could result in injury, death, or property damage in Barton County.

Nemaha Ridge
The most active portion of the Nemaha Ridge is located in Central and Northern Oklahoma where induced earthquakes are on the rise. If these earthquakes continue increasing in frequency and magnitude it could pose a greater threat to Barton County.

Overall, there is no risk of the epicenter of an earthquake to be in or near Barton County.

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 Barton 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 but according to the following Earthquake Hazard Financial Exposure Per Missouri County map, major damage is not likely. In addition, some underground utilities may be damaged. Some injuries may occur, but fatalities are unlikely.

Potential Losses to Existing Development

The 2018 State Hazard Mitigation Plan quantified the population estimates and possible potential life loss exposure to potential earthquake hazards by county in the tables below. Loss of life and structures are not likely given Barton County's location in state and lack of proximity to an event area.

The following HAZUS building inventory counts are based on the 2015 ACS census data. Population counts are 2010 estimates from the U.S. Census Bureau.
.
This information was derived from inventory data associated with FEMA's loss estimation software HAZUS-MH 3.0. The HAZUS building inventory counts are based on the 2015 ACS data. Inventory values reflect 2015 valuations, based on RSMeans (a supplier of construction cost information) replacement costs.

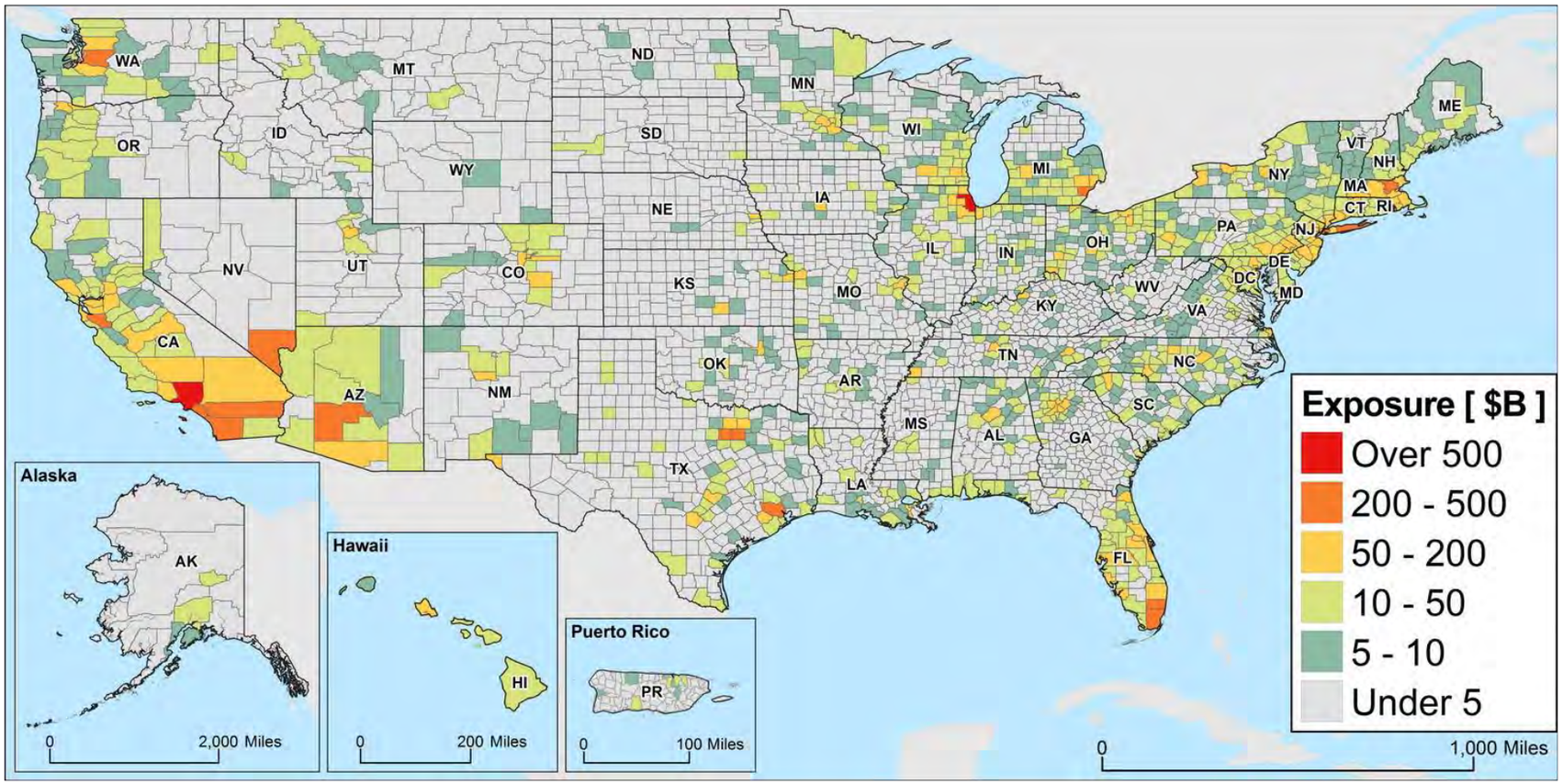
HAZUS Structures Financial Exposure for Barton County

County	Estimated Population (ACS 2015)	Building Exposure (HAZUS)								Structure Counts						
		Agriculture	Commercial	Education	Industrial	Government	Religion	Residential	TOTAL	Total Number of Structures	Agriculture	Commercial	Education	Industrial	Government	Residential
Barton	11,880	$31,626	$197,447	$24,789	$186,381	$8,737	$28,994	$936,986	$1,414,960	15,729	9,810	544	16	112	24	5,223

Barton County Population including Growth Estimates

County	2000 Census	April 1, 2010 - Census	Growth 2000-2010	ACS 2015 Population	Growth 2010-2015	Growth 2000-2015
Barton	12,541	12,402	-1%	11,880	-4.21%	-5.27%

Earthquake Hazard Financial Exposure Per Missouri County



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 earthquake event.

Hazard Summary by Jurisdiction

Since the earthquake intensity is not likely to vary greatly throughout Barton County, the risk will be the same throughout. However, damages could differ if there are structural variations in the planning area-built environment. For example, older structures and those structures which are not in prime condition are likely to experience higher damages. **Table 3.19** shows with the number and percentage of housing units built in 1939 or earlier.

Table 3.19. Housing units built 1939 or earlier by Jurisdiction

Jurisdiction	# built 1939 or earlier	% built 1939 or earlier
Golden City	154	41.3%
Lamar	246	12%
Lamar Heights	2	2%
Liberal	155	35.8%
Mindenmines	44	27.2%

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. Potential damages to future development can be mitigated by adopting and enforcing at least IBC 2012 building codes. Most communities in Barton County do not have up-to-date building codes and the county does have building codes at all. Updating and enforcing building codes throughout Barton County would mitigate the impact on future development from an earthquake event.

3.4.4 Extreme Heat

Hazard Profile

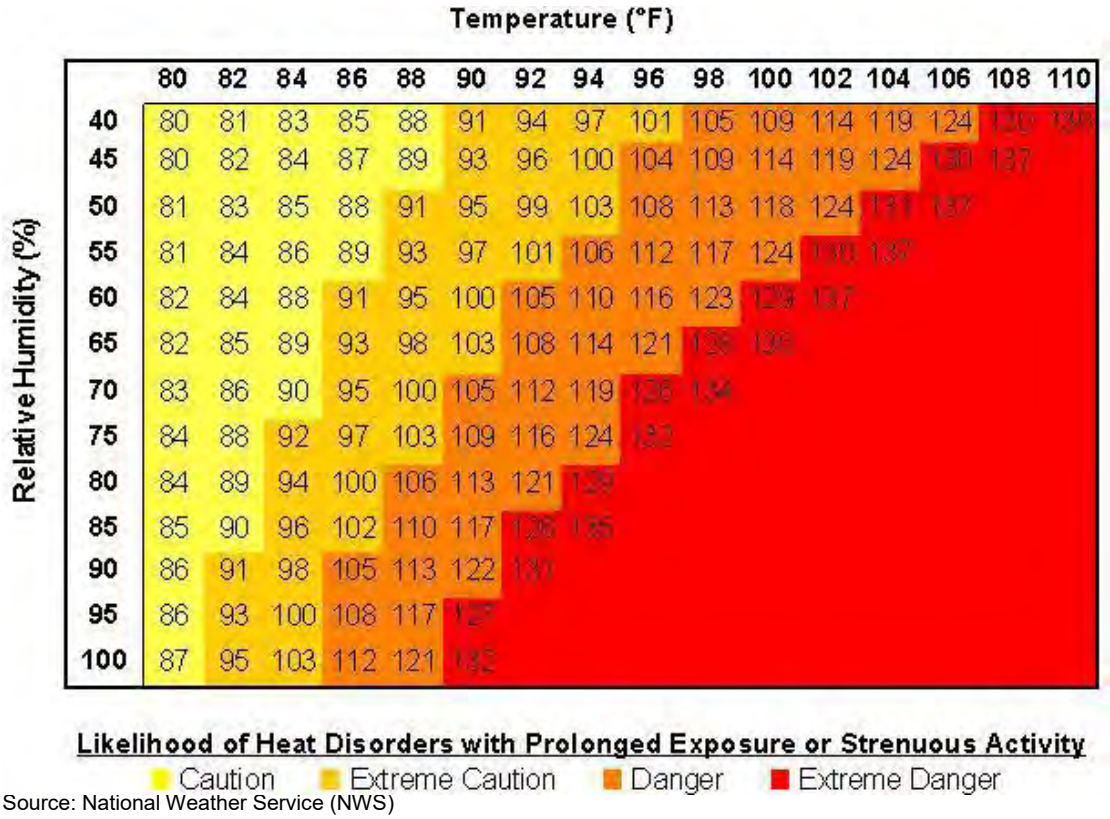
Some specific sources for this hazard are:

- National Centers for Environmental Information, Storm Events Database, http://www.NCEI.noaa.gov/stormevents/
- Heat Index Chart & typical health impacts from heat, National Weather Service; National Weather Service Heat Index Program, www.weather.gov/os/heat/index.shtml ;
- Daily temperatures averages and extremes, High Plains Regional Climate Summary, http://www.hprcc.unl.edu/data/historical/index.php?state=ia&action=select_state&submit=Select+State;
- Hyperthermia mortality, Missouri; Missouri Department of Health and Senior Service, http://health.mo.gov/living/healthcondiseases/hyperthermia/pdf/hyper1.pdf;
- Hyperthermia mortality by Geographic area, Missouri Department of Health and Senior Services,
- http://health.mo.gov/living/healthcondiseases/hyperthermia/pdf/hyper2.pdf;

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 3.4.9.** 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 3.9** uses both of these factors to produce a guide for the apparent temperature or relative intensity of heat conditions.

Figure 3.9. 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 heat is an area-wide hazard event, and the risk of extreme heat does not vary across the planning area.

Severity/Magnitude/Extent

Extreme heat can cause stress to crops and animals. 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 1988-2011, there were 3,496 fatalities in the U.S. attributed to summer heat. This translates to an annual national average of 146 deaths. 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 3.20 lists typical symptoms and health impacts due to exposure to extreme heat.

Table 3.20. 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

NOAA's National Centers for Environmental Information (NCEI) maintains a storm event database which contains all recorded storm event in the State of Missouri. There are ten (10) recorded extreme heat events in the NCEI database from 1996 to 2016 for Barton County, these events occurred in only 5 out of 20 years. There were zero deaths and no injuries or property and crop damage associated with these events in the NCEI data for Barton County. The event narratives describe fatalities that occurred during regional multi-county heat events for other nearby counties. Extreme heat events in Barton County were recorded in consecutive months in 5 separate years from 1996 to 2016. The months for each year and event narratives are summarized below:

1999, July to August - Periodic excessive heat continued from July into early and mid-August with temperatures exceeding 95 deg F on 8 (nonconsecutive) days. Daytime heat index values frequently reached 100 deg F or greater.

2000, August to September - A prolonged period of excessive heat continued from late August into early September for central, south central, and southwest Missouri. Afternoon temperature averaged around 100 degrees for the first three days of September. These temperatures are about 15 to 20 degrees above normal.

2001, July to August - During the middle of July a large area of high pressure began to build over the Central United States. It held together through the last week of July with a brief period of cloud cover and shower activity around the 26, 27 and 28 of the month. Temperatures rose into the 90's with a few 100's in southeast Kansas and portions of southwest and west central Missouri. The high temperatures combined with increased humidity levels to produce very high heat indices of 100 to 110 degrees for several consecutive days. The heat and humidity continued into the first week of August with heat indices between 100 and 110 degrees for 9 consecutive days.

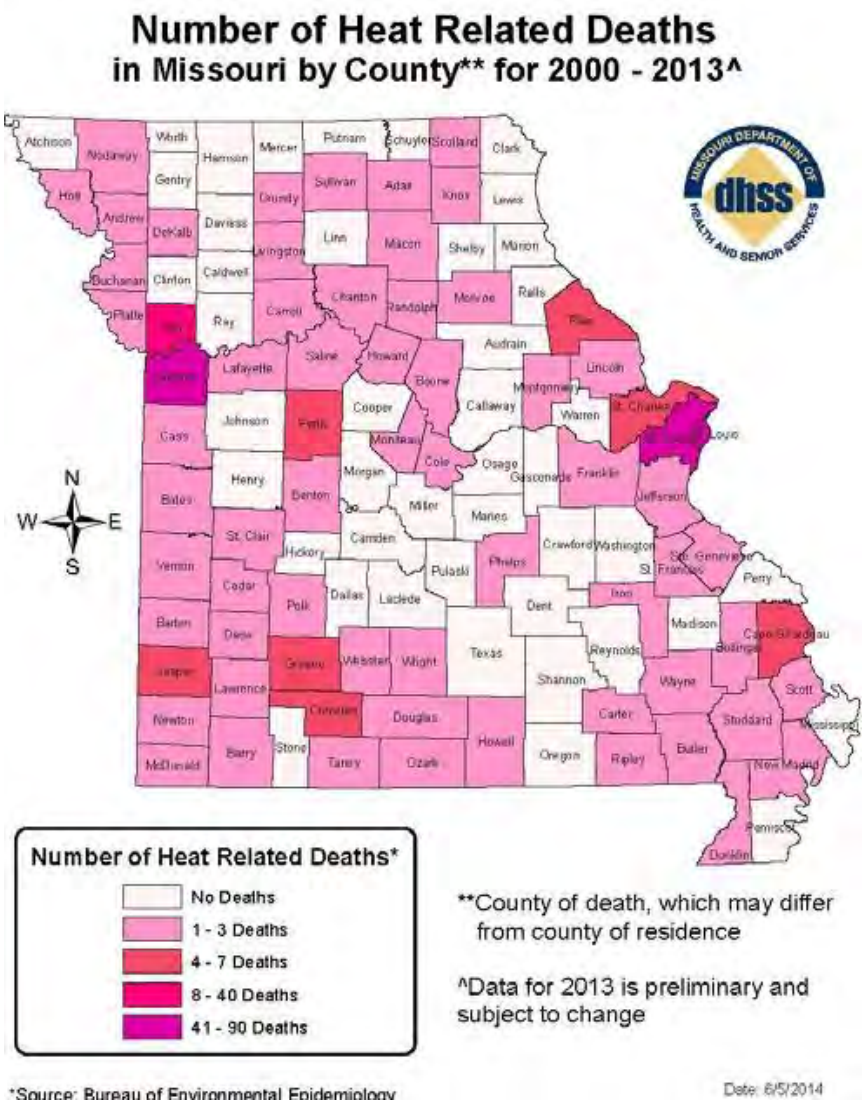
2011, August - A persistent area of high pressure and an upper level ridge over the region allowed temperatures to climb into the lower 100s with heat index values around 110 degrees. Regional temperatures during August averaged 2-4 degrees above normal over southwestern Missouri. The hottest day of the summer occurred on August 2 when triple digit heat impacted much of the state.

Numerous locations, especially across West-central and Southwestern sections, witnessed their hottest temperatures in more than 25 years. Some high temperature records across the Southwest Missouri region ranged from 108oF to 113oF.

2012, June to August - A strong ridge of high pressure settled over the central portions of the U.S. beginning in June with high temperatures reaching over 100 degrees by the end of the month, and became the dominant weather pattern for much of the Summer of 2012. This weather pattern finally broke down after the first week of August and temperatures became more seasonable. Even though air temperatures were extreme, the humidity levels were relatively dry causing the heat index to be closer to the actual air temperatures.

Figure 3.10 is a map created by the Missouri Department of Health and Senior Services Bureau of Environmental Epidemiology shows that between 2000 and 2013 there were 1-3 heat related deaths in Barton County.

Figure 3.10. Heat Related Deaths in Missouri 2000 - 2013



Probability of Future Occurrence

Based on the 5 years with recorded extreme heat events over the past 20-year period (1996- 2016), Barton County has a 25% chance of a prolonged extreme heat event occurring in any given year.

The events recorded in the NCEI database describe prolonged periods were 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 NCEI database. It is possible that the heat related fatalities reported by DHSS (as shown in **Figure 3.10**) occurred during a shorter period of extreme heat and would not be recorded in the NCEI database. This data limitation indicates that extreme heat events could be underreported in the NCEI.

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 Barton County over the next 13 years. Extreme heat can impact agriculture in a significant way, especially as extreme heat events often coincide with drought (see drought section).

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.

Barton County has seen a steady population decrease from 2000-2015, the only jurisdiction that has seen a growth is the city of Lamar with only a 0.72% population increase from 2000-2015. There is no planned future development in Barton County. Due to these growth and development trends, it is not expected that future growth would be impacted significantly by the threat of extreme heat.

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 3.21** 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 3.21. Barton County Population Under Age 5 and Over Age 65, 2010 Census Data

Jurisdiction	Population % Under 5 yrs	Population % 65 yrs & over
*Barton County Total	6.7%	17.2%
Golden City	6.4%	17.8%
Lamar	7.6%	19.5%
Lamar Heights	4.5%	15.7%
Liberal	7.1%	14.4%
Mindenmines	4.9%	11.8%
Unincorporated Barton County	6.3%	16.0%

Source: U.S. Census Bureau, (*) includes entire population of each city or county

Problem Statement

All areas of Barton County are at equal risk to the hazards of extreme heat. However, those with larger numbers of children and elderly among 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.

3.4.5 Flooding (Flash and River)

Some specific sources for this hazard are:

- Watershed map, Environmental Protection Agency, http://cfpub.epa.gov/surf/county.cfm?fips_code=19169
- FEMA Map Service Center, Digital Flood Insurance Rate Maps (DFIRM) for all jurisdictions, if available, msc.fema.gov/portal
- NFIP Community Status Book, http://www.fema.gov/national-flood-insurance-program/national-flood-insurance-program-community-status-book
- NFIP claims status, BureauNet, http://bsa.nfipstat.fema.gov/reports/reports.html
- Flood Insurance Administration—Repetitive Loss List (this must be requested from the State Floodplain Management agency or FEMA)
- National Centers for Environmental Information, Storm Events Database, http://www.NCEI.noaa.gov/stormevents/
- USDA Risk Management Agency, Insurance Claims, http://www.rma.usda.gov/data/cause.htm

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.

Damn and levee failure may also cause flooding. Damn failure is discussed in a separate hazard profile, and levee failure will not be discussed because there are no levees in Barton County.

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), also referred to as the floodplain. These are low lying and relatively flat areas adjoining a river or stream. 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. **Figures 3.11 through 3.13** show the SFHAs in Barton County.

Figure 3.11. Barton County Floodplain with structure counts

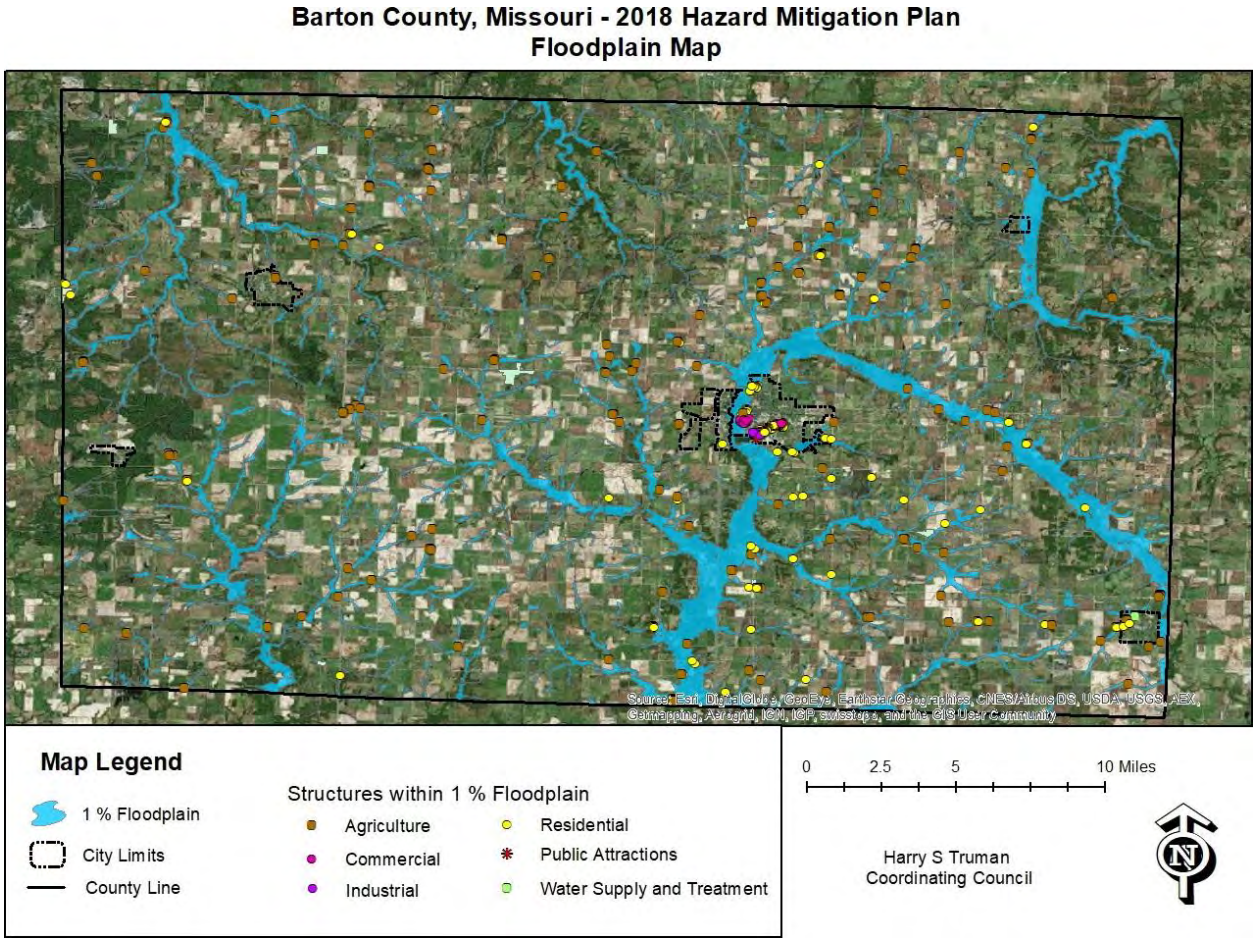


Figure 3.12. Lamar Floodplain with structure counts

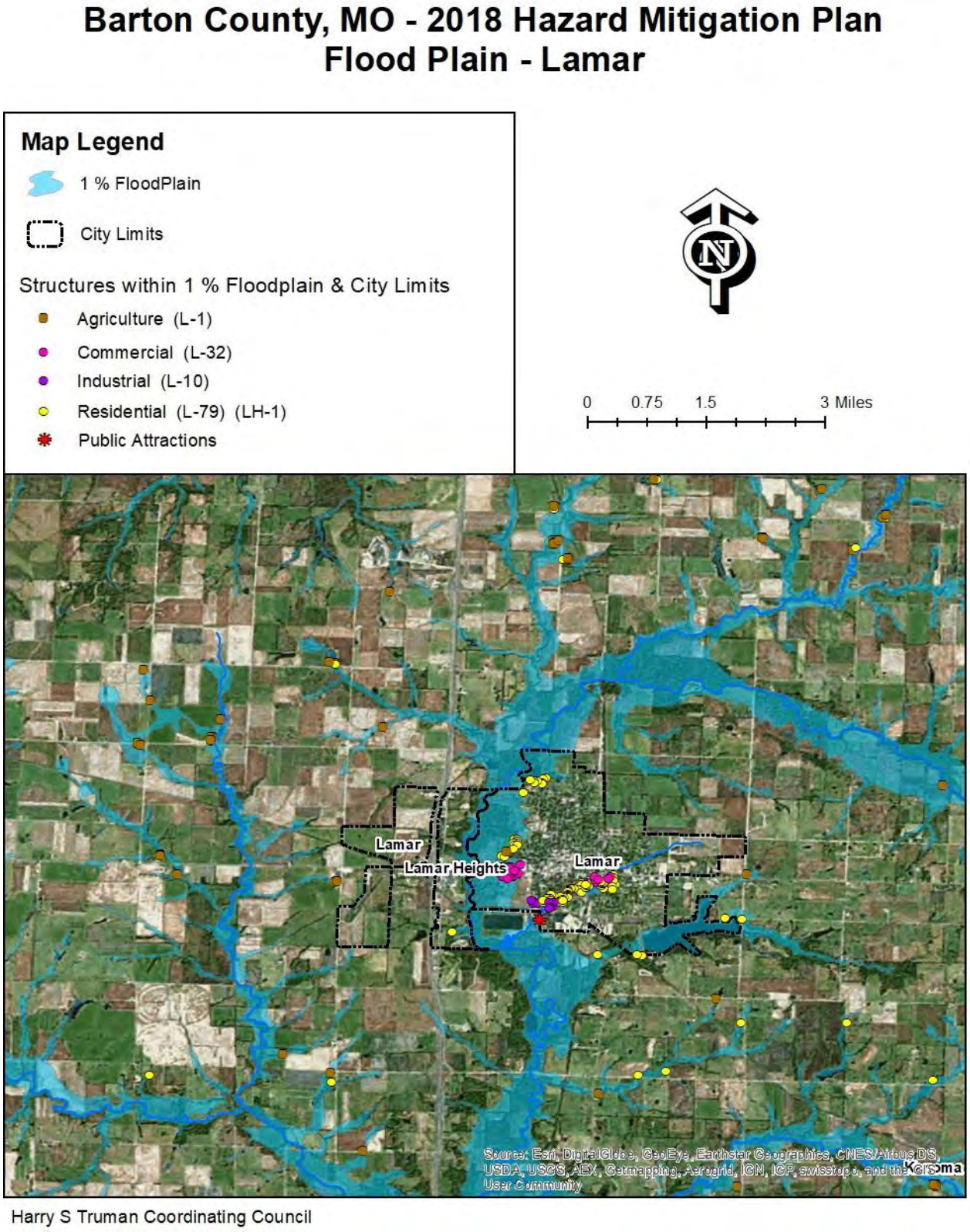
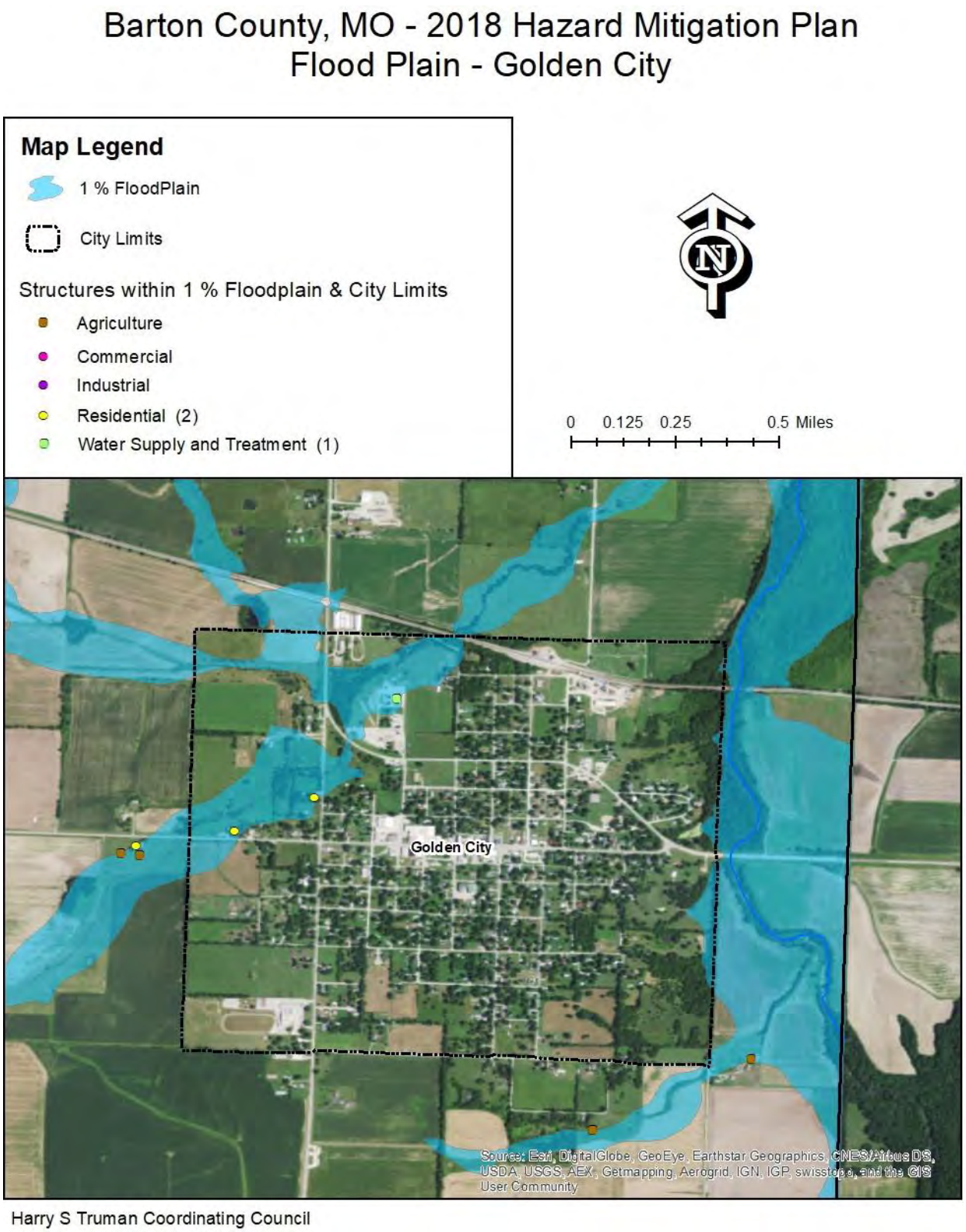


Figure 3.13. Golden City Floodplain with structure counts



The NCEI storm event database lists riverine and 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 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.

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 NCEI storm event database determined which jurisdictions are most prone to flooding and flash flooding from 1997 to 2017 are listed in **Table 3.21** and **Table 3.22**.

Table 3.22. Barton County NCEI Flood Events by Location, 1997-2017

Location	# of Events
Unincorporated County	45
-County wide, unspecified. (2/24/201) (5/8/2002) (5/12/2002) (1/5/2005) (3/3/2008) (3/19/2008) (6/1/2008) (5/20/2010) (4/25/2011) (4/11/2013) (11/17/2015) (11/27/2015) (12/13/2015) (4/21/2017)	
-Hwy 126 seven miles south of Lamar near intersection of I-49, North Fork Spring River. (1/5/2005) (3/3/2008) (3/20/2012) (4/30/2012) (4/27/2013) (12/13/2015)(4/21/2017)	
-Hwy K half mile south of intersection with Hwy V, East Fork of Dry Wood Creek. (1/5/2005) (5/20/2010) (4/30/2012) (6/1/2013) (5/24/2015) (11/27/2015) (12/13/2015) (5/3/2017)	
-Outer Road near I-49 three miles south of Hwy 126. (3/26/2010) (12/13/2015) (4/21/2017) (5/3/2017)	
-Route J. (6/1/2013)	
-Route V. (6/1/2013)	
-Route M at Glendale Fork near SW 30th Rd. (5/20/2010) (4/30/2012) (7/30/2013) (5/24/2015) (12/13/2015) (4/21/2017)	
-Prairie State park closed campgrounds due to flooding. (11/17/2015)	
-SE 80th Rd. (12/14/2015)	
-I-49 southbound between Hwy 126 and the Jasper/Barton County border. (5/24/2016)	
-NE 30th Lane. (4/22/2017)	
Lamar/Lamar Heights	2
-Unspecified location. (4/25/2011) (4/11/2013)	
Mindenmines	
-unspecified location. (3/3/2008) (3/19/2008) (6/1/2008)	3

Source: National Centers for Environmental Information

Table 3.23. Barton County NCEI Flash Flood Events by Location, 1997-2017

Location	# of Events
Unincorporated County	66
-Unspecified western part of county. (6/17/1997)	
-Flooded streets, Burgess area. (6/29/1997)	
-County Wide, unspecified location. (10/4/1998) (4/26/1999) (5/4/1999) (6/20/2000) (7/22/2000) (5/7/2002) (1/5/2005) (5/14/2005) (4/24/2007) (6/11/2007) (3/18/2008) (4/10/2008) (4/18/2008) (6/9/2008) (6/13/2008) (9/13/2008) (3/24/2009) (5/13/2009) (6/16/2009) (7/21/2009) (5/1/2012) (6/15/13) (4/30/2017)	
-Hwy 126. (7/22/2000) (4/24/2004) (1/5/2005) (7/20/2007) (4/10/2008) (5/7/2008) (6/13/2008) (6/28/2008) (7/26/2008) (5/11/2017)	
-Hwy K, near Hwy V. (1/5/2005) (5/7/2008) (6/9/2008) (6/13/2008) (6/28/2008) (9/13/2008) (6/16/2009) (10/8/2009) (5/11/2016) (4/29/2017)	
-Southeast part of county, unspecified locations. (7/1/2000)	
-Northern part of county, flooded county roads, unspecified location. (6/14/2001)	
- 70th Rd, Irwin area. (6/24/2007)	
-Hwy DD west of I-49. (6/24/2007)	
-Hwy T near SE 10th Rd. (6/28/2007) (9/6/2007) (5/6/2012)	
-numerous roads between I-49 and Hwy 43. (7/26/2008)	
-Hwy M south of Hwy 126. (9/13/2008)	
-Hwy WW. (10/8/2009)	
-Hwy P. (10/8/2009)	
-Hwy W. (6/1/2007) (9/1/2010)	
-Flooded streets, Iantha area. (4/30/2012)	
-Prairie State park campground. (4/26/2017)	
-Unspecified location near Milford (5/12/2002)	
-Hwy C near Milford (9/13/2008) (10/8/2009) (9/1/2010)	
-Hwy A near Milford (9/13/2008) (5/6/2012)	
Golden City	6
-Hwy 126 west of Golden City. (9/6/2007) (9/8/2007)	
-Intersection at Hwy 160 and Walnut street. (9/8/2007)	
Lamar/Lamar Heights	
-Flooded streets, unspecified location. (6/17/1997) (6/29/1997) (4/27/1998) (4/25/1999) (6/13/2004) (6/1/2007) (6/11/2007) (6/28/2007) (5/7/2008) (7/21/2009) (5/1/2012)	
- North Fork Spring River, unspecified location. (10/5/1998)	16
-Lamar City Park. 6/27/2001)	
-intersection of Hwy 160 and Hwy J. (5/6/2012)	
-I-49 South of Lamar, near Hwy 160. (6/11/2007) (9/8/2007)	
Liberal	
- Flooded streets, unspecified location. (6/29/1997) (9/13/2008)	
-Hwy K, east of Liberal. (6/1/2007) (5/31/2013) (5/11/2016)	6
-Hwy P. (6/1/2007)	
Mindenmines	
-Flooded streets, unspecified location. (7/8/1997) (2/8/2001) (5/10/2007)	
-Highway 160. (5/10/2007) (6/30/2007) (6/28/2008)	10
-Hwy M south of Hwy 160. (5/7/2008) (10/8/2009) (4/302012) (7/30/2013)	

Source: National Centers for Environmental Information

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 community's 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 3.24 shows details on NFIP participation for the communities in the Barton County. **Table 3.25** shows the number of policies in force, amount of insurance in force, number of closed losses, and total payments for each jurisdiction, where applicable. The community with the most insurance payments is the city of Lamar with a total of 100 insurance payment totaling 244,750.27 dollars. The second most insurance payments is Barton Counties unincorporated areas with 1 insurance payments totaling 18,059.00 dollars. Although Sanctioned on 4/18/1976, Mindenmines does not participate in the NFIP and has not been included in the table as they do not experience flooding and are not near bodies of water, per city administration.

Table 3.24. NFIP Participation in Barton County

Community ID #	Community Name	NFIP Participant (Y/N)	Current Effective Map Date	Regular-Emergency Program Entry Date
290785#	Barton County	Y	03/17/11	07/01/87
290735#	Golden City	Y	03/17/11(M)	07/10/12
290025#	Lamar	Y	03/17/11	02/15/85
290921#	Lamar Heights	Y	03/17/11	09/07/12
290606#	Liberal	Y	03/17/11(M)	03/17/11

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 3.25. NFIP Policy and Claim Statistics as of [insert date]

Community	Total Losses	Closed Losses	Open Losses	CWOP Losses	Total Payments
Barton	0	1	0	0	18,059.00
City of Lamar	15	14	0	1	244,750.27

Source: NFIP Community Status Book 2013 BureauNet, http://bsa.nfipstat.fema.gov/reports/reports.html; *Closed Losses are those flood insurance claims that resulted in payment.

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, jurisdictions included in the planning area have a combined total of one repetitive loss properties. As of August 21, 2017, zero properties have been mitigated, leaving one un-mitigated repetitive loss properties.

Table 3.26 shows a summary of the repetitive loss properties in Barton County.

Table 3.26. Barton County Repetitive Loss Properties

Jurisdiction	# of Properties	Type of Property	# Mitigated	Building Payments	Content Payments	Total Payments	Average Payment	# of Losses
City of Lamar	1	unknown	0	0.00	11,852.84	11,852.84	3,950.95	3

Source: Flood Insurance Administration as of 8/31/2017

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 zero SRL properties on record for Barton County.

Previous Occurrences

Tables 3.27 shows NCEI flash flood events for Barton County over a 20 year period from 1997 to 2017. **Table 3.28** shows NCEI riverine flood events for the same 20 year period. Many flood events were reported in the NCEI multiple times due to the fact that they occurred in multiple locations throughout the county. For the purpose of calculating previous occurrences all events reported on the same day have been combined as one riverine flood or flash flood event, and for this reason the total number of previous occurrences is different than the number of events listed in Tables 3.22 and 3.23 which lists flood events by location.

According to the NCEI storm event database, there have been 57 flash flood events and 25 riverine flood events recorded in Barton County from 1997 to 2017. Property damage occurred during several of these flooding events, and there was one death recorded in 2015.

The most recent and most significant damaging event occurred in April of 2017 when several days of heavy rainfall occurred across Southwest Missouri and the Missouri Ozarks region. Barton County was included in the presidential disaster declaration (DR-4317) that resulted from this event. Barton County was also included in the presidential disaster declaration (DR-4250) that resulted from the events in December 2015 through January 2016.

Table 3.27. NCEI Barton County Flash Flood Events Summary, 1997 to 2017

Year	# of Events	# of Deaths	# of Injuries	Property Damages	Crop Damages
1997	3	0	0	0	0
1998	2	0	0	0	0
1999	2	0	0	40K	0
2000	3	0	0	0	0
2001	3	0	0	0	0
2002	2	0	0	0	0
2003	0	0	0	0	0
2004	2	0	0	0	0
2005	2	0	0	0	0
2006	0	0	0	0	0
2007	10	0	0	0	0
2008	9	0	0	0	0
2009	6	0	0	0	0
2010	1	0	0	0	0
2011	0	0	0	0	0
2012	3	0	0	0	0
2013	3	0	0	100K	0
2014	1	0	0	0	0
2015	0	0	0	0	0
2016	2	0	0	0	0
2017	3	0	0	250K	0
Totals	**57**	**0**	**0**	**390K**	**0**

Source: NCEI, data accessed [insert date]

Table 3.28. NCEI Barton County Riverine Flood Events Summary, 1997 to 2017

Year	# of Events	# of Deaths	# of Injuries	Property Damages	Crop Damages
1997	0	0	0	0	0
1998	0	0	0	0	0
1999	0	0	0	0	0
2000	0	0	0	0	0
2001	1	0	0	0	0
2002	2	0	0	300K	200K
2003	0	0	0	0	0
2004	0	0	0	0	0
2005	1	0	0	0	0
2006	0	0	0	0	0
2007	0	0	0	0	0
2008	3	0	0	0	0
2009	0	0	0	0	0
2010	2	0	0	0	0
2011	1	0	0	100K	0
2012	2	0	0	0	0
2013	4	0	0	0	0
2014	0	0	0	0	0
2015	5	1	0	0	0
2016	1	0	0	0	0
2017	3	0	0	10K	0
Totals	**25**	**1**	**0**	**$410K**	**$200K**

Source: NCEI, data accessed [insert date]

Probability of Future Occurrence

There have been a total of 82 reported flood events in Barton County from 1997 to 2017 in the NCEI storm event database. Of those, 57 were flash floods and 25 were riverine floods. Using a 20 year period of record this indicates 100 percent probability of both flash flood events and riverine flood events occurring in the county in anygiven year.

Vulnerability

Vulnerability Overview

Flooding has been included in 3 of the 14 presidential disaster declarations (since 1990) that have included Barton 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 even though there is only one repetitive lose property, significant property damage is still possible. 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 susceptible to flooding. North Fork Spring River and its tributaries are the most frequently flooded body of water. There are no schools or special district facilities in SFHAs in Barton 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 structures situated within 100 feet of the 100 year floodplain to compile building counts by type for each participating jurisdiction, and the

unincorporated balance of Barton 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 3.29.**

Table 3.29. Potential Flood loses for Building Types by Jurisdiction

Jurisdiction	Residential	Commercial	Industrial	Agriculture	Total Building Count
Golden City	2	0	0	0	2
Lamar	79	32	10	1	122
Lamar Heights	1	0	0	0	1
Liberal	0	0	0	0	0
Mindenmines	0	0	0	0	0

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. There are currently no plans for future development in Barton County.

Hazard Summary by Jurisdiction

All local jurisdictions are vulnerable to flood hazards, however as demonstrated in **Table 3.29** exposure to assets near the floodplain varies among each jurisdiction. 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 unincorporated areas in the county are also susceptible to street flooding during periods of heavy rain.

Problem Statement

Flooding events, both riverine and flash, are a frequent occurrence in Barton County. Vulnerability to flood hazards varies slightly by jurisdiction, communities who develop in low lying areas or in or near the floodplain are more vulnerable. The risks can be reduced by preventing development in flood prone areas and enforcing building codes.

3.4.6 Thunderstorm/High Winds/Lightning/Hail

Some Specific Sources for this hazard are:

- FEMA 320, Taking Shelter from the Storm, 3rd edition, http://www.weather.gov/media/bis/FEMA_SafeRoom.pdf Lightning Map, National Weather Service, http://www.lightningsafety.noaa.gov/stats/08_Vaisala_NLDN_Poster.pdf National Weather Service, http://www.lightningsafety.noaa.gov/stats/08_Vaisala_NLDN_Poster.pdf
- Death and injury statistics from lightning strikes, National Weather Service.
- Wind Zones in the U.S. map, FEMA, http://www.fema.gov/plan/prevent/saferoom/tsfs02_wind_zones.shtm;
- Annual Windstorm Probability (65+knots) map U.S. 1980-1994, NSSL, http://www.nssl.noaa.gov/users/brooks/public_html/bigwind.gif
- Hailstorm intensity scale, The Tornado and Storm Research Organization (TORRO), http://www.torro.org.uk/site/hscale.php;
- NCEI data;
- USDA Risk Management Agency, Insurance Claims, http://www.rma.usda.gov/data/cause.htm
- National Severe Storms Laboratory – hail map, http://www.nssl.noaa.gov/users/brooks/public_html/bighail.gif

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 3.4.5**) and tornadoes (discussed separately in **Section 3.4.7).**

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.

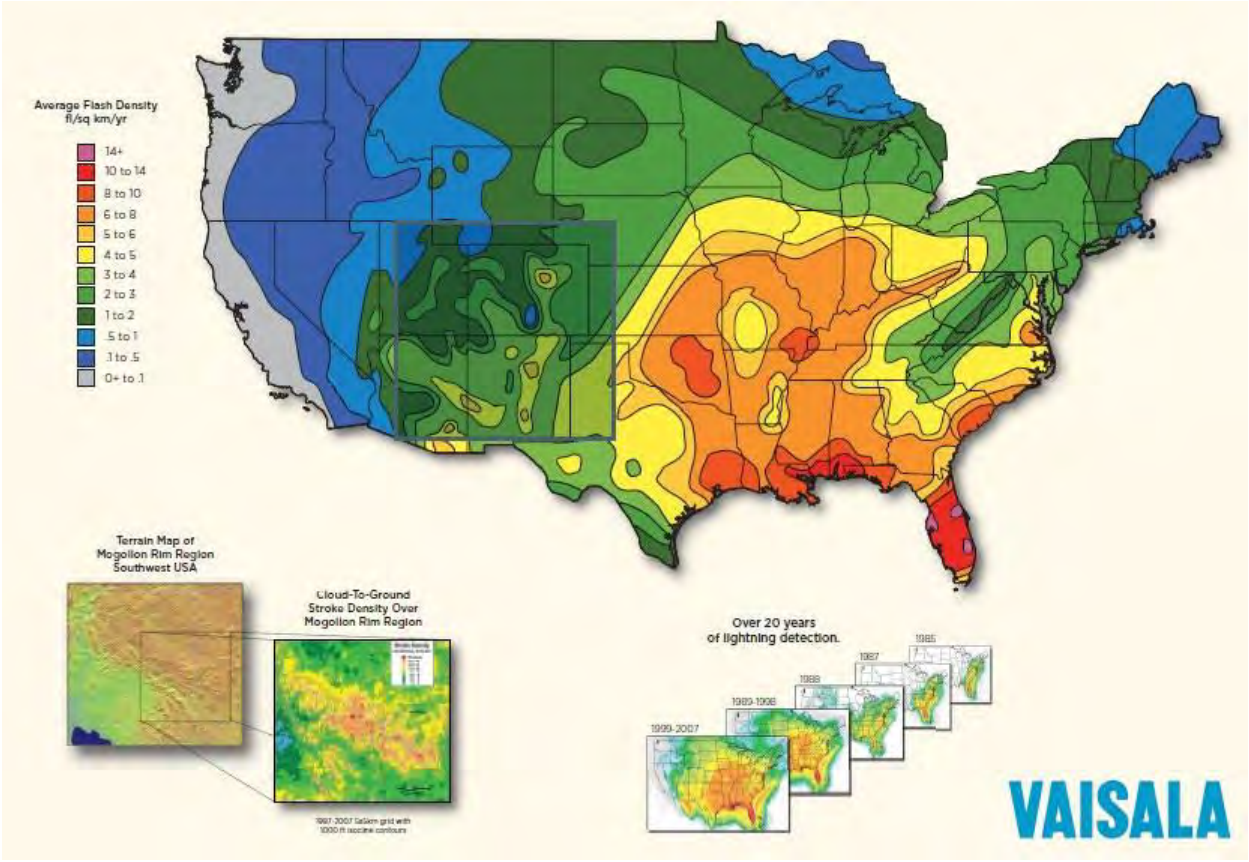
At the time when the updraft can no longer support the hailstone, it will fall down to the earth. For example, a ¼" diameter or pea sized hail requires updrafts of 24 miles per hour, while a 2 ¾" diameter or baseball sized hail requires an updraft of 81 miles per hour. According to the NOAA, the largest 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.

Figure 3.14 shows lightning frequency in the U.S. Barton County lies in the 5 to 6 flash density zones on the map.

Figure 3.14. Location and Frequency of Lightning in the United States



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

Figure 3.15. Wind Zones in the United States

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 the County 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 3.30 3.30** below describes typical damage impacts of the various sizes of hail.

Table 3.30. 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 3.31** through **Table 3.33**) summarize past crop damages as indicated by crop insurance claims. The tables illustrate the magnitude of the impact on the planning area's agricultural economy. There were no records of recorded crop damage caused by lightening in Barton county.

Table 3.31. Crop Insurance Claims Paid in County A from Thunderstorms, 2001-2016

Crop Year	Crop Name	Cause of Loss Description	Insurance Paid
2001	Wheat/Corn/Grain Sorghum/Soybeans	Excessive Moisture	$99,330
2002	Wheat/Corn/Grain Sorghum/Soybeans	Excessive Moisture	$1,443,413
2003	Wheat/Corn/Grain Sorghum/Soybeans	Excessive Moisture	$604,809
2004	Wheat/Corn/Grain Sorghum/Soybeans	Excessive Moisture	$639,930
2005	Wheat/Corn/Grain Sorghum/Soybeans	Excessive Moisture	$1,062,080
2006	Wheat/Corn/Grain Sorghum/Soybeans	Excessive Moisture	$925,820
2007	Wheat/Corn/Grain Sorghum/Soybeans	Excessive Moisture	$14,678,921
2008	Wheat/Corn/Grain Sorghum/Soybeans	Excessive Moisture	$6,230,339
2009	Wheat/Corn/Grain Sorghum/Soybeans	Excessive Moisture	$2,474,194
2010	Wheat/Corn/Grain Sorghum/Soybeans	Excessive Moisture	$4,618,606
2011	Wheat/Corn/Grain Sorghum/Soybeans	Excessive Moisture	$22,220,411
2012	Wheat/Corn/Grain Sorghum/Soybeans	Excessive Moisture	$19,015,206
2013	Wheat/Corn/Grain Sorghum/Soybeans	Excessive Moisture	$14,490,529
2014	Wheat/Corn/Grain Sorghum/Soybeans	Excessive Moisture	$1,731,797
2015	Wheat/Corn/Grain Sorghum/Soybeans	Excessive Moisture	$7,129,836
2016	Wheat/Corn/Grain Sorghum/Soybeans	Excessive Moisture	$770,999.7
Total			**$98,136,220.7**

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

Table 3.32. Crop Insurance Claims Paid in County A from high Winds, 2001-2016

Crop Year	Crop Name	Cause of Loss Description	Insurance Paid
2002	Wheat	Wind/Excess wind	$766
2003	Corn	Wind/Excess wind	$7,782
2016	Corn	Wind/Excess wind	$136,095
Total			**$144,643**

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

Table 3.33. Crop Insurance Claims Paid in County A from Hail, 2001-2016

Crop Year	Crop Name	Cause of Loss Description	Insurance Paid
2002	Wheat/Corn/Grain Sorghum	Hail	$490,675
2003	Wheat	Hail	$4,757
2008	Wheat/soybeans	Hail	$5,847,320
2009	Wheat	Hail	$812
2010	Soybeans	Hail	$1,058
2011	Wheat/Corn	Hail	$16,131,179
2012	Corn	Hail	$11,578
2013	Wheat	Hail	$3,674
2014	Soybeans	Hail	$1,221.66
2016	Wheat	Hail	$257
Total			**$22,492,531.66**

USDA Risk Management Agency, Insurance Claims, http://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

Hail

There are 101 hail events reported to the NCEI from 2001 – 2016 in Barton County. Three events recorded were the highest magnitude events where hailstones reached a diameter of 2.75 or greater, no damages were reported during these events. There were two events with reported property damages and 1 event with reported crop damage. The most significant and costliest event occurred in May 2002 when hail caused $100,000 in crop damage. Limitations to the use of NCEI reported hail events include the fact that minor damage to vehicles and buildings may go unreported. **Table 3.34** provides information about damaging hail events in the county.

Table 3.34. NCEI reported Hail Events in Barton County, 2001-2016

Location	Date	Magnitude (inches)	Deaths	Injuries	Property Damage	Crop Damage
Liberal	4/2/201	.75	0	0	0	0
Golden City	4/2/2001	.75	0	0	0	0
Golden City	4/15/2001	1.0	0	0	0	0
Lamar	5/6/2001	.75	0	0	0	0
Liberal	5/17/2001	.75	0	0	0	0
Mindenmines	6/3/2001	.88	0	0	0	0
Lamar	6/3/2001	.75	0	0	0	0
Lamar	6/27/2001	.75	0	0	0	0
Lamar	9/7/2001	.75	0	0	0	0
Lamar	4/20/2002	.75	0	0	0	0
Lamar	5/7/2002	1.0	0	0	0	0
Mindenmines	5/8/2002	1.0	0	0	0	0
Lamar	5/8/2002	1.0	0	0	0	$100,000
Lamar	5/12/2002	1.0	0	0	0	0
Lamar	7/22/2002	.75	0	0	0	0
Lamar	3/12/2003	.75	0	0	0	0
Nashville (unincorporated)	3/12/2003	.88	0	0	0	0
Lamar	4/6/2003	.88	0	0	0	0
Boston (unincorporated)	4/19/2003	1.75	0	0	0	0
Lamar	5/4/2003	.88	0	0	0	0

Golden City	5/4/2003	.75	0	0	0	0
Liberal	5/4/2003	.75	0	0	0	0
Lamar	5/6/2003	.88 – 1.75	0	0	0	0
Nashville (unincorporated)	5/9/2003	.75	0	0	0	0
Lamar	5/9/2003	1.0	0	0	0	0
Mindenmines	7/11/2003	.75	0	0	0	0
Golden City	7/12/2003	.75	0	0	0	0
Milford	7/12/2003	1.0	0	0	0	0
Golden City	7/28/2003	.88	0	0	0	0
Liberal	9/26/2003	.75	0	0	0	0
Lamar	9/26/2003	.75	0	0	0	0
Iantha (unincorporated)	11/4/2003	.75	0	0	0	0
Mindenmines	3/29/2004	.75	0	0	0	0
Lamar	5/27/2004	1.0	0	0	0	0
Irwin (unincorporated)	5/27/2004	1.0	0	0	0	0
Liberal	7/8/2004	.88	0	0	0	0
MIndenmines	4/21/2005	.75	0	0	0	0
Golden City	9/3/2005	.75	0	0	0	0
Lamar	9/3/2005	.75	0	0	0	0
Liberal	9/13/2005	1.75	0	0	0	0
Lamar	9/13/2005	2.0	0	0	0	0
Irwin (unincorporated)	9/13/2005	1.0-2.75	0	0	0	0
Golden City	9/28/2005	1.0	0	0	0	0
Lamar	11/12/2005	.75	0	0	0	0
Liberal	2/4/2006	.75	0	0	0	0
Lamar	3/8/2006	.75	0	0	0	0
Boston (unincorporated)	3/12/2006	1.0	0	0	0	0
Lamar	5/3/2006	1.75	0	0	0	0
Lamar	5/22/2006	.88	0	0	0	0

Boston (unincorporated)	3/1/2007	1.0	0	0	0	0
Lamar	3/1/2007	.88	0	0	0	0
Milford	3/1/2007	1.75	0	0	0	0
Irwin (unincorporated)	3/30/2007	.75	0	0	0	0
Milford	4/25/2007	.75	0	0	0	0
Liberal	5/6/2007	1.75	0	0	0	0
Hanon (unincorporated)	5/6/2007	1.0	0	0	0	0
Nashville (unincorporated)	6/7/2007	.88	0	0	0	0
Liberal	6/10/2007	1.75	0	0	0	0
Nashville (unincorporated)	6/10/2007	2.75	0	0	0	0
Liberal	10/17/2007	1.0	0	0	0	0
Irwin (unincorporated)	4/22/2008	.75	0	0	0	0
Lamar	4/22/2008	.75	0	0	0	0
Lamar	5/13/2008	.88	0	0	0	0
Oakton (unincorporated)	5/31/2008	1.0	0	0	0	0
Milford	5/13/2009	1.0	0	0	0	0
Nashville (unincorporated)	5/13/2009	1.0	0	0	0	0
Kenoma (unincorporated)	5/15/2009	.88	0	0	0	0
Golden City	6/9/2009	1.0	0	0	0	0
Lamar	6/10/2009	.88	0	0	0	0
Newport (unincorporated)	6/10/2009	1.0	0	0	0	0
Lamar	6/30/2009	1.0	0	0	0	0
Mindenmines	3/10/2010	1.0	0	0	0	0
Liberal	3/10/2010	1.0-1.75	0	0	$5,000	0
Hannon (unincorporated)	3/10/2010	.75	0	0	0	0
Kenoma (unincorporated)	4/7/2010	.75	0	0	0	0
Newport (unincorporated)	5/10/2010	1.75	0	0	$1,000	0
Newport (unincorporated)	5/25/2010	.88	0	0	0	0
Hannon (unincorporated)	6/2/2010	.88	0	0	0	0

Verdella (unincorporated)	6/2/2010	2.75 – 3.0	0	0	0	0
Irwin (unincorporated)	6/2/2010	.88	0	0	0	0
Liberal	6/2/2010	1.75 – 2.0	0	0	0	0
Mindenmines	6/2/2010	1.75	0	0	0	0
Mllford	7/12/2010	1.0	0	0	0	0
Mindenmines	3/19/2011	.75	0	0	0	0
Golden City	5/7/2011	1.0	0	0	0	0
Mindenmines	6/18/2011	1.0	0	0	0	0
Verdella (unincorporated)	6/24/2011	.75	0	0	0	0
Lamar	2/28/2012	1.75	0	0	0	0
Newport (unincorporated)	8/8/2012	.88	0	0	0	0
Mindenmines	4/15/2013	.75	0	0	0	0
Irwin (unincorporated)	4/27/2014	1.0	0	0	0	0
Lamar	5/12/2014	1.0	0	0	0	0
Mindenmines	5/21/2014	.75	0	0	0	0
Mindenmines	3/24/2015	.88	0	0	0	0
Oakton (unincorporated)	3/24/2015	1.5	0	0	0	0
Kenoma (unincorporated)	3/24/2015	1.0	0	0	0	0
Irwin (unincorporated)	3/25/2015	.88	0	0	0	0
Golden City	4/2/2015	1.5	0	0	0	0
Lamar	3/30/2016	.75	0	0	0	0
Iantha (unincorporated)	5/11/2016	.88	0	0	0	0
Liberal	5/11/2016	1.0	0	0	0	0
Total	**101 events**		**0**	**0**	**$6,000**	**$100,000**

High wind

There are 68 high wind events reported to the NCEI from 2001-2016 in Barton County. There were 28 events with reported property damages, the total damages from these events is $10,289,000. There are no reported injuries or deaths. **Table 3.35** provides information about high wind events in the county.

Table 3.35. NCEI reported High Wind Events in Barton County, 2001-2016

Location	Date	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
Lamar	4/11/2001	n/a	0	0	0	0
Oakton (unincorporated)	8/29/2001	59.8 mph	0	0	$5,000	0
Lamar	3/9/2002	74.8 mph	0	0	$10,000	0
Kenoma (unincorporated)	8/2/2002	57.5 mph	0	0	0	0
County Wide	5/13/2003	69 mph	0	0	0	0
Lamar	6/25/2003	69 mph	0	0	0	0
Golden City	7/28/2003	69 mph	0	0	0	0
Lamar	8/21/2003	74.8 mph	0	0	0	0
Lamar	9/26/2003	74.8 mph	0	0	$500	0
Lamar	11/23/2003	80.5 mph	0	0	$3,000	0
Nashville (unincorporated)	4/23/2003	69 mph	0	0	0	0
Mindenmines	5/27/2004	74.8 mph	0	0	0	0
Lamar	5/27/2004	74.8 mph	0	0	$20,000	0
Hannon (unincorporated)	7/5/2004	63.3 mph	0	0	0	0
Kenoma (unincorporated)	7/23/2005	74.8 mph	0	0	$30,000	0
Lamar	7/23/2005	57.5 mph	0	0	$10,000	0
Lamar	8/8/2005	57.5 mph	0	0	0	0
Irwin (unincorporated)	8/8/2005	63.3 mph	0	0	0	0
Golden City	8/26/2005	57.5 mph	0	0	0	0
Lamar	9/3/2005	57.5 mph	0	0	0	0
County Wide	11/27/2005	69 mph	0	0	0	0
County Wide	3/12/2006	57.5 mph	0	0	0	0
Liberal	4/2/2006	57.5 mph	0	0	0	0
Golden City	4/6/2006	57.5 mph	0	0	0	0
Mindenmines	4/23/2006	57.5 mph	0	0	0	0
Liberal	5/3/2006	57.5 mph	0	0	0	0
Liberal	8/9/2006	69 mph	0	0	0	0

Golden City	4/24/2007	57.5 mph	0	0	0	0
Nashville (unincorporated)	6/7/2007	69 mph	0	0	$25,000	0
County Wide	6/7/2007	57.5 mph	0	0	0	0
Lamar	8/24/2007	57.5 mph	0	0	0	0
Liberal	9/30/2007	57.5 mph	0	0	0	0
County Wide	10/17/2007	57.5 mph	0	0	0	0
Boston (unincorporated)	5/13/2008	57.5 mph	0	0	0	0
Golden City	6/1/2008	57.5 mph	0	0	$20,000	0
Kenoma (unincorporated)	6/3/2008	74.8 mph	0	0	0	0
Mindenmines	6/3/2008	57.5 mph	0	0	$10,000	0
Newport (unincorporated)	6/8/2008	57.5 mph	0	0	0	0
Liberal	6/28/2008	63.3 mph	0	0	$15,000	0
Lamar	11/5/2008	59.8 mph	0	0	$16,000	0
County Wide	12/13/2008	59.8 mph	0	0	$6,000,000	0
Lamar	2/9/2009	57.5 mph	0	0	0	0
County Wide	5/8/2009	80.5 mph	0	0	$4,000,000	0
Nashville (unincorporated)	5/13/2009	70.2 mph	0	0	0	0
Golden City	6/10/2009	59.8 mph	0	0	$30,000	0
Iantha (unincorporated)	6/23/2009	59.8 mph	0	0	0	0
Lamar	6/30/2009	59.8 mph	0	0	$2,000	0
Kenoma (unincorporated)	4/7/2010	59.8 mph	0	0	0	0
Iantha (unincorporated)	6/16/2010	64.4 mph	0	0	0	0
Liberal	6/27/2010	59.8 mph	0	0	$5,000	0
Irwin (unincorporated)	7/11/2010	59.8 mph	0	0	0	0
Oakton (unincorporated)	2/27/2011	59.8 mp[h	0	0	$5,000	0
Newport (unincorporated)	5/12/2011	59.8 mph	0	0	$5,000	0
Liberal	7/3/2011	59.8 mph	0	0	0	0
Irwin (unincorporated)	7/3/2011	59.8 mph	0	0	$1,000	0
Iantha (unincorporated)	7/24/2011	59.8 mph	0	0	$3,000	0

Oakton (unincorporated)	7/24/2011	59.8 mph	0	0	0	0
Lamar	7/25/2011	59.8 mph	0	0	0	0
Lamar	9/7/2012	64.4 mph	0	0	0	0
Oskaloosa (unincorporated)	1/29/2013	59.8 mph	0	0	$10,000	0
Lamar	5/20/2013	74.8 mph	0	0	$17,000	0
Oakton (unincorporated)	4/27/2014	59.8 mph	0	0	$1,000	0
Lamar	6/28/2014	59.8 mph	0	0	$5,000	0
Boston (unincorporated)	4/2/2015	59.8 mph	0	0	0	0
Iantha (unincorporated)	8/23/2015	59.8 mph	0	0	0	0
Lamar	8/23/2015	59.8 mph	0	0	$5,000	0
Liberal	4/26/2016	64.4 mph	0	0	$30,000	0
Lamar	4/26/2015	59.8 mph	0	0	$5,000	0
Total	**68 events**		**0**	**0**	**$10,289,000**	**0**

Lightning

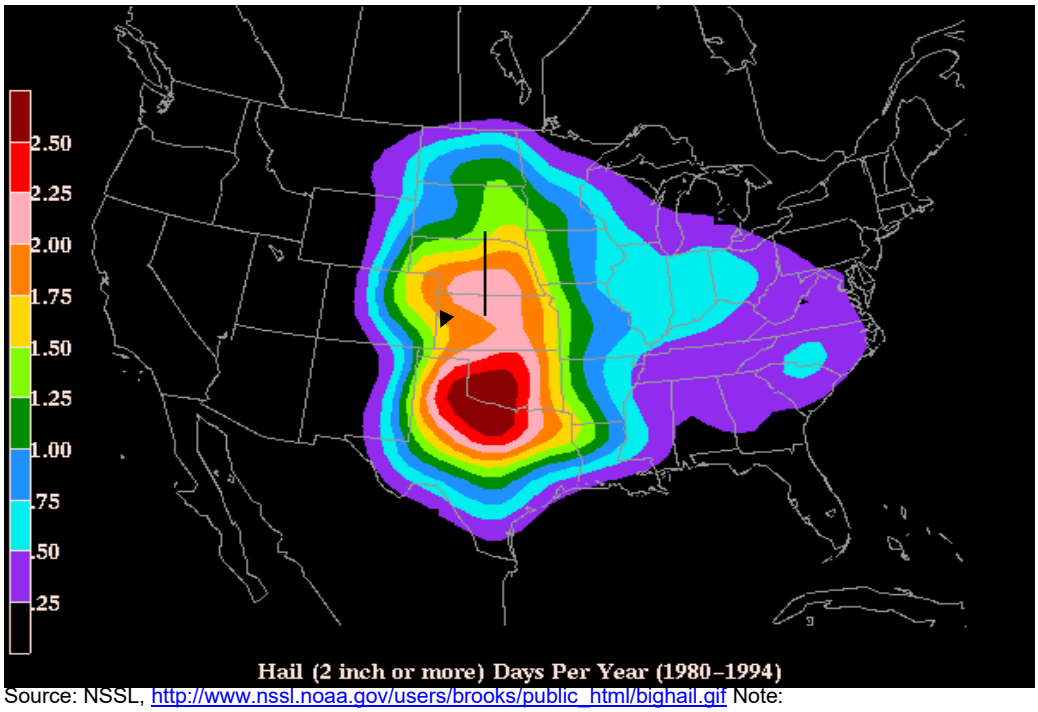
Limitations to the use of NCEI reported lightning events include the fact that only lightning events that result in fatality, injury and/or property and crop damages are reported in the NCEI. There are zero reported lightning events from 2001-2016 in Barton County.

Probability of Future Occurrence

Hail

There have been 101 recorded hail events during the 15-year period from 2001-2016. This equates to a 100 percent probability of 6-7 hail events occurring any given year. **Figure 3.16** 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. Barton County is located in the light green zone meaning the county is expected to experience hail greater than 2" in diameter 1.25 to 1.5 days per year.

Figure 3.16. Annual Hailstorm Probability (2" diameter or larger), U1980- 1994



Source: NSSL, http://www.nssl.noaa.gov/users/brooks/public_html/bighail.gif Note:

High Winds

There have been 68 high wind events during the 15-year period from 2001-2016. This equates to a 100 percent probability of 4.5 thunderstorm or high wind events occurring in any given year. However, only 28 of these events resulted in reported property damage. This equates to a 100 percent probability of 2 damaging wind events occurring in any given year.

Lightning

Due to insufficient data it is not possible to calculate probability for lightning in Barton County.

Vulnerability

Vulnerability Overview

Thunderstorms, high wind, hail, and lightning pose varying risk for jurisdictions in Barton County. Downbursts resulting from thunderstorms can be just as damaging as an EF-1 tornado. 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. Lightning can cause wildfires and structural fires, damage electrical utilities causing power outages, and sometime 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. High wind events in the County have damaged critical facilities, schools, local governments, and private property. Potential annual losses throughout the county are: thunderstorm winds & high winds=$685,934, hail=$7,067, and lightning=$0.

Previous and Future Development

Additional development trends in the exposure of more households and businesses vulnerable to damages from severe thunderstorm/high winds/lightning/hail. There are no planned areas of future development in Barton County.

Hazard Summary by Jurisdiction

Thunderstorms/high winds/lightning/hail events are area-wide. However, larger communities with more development and communities with a higher percentage of older homes (built before 1939) may be more at risk for significantly higher losses to existing development. In Barton County the largest community is the City of Lamar. The communities with the highest percent of older homes (built prior to 1939) include Golden City, Liberal, and Mindenmines. **Table 3.36** shows percentage of older homes and percentage of mobile homes by jurisdiction. The data in this table is also relevant for the tornado hazard which is discussed in the next section (3.4.7).

Table 3.36. Percent Older Homes and Percent Mobile Homes by Jurisdiction

Jurisdiction	Percent Older Home (built prior to 1939)	Percentage Mobile Homes
Golden City	41.3%	7.2%
Lamar	12%	4.2%
Lamar Heights	2%	25%
Liberal	35.8%	10.6%
Mindenmines	27.2%	21%

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.

3.4.7 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 Centers for Environmental Information, http://www.NCEI.noaa.gov/stormevents/
- Tornado History Project, map of tornado events, http://www.tornadohistoryproject.com/tornado/Missouri

Hazard Profile

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 **Section3.4.6**, 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

Tornadoes can occur anywhere throughout Barton County making this an area-wide hazard.

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 3.37**) 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 3.37. 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 3.38**. 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 or damage is located online at www.spc.noaa.gov/efscale/ef-scale.html.

Table 3.38. 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
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

There are limitations to the use of NCEI 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 NCEI. 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 3.39 shows NCEI reported tornado events and damages since 1993 in the planning area. Prior to that date, only really destructive tornadoes were recorded. It is necessary to go back as far as possible because of the random and intermittent nature of tornado events.

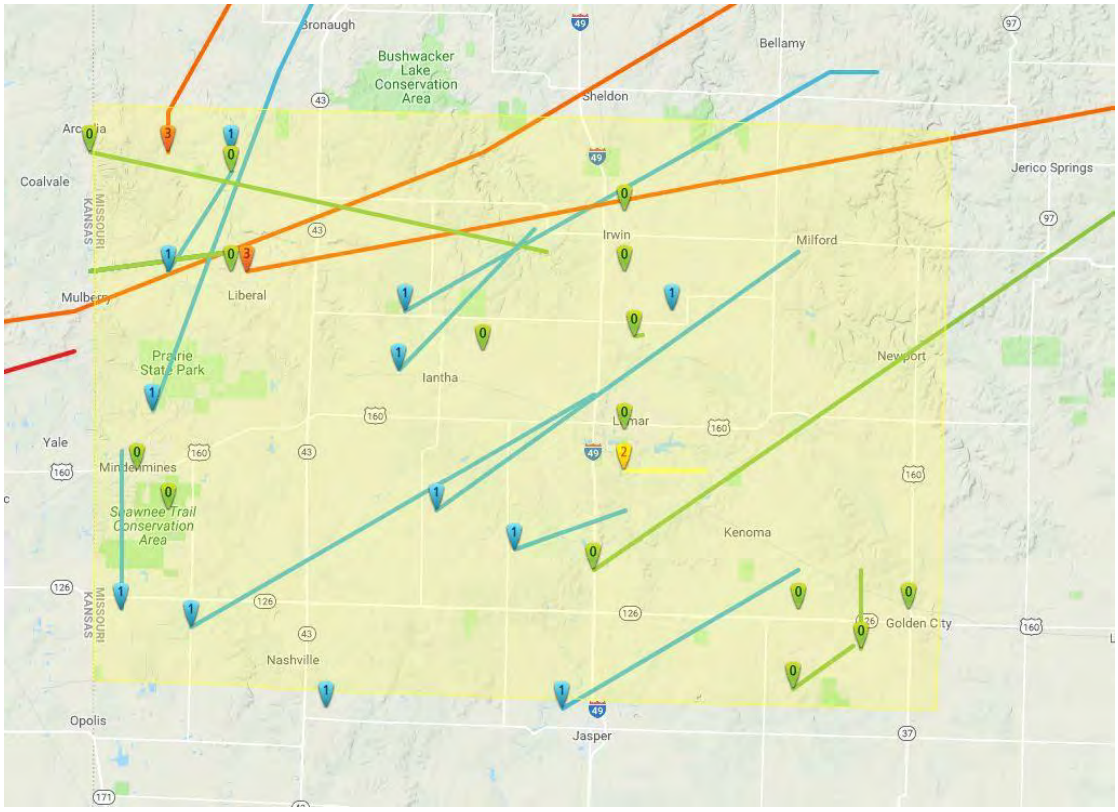
Figure 3.17 shows historic tornado paths in Barton County as recorded by the Missouri Tornado History Project. This shows the path of all tornadoes that were recorded in Barton County as far back as 1954, therefore the amount of tornadoes shown on this map are greater than the amount recorded in Table 3.39.

Table 3.39. NCEI Recorded Tornadoes in Barton County, 1993 – 2017

Date	Beginning Location	Ending Location	Length (miles)	Width (yards)	F/EF Rating	Death	Injury	Property	Crop Damages
5/26/1995	5S Mindenmines		5	100	1	0	0	$20,000	0
7/25/1995	3W Golden City		.1	100	0	0	0	0	0
5/26/1996	2W Liberal	3N Liberal	3	100	1	0	0	$5,000	0
5/26/1996	4E Oskaloosa		.2	50	1	0	0	$5,000	0
12/18/2002	9S Lamar Mun. Airport	2SE Kenoma	9.5	100	1	1	7	$138,000	0
5/4/2003	5W Liberal	1N Liberal	6	880	4	1	10	$13,000,000	$1,000,000
5/4/2003	1E Liberal	5NE Milford	23	880	3	0	0	$5,000,000	$1,000,000
9/13/2005	4N Liberal	4N Liberal	.2	20	0	0	0	0	0
9/28/2005	Golden City	Golden City	.4	25	0	0	0	0	0
3/12/2006	Boston	6N Golden City	12	50	0	0	0	0	0
5/3/2006	1W Oskaloosa	2W Irwin	16	50	0	0	0	0	0
4/24/2007	2SW Golden City	2NW Golden City	2.83	25	0	0	0	$5,000	0
6/10/2007	1S Lamar	1S Lamar	.5	200	0	0	0	0	0
5/13/2008	1SE Mindenmines	1SE Mindenmines	.03	20	0	0	0	0	0
7/12/2010	3N Lamar	3NNE Lamar	.27	25	0	0	0	0	0
2/28/20012	3WNW Nashville	1WNW Lamar	16	200	1	0	0	$250,000	0
5/20/2013	Iantha	2WNW Irwin	6.81	100	1	0	0	$50,000	0
Totals	**16 events**					**2**	**17**	**$18,478,000**	**$2,000,000**

Source: National Centers for Environmental Information, http://www.NCEI.noaa.gov/stormevents/

Figure 3.17. Barton County Map of Historic Tornado Events



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

Probability of Future Occurrence

According to the NCEI storm event records there have been 16 tornado events over a 23 year period from 1993 to 2016. Based on the past occurrence of tornadoes in Barton County, there is a 70 percent probability that the county will experience a tornado in any given year.

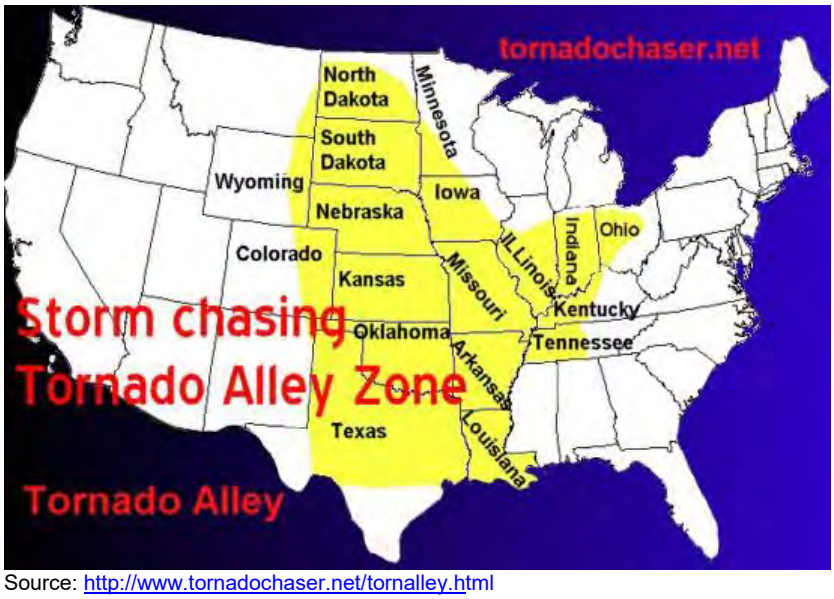
The potential severity of effects from tornadoes will continue to be high. Barton County will continue to experience deaths, injuries, and property damages from tornadoes. However, technological advances will facilitate earlier warnings than previously available. This, combined with a vigorous public 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

Barton County (and all of Missouri) lies in a region of the U.S. with high frequency of dangerous and destructive tornadoes referred to as “Tornado Alley”. The term appeared in 1952 as the title of a research project focusing on severe weather in parts of Texas, Oklahoma, Kansas, South Dakota, Iowa, Missouri, New Mexico, Colorado, North Dakota, and Minnesota - it is largely a media driven term, although tornado climatologists distinguish peaks in activity in various areas and storm chasers have long recognized the Great Plains “tornado belt”.

Figure 3.18. 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 Barton County was rated at moderate risk.

Potential Losses to Existing Development

Bearing in mind the sparse population density in Barton County and a historical record involving EF-4 and weaker tornadoes, the potential for losses to existing development in Barton County does exist but is far greater in communities (where building density is higher) than in the unincorporated areas of the County, especially in the context of critical facilities such as schools, daycares, healthcare facilities, nursing homes, etc.

Previous and Future Development

There is no planned or anticipated future development in Barton County. Therefore exposure vulnerable to buildings and population is not expected to increase.

Hazard Summary by Jurisdiction

A tornado event could occur anywhere in the Barton County, however some jurisdictions would suffer heavier damages because of the high concentration of structures. These areas are also where critical facilities such as schools, etc. are located. Furthermore, communities with a higher percentage of older homes (built prior to 1939) and mobile homes have an increased risk of suffering heavier damages during a tornado. **Table 3.36** (in the previous section 3.4.6) shows the percentage of older homes and mobile homes by jurisdiction.

Problem Statement

Tornados can and have occurred in Barton County, and they are more or less completely random. The risk of tornado is the same for all parts of the county, but the vulnerability of damage is greater in those areas where people and structures are concentrated in higher numbers.

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 buildings that do not have a saferoom; such as in public buildings, nursing homes, and other facilities that house vulnerable populations. 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.

3.4.8 Wildfires

The specific sources for this hazard are:

- Missouri Department of Conversation 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

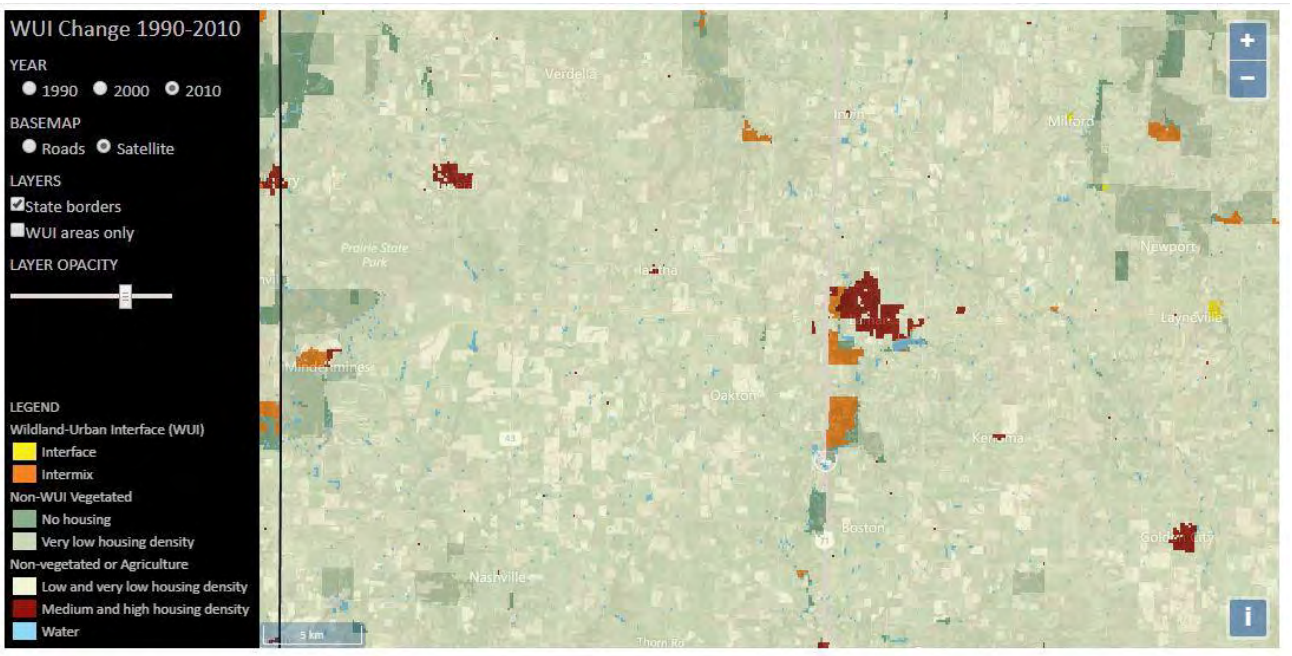
works closely with volunteer fire departments and federal partners to assist with fire suppression activities. Currently, more than 900 rural fire departments in Missouri have mutual aid agreements with the Forestry Division to obtain assistance in wildfire protection if needed.

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. 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 3.20** shows WUI areas in Barton County. There are only a few small WUI areas in Barton County near the cities of Lamar and Mindenmines, as well as some unincorporated areas.

Figure 3.19. Wildland-Urban Interface/Intermix Areas, Barton County



Source: University of Wisconsin Slivis Lab, http://silvis.forest.wisc.edu/maps/wui_main

Severity/Magnitude/Extent

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. See ***http://www.firewisemissouri.org/wildfire-in-missouri.html***

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.

Previous Occurrences

The 2013 State Hazard Mitigation plan utilized data from the Missouri Department of Conservation to analyze past wildfire events. In an 8-year period from 2004 to 2012, Barton County experienced 73 wildfires that destroyed a total of 1,479 acres, an average of 8.1 events occurred annually with an average of 2 acres destroyed annually. **Table 3.39** shows recorded wildfire events in Barton County.

Table 3.40. Wildfires in Barton County, 2004-2012.

# of Wildfires	Average Annual # of Wildfires	Likelihood Rating (1-5)	Acres Burned	Average Annual Acres Burned	Average Acres Burned Rating	Total Buildings Damaged	Overall Vulnerability
73	8.1	1	1,479	164	2	2	2

Source: 2013 Missouri State Hazard Mitigation Plan

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

Probability of Future Occurrence

There have been 73 wildfires in Barton County over an 8-year period, with an annual average of 8.1 wildfires. This equates to a 100 percent probability of a wildfire occurring 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

During the 8-year period from 2004 to 2012, there have been only 2 buildings damaged by wildfires and an annual average of 164 acres burned. There is some potential for losses to agriculture, but the cost of such losses is dependent on whether the area is predominately pasture or cropland. There is also some potential for losses to development because the WUI areas near Lamar and Mindenmines are adjacent to a medium to high density housing area. Overall, Barton County has a fairly low vulnerability rating for wildfires. The 2013 State Hazard Mitigation Plan shows a vulnerability rating of 2 for Barton County (on a scale of 1-5).

Impact of Previous and Future Development

There are currently no plans for future development in Barton County.

Hazard Summary by Jurisdiction

The communities most at risk for experiencing wildfires have larger WUI areas within or adjacent to their communities. These communities include Lamar, Mindenmines, and parts of the unincorporated county. The other communities are considered at low risk of experiencing wildfires.

Problem Statement

Barton County does occasionally experience wildland fire events. These events can destroy, damage, and threaten structures in hazard prone areas. Populations and structures in and near WUI areas of the county have an increased risk to wildfires due to the level of fuel mixed with structures. Fire safety education and enforcing burn bans during drought conditions may help to decrease the risk of 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.

3.4.9 Winter Weather/Snow/Ice/Severe Cold

Some specific sources for this hazard are:

- Wind chill chart, National Weather Service, http://www.nws.noaa.gov/om/winter/windchill.shtml;
- Average Number of House per year with Freezing Rain, American Meteorological Society. "Freezing Rain Events in the United States." http://ams.confex.com/ams/pdfpapers/71872.pdf;
- USDA Risk Management Agency, Insurance Claims, http://www.rma.usda.gov/data/cause.htm
- Any local Road Department data on the cost of winter storm response efforts.
- National Centers for Environmental Information, Storm Events Database, http://www.NCEI.noaa.gov/stormevents/

Hazard Profile

Hazard Description

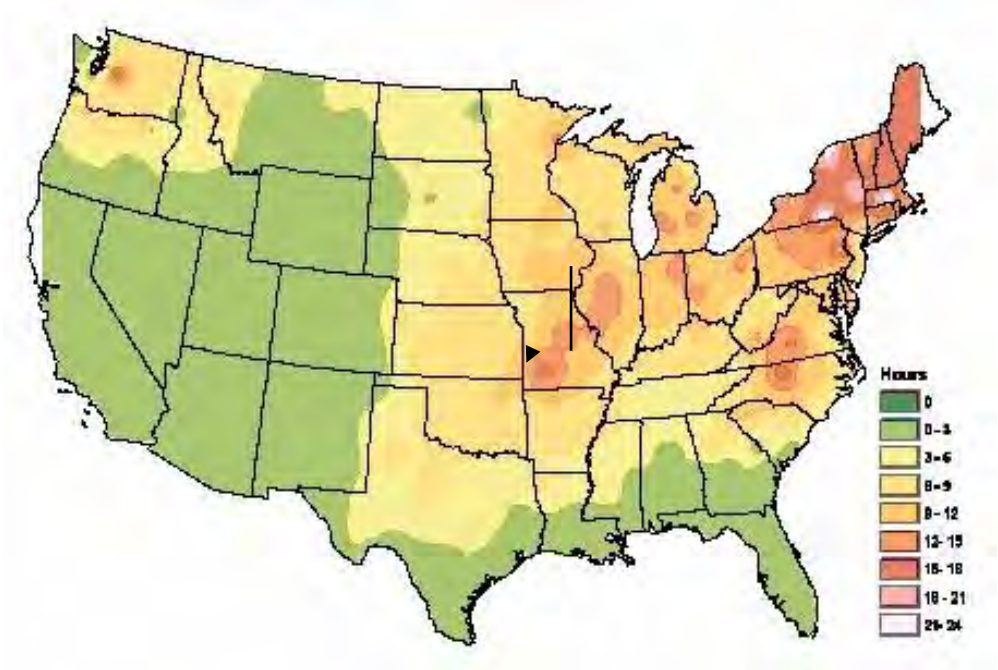
A major winter storm can last for several days and be accompanied by high winds, freezing rain or sleet, heavy snowfall, and cold temperatures. The National Weather Service describes different types of winter storm events as follows.

- **Blizzard**—Winds of 35 miles per hour or more with snow and blowing snow reducing visibility to less than ¼ 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 3.20** shows freezing rain zones in the United States, these zones are defined by the number of hours per year with freezing rain. Barton County appears to be bisected by 2 zones, therefore is expected to experience anywhere from 9 to 15 hours of freezing rain annually.

Figure 3.20. 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.

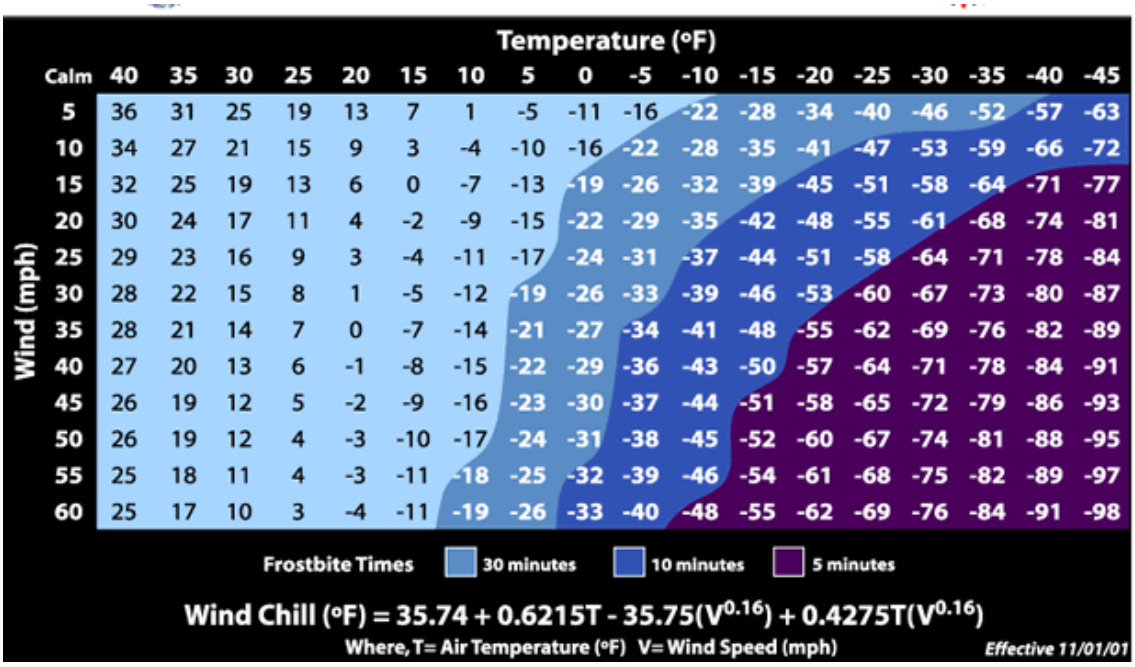
Buildings with overhanging tree limbs are more vulnerable to damage during winter storms when limbs fall. Businesses experience loss of income as a result of closure during power outages. In general heavy winter storms increase wear and tear on roadways though the cost of such damages is difficult to 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 3.21** below shows the relationship of wind speed to apparent temperature and typical time periods for the onset of frostbite.

Figure 3.21. Wind Chill Chart



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

Previous Occurrences

There are 31 recorded events in the NCEI database for Blizzard, Extreme Cold/Wind Chill,

Frost/Freeze, Heavy Snow, Ice Storm, Sleet, and Winter Storm in Barton County from 1997 - 2017. **Table 3.41** shows all NCEI reported winter storm events in Barton County over a 20 year period from 1997 to 2017.

Table 3.41. NCEI County A Winter Weather Events Summary, 1997-2017

Type of Event	Inclusive Dates	Magnitude	# of Injuries	Property Damages	Crop Damages
Heavy Snow	1/8/1997-1/9/1997	6 inches + snow	0	$5,000	0
Winter Storm	12/20/1998-12/21/1998	Light rain, freezing drizzle, light snow.	0	0	0
Winter Storm	1/1/1999-1/2/1999	3-6 inches snow, sleet, & ice.	0	$150,000	0
Winter Storm	3/13/1999-3/14/1999	Heavy snow, 3-16 inches	0	0	0
Extreme Cold/Windchill	12/12/2000-1/3/2001	Temperatures 10-20 degrees below normal			
Heavy Snow	12/12/2000-12/13/2000	Up to 14 inches snow	0	$75,000	0
Ice Storm	1/28/2001	Freezing rain & ice accumulation up to 1/4 inch	0	0	0
Ice Storm	2/21/2001	Sleet, freezing rain, & ice accumulation ¼ inch – 2 inches	0	0	0
Winter Storm	3/2/2002	Freezing rain sleet, & ice accumulation 1/10 to ¼ inch. Heavy snow4-9 inches.	0	0	0
Winter Storm	12/4/2002-12/5/2002	3-5 inches snow	0	0	0
Winter Storm	12/24/2002	5-8 inches snow	0	0	0
Winter Storm	1/2/2003	Up to 7 inches snow	0	0	0
Winter Storm	2/23/2003	6-12 inches snow	0	0	0
Winter Storm	3/4/2003	Freezing rain, ice accumulation ¼-2 inches	0	0	0
Heavy Snow	12/10/2003	5-8 inches snow	0	0	0
Winter Storm	2/4/2004-2/5/2004	1-8 inches mix of freezing rain, sleet, & snow.	0	0	0
Winter Storm	11/30/2006-12/1/2006	Freezing rain, sleet, & ice accumulation up to 4 inches. Followed by snow. Total accumulation 7-12 inches.	0	$760,000	0
Ice Storm	1/12/2007-1/14/2007	4 inches sleet	0	$4,500,000	0
Winter Storm	1/20/2007	Freezing rain, sleet, snow.	0	0	0
Frost Freeze	4/7/2007-4/9/2007	Temperatures in upper teens to mid-20s causing hard freeze on matured crops	0	0	$3,380,000
Ice Storm	12/9/2007-12/10/2007	Up to 1 ½ inches ice accumulation.	0	$2,500,000	0
Ice Storm	2/21/2008	Sleet, freezing rain. Ice accumulation of ½ to ¾ inch	0	0	0
Winter Storm	1/26/2009-1/27/2009	Freezing rain, sleet, snow. Ice Accumulation ¼ inch. Sleet snow accumulation 1-3inches.	0	0	0
Winter Storm	12/24/2009-12/25/2009	Freezing rain, sleet, & ice accumulation of ¼ inch. Snow accumulation of 4-7 inches	0	0	0
Winter Storm	3/20/2010-3/21/2010	6-10 inches snow	0	0	0
Blizzard	2/1/2011	15-20 inches snow	0	0	0
Winter Storm	2/21/2013	Sleet & freezing rain 1-2 inches	0	0	0
Winter Storm	12/20/2013-12/22/2013	Freezing rain, ice accumulation of ½ to ¾ inch	0	0	0
Winter Storm	1/5/2014	5-9 inches snow	0	0	0

Winter Storm	3/2/2014-3/3/2014	¼-1/2 inch sleet, 1-2 inches snow	0	0	0
Ice storm	1/13/2017	Up to ½ inch ice accumulation	0	0	0
Totals	**31 events**			$7,990,000	$3,380,000

Source: NCEI, data accessed [insert date]

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. Barton County has experience 31 winter storm events over the past 20-year period from 1997-2017. This equates to a 100 percent probability of 1 to 2 winter storm events occurring in any given year.

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. Barton County received a vulnerability rating of medium.

Potential Losses to Existing Development

NCEI reflects property damage totaling $7,990,000 and crop damage totaling $3,380,000 over a 20 year period. Under-reporting and other data limitations may have caused this figure to be low, but the fact remains that most damages associated with severe winter weather involve automobile accidents and injuries incurred as people try to travel through the winter environment or compensate for the low temperatures, rather than directly being a result of the winter weather.

Previous and Future Development

There is no anticipated future development in Barton County. Therefore, estimating the impacts of future winter storm events on future development is not feasible.

Hazard Summary by Jurisdiction

Severe winter weather affects all jurisdictions equally. 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 3.42** includes information on populations over 65 and the percent living below the poverty level by jurisdiction.

Table 3.42. Barton County Percent vulnerable Populations by Jurisdiction

Jurisdiction	% of families living below poverty	Population over 65
Golden City	11%	21.7%
Lamar	22.3%	19.2%
Lamar Heights	21.7%	17.4%
Liberal	9.5%	18.1%
Mindenmines	24.7%	17%

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.

4 MITIGATION STRATEGY

4 MITIGATION STRATEGY 4.1
4.1 Goals & Objectives *4.1*
4.2 Identification and Analysis of Mitigation Actions *4.3*
4.3 Implementation of Mitigation Actions *4.6*

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 updated risk assessment. The mitigation strategy was developed through a collaborative group process. The process included review of 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 & Objectives

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 Barton Counties existing hazard mitigation plan approved by FEMA on December 2013. Therefore, the goals from the 2013 Barton 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 second 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.

Discussion of the previously approved goals involved determining the application of the goals and objectives to today and validity of the language used. It was determined that the goals and objectives still applied today. However, upon reviewing the Mitigation Actions in greater detail, a significant amount of redundancy was noted in that the exact same actions were appearing under multiple goals and objectives. Therefore, to reduce said redundancy the following edits to the 2013 goals and objectives were review with the MPC during the fourth meeting:

Objective 1.1: Promote the participation in FEMA's NFIP/CRS rating system through enhanced floodplain management.

- This objective will be deleted because all actions under Objective 1.1 also appear under:
    - **Objective 2.1:** Increase control over development in the floodplain to ensure lives and properties are not at risk to future flood conditions.

Goal 5: Improve Public Awareness through the coordination of all educational programs that promote the education of probable natural disasters and their probable severity in Barton County and those specific to each community.

- This goal has only one object:
    - **Objective 5.1:** Educate property owners, financial institutions, and County residents on the affordable, individual mitigation and preparedness measures that can be taken before the next hazard event.
- This goal and object are very similar to:
    - **Goal 4:** Protect public health, safety, and welfare by increasing the public awareness of existing hazards and by fostering both individual and public responsibility in mitigating risks due to those hazards.
    - **Objective 4.1:** Increase the level of knowledge and awareness on the hazards that threaten the area by educating property owners, financial institutions, and County residents on the affordable, individual mitigation and preparedness measures that can be taken before the next hazard event.
    - The language of Goals 4 and 5 and Objectives 4.1 and 5.1 will merged to create a revised Goal 4 and Objective 4.1. Goal 5 and Objective 5.1 will be deleted.

2018 Updated Goals and Objectives

Goal 1: Increase internal capabilities to mitigate the effects of natural hazards.

Objective 1.1: Enhance capability to conduct hazard risk assessments, demonstrate funding needs, and track mitigation activities throughout the county.

Objective 1.2: Ensure that current emergency services are adequate to protect public health and safety.

Goal 2: Enhance existing or design new policies that will reduce the potential damaging effects of hazards without hindering other community goals through punitive constraints.

Objective 2.1: Increase control over development in the floodplain to ensure lives and properties are not at risk to future flood conditions.

Objective 2.2: Preserve the natural and beneficial functions of the county's floodplains and wetlands through continued support of natural resource protection policies and by discouraging growth in environmentally sensitive areas.

Objective 2.3: Ensure that new construction is completed using severe weather/ high wind resistant design techniques and materials in accordance with the minimum requirements of the International Building Codes that will limit damage caused by high winds and reduce the amount of wind borne debris.

Objective 2.4: Increase the amount and range of community severe weather/ tornado community shelters and private and/or public safe rooms throughout the County.

Goal 3: Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.

Objective 3.1: Maximize the use of available hazard mitigation grant programs to protect the most vulnerable populations and structures.

Objective 3.2: Decrease the number of properties located within the FEMA designated 100-year floodplain by 25% by the year 2020.

Objective 3.3: Ensure that all vital/ critical facilities are protected from the effects of natural hazards to the maximum extent possible.

Goal 4: Protect public health, safety, and welfare by increasing the public awareness of natural disasters and their probable severity through the coordination of all educational programs to foster both individual and public responsibility in mitigating risks due to those hazards.

Objective 4.1: Increase the level of knowledge and awareness on the hazards that threaten the area by educating property owners, financial institutions, and County residents on the affordable, individual mitigation and preparedness measures that can be taken before the next hazard event.

Objective 4.2: Increase the number of residents that maintain an active NFIP flood insurance policy by 10% by the year 2020.

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.

Some specific sources for mitigation action ideas include the following:

- FEMA's Mitigation Action Ideas Publication, https://www.fema.gov/media-library/assets/documents/30627
- FEMA's Climate Resilient Activities for Hazard Mitigation Assistance, https://www.fema.gov/media-library/assets/documents/110202
- EPA's Hazard Mitigation for Natural Disasters Publication, https://www.epa.gov/waterutilityresponse/hazard-mitigation-natural-disasters
- EPAs Planning for an Emergency Drinking Water Supply Publication, https://www.epa.gov/waterutilityresponse/water-utility-planning-emergency-drinking-water-supply

During the third MPC meeting, the results of the risk assessment update were provided to the MPC members for review and the key issues were identified for specific hazards. Changes in risk since adoption of the previously approved plan were discussed. After the third meeting, one-on-one jurisdictional meetings were conducted and key issues specific to each jurisdictional risk for specific hazards were discussed. Each jurisdiction was presented with a list of possible mitigation actions to prompt discussions within and among the jurisdictions. The list included possible new mitigation actions, as well as actions from the previously approved plan. Actions from the previous plan included completed actions, on-going actions, and actions upon which progress

had not been made. The MPC discussed SEMA's identified funding priorities and the types of mitigation actions generally recognized by FEMA.

The MPC determined to include problem statements in the plan update at the end of each hazard profile, which had not been done in the previously approved plan. The problem statements summarize the risk to the planning area presented by each hazard and include possible methods to reduce that risk. Use of the problem statements allowed the MPC to recognize new and innovative strategies for mitigate risks in the planning area.

The focus of Meeting #3 and the subsequent one-on-one jurisdictional meetings was the update of the mitigation strategy. For a comprehensive range of mitigation actions to consider, the MPC reviewed the following information:

- A list of actions proposed in the previous mitigation plan, the current State Plan, and approved plans in surrounding counties,
- Key issues from the risk assessments, including the Problem Statements concluding each hazard profile and vulnerability analysis,
- State priorities established for Hazard Mitigation Assistance grants, and
- Public input during meetings, responses to Data Collection Questionnaires, and other efforts to involve the public in the plan development process.

Individual jurisdictions, including school and special districts, developed final mitigation strategy for submission to the MPC. They were encouraged to review the details of the risk assessment vulnerability analysis specific to their jurisdiction. They were also provided a link to the FEMA's publication, *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards (January 2013).* This document was developed by FEMA as a resource for identification of a range of potential mitigation actions for reducing risk to natural hazards and disasters.

The MPC reviewed the actions from the previously approved plan for progress made since the plan had been adopted, using worksheets included in Appendix D of this plan. Prior to Meeting #3, the list of actions for each jurisdiction was emailed to that jurisdiction's MPC representative along with the worksheets. 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.

Individual jurisdictional meetings were also conducted to clarify completed, deleted, and continuing actions. Based on the status updates, there were 2 completed actions, 41 deleted actions, and 50 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
Barton County	**0**	**11**	**15**
Golden City	**1**	**7**	**7**

Lamar	**1**	**6**	**11**
Lamar Heights	**1**	**6**	**11**
Liberal	**0**	**7**	**8**
Mindenmines	**0**	**9**	**7**
Lamar R-1	**0**	**1**	**2**
Liberal R-2	**0**	**1**	**2**
Golden City R-3	**0**	**1**	**2**
Totals	**3**	**49**	**65**

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)**
Golden City Stormwater drainage study/plan	City has done a complete stormwater study and is currently in the process of replacing drainage pipes to open up stormwater flow
Lamar Reserve funding	City has reserve funds
Deleted Actions	**Reason for Deletion**
Barton Co Flood Plain Ordinance	Action was listed twice under two different goals/objective, these goals/objectives/action were merged into one to reduce
Barton Co Community Rating System	Action was listed twice under two different goals/objective, these goals/objectives/action were merged into one to reduce
Barton Co "No rise clause for Floodplain	County does not have building codes or zoning
Barton Co Stream Buffer ordinance	County does not have ability to enforce stream buffer ordinance on private property.
Barton Co Stream cleanup programs	County does not have resources for this.
Barton Co Slope stabilization to prevent erosion	County does not have resources for this.
Barton Co Building codes	County does not have building codes
Barton Co require saferooms for mobile home parks	Little new buildings in county and county can't require private land owners to install saferooms
Barton Co Acquire land parcels within 100 year floodplain	County does not have resources for this.
Barton Co Seasonal education on preparedness/mitigation measures	Action was listed twice under two different goals/objective, these goals/objectives/action were merged into one to reduce
Golden City Floodplain Ordinance	City reported that county regulates floodplain
Golden City Building codes	City does not have resources to enforce building codes
Golden City require saferooms for mobile home parks	no new building in city and city can't require private land owners to install saferooms
Golden City Acquire land parcels within 100 year floodplain	Little floodplain in city and city does not have resources for this
Golden City Contact prop. Owners in 100 yr floodplain and provide info on Federal Flood Mitigation Programs	County does this

Golden City Alleviate flood hazard conditions	Minimal floodplain
Golden City All hazards education	County does this
Lamar Stream buffer ordinance	Not feasible due to private property along streams
Lamar require saferooms for mobile home parks	No new mobile home parks and city can't require private land owners to install saferooms
Lamar Acquire land parcels within 100 year floodplain	Preservation is done by not allowing construction in 100 year floodplain
Lamar Contact prop. Owners in 100 yr floodplain and provide info on Federal Flood Mitigation Programs	County does this
Lamar All hazards education	County does this
Lamar Advertise flood insurance by mail annually	Not feasible
Liberal Community Rating System	Minimal floodplain
Liberal GIS	County does this
Liberal Building codes	City does not have resources to establish and enforce building codes
Liberal require saferooms for mobile home parks	no new building in city and city can't require private land owners to install saferooms
Liberal Alleviate flood hazard conditions	Minimal floodplain
Liberal Contact prop. Owners in 100 yr floodplain and provide info on Federal Flood Mitigation Programs	Minimal floodplain
Liberal All hazards education	County does this
Minden Floodplain ordinance	No floodplain
Minden Community Rating System	No floodplain
Minden GIS	County does this
Minden Building codes	City does not have resources to establish and enforce building codes
Minden require saferooms for mobile home parks	no mobile home parks city and city can't require private land owners to install saferooms
Minden Alleviate flood hazard conditions	MIndenmines does not experience flooding
Minden Acquire land parcels within 100 year floodplain	No floodplain
Minden Contact prop. Owners in 100 yr floodplain	No floodplain
Minden All hazards education	County does this
Schools Inventory	Not applicable for schools

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 D. 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 #): _____

2018 Updated Mitigation Action Plans

The remainder of this section analyzes each continuing and new action by jurisdiction. An action worksheet was used to develop an implementation plan for each action. The following action plans are specific for each individual jurisdiction, with the following exceptions:

- Due to the close proximity of Lamar and Lamar Heights, one action plan was development for both jurisdictions.
- The action plans for the three participating jurisdictions were combined as one action plan.

Barton County 2018 Mitigation Action Plan

Action Worksheet	
Name of Jurisdiction:	Barton County
Risk / Vulnerability	
Problem being Mitigated:	No county wide Hazard Mitigation Committee.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	BC 1.1.1
Name of Action or Project:	Countywide hazard Mitigation committee.
Action or Project Description:	Barton County has an active Local Emergency Planning Committee (LEPC) that will act as the Countywide Hazard Mitigation Committee to coordinate and prioritize goals, objectives, and actions identified in this plan and its subsequent updates. All jurisdictions should designate a representative to participate on the LEPC.
Applicable Goal Statement	Goal 1: Increase internal capabilities to mitigate the effects of natural hazards.
Applicable Objective Statement:	Objective 1.1 Enhance capability to conduct hazard risk assessments, demonstrate funding needs, and track mitigation activities throughout the county.
Estimated Cost:	$0
Benefits:	Existing representation of emergency personnel & jurisdictions.
Plan for Implementation	
Responsible Organization/Department:	County Emergency Management Director
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	Existing Emergency Management Budget
Local Planning Mechanisms to be Used in Implementation, if any:	Local Emergency Operations Plan
Progress Report	
Action Status	Continue
Report of Progress	Meet quarterly to monitor and review issues and events within our county.

Action Worksheet

Name of Jurisdiction:	Barton County
Risk / Vulnerability	
Problem being Mitigated:	County wide GIS data.
Hazard(s) Addressed:	All hazards
Action or Project	
Action/Project Number:	BC 1.1.2
Name of Action or Project:	Barton County GIS
Action or Project Description:	Incorporate a Geographic Information System (GIS) to maintain current building and parcel data for purposes of conducting more detailed hazard risk assessments, for tracking permitting and land use patterns in hazard prone areas.
Applicable Goal Statement:	Goal 1: Increase internal capabilities to mitigate the effects of natural hazards.
Applicable Objective Statement:	Objective 1.1 Enhance capability to conduct hazard risk assessments, demonstrate funding needs, and track mitigation activities throughout the county.
Estimated Cost:	$20,000 annually
Benefits:	Identify vital infrastructure, property, floodplains, etc.
Plan for Implementation	
Responsible Organization/Department:	County Assessor
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	County revenue
Local Planning Mechanisms to be Used in Implementation, if any:	Day to day emergency operations. LEPC
Progress Report	
Action Status	Continue
Report of Progress	The Barton County Assessor's office is working on the new GIS mapping for cities and county. Pushing to complete the GIS and maintain it going forward.

Action Worksheet	
Name of Jurisdiction:	Barton County
Risk / Vulnerability	
Problem being Mitigated:	The county has expressed concern that the Ed Onstott Dam should not be classified as a low hazard because if it were to fail it could flood I-49 and several nearby homes.
Hazard(s) Addressed:	Dam Failure
Action or Project	
Action/Project Number:	BC 1.1.3
Name of Action or Project:	Ed Onstott Lake Dam
Action or Project Description:	County will work with property owner, Missouri Department of Natural Resources, and U.S. Army Corp of Engineers to investigate the feasibility of conducting an assessment of this dam to reclassify and develop an inundation map.
Applicable Goal Statement:	Goal 1 Increase internal capabilities to mitigate the effects of natural hazards.
Applicable Objective Statement:	Objective 1.1 Enhance capability to conduct hazard risk assessments, demonstrate funding needs, and track mitigation activities throughout the county.
Estimated Cost:	unknown
Benefits:	Bring awareness of the potential hazard to residents living near the dam.
Plan for Implementation	
Responsible Organization/Department:	County Emergency Management Director
Action/Project Priority:	Medium
Timeline for Completion:	5 years
Potential Fund Sources:	Grants, general revenue
Local Planning Mechanisms to be Used in Implementation, if any:	LEPC
Progress Report	
Action Status	New
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Barton County
Risk / Vulnerability	
Problem being Mitigated:	Availability of equipment during disaster.
Hazard(s) Addressed:	All hazards
Action or Project	
Action/Project Number:	BC 1.2.1
Name of Action or Project:	Inventory emergency services and equipment.
Action or Project Description:	Conduct an inventory survey for the county's emergency response services to identify any existing needs or shortfalls in terms of personnel, equipment or required resources.
Applicable Goal Statement:	Goal 1: Increase internal capabilities to mitigate the effects of natural hazards.
Applicable Objective Statement:	Objective 1.2: Ensure that current emergency services are adequate to protect public health and safety.
Estimated Cost:	$2,000
Benefits:	24/7 resource listing is beneficial because having the right resources and knowing what resources are available can help mitigate property damage, injury, and death during a disaster.
Plan for Implementation	
Responsible Organization/Department:	County Emergency Management Director
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	County budget & Grants
Local Planning Mechanisms to be Used in Implementation, if any:	LEPC
Progress Report	
Action Status	Continue
Report of Progress	Inventory is keep and maintained quarterly from the OEM in Barton County for the State. And an up to date inventory listing is maintained in the Barton Co Commissioners office.

Action Worksheet	
Name of Jurisdiction:	Barton County
Risk / Vulnerability	
Problem being Mitigated:	People building in floodplain
Hazard(s) Addressed:	Flood
Action or Project	
Action/Project Number:	BC 2.1.1
Name of Action or Project:	Floodplain Ordinance
Action or Project Description:	Maintain Floodplain Ordinances to be in compliance with SEMA and FEMA standards.
Applicable Goal Statement:	Goal 2: Enhance existing or design new policies that will reduce the potential damaging effects of hazards without hindering other community goals through punitive constraints.
Applicable Objective Statement:	Objective 2.1: Increase control over development in the floodplain to ensure lives and properties are not at risk to future flood conditions.
Estimated Cost:	0
Benefits:	People need to know if they're property is in the floodplain so they can take the proper measures to mitigate damage during a flood.
Plan for Implementation	
Responsible Organization/Department:	County Emergency Management Director
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	GIS Budget
Local Planning Mechanisms to be Used in Implementation, if any:	LEPC
Progress Report	
Action Status	Continue
Report of Progress	After Floodplain came out we have traveled the county and reviewed the areas of the Floodplain looking if anyone lives in these areas. Talked to people in the floodplain to advise them what they need to do if they want to fix this problem.

Action Worksheet	
Name of Jurisdiction:	Barton County
Risk / Vulnerability	
Problem being Mitigated:	Flood prone property
Hazard(s) Addressed:	Flood
Action or Project	
Action/Project Number:	BC 2.1.2
Name of Action or Project:	Community Rating System/Flood prone property
Action or Project Description:	Regularly calculate and document the amount of flood prone property that is preserved as open space for potential credit points under the Community Rating System (CRS).
Applicable Goal Statement:	Goal 2: Enhance existing or design new policies that will reduce the potential damaging effects of hazards without hindering other community goals through punitive constraints.
Applicable Objective Statement:	Objective 2.1: Increase control over development in the floodplain to ensure lives and properties are not at risk to future flood conditions.
Estimated Cost:	0
Benefits:	Identify repetitive loss properties and prevent from rebuilding in the floodplain.
Plan for Implementation	
Responsible Organization/Department:	County Emergency Management Director
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	GIS Budget
Local Planning Mechanisms to be Used in Implementation, if any:	LEPC
Progress Report	
Action Status	
Report of Progress	County monitors flood prone property outside city limits.

Action Worksheet

Name of Jurisdiction:	Barton County
Risk / Vulnerability	
Problem being Mitigated:	Debris in waterways can cause excessive flooding of roads and bridges.
Hazard(s) Addressed:	Flood
Action or Project	
Action/Project Number:	BC 2.2.1
Name of Action or Project:	Debris removal/stormwater drainage
Action or Project Description:	Incorporate the inspection and management of hazardous natural debris into routine drainage system maintenance process.
Applicable Goal Statement:	Goal 2: Enhance existing or design new policies that will reduce the potential damaging effects of hazards without hindering other community goals through punitive constraints.
Applicable Objective Statement:	Objective 2.2 Preserve the natural and beneficial functions of the county's floodplains and wetlands through continued support of natural resource protection policies and by discouraging growth in environmentally sensitive areas.
Estimated Cost:	unknown
Benefits:	Keeping the waterways flowing will help prevent excessive flooding and mitigate potential damages during floods.
Plan for Implementation	
Responsible Organization/Department:	County Emergency Management Director
Action/Project Priority:	High
Timeline for Completion:	As needed
Potential Fund Sources:	Road & bridge budget
Local Planning Mechanisms to be Used in Implementation, if any:	LEPC
Progress Report	
Action Status	Continue/modified
Report of Progress	County cleans debris from bridges as needed.

Action Worksheet	
Name of Jurisdiction:	Barton County
Risk / Vulnerability	
Problem being Mitigated:	A need for more saferooms was seen in this area after the 2011 Joplin Tornado.
Hazard(s) Addressed:	Tornado
Action or Project	
Action/Project Number:	BC 2.4.1
Name of Action or Project:	Saferooms
Action or Project Description:	Construct new community saferooms, when financially feasible, to ensure all residents have access to a saferoom or storm shelter during a tornado.
Applicable Goal Statement:	Goal 2: Enhance existing or design new policies that will reduce the potential damaging effects of hazards without hindering other community goals through punitive constraints.
Applicable Objective Statement:	Objective 2.4 Increase the amount and range of community severe weather/ tornado community shelters and private and/or public safe rooms throughout the County.
Estimated Cost:	$800,000
Benefits:	More saferooms can save lives.
Plan for Implementation	
Responsible Organization/Department:	County Emergency Management Director
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	Mitigation Grants
Local Planning Mechanisms to be Used in Implementation, if any:	LEPC
Progress Report	
Action Status	continue
Report of Progress	Safe room has been built in Lamar School system within the last 5 yrs.

Action Worksheet	
Name of Jurisdiction:	Barton County
Risk / Vulnerability	
Problem being Mitigated:	Storm sirens needed.
Hazard(s) Addressed:	Tornado
Action or Project	
Action/Project Number:	BC 3.1.1
Name of Action or Project:	County wide warning system
Action or Project Description:	Increase & Monitor Warning System coverage to the most feasible extent.
Applicable Goal Statement:	Goal 3: Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.
Applicable Objective Statement:	Objective 3.1: Maximize the use of available hazard mitigation grant programs to protect the most vulnerable populations and structures.
Estimated Cost:	$10,000
Benefits:	A properly maintained warning system can save lives.
Plan for Implementation	
Responsible Organization/Department:	County Emergency Management Director
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	County Budget
Local Planning Mechanisms to be Used in Implementation, if any:	LEPC
Progress Report	
Action Status	Continue
Report of Progress	Have added a total of 17 storm sirens in the county alone and Golden City has removed all there old sirens and replaced them with one large siren. Monthly monitoring of sirens and replacing and repairing them as needed.

Action Worksheet	
Name of Jurisdiction:	Barton County
Risk / Vulnerability	
Problem being Mitigated:	Flooding creates hazardous conditions.
Hazard(s) Addressed:	Flood
Action or Project	
Action/Project Number:	BC 3.1.2
Name of Action or Project:	Alleviate Flood Hazard Conditions
Action or Project Description:	Investigate the feasibility and funding availability for projects to alleviate flood hazard conditions.
Applicable Goal Statement:	Goal 3: Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.
Applicable Objective Statement:	Objective 3.1: Maximize the use of available hazard mitigation grant programs to protect the most vulnerable populations and structures.
Estimated Cost:	unknown
Benefits:	Mitigate flood damage to roads, critical infrastructure, and private property, and reduce loss of life due to flooding.
Plan for Implementation	
Responsible Organization/Department:	County Emergency Management Director
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	Mitigation Grants
Local Planning Mechanisms to be Used in Implementation, if any:	LEPC
Progress Report	
Action Status	Continue
Report of Progress	No progress due to lack of funding

Action Worksheet	
Name of Jurisdiction:	Barton County
Risk / Vulnerability	
Problem being Mitigated:	People building in flood plain
Hazard(s) Addressed:	Flood
Action or Project	
Action/Project Number:	BC 3.2.1
Name of Action or Project:	Flood Mitigation
Action or Project Description:	Contact owners with property located within the FEMA designated 100 year floodplain and provide information about Federal Flood Mitigation Programs.
Applicable Goal Statement:	Goal 3: Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.
Applicable Objective Statement:	Objective 3.2 Decrease the number of properties located within the FEMA designated 100 year floodplain by 25% by the year 2020.
Estimated Cost:	0
Benefits:	Prevent building in floodplain
Plan for Implementation	
Responsible Organization/Department:	County Emergency Management Director
Action/Project Priority:	Low
Timeline for Completion:	ongoing
Potential Fund Sources:	GIS Budget
Local Planning Mechanisms to be Used in Implementation, if any:	LEPC
Progress Report	
Action Status	Continue
Report of Progress	No progress due to lack of funding.

Action Worksheet	
Name of Jurisdiction:	Barton County
Risk / Vulnerability	
Problem being Mitigated:	No funding available for public facilities and infrastructure damaged by natural hazards.
Hazard(s) Addressed:	All hazards
Action or Project	
Action/Project Number:	BC 3.3.1
Name of Action or Project:	Reserve Funding
Action or Project Description:	Establish a local reserve fund for repairing and/ or incorporating hazard mitigation measures for public facilities and infrastructure damaged by natural hazards.
Applicable Goal Statement:	Goal 3: Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.
Applicable Objective Statement:	Objective 3.3 Ensure that all vital/ critical facilities are protected from the effects of natural hazards to the maximum extent possible.
Estimated Cost:	unknown
Benefits:	Help fund mitigation costs.
Plan for Implementation	
Responsible Organization/Department:	County Commission
Action/Project Priority:	High
Timeline for Completion:	ongoing
Potential Fund Sources:	Donations
Local Planning Mechanisms to be Used in Implementation, if any:	LEPC
Progress Report	
Action Status	Continue
Report of Progress	County has general reserve fund.

Action Worksheet	
Name of Jurisdiction:	Barton County
Risk / Vulnerability	
Problem being Mitigated:	Maintenance/mitigation of county buildings and infrastructure.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	BC 3.3.2
Name of Action or Project:	Key facilities
Action or Project Description:	Identify at risk key facilities, and execute the potential mitigation techniques for protecting each facility to the maximum extent possible.
Applicable Goal Statement:	Goal 3: Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.
Applicable Objective Statement:	Objective 3.2 Ensure that all vital/ critical facilities are protected from the effects of natural hazards to the maximum extent possible.
Estimated Cost:	unknown
Benefits:	Protect county infrastructure.
Plan for Implementation	
Responsible Organization/Department:	County Emergency Management Director
Action/Project Priority:	High
Timeline for Completion:	ongoing
Potential Fund Sources:	County Budget
Local Planning Mechanisms to be Used in Implementation, if any:	LEPC
Progress Report	
Action Status	Continue
Report of Progress	Working on maintaining the County Court House and County Jail. Upkeep and monitor all county buildings.

Action Worksheet	
Name of Jurisdiction:	Barton County
Risk / Vulnerability	
Problem being Mitigated:	Residents are unaware of preparedness/mitigation measures they can take to protect themselves during a natural disaster.
Hazard(s) Addressed:	All hazards
Action or Project	
Action/Project Number:	BC 4.1.1
Name of Action or Project:	All hazards education
Action or Project Description:	Coordinate seasonal educational materials on individual and family preparedness/mitigation measures, and display and distribute routinely to county citizens and officials alike.
Applicable Goal Statement:	Goal 4 Protect public health, safety, and welfare by increasing the public awareness of natural disasters and their probable severity through the coordination of all educational programs to foster both individual and public responsibility in mitigating risks due to those hazards.
Applicable Objective Statement:	Objective 4.1 Increase the level of knowledge and awareness on the hazards that threaten the area by educating property owners, financial institutions, and County residents on the affordable, individual mitigation and preparedness measures that can be taken before the next hazard event.
Estimated Cost:	unknown
Benefits:	Educate residents on natural hazards and how to protect themselves.
Plan for Implementation	
Responsible Organization/Department:	County Emergency Management Director
Action/Project Priority:	High
Timeline for Completion:	ongoing
Potential Fund Sources:	County Budget, SEMA provided brochures
Local Planning Mechanisms to be Used in Implementation, if any:	LEPC
Progress Report	
Action Status	Continue
Report of Progress	Barton County OEM Director attends county and city events to distribute information to the citizens. OEM Director also posts information on social media.

Action Worksheet	
Name of Jurisdiction:	Barton County
Risk / Vulnerability	
Problem being Mitigated:	Public unaware of the potential severity of hazards.
Hazard(s) Addressed:	All hazards
Action or Project	
Action/Project Number:	BC 4.1.2
Name of Action or Project:	Hazards workshop
Action or Project Description:	Host a public hazards workshop to promote awareness of all hazards and they're potential severity for the residents in combination with community/regional festival or event.
Applicable Goal Statement:	Goal 4 Protect public health, safety, and welfare by increasing the public awareness of natural disasters and their probable severity through the coordination of all educational programs to foster both individual and public responsibility in mitigating risks due to those hazards.
Applicable Objective Statement:	Objective 4.1 Increase the level of knowledge and awareness on the hazards that threaten the area by educating property owners, financial institutions, and County residents on the affordable, individual mitigation and preparedness measures that can be taken before the next hazard event.
Estimated Cost:	0
Benefits:	Educate residents on the severity of hazards and how to protect themselves.
Plan for Implementation	
Responsible Organization/Department:	County Emergency Management Director
Action/Project Priority:	High
Timeline for Completion:	ongoing
Potential Fund Sources:	County Budget, SEMA provided brochures.
Local Planning Mechanisms to be Used in Implementation, if any:	LEPC
Progress Report	
Action Status	Continue
Report of Progress	Host this yearly during the county fair in Lamar.

Action Worksheet	
Name of Jurisdiction:	Barton County
Risk / Vulnerability	
Problem being Mitigated:	Flood insurance
Hazard(s) Addressed:	All hazards
Action or Project	
Action/Project Number:	BC 4.2.2
Name of Action or Project:	
Action or Project Description:	Distribute an educational flyer targeting NFIP policyholders on the Increase Costs of Compliance (ICC) coverage, to be disseminated following a flood event that results in substantial damage determinations by the county.
Applicable Goal Statement:	Goal 4 Protect public health, safety, and welfare by increasing the public awareness of natural disasters and their probable severity through the coordination of all educational programs to foster both individual and public responsibility in mitigating risks due to those hazards.
Applicable Objective Statement:	Objective 4.2 Increase the number of residents that maintain an active NFIP flood insurance policy by 10% by the year 2020.
Estimated Cost:	0
Benefits:	Educate residents whose property is in the flood on flood insurance.
Plan for Implementation	
Responsible Organization/Department:	County Emergency Management Director
Action/Project Priority:	High
Timeline for Completion:	ongoing
Potential Fund Sources:	County Budget, SEMA brochures
Local Planning Mechanisms to be Used in Implementation, if any:	LEPC
Progress Report	
Action Status	Continue
Report of Progress	Pass out information to residents at the local county fairs.

Golden City 2018 Mitigation Action Plan

Action Worksheet	
Name of Jurisdiction:	Golden City
Risk / Vulnerability	
Problem being Mitigated:	No county wide Hazard Mitigation Committee.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	GC 1.1.1
Name of Action or Project:	Countywide hazard Mitigation committee.
Action or Project Description:	Barton County has an active Local Emergency Planning Committee (LEPC) that will act as the Countywide Hazard Mitigation Committee to coordinate and prioritize goals, objectives, and actions identified in this plan and its subsequent updates. All jurisdictions should designate a representative to participate on the LEPC.
Applicable Goal Statement	Goal 1: Increase internal capabilities to mitigate the effects of natural hazards.
Applicable Objective Statement:	Objective 1.1 Enhance capability to conduct hazard risk assessments, demonstrate funding needs, and track mitigation activities throughout the county.
Estimated Cost:	$0
Benefits:	Existing representation of emergency personnel & jurisdictions.
Plan for Implementation	
Responsible Organization/Department:	City administration
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	General budget
Local Planning Mechanisms to be Used in Implementation, if any:	Local Emergency Operations Plan
Progress Report	
Action Status	Continue
Report of Progress	City attends quarterly meetings to monitor and review issues and events within our county.

Action Worksheet	
Name of Jurisdiction:	Golden City
Risk / Vulnerability	
Problem being Mitigated:	County wide GIS data.
Hazard(s) Addressed:	All hazards
Action or Project	
Action/Project Number:	GC 1.1.2
Name of Action or Project:	Barton County GIS
Action or Project Description:	Incorporate a Geographic Information System (GIS) to maintain current building and parcel data for purposes of conducting more detailed hazard risk assessments, for tracking permitting and land use patterns in hazard prone areas.
Applicable Goal Statement:	Goal 1: Increase internal capabilities to mitigate the effects of natural hazards.
Applicable Objective Statement:	Objective 1.1 Enhance capability to conduct hazard risk assessments, demonstrate funding needs, and track mitigation activities throughout the county.
Estimated Cost:	0
Benefits:	Identify vital infrastructure, property, floodplains, etc.
Plan for Implementation	
Responsible Organization/Department:	City assessor
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	General revenue
Local Planning Mechanisms to be Used in Implementation, if any:	Day to day emergency operations. LEPC
Progress Report	
Action Status	Continue
Report of Progress	The city has access to the county GIS and coordinates city information with county GIS.

Action Worksheet	
Name of Jurisdiction:	Golden City
Risk / Vulnerability	
Problem being Mitigated:	Availability of equipment during disaster.
Hazard(s) Addressed:	All hazards
Action or Project	
Action/Project Number:	GC 1.2.1
Name of Action or Project:	Inventory emergency services and equipment.
Action or Project Description:	Conduct an inventory survey for the county's emergency response services to identify any existing needs or shortfalls in terms of personnel, equipment or required resources.
Applicable Goal Statement:	Goal 1: Increase internal capabilities to mitigate the effects of natural hazards.
Applicable Objective Statement:	Objective 1.2: Ensure that current emergency services are adequate to protect public health and safety.
Estimated Cost:	unknown
Benefits:	24/7 resource listing is beneficial because having the right resources and knowing what resources are available can help mitigate property damage, injury, and death during a disaster.
Plan for Implementation	
Responsible Organization/Department:	City Administration
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	General Revenue
Local Planning Mechanisms to be Used in Implementation, if any:	LEPC
Progress Report	
Action Status	Continue
Report of Progress	The city provides information to the Barton County OEM about available equipment and coordinates equipment maintenance.

Action Worksheet	
Name of Jurisdiction:	Golden City
Risk / Vulnerability	
Problem being Mitigated:	Flood prone property
Hazard(s) Addressed:	Flood
Action or Project	
Action/Project Number:	GC 2.1.2
Name of Action or Project:	Community Rating System/Flood prone property
Action or Project Description:	Regularly calculate and document the amount of flood prone property that is preserved as open space for potential credit points under the Community Rating System (CRS).
Applicable Goal Statement:	Goal 2: Enhance existing or design new policies that will reduce the potential damaging effects of hazards without hindering other community goals through punitive constraints.
Applicable Objective Statement:	Objective 2.1: Increase control over development in the floodplain to ensure lives and properties are not at risk to future flood conditions.
Estimated Cost:	0
Benefits:	Identify repetitive loss properties and prevent from rebuilding in the floodplain.
Plan for Implementation	
Responsible Organization/Department:	City administrator
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	General Budget
Local Planning Mechanisms to be Used in Implementation, if any:	LEPC
Progress Report	
Action Status	Continue
Report of Progress	City monitors flood prone property within city limits

Action Worksheet	
Name of Jurisdiction:	Golden City
Risk / Vulnerability	
Problem being Mitigated:	A need for more saferooms was seen in this area after the 2011 Joplin Tornado.
Hazard(s) Addressed:	Tornado
Action or Project	
Action/Project Number:	GC 2.4.1
Name of Action or Project:	Saferooms
Action or Project Description:	Construct two new community saferooms, when financially feasible, to ensure all residents have access to a saferoom or storm shelter during a tornado.
Applicable Goal Statement:	Goal 2: Enhance existing or design new policies that will reduce the potential damaging effects of hazards without hindering other community goals through punitive constraints.
Applicable Objective Statement:	Objective 2.4 Increase the amount and range of community severe weather/ tornado community shelters and private and/or public safe rooms throughout the County.
Estimated Cost:	$1,600,000
Benefits:	More saferooms can save lives.
Plan for Implementation	
Responsible Organization/Department:	City Administration
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	Mitigation Grants
Local Planning Mechanisms to be Used in Implementation, if any:	LEPC
Progress Report	
Action Status	Continue
Report of Progress	No progress, lack of funding

Action Worksheet	
Name of Jurisdiction:	Golden City
Risk / Vulnerability	
Problem being Mitigated:	Storm sirens needed.
Hazard(s) Addressed:	Tornado
Action or Project	
Action/Project Number:	GC 3.1.1
Name of Action or Project:	County wide warning system
Action or Project Description:	Increase & Monitor Warning System coverage to the most feasible extent.
Applicable Goal Statement:	Goal 3: Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.
Applicable Objective Statement:	Objective 3.1: Maximize the use of available hazard mitigation grant programs to protect the most vulnerable populations and structures.
Estimated Cost:	$25,000
Benefits:	Properly maintained warning systems can save lives.
Plan for Implementation	
Responsible Organization/Department:	City Emergency Manager
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	General Budget
Local Planning Mechanisms to be Used in Implementation, if any:	LEPC
Progress Report	
Action Status	Continue
Report of Progress	Installed new warning siren in city of Golden City. Continue monthly monitoring

Action Worksheet	
Name of Jurisdiction:	Golden City
Risk / Vulnerability	
Problem being Mitigated:	No funding available for public facilities and infrastructure damaged by natural hazards.
Hazard(s) Addressed:	All hazards
Action or Project	
Action/Project Number:	GC 3.3.1
Name of Action or Project:	Reserve Funding
Action or Project Description:	Establish a local reserve fund for repairing and/ or incorporating hazard mitigation measures for public facilities and infrastructure damaged by natural hazards.
Applicable Goal Statement:	Goal 3: Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.
Applicable Objective Statement:	Objective 3.3 Ensure that all vital/ critical facilities are protected from the effects of natural hazards to the maximum extent possible.
Estimated Cost:	unknown
Benefits:	Help fund mitigation costs.
Plan for Implementation	
Responsible Organization/Department:	City Administration
Action/Project Priority:	High
Timeline for Completion:	ongoing
Potential Fund Sources:	Donations
Local Planning Mechanisms to be Used in Implementation, if any:	City Council Meeting
Progress Report	
Action Status	Continue
Report of Progress	City has general reserve fund that can be used for mitigation and repairs when a disaster occurs.

Lamar 2018 Mitigation Action Plan

Action Worksheet	
Name of Jurisdiction:	Lamar
Risk / Vulnerability	
Problem being Mitigated:	No county wide Hazard Mitigation Committee.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	La 1.1.1
Name of Action or Project:	Countywide hazard Mitigation committee.
Action or Project Description:	Barton County has an active Local Emergency Planning Committee (LEPC) that will act as the Countywide Hazard Mitigation Committee to coordinate and prioritize goals, objectives, and actions identified in this plan and its subsequent updates. All jurisdictions should designate a representative to participate on the LEPC.
Applicable Goal Statement	Goal 1: Increase internal capabilities to mitigate the effects of natural hazards.
Applicable Objective Statement:	Objective 1.1 Enhance capability to conduct hazard risk assessments, demonstrate funding needs, and track mitigation activities throughout the county.
Estimated Cost:	$0
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	City Administration
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	Existing Emergency Management Budget
Local Planning Mechanisms to be Used in Implementation, if any:	Budget Planning
Progress Report	
Action Status	Continue
Report of Progress	Meet quarterly to monitor and review issues and events within our county.

Action Worksheet	
Name of Jurisdiction:	Lamar
Risk / Vulnerability	
Problem being Mitigated:	Lack of County wide GIS data.
Hazard(s) Addressed:	All hazards
Action or Project	
Action/Project Number:	La 1.1.2
Name of Action or Project:	Barton County GIS
Action or Project Description:	Incorporate a Geographic Information System (GIS) to maintain current building and parcel data for purposes of conducting more detailed hazard risk assessments, for tracking permitting and land use patterns in hazard prone areas.
Applicable Goal Statement:	Goal 1: Increase internal capabilities to mitigate the effects of natural hazards.
Applicable Objective Statement:	Objective 1.1 Enhance capability to conduct hazard risk assessments, demonstrate funding needs, and track mitigation activities throughout the county.
Estimated Cost:	$4000 annually
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	City Administration
Action/Project Priority:	
Timeline for Completion:	Ongoing
Potential Fund Sources:	General budget
Local Planning Mechanisms to be Used in Implementation, if any:	City administration meeting
Progress Report	
Action Status	Continue, modify if FEMA provides updated floodplain.
Report of Progress	City & County has initiates county wide GIS. FIRM panels include all 100-year floodplain. City has access to county GIS and provides information as needed.

Action Worksheet	
Name of Jurisdiction:	Lamar
Risk / Vulnerability	
Problem being Mitigated:	Availability of equipment during disaster.
Hazard(s) Addressed:	All hazards
Action or Project	
Action/Project Number:	La 1.2.1
Name of Action or Project:	Inventory emergency services and equipment.
Action or Project Description:	Conduct an inventory survey for the county's emergency response services to identify any existing needs or shortfalls in terms of personnel, equipment or required resources.
Applicable Goal Statement:	Goal 1: Increase internal capabilities to mitigate the effects of natural hazards.
Applicable Objective Statement:	Objective 1.2: Ensure that current emergency services are adequate to protect public health and safety.
Estimated Cost:	unknown
Benefits:	24/7 resource listing is beneficial because having the right resources and knowing what resources are available can help mitigate property damage, injury, and death during a disaster.
Plan for Implementation	
Responsible Organization/Department:	City Administration
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	General budget
Local Planning Mechanisms to be Used in Implementation, if any:	LEPC
Progress Report	
Action Status	Continue
Report of Progress	City participates & coordinates with county's annual inventory. City will also be using state-wide inventory program "salamander".

Action Worksheet	
Name of Jurisdiction:	Lamar
Risk / Vulnerability	
Problem being Mitigated:	People building in floodplain
Hazard(s) Addressed:	Flood
Action or Project	
Action/Project Number:	La 2.1.1
Name of Action or Project:	Floodplain Ordinance
Action or Project Description:	Maintain Floodplain Ordinances to be in compliance with SEMA and FEMA standards.
Applicable Goal Statement:	Goal 2: Enhance existing or design new policies that will reduce the potential damaging effects of hazards without hindering other community goals through punitive constraints.
Applicable Objective Statement:	Objective 2.1: Increase control over development in the floodplain to ensure lives and properties are not at risk to future flood conditions.
Estimated Cost:	varies
Benefits:	People need to know if they're property is in the floodplain. Restricted development in floodplain helps prevent property damage, injury, and death during a flood.
Plan for Implementation	
Responsible Organization/Department:	City Floodplain Administrator
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	Building & general budget
Local Planning Mechanisms to be Used in Implementation, if any:	City administration & zoning planning meetings
Progress Report	
Action Status	Continue
Report of Progress	City updated FEMA floodplain ordinances requiring permit for floodplain development. Structures in 100-year floodplain required to be raised 1 foot above floodplain.

Action Worksheet	
Name of Jurisdiction:	Lamar
Risk / Vulnerability	
Problem being Mitigated:	Flood prone property
Hazard(s) Addressed:	Flood
Action or Project	
Action/Project Number:	La 2.1.2
Name of Action or Project:	Community Rating System/Flood prone property
Action or Project Description:	Regularly calculate and document the amount of flood prone property that is preserved as open space for potential credit points under the Community Rating System (CRS).
Applicable Goal Statement:	Goal 2: Enhance existing or design new policies that will reduce the potential damaging effects of hazards without hindering other community goals through punitive constraints.
Applicable Objective Statement:	Objective 2.1: Increase control over development in the floodplain to ensure lives and properties are not at risk to future flood conditions.
Estimated Cost:	unknown
Benefits:	Identify repetitive loss properties and prevent from rebuilding in the floodplain.
Plan for Implementation	
Responsible Organization/Department:	City Administration
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	General budget
Local Planning Mechanisms to be Used in Implementation, if any:	City administration & zoning planning meetings
Progress Report	
Action Status	continue
Report of Progress	City monitors flood prone property within city limits.

Action Worksheet	
Name of Jurisdiction:	Lamar
Risk / Vulnerability	
Problem being Mitigated:	Unsafe construction practices.
Hazard(s) Addressed:	All hazards
Action or Project	
Action/Project Number:	La 2.3.1
Name of Action or Project:	Building codes
Action or Project Description:	Establish the minimum requirements of the international building codes.
Applicable Goal Statement:	Goal 2: Enhance existing or design new policies that will reduce the potential damaging effects of hazards without hindering other community goals through punitive constraints.
Applicable Objective Statement:	Objective 2.3: Ensure that new construction is completed using severe weather/ high wind resistant design techniques and materials in accordance with the minimum requirements of the International Building Codes that will limit damage caused by high winds and reduce the amount of wind-borne debris.
Estimated Cost:	$40,000
Benefits:	Ensure safe construction of buildings to protect lives an decrease damage during a hazard event.
Plan for Implementation	
Responsible Organization/Department:	City zoning and permitting
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	General budget
Local Planning Mechanisms to be Used in Implementation, if any:	Zoning and permitting
Progress Report	
Action Status	Continue
Report of Progress	City uses IBC for building structures.

Action Worksheet	
Name of Jurisdiction:	Lamar
Risk / Vulnerability	
Problem being Mitigated:	A need for more saferooms was seen in this area after the 2011 Joplin Tornado.
Hazard(s) Addressed:	Tornado
Action or Project	
Action/Project Number:	La 2.4.1
Name of Action or Project:	Saferooms
Action or Project Description:	Ensure all residents have access to a saferoom or storm shelter during a tornado. Continue to construct new community saferooms at school facilities in Lamar.
Applicable Goal Statement:	Goal 2: Enhance existing or design new policies that will reduce the potential damaging effects of hazards without hindering other community goals through punitive constraints.
Applicable Objective Statement:	Objective 2.4 Increase the amount and range of community severe weather/ tornado community shelters and private and/or public safe rooms throughout the County.
Estimated Cost:	$800,000
Benefits:	More saferooms can save lives.
Plan for Implementation	
Responsible Organization/Department:	City Administrators
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	Mitigation Grants
Local Planning Mechanisms to be Used in Implementation, if any:	City Administration & Emergency Operations Plans
Progress Report	
Action Status	continue
Report of Progress	A safe room has been built in Lamar School system within the last 5 yrs.

Action Worksheet	
Name of Jurisdiction:	Lamar
Risk / Vulnerability	
Problem being Mitigated:	Storm sirens needed.
Hazard(s) Addressed:	Tornado
Action or Project	
Action/Project Number:	La 3.1.1
Name of Action or Project:	County wide warning system
Action or Project Description:	Increase & Monitor Warning System coverage to the most feasible extent.
Applicable Goal Statement:	Goal 3: Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.
Applicable Objective Statement:	Objective 3.1: Maximize the use of available hazard mitigation grant programs to protect the most vulnerable populations and structures.
Estimated Cost:	$25,000 siren
Benefits:	A properly maintained warning systems can save lives.
Plan for Implementation	
Responsible Organization/Department:	City Emergency Manager
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	General budget
Local Planning Mechanisms to be Used in Implementation, if any:	City Administration & Emergency Operations Plans
Progress Report	
Action Status	Continue
Report of Progress	City has sirens to cover entire city, tested monthly. Facebook also used for warnings.

Action Worksheet	
Name of Jurisdiction:	Lamar
Risk / Vulnerability	
Problem being Mitigated:	Flooding creates hazardous conditions.
Hazard(s) Addressed:	Flood
Action or Project	
Action/Project Number:	La 3.1.2
Name of Action or Project:	Alleviate Flood Hazard Conditions
Action or Project Description:	Investigate the feasibility and funding availability for projects to alleviate flood hazard conditions.
Applicable Goal Statement:	Goal 3: Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.
Applicable Objective Statement:	Objective 3.1: Maximize the use of available hazard mitigation grant programs to protect the most vulnerable populations and structures.
Estimated Cost:	unknown
Benefits:	Reduce flood damage to roads, critical infrastructure, and private property, and reduce loss of life due to flooding.
Plan for Implementation	
Responsible Organization/Department:	City Administration
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	Mitigation Grants/MODOT grants
Local Planning Mechanisms to be Used in Implementation, if any:	City Administration Planning
Progress Report	
Action Status	Continue
Report of Progress	City has applied every year to MODOT to raise HWY 160 to allow usage during flood. Closure of HWY 160 during flood prevents use of emergency vehicles. Waiting on MODOT for funding.

Action Worksheet	
Name of Jurisdiction:	Lamar
Risk / Vulnerability	
Problem being Mitigated:	Poor stormwater drainage creates excessive flooding.
Hazard(s) Addressed:	Flood
Action or Project	
Action/Project Number:	La 3.1.3
Name of Action or Project:	Stormwater drainage
Action or Project Description:	Seek funding to complete stormwater drainage study/plan.
Applicable Goal Statement:	Goal 3: Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.
Applicable Objective Statement:	Objective 3.1: Maximize the use of available hazard mitigation grant programs to protect the most vulnerable populations and structures.
Estimated Cost:	unknown
Benefits:	Reduce flood hazards due to insufficient stormwater infrastructure.
Plan for Implementation	
Responsible Organization/Department:	City administration
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	General budget
Local Planning Mechanisms to be Used in Implementation, if any:	City Administration Planning
Progress Report	
Action Status	Continue
Report of Progress	Identified all dry streams through city and channelized for improved flow. Continue to monitor.

Action Worksheet	
Name of Jurisdiction:	Lamar
Risk / Vulnerability	
Problem being Mitigated:	Maintenance/mitigation of city buildings and infrastructure.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	La 3.3.1
Name of Action or Project:	Key Facilities
Action or Project Description:	Identify at risk key facilities and execute the potential mitigation techniques for protecting each facility to the maximum extent possible.
Applicable Goal Statement:	Goal 3: Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.
Applicable Objective Statement:	Objective 3.3: Ensure that all vital/ critical facilities are protected from the effects of natural hazards to the maximum extent possible.
Estimated Cost:	unknown
Benefits:	Protect city infrastructure
Plan for Implementation	
Responsible Organization/Department:	City administration
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	General budget
Local Planning Mechanisms to be Used in Implementation, if any:	City Administration Planning
Progress Report	
Action Status	Continue
Report of Progress	City has generators and sand bags to protect infrastructure.

Action Worksheet	
Name of Jurisdiction:	Lamar
Risk / Vulnerability	
Problem being Mitigated:	Lamar Lake Dam does not currently have an inundation map. Residents and businesses near the Dam need to know if they are in the hazard zone should the dam ever fail.
Hazard(s) Addressed:	Dam Failure
Action or Project	
Action/Project Number:	La 3.3.2
Name of Action or Project:	Inundation Map
Action or Project Description:	City to work with MDNR and the National Inventory of Dams to develop an inundation map of Lamar Lake Dam.
Applicable Goal Statement:	Goal 3: Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.
Applicable Objective Statement:	Objective 3.3: Ensure that all vital/ critical facilities are protected from the effects of natural hazards to the maximum extent possible.
Estimated Cost:	unknown
Benefits:	Lives can be saved if residents are aware of the hazard zone.
Plan for Implementation	
Responsible Organization/Department:	City administration
Action/Project Priority:	High
Timeline for Completion:	5 years
Potential Fund Sources:	General budget and grants planning
Local Planning Mechanisms to be Used in Implementation, if any:	City Administration
Progress Report	
Action Status	New
Report of Progress	

Action Worksheet	
Name of Jurisdiction:	Lamar Heights
Risk / Vulnerability	
Problem being Mitigated:	No county wide Hazard Mitigation Committee.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	La 1.1.1
Name of Action or Project:	Countywide hazard Mitigation committee.
Action or Project Description:	Barton County has an active Local Emergency Planning Committee (LEPC) that will act as the Countywide Hazard Mitigation Committee to coordinate and prioritize goals, objectives, and actions identified in this plan and its subsequent updates. All jurisdictions should designate a representative to participate on the LEPC.
Applicable Goal Statement	Goal 1: Increase internal capabilities to mitigate the effects of natural hazards.
Applicable Objective Statement:	Objective 1.1 Enhance capability to conduct hazard risk assessments, demonstrate funding needs, and track mitigation activities throughout the county.
Estimated Cost:	$0
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	City Administration
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	Existing Emergency Management Budget
Local Planning Mechanisms to be Used in Implementation, if any:	General budget planning
Progress Report	
Action Status	Continue
Report of Progress	Meet quarterly to monitor and review issues and events within our county.

Action Worksheet

Name of Jurisdiction:	Lamar Heights
Risk / Vulnerability	
Problem being Mitigated:	Lack of County wide GIS data.
Hazard(s) Addressed:	All hazards
Action or Project	
Action/Project Number:	La 1.1.2
Name of Action or Project:	Barton County GIS
Action or Project Description:	Incorporate a Geographic Information System (GIS) to maintain current building and parcel data for purposes of conducting more detailed hazard risk assessments, for tracking permitting and land use patterns in hazard prone areas.
Applicable Goal Statement:	Goal 1: Increase internal capabilities to mitigate the effects of natural hazards.
Applicable Objective Statement:	Objective 1.1 Enhance capability to conduct hazard risk assessments, demonstrate funding needs, and track mitigation activities throughout the county.
Estimated Cost:	$4000 annually
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	City Administration
Action/Project Priority:	
Timeline for Completion:	Ongoing
Potential Fund Sources:	General budget
Local Planning Mechanisms to be Used in Implementation, if any:	City administration planning
Progress Report	
Action Status	Continue, modify if FEMA provides updated floodplain.
Report of Progress	City & County has initiates county wide GIS. FIRM panels include all 100-year floodplain. City has access to county GIS and provides information as needed.

Action Worksheet	
Name of Jurisdiction:	Lamar Heights
Risk / Vulnerability	
Problem being Mitigated:	Availability of equipment during disaster.
Hazard(s) Addressed:	All hazards
Action or Project	
Action/Project Number:	La 1.2.1
Name of Action or Project:	Inventory emergency services and equipment.
Action or Project Description:	Conduct an inventory survey for the county's emergency response services to identify any existing needs or shortfalls in terms of personnel, equipment or required resources.
Applicable Goal Statement:	Goal 1: Increase internal capabilities to mitigate the effects of natural hazards.
Applicable Objective Statement:	Objective 1.2: Ensure that current emergency services are adequate to protect public health and safety.
Estimated Cost:	unknown
Benefits:	24/7 resource listing is beneficial because having the right resources and knowing what resources are available can help mitigate property damage, injury, and death during a disaster.
Plan for Implementation	
Responsible Organization/Department:	City Administration
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	General budget planning
Local Planning Mechanisms to be Used in Implementation, if any:	LEPC
Progress Report	
Action Status	Continue
Report of Progress	City participates & coordinates with county's annual inventory. City will also be using state-wide inventory program "salamander".

Action Worksheet	
Name of Jurisdiction:	Lamar Heights
Risk / Vulnerability	
Problem being Mitigated:	People building in floodplain
Hazard(s) Addressed:	Flood
Action or Project	
Action/Project Number:	La 2.1.1
Name of Action or Project:	Floodplain Ordinance
Action or Project Description:	Maintain Floodplain Ordinances to be in compliance with SEMA and FEMA standards.
Applicable Goal Statement:	Goal 2: Enhance existing or design new policies that will reduce the potential damaging effects of hazards without hindering other community goals through punitive constraints.
Applicable Objective Statement:	Objective 2.1: Increase control over development in the floodplain to ensure lives and properties are not at risk to future flood conditions.
Estimated Cost:	varies
Benefits:	People need to know if they're property is in the floodplain. Restricted development in floodplain helps prevent property damage, injury, and death during a flood.
Plan for Implementation	
Responsible Organization/Department:	City Floodplain Administrator
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	Building & general budget
Local Planning Mechanisms to be Used in Implementation, if any:	City administration & zoning planning meetings
Progress Report	
Action Status	Continue
Report of Progress	City updated FEMA floodplain ordinances requiring permit for floodplain development. Structures in 100 year floodplain required to be raised 1 foot above floodplain.

Action Worksheet	
Name of Jurisdiction:	Lamar Heights
Risk / Vulnerability	
Problem being Mitigated:	Flood prone property
Hazard(s) Addressed:	Flood
Action or Project	
Action/Project Number:	La 2.1.2
Name of Action or Project:	Community Rating System/Flood prone property
Action or Project Description:	Regularly calculate and document the amount of flood prone property that is preserved as open space for potential credit points under the Community Rating System (CRS).
Applicable Goal Statement:	Goal 2: Enhance existing or design new policies that will reduce the potential damaging effects of hazards without hindering other community goals through punitive constraints.
Applicable Objective Statement:	Objective 2.1: Increase control over development in the floodplain to ensure lives and properties are not at risk to future flood conditions.
Estimated Cost:	unknown
Benefits:	Identify repetitive loss properties and prevent from rebuilding in the floodplain.
Plan for Implementation	
Responsible Organization/Department:	City Administration
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	General budget
Local Planning Mechanisms to be Used in Implementation, if any:	City administration & zoning planning meetings
Progress Report	
Action Status	continue
Report of Progress	City monitors flood prone property within city limits.

Action Worksheet	
Name of Jurisdiction:	Lamar Heights
Risk / Vulnerability	
Problem being Mitigated:	Unsafe construction practices.
Hazard(s) Addressed:	All hazards
Action or Project	
Action/Project Number:	La 2.3.1
Name of Action or Project:	Building codes
Action or Project Description:	Establish the minimum requirements of the international building codes.
Applicable Goal Statement:	Goal 2: Enhance existing or design new policies that will reduce the potential damaging effects of hazards without hindering other community goals through punitive constraints.
Applicable Objective Statement:	Objective 2.3: Ensure that new construction is completed using severe weather/ high wind resistant design techniques and materials in accordance with the minimum requirements of the International Building Codes that will limit damage caused by high winds and reduce the amount of wind-borne debris.
Estimated Cost:	$40,000
Benefits:	Ensure safe construction of buildings to protect lives an decrease damage during a hazard event.
Plan for Implementation	
Responsible Organization/Department:	City zoning and permitting
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	General budget
Local Planning Mechanisms to be Used in Implementation, if any:	Zoning and permitting
Progress Report	
Action Status	Continue
Report of Progress	City uses IBC for building structures.

Action Worksheet

Name of Jurisdiction:	Lamar Heights
Risk / Vulnerability	
Problem being Mitigated:	A need for more saferooms was seen in this area after the 2011 Joplin Tornado.
Hazard(s) Addressed:	Tornado
Action or Project	
Action/Project Number:	La 2.4.1
Name of Action or Project:	Saferooms
Action or Project Description:	Ensure all residents have access to a saferoom or storm shelter during a tornado. Construct new community saferooms at the school facility in Lamar.
Applicable Goal Statement:	Goal 2: Enhance existing or design new policies that will reduce the potential damaging effects of hazards without hindering other community goals through punitive constraints.
Applicable Objective Statement:	Objective 2.4 Increase the amount and range of community severe weather/ tornado community shelters and private and/or public safe rooms throughout the County.
Estimated Cost:	$800,000
Benefits:	More saferooms can save lives.
Plan for Implementation	
Responsible Organization/Department:	City Administrators
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	Mitigation Grants
Local Planning Mechanisms to be Used in Implementation, if any:	City Administration & Emergency Operations Plans
Progress Report	
Action Status	continue
Report of Progress	Safe room has been built in Lamar School system within the last 5 yrs.

Action Worksheet	
Name of Jurisdiction:	Lamar Heights
Risk / Vulnerability	
Problem being Mitigated:	Storm sirens needed.
Hazard(s) Addressed:	Tornado
Action or Project	
Action/Project Number:	La 3.1.1
Name of Action or Project:	County wide warning system
Action or Project Description:	Increase & Monitor Warning System coverage to the most feasible extent.
Applicable Goal Statement:	Goal 3: Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.
Applicable Objective Statement:	Objective 3.1: Maximize the use of available hazard mitigation grant programs to protect the most vulnerable populations and structures.
Estimated Cost:	$25,000 siren
Benefits:	A properly maintained warning systems can save lives.
Plan for Implementation	
Responsible Organization/Department:	City Emergency Manager
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	General budget
Local Planning Mechanisms to be Used in Implementation, if any:	City Administration & Emergency Operations Plans
Progress Report	
Action Status	Continue
Report of Progress	City has sirens to cover entire city, tested monthly. Facebook also used for warnings.

Action Worksheet	
Name of Jurisdiction:	Lamar Heights
Risk / Vulnerability	
Problem being Mitigated:	Flooding creates hazardous conditions.
Hazard(s) Addressed:	Flood
Action or Project	
Action/Project Number:	La 3.1.2
Name of Action or Project:	Alleviate Flood Hazard Conditions
Action or Project Description:	Investigate the feasibility and funding availability for projects to alleviate flood hazard conditions.
Applicable Goal Statement:	Goal 3: Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.
Applicable Objective Statement:	Objective 3.1: Maximize the use of available hazard mitigation grant programs to protect the most vulnerable populations and structures.
Estimated Cost:	unknown
Benefits:	Reduce flood damage to roads, critical infrastructure, and private property, and reduce loss of life due to flooding.
Plan for Implementation	
Responsible Organization/Department:	City Administration
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	Mitigation Grants/MODOT grants
Local Planning Mechanisms to be Used in Implementation, if any:	City Administration Planning
Progress Report	
Action Status	Continue
Report of Progress	City has applied every year to MODOT to raise HWY 160 to allow usage during flood. Closure of HWY 160 during flood prevents use of emergency vehicles. Waiting on MODOT for funding.

Action Worksheet	
Name of Jurisdiction:	Lamar Heights
Risk / Vulnerability	
Problem being Mitigated:	Poor stormwater drainage creates excessive flooding.
Hazard(s) Addressed:	Flood
Action or Project	
Action/Project Number:	La 3.1.3
Name of Action or Project:	Stormwater drainage
Action or Project Description:	Seek funding to complete stormwater drainage study/plan.
Applicable Goal Statement:	Goal 3: Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.
Applicable Objective Statement:	Objective 3.1: Maximize the use of available hazard mitigation grant programs to protect the most vulnerable populations and structures.
Estimated Cost:	unknown
Benefits:	Reduce flood hazards due to insufficient stormwater infrastructure.
Plan for Implementation	
Responsible Organization/Department:	City administration
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	General budget
Local Planning Mechanisms to be Used in Implementation, if any:	City Administration Planning
Progress Report	
Action Status	Continue
Report of Progress	Identified all dry streams through city and channelized for improved flow. Continue to monitor.

Action Worksheet	
Name of Jurisdiction:	Lamar Heights
Risk / Vulnerability	
Problem being Mitigated:	Maintenance/mitigation of city buildings and infrastructure.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	La 3.3.1
Name of Action or Project:	Key Facilities
Action or Project Description:	Identify at risk key facilities and execute the potential mitigation techniques for protecting each facility to the maximum extent possible.
Applicable Goal Statement:	Goal 3: Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.
Applicable Objective Statement:	Objective 3.3: Ensure that all vital/ critical facilities are protected from the effects of natural hazards to the maximum extent possible.
Estimated Cost:	unknown
Benefits:	Protect city infrastructure
Plan for Implementation	
Responsible Organization/Department:	City administration
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	General budget
Local Planning Mechanisms to be Used in Implementation, if any:	City Administration Planning
Progress Report	
Action Status	Continue
Report of Progress	City has generators and sand bags to protect infrastructure.

Action Worksheet	
Name of Jurisdiction:	Lamar Heights
Risk / Vulnerability	
Problem being Mitigated:	Lamar Lake Dam does not currently have an inundation map. Residents and businesses near the Dam need to know if they are in the hazard zone should the dam ever fail.
Hazard(s) Addressed:	Dam Failure
Action or Project	
Action/Project Number:	La 3.3.2
Name of Action or Project:	Inundation Map
Action or Project Description:	City to work with MDNR and the National Inventory of Dams to develop an inundation map of Lamar Lake Dam.
Applicable Goal Statement:	Goal 3: Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.
Applicable Objective Statement:	Objective 3.3: Ensure that all vital/ critical facilities are protected from the effects of natural hazards to the maximum extent possible.
Estimated Cost:	unknown
Benefits:	Lives can be saved if residents are aware of the hazard zone.
Plan for Implementation	
Responsible Organization/Department:	City administration
Action/Project Priority:	High
Timeline for Completion:	5 years
Potential Fund Sources:	General budget and grants
Local Planning Mechanisms to be Used in Implementation, if any:	City Administration Planning
Progress Report	
Action Status	New
Report of Progress	

Liberal 2018 Mitigation Action Plan

Action Worksheet	
Name of Jurisdiction:	Liberal
Risk / Vulnerability	
Problem being Mitigated:	No county wide Hazard Mitigation Committee.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	Li 1.1.1
Name of Action or Project:	Countywide hazard Mitigation committee.
Action or Project Description:	Barton County has an active Local Emergency Planning Committee (LEPC) that will act as the Countywide Hazard Mitigation Committee to coordinate and prioritize goals, objectives, and actions identified in this plan and its subsequent updates. All jurisdictions should designate a representative to participate on the LEPC.
Applicable Goal Statement	Goal 1: Increase internal capabilities to mitigate the effects of natural hazards.
Applicable Objective Statement:	Objective 1.1 Enhance capability to conduct hazard risk assessments, demonstrate funding needs, and track mitigation activities throughout the county.
Estimated Cost:	$0
Benefits:	
Plan for Implementation	
Responsible Organization/Department:	City Administration
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	General budget
Local Planning Mechanisms to be Used in Implementation, if any:	City Council Meetings
Progress Report	
Action Status	Continue
Report of Progress	Meet quarterly to monitor and review issues and events within our county.

Action Worksheet	
Name of Jurisdiction:	Liberal
Risk / Vulnerability	
Problem being Mitigated:	Availability of equipment during disaster.
Hazard(s) Addressed:	All hazards
Action or Project	
Action/Project Number:	Li 1.2.1
Name of Action or Project:	Inventory emergency services and equipment.
Action or Project Description:	Conduct an inventory survey for the county's emergency response services to identify any existing needs or shortfalls in terms of personnel, equipment or required resources.
Applicable Goal Statement:	Goal 1: Increase internal capabilities to mitigate the effects of natural hazards.
Applicable Objective Statement:	Objective 1.2: Ensure that current emergency services are adequate to protect public health and safety.
Estimated Cost:	unknown
Benefits:	24/7 resource listing is beneficial because having the right resources and knowing what resources are available can help mitigate property damage, injury, and death during a disaster.
Plan for Implementation	
Responsible Organization/Department:	City Administration
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	General budget
Local Planning Mechanisms to be Used in Implementation, if any:	LEPC
Progress Report	
Action Status	Continue
Report of Progress	City participates & coordinates with county's annual inventory.

Action Worksheet	
Name of Jurisdiction:	Liberal
Risk / Vulnerability	
Problem being Mitigated:	People building in floodplain
Hazard(s) Addressed:	Flood
Action or Project	
Action/Project Number:	Li 2.1.1
Name of Action or Project:	Floodplain Ordinance
Action or Project Description:	Maintain Floodplain Ordinances to be in compliance with SEMA and FEMA standards.
Applicable Goal Statement:	Goal 2: Enhance existing or design new policies that will reduce the potential damaging effects of hazards without hindering other community goals through punitive constraints.
Applicable Objective Statement:	Objective 2.1: Increase control over development in the floodplain to ensure lives and properties are not at risk to future flood conditions.
Estimated Cost:	varies
Benefits:	People need to know if they're property is in the floodplain.
Plan for Implementation	
Responsible Organization/Department:	City Administration
Action/Project Priority:	Low
Timeline for Completion:	Ongoing
Potential Fund Sources:	general budget
Local Planning Mechanisms to be Used in Implementation, if any:	City council
Progress Report	
Action Status	Continue
Report of Progress	City established floodplain ordinance January 11, 2011

Action Worksheet	
Name of Jurisdiction:	Liberal
Risk / Vulnerability	
Problem being Mitigated:	A need for more saferooms was seen in this area after the 2011 Joplin Tornado.
Hazard(s) Addressed:	Tornado
Action or Project	
Action/Project Number:	Li 2.4.1
Name of Action or Project:	Saferooms
Action or Project Description:	Ensure all residents have access to a saferoom or storm shelter during a tornado. Construct new community safe rooms when financially feasible.
Applicable Goal Statement:	Goal 2: Enhance existing or design new policies that will reduce the potential damaging effects of hazards without hindering other community goals through punitive constraints.
Applicable Objective Statement:	Objective 2.4 Increase the amount and range of community severe weather/ tornado community shelters and private and/or public safe rooms throughout the County.
Estimated Cost:	$800,000
Benefits:	More saferooms can save lives.
Plan for Implementation	
Responsible Organization/Department:	City Administration
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	Mitigation Grants
Local Planning Mechanisms to be Used in Implementation, if any:	City Administration & Emergency Operations Plans
Progress Report	
Action Status	continue
Report of Progress	Community saferoom at Liberal school is in progress with FEMA funding and Bond issue approved.

Action Worksheet	
Name of Jurisdiction:	Liberal
Risk / Vulnerability	
Problem being Mitigated:	Storm sirens needed.
Hazard(s) Addressed:	Tornado
Action or Project	
Action/Project Number:	Li 3.1.1
Name of Action or Project:	County wide warning system
Action or Project Description:	Increase & Monitor Warning System coverage to the most feasible extent.
Applicable Goal Statement:	Goal 3: Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.
Applicable Objective Statement:	Objective 3.1: Maximize the use of available hazard mitigation grant programs to protect the most vulnerable populations and structures.
Estimated Cost:	$25,000 siren
Benefits:	A properly maintained warning systems can save lives.
Plan for Implementation	
Responsible Organization/Department:	City Emergency Management
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	General budget
Local Planning Mechanisms to be Used in Implementation, if any:	City Administration & Emergency Operations Plans
Progress Report	
Action Status	Continue
Report of Progress	City has 2 sirens with capability to active manually. Monitored monthly.

Action Worksheet	
Name of Jurisdiction:	Liberal
Risk / Vulnerability	
Problem being Mitigated:	Flooding creates hazardous conditions.
Hazard(s) Addressed:	Flood
Action or Project	
Action/Project Number:	Li 3.1.2
Name of Action or Project:	Stormwater drainage
Action or Project Description:	Seek funding to complete stormwater drainage study/plan.
Applicable Goal Statement:	Goal 3: Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.
Applicable Objective Statement:	Objective 3.1: Maximize the use of available hazard mitigation grant programs to protect the most vulnerable populations and structures.
Estimated Cost:	unknown
Benefits:	Reduce flood hazards due to insufficient stormwater infrastructure.
Plan for Implementation	
Responsible Organization/Department:	City administration
Action/Project Priority:	Low
Timeline for Completion:	Ongoing
Potential Fund Sources:	General budget and grants
Local Planning Mechanisms to be Used in Implementation, if any:	City Council Meetings
Progress Report	
Action Status	Continue
Report of Progress	No progress, lack of funding.

Action Worksheet	
Name of Jurisdiction:	Liberal
Risk / Vulnerability	
Problem being Mitigated:	No funding available for public facilities and infrastructure damaged by natural hazards.
Hazard(s) Addressed:	All hazards
Action or Project	
Action/Project Number:	Li 3.3.1
Name of Action or Project:	Reserve Funding
Action or Project Description:	Establish a local reserve fund for repairing and/ or incorporating hazard mitigation measures for public facilities and infrastructure damaged by natural hazards.
Applicable Goal Statement:	Goal 3: Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.
Applicable Objective Statement:	Objective 3.3 Ensure that all vital/ critical facilities are protected from the effects of natural hazards to the maximum extent possible.
Estimated Cost:	$400,000
Benefits:	Help fund mitigation costs.
Plan for Implementation	
Responsible Organization/Department:	City council
Action/Project Priority:	High
Timeline for Completion:	ongoing
Potential Fund Sources:	CD's
Local Planning Mechanisms to be Used in Implementation, if any:	City Council Meetings
Progress Report	
Action Status	Continue
Report of Progress	City has $100,000 reserve fund for each utility (electric, water, sewer, gas). Reserve fund to be used for mitigation and post-disaster repairs.

Action Worksheet	
Name of Jurisdiction:	Liberal
Risk / Vulnerability	
Problem being Mitigated:	Maintenance/mitigation of city buildings and infrastructure.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	Li 3.3.2
Name of Action or Project:	Key Facilities
Action or Project Description:	Identify at risk key facilities and execute the potential mitigation techniques for protecting each facility to the maximum extent possible.
Applicable Goal Statement:	Goal 3: Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.
Applicable Objective Statement:	Objective 3.3: Ensure that all vital/ critical facilities are protected from the effects of natural hazards to the maximum extent possible.
Estimated Cost:	unknown
Benefits:	Protect city infrastructure
Plan for Implementation	
Responsible Organization/Department:	City administration
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	General budget
Local Planning Mechanisms to be Used in Implementation, if any:	City Council Meetings
Progress Report	
Action Status	Continue
Report of Progress	City has generator available for back-up power to water and lift station.

Mindenmines 2018 Mitigation Action Plan

Action Worksheet	
Name of Jurisdiction:	City of Mindenmines
Risk / Vulnerability	
Problem being Mitigated:	No county wide Hazard Mitigation Committee
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	M 1.1.1
Name of Action or Project:	Countywide hazard Mitigation committee.
Action or Project Description:	Barton County has an active Local Emergency Planning Committee (LEPC) that will act as the Countywide Hazard Mitigation Committee to coordinate and prioritize goals, objectives, and actions identified in this plan and its subsequent updates. All jurisdictions should designate a representative to participate on the LEPC.
Applicable Goal Statement	Goal 1: Increase internal capabilities to mitigate the effects of natural hazards.
Applicable Objective Statement:	Objective 1.1 Enhance capability to conduct hazard risk assessments, demonstrate funding needs, and track mitigation activities throughout the county.
Estimated Cost:	0
Benefits:	Existing representation of emergency personnel & jurisdictions.
Plan for Implementation	
Responsible Organization/Department:	City Administration Planning
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	General budget
Local Planning Mechanisms to be Used in Implementation, if any:	LEPC
Progress Report	
Action Status	Continue, modified
Report of Progress	Meet quarterly to monitor and review issues and events within our county.

Action Worksheet	
Name of Jurisdiction:	Mindenmines
Risk / Vulnerability	
Problem being Mitigated:	Availability of equipment during disaster.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	M 1.2.1
Name of Action or Project:	Inventory emergency services and equipment.
Action or Project Description:	Participate in the inventory survey for the county's emergency response services to identify any existing needs or shortfalls in terms of personnel, equipment or required resources.
Applicable Goal Statement	Goal 1: Increase internal capabilities to mitigate the effects of natural hazards.
Applicable Objective Statement:	Objective 1.2 Ensure that current emergency services are adequate to protect public health and safety.
Estimated Cost:	0
Benefits:	24/7 resource listing is beneficial because having the right resources and knowing what resources are available can help mitigate property damage, injury, and death during a disaster.
Plan for Implementation	
Responsible Organization/Department:	City Administration
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	General budget
Local Planning Mechanisms to be Used in Implementation, if any:	City Administration & Emergency Operations Plans
Progress Report	
Action Status	Continue
Report of Progress	City participates and coordinates with county inventory by providing information to county emergency management.

Action Worksheet	
Name of Jurisdiction:	Mindenmines
Risk / Vulnerability	
Problem being Mitigated:	A need for more saferooms was seen in this area after the 2011 Joplin Tornado.
Hazard(s) Addressed:	Tornado
Action or Project	
Action/Project Number:	M 2.4.1
Name of Action or Project:	Saferooms
Action or Project Description:	Ensure all residents have access to a saferoom or storm shelter during a tornado.
Applicable Goal Statement:	Goal 2: Enhance existing or design new policies that will reduce the potential damaging effects of hazards without hindering other community goals through punitive constraints.
Applicable Objective Statement:	Objective 2.4 Increase the amount and range of community severe weather/ tornado community shelters and private and/or public safe rooms throughout the County.
Estimated Cost:	$800,000
Benefits:	More saferooms can save lives.
Plan for Implementation	
Responsible Organization/Department:	City administration
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	Mitigation Grants
Local Planning Mechanisms to be Used in Implementation, if any:	City Administration & Emergency Operations Plans
Progress Report	
Action Status	Continue
Report of Progress	No progress

Action Worksheet	
Name of Jurisdiction:	Mindenmines
Risk / Vulnerability	
Problem being Mitigated:	Storm sirens
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	M 3.1.1
Name of Action or Project:	County wide warning system
Action or Project Description:	Increase & Monitor Warning System coverage to the most feasible extent.
Applicable Goal Statement	Goal 3 Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.
Applicable Objective Statement:	Objective 3.1 Maximize the use of available hazard mitigation grant programs to protect the most vulnerable populations and structures.
Estimated Cost:	$25,000 siren
Benefits:	A properly maintained warning systems can save lives.
Plan for Implementation	
Responsible Organization/Department:	City Administration
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	N/A
Local Planning Mechanisms to be Used in Implementation, if any:	City Administration & Emergency Operations Plans
Progress Report	
Action Status	Continue
Report of Progress	Mindenmines has added an extra tornado siren provided by county. Also has siren owned by city. Monitor sirens monthly.

Action Worksheet	
Name of Jurisdiction:	Mindenmines
Risk / Vulnerability	
Problem being Mitigated:	Poor storm water drainage
Hazard(s) Addressed:	Flood
Action or Project	
Action/Project Number:	Minden 3.1.2
Name of Action or Project:	Storm water study/plan
Action or Project Description:	Seek funding to complete a storm water drainage study and maintenance of stormwater drain
Applicable Goal Statement	Goal 3 Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.
Applicable Objective Statement:	Objective 3.1 Maximize the use of available hazard mitigation grant programs to protect the most vulnerable populations and structures.
Estimated Cost:	Unknown/varies
Benefits:	Reduce flood hazards due to insufficient stormwater infrastructure.
Plan for Implementation	
Responsible Organization/Department:	City Administration
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	General budget/grants
Local Planning Mechanisms to be Used in Implementation, if any:	City administration planning
Progress Report	
Action Status	Continue, modified
Report of Progress	City cleans debris from ditches and pipes as needed.

Action Worksheet	
Name of Jurisdiction:	Mindenmines
Risk / Vulnerability	
Problem being Mitigated:	No funding available for public facilities and infrastructure damaged by natural hazards.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	Minden 3.3.1
Name of Action or Project:	Reserve funding
Action or Project Description:	Establish a local reserve fund for repairing and/ or incorporating hazard mitigation measures for public facilities and infrastructure damaged by natural hazards.
Applicable Goal Statement	Goal 3 Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.
Applicable Objective Statement:	Objective 3.3 Ensure that all vital/ critical facilities are protected from the effects of natural hazards to the maximum extent possible.
Estimated Cost:	unknown
Benefits:	Help fund mitigation costs.
Plan for Implementation	
Responsible Organization/Department:	City Administration
Action/Project Priority:	Medium
Timeline for Completion:	Ongoing
Potential Fund Sources:	unknown
Local Planning Mechanisms to be Used in Implementation, if any:	City administration planning
Progress Report	
Action Status	Continue, modified
Report of Progress	No progress, lack of funding. Mindenmines operates mostly on utility bills. Reserve funding is not a term Mindenmines is familiar with.

Action Worksheet	
Name of Jurisdiction:	Mindenmines
Risk / Vulnerability	
Problem being Mitigated:	Protect key facilities from hazard conditions
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	Minden 3.3.2
Name of Action or Project:	Key Facilities
Action or Project Description:	Identify at risk key facilities and execute the potential mitigation techniques for protecting each facility to the maximum extent possible.
Applicable Goal Statement	Goal 3 Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.
Applicable Objective Statement:	Objective 3.3 Ensure that all vital/ critical facilities are protected from the effects of natural hazards to the maximum extent possible.
Estimated Cost:	varies
Benefits:	Protect city infrastructure
Plan for Implementation	
Responsible Organization/Department:	City Administration
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	unknown
Local Planning Mechanisms to be Used in Implementation, if any:	City Administration & Emergency Operations Plans
Progress Report	
Action Status	Continue
Report of Progress	City has generators for back-up power to water plant and lift station.

Lamar R-1 School District 2018 Mitigation Action Plan

Action Worksheet	
Name of Jurisdiction:	Lamar R-1 School District
Risk / Vulnerability	
Problem being Mitigated:	No county wide Hazard Mitigation Committee.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	Sch 1.1.1
Name of Action or Project:	Countywide hazard Mitigation committee.
Action or Project Description:	Barton County has an active Local Emergency Planning Committee (LEPC) that will act as the Countywide Hazard Mitigation Committee to coordinate and prioritize goals, objectives, and actions identified in this plan and its subsequent updates. All school districts should designate a representative to participate on the LEPC.
Applicable Goal Statement	Goal 1: Increase internal capabilities to mitigate the effects of natural hazards.
Applicable Objective Statement:	Objective 1.1 Enhance capability to conduct hazard risk assessments, demonstrate funding needs, and track mitigation activities throughout the county.
Estimated Cost:	$0
Benefits:	Existing representation of emergency personnel & jurisdictions.
Plan for Implementation	
Responsible Organization/Department:	School Superintendents
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	Existing Emergency Management Budget
Local Planning Mechanisms to be Used in Implementation, if any:	Local Emergency Operations Plan
Progress Report	
Action Status	Continue
Report of Progress	Meet quarterly to monitor and review issues and events within our county.

Action Worksheet	
Name of Jurisdiction:	Lamar R-1 School District
Risk / Vulnerability	
Problem being Mitigated:	A need for more saferooms was seen in this area after the 2011 Joplin Tornado.
Hazard(s) Addressed:	Tornado
Action or Project	
Action/Project Number:	Sch 2.4.1
Name of Action or Project:	Saferooms
Action or Project Description:	Ensure all students and staff have a safe place to go by constructing new FEMA approved saferooms when financially feasible.
Applicable Goal Statement:	Goal 2: Enhance existing or design new policies that will reduce the potential damaging effects of hazards without hindering other community goals through punitive constraints.
Applicable Objective Statement:	Objective 2.4 Increase the amount and range of community severe weather/ tornado community shelters and private and/or public safe rooms throughout the County.
Estimated Cost:	$800,000
Benefits:	More saferooms can save lives.
Plan for Implementation	
Responsible Organization/Department:	School Superintendents.
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	Mitigation Grants
Local Planning Mechanisms to be Used in Implementation, if any:	City Administration & Emergency Operations Plans
Progress Report	
Action Status	continue
Report of Progress	Safe room has been built in Lamar School system within the last 5 yrs. Liberal school has been approved for a FEMA grant to construct saferoom at High School campus.

Action Worksheet	
Name of Jurisdiction:	Lamar R-1 School District
Risk / Vulnerability	
Problem being Mitigated:	Protect key facilities from hazard conditions
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	Sch 3.3.1
Name of Action or Project:	Key Facilities
Action or Project Description:	Identify at risk key facilities and execute the potential mitigation techniques for protecting each facility to the maximum extent possible.
Applicable Goal Statement:	Goal 3: Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.
Applicable Objective Statement:	Objective 3.3: Ensure that all vital/ critical facilities are protected from the effects of natural hazards to the maximum extent possible.
Estimated Cost:	unknown
Benefits:	Protect school facilities.
Plan for Implementation	
Responsible Organization/Department:	School superintendents
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	General budget
Local Planning Mechanisms to be Used in Implementation, if any:	School board/LEPC
Progress Report	
Action Status	Continue
Report of Progress	Schools work with cities and county resources to protect buildings. All schools have early warning systems.

Action Worksheet	
Name of Jurisdiction:	Liberal R-2 School District
Risk / Vulnerability	
Problem being Mitigated:	No county wide Hazard Mitigation Committee.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	Sch 1.1.1
Name of Action or Project:	Countywide hazard Mitigation committee.
Action or Project Description:	Barton County has an active Local Emergency Planning Committee (LEPC) that will act as the Countywide Hazard Mitigation Committee to coordinate and prioritize goals, objectives, and actions identified in this plan and its subsequent updates. All school districts should designate a representative to participate on the LEPC.
Applicable Goal Statement	Goal 1: Increase internal capabilities to mitigate the effects of natural hazards.
Applicable Objective Statement:	Objective 1.1 Enhance capability to conduct hazard risk assessments, demonstrate funding needs, and track mitigation activities throughout the county.
Estimated Cost:	$0
Benefits:	Existing representation of emergency personnel & jurisdictions.
Plan for Implementation	
Responsible Organization/Department:	School Superintendents
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	Existing Emergency Management Budget
Local Planning Mechanisms to be Used in Implementation, if any:	Local Emergency Operations Plan
Progress Report	
Action Status	Continue
Report of Progress	Meet quarterly to monitor and review issues and events within our county.

Action Worksheet	
Name of Jurisdiction:	Liberal R-2 School District
Risk / Vulnerability	
Problem being Mitigated:	A need for more saferooms was seen in this area after the 2011 Joplin Tornado.
Hazard(s) Addressed:	Tornado
Action or Project	
Action/Project Number:	Sch 2.4.1
Name of Action or Project:	Saferooms
Action or Project Description:	Ensure all students and staff have a safe place to go by constructing new FEMA approved saferooms when financially feasible.
Applicable Goal Statement:	Goal 2: Enhance existing or design new policies that will reduce the potential damaging effects of hazards without hindering other community goals through punitive constraints.
Applicable Objective Statement:	Objective 2.4 Increase the amount and range of community severe weather/ tornado community shelters and private and/or public safe rooms throughout the County.
Estimated Cost:	$800,000
Benefits:	More saferooms can save lives.
Plan for Implementation	
Responsible Organization/Department:	School Superintendents.
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	Mitigation Grants
Local Planning Mechanisms to be Used in Implementation, if any:	City Administration & Emergency Operations Plans
Progress Report	
Action Status	continue
Report of Progress	Safe room has been built in Lamar School system within the last 5 yrs. Liberal school has been approved for a FEMA grant to construct saferoom at High School campus.

Action Worksheet	
Name of Jurisdiction:	Lamar R-2 School District
Risk / Vulnerability	
Problem being Mitigated:	Protect key facilities from hazard conditions
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	Sch 3.3.1
Name of Action or Project:	Key Facilities
Action or Project Description:	Identify at risk key facilities and execute the potential mitigation techniques for protecting each facility to the maximum extent possible.
Applicable Goal Statement:	Goal 3: Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.
Applicable Objective Statement:	Objective 3.3: Ensure that all vital/ critical facilities are protected from the effects of natural hazards to the maximum extent possible.
Estimated Cost:	unknown
Benefits:	Protect school facilities.
Plan for Implementation	
Responsible Organization/Department:	School superintendents
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	General budget
Local Planning Mechanisms to be Used in Implementation, if any:	School Board/LEPC
Progress Report	
Action Status	Continue
Report of Progress	Schools work with cities and county resources to protect buildings. All schools have early warning systems.

Golden City R-3 School District 2018 Mitigation Action Plan

Action Worksheet	
Name of Jurisdiction:	Liberal R-2 School District
Risk / Vulnerability	
Problem being Mitigated:	No county wide Hazard Mitigation Committee.
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	Sch 1.1.1
Name of Action or Project:	Countywide hazard Mitigation committee.
Action or Project Description:	Barton County has an active Local Emergency Planning Committee (LEPC) that will act as the Countywide Hazard Mitigation Committee to coordinate and prioritize goals, objectives, and actions identified in this plan and its subsequent updates. All school districts should designate a representative to participate on the LEPC.
Applicable Goal Statement	Goal 1: Increase internal capabilities to mitigate the effects of natural hazards.
Applicable Objective Statement:	Objective 1.1 Enhance capability to conduct hazard risk assessments, demonstrate funding needs, and track mitigation activities throughout the county.
Estimated Cost:	$0
Benefits:	Existing representation of emergency personnel & jurisdictions.
Plan for Implementation	
Responsible Organization/Department:	School Superintendents
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	Existing Emergency Management Budget
Local Planning Mechanisms to be Used in Implementation, if any:	Local Emergency Operations Plan
Progress Report	
Action Status	Continue
Report of Progress	Meet quarterly to monitor and review issues and events within our county.

Action Worksheet	
Name of Jurisdiction:	Golden City R-3 School District
Risk / Vulnerability	
Problem being Mitigated:	A need for more saferooms was seen in this area after the 2011 Joplin Tornado.
Hazard(s) Addressed:	Tornado
Action or Project	
Action/Project Number:	Sch 2.4.1
Name of Action or Project:	Saferooms
Action or Project Description:	Ensure all students and staff have a safe place to go by constructing new FEMA approved saferooms when financially feasible.
Applicable Goal Statement:	Goal 2: Enhance existing or design new policies that will reduce the potential damaging effects of hazards without hindering other community goals through punitive constraints.
Applicable Objective Statement:	Objective 2.4 Increase the amount and range of community severe weather/ tornado community shelters and private and/or public safe rooms throughout the County.
Estimated Cost:	$800,000
Benefits:	More saferooms can save lives.
Plan for Implementation	
Responsible Organization/Department:	School Superintendents.
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	Mitigation Grants
Local Planning Mechanisms to be Used in Implementation, if any:	City Administration & Emergency Operations Plans
Progress Report	
Action Status	continue
Report of Progress	Safe room has been built in Lamar School system within the last 5 yrs. Liberal school has been approved for a FEMA grant to construct saferoom at High School campus.

Action Worksheet	
Name of Jurisdiction:	Golden City R-3 School District
Risk / Vulnerability	
Problem being Mitigated:	Protect key facilities from hazard conditions
Hazard(s) Addressed:	All Hazards
Action or Project	
Action/Project Number:	Sch 3.3.1
Name of Action or Project:	Key Facilities
Action or Project Description:	Identify at risk key facilities and execute the potential mitigation techniques for protecting each facility to the maximum extent possible.
Applicable Goal Statement:	Goal 3: Protect Barton County's most vulnerable populations, buildings, and critical facilities through the implementation of cost effective and technically feasible mitigation projects.
Applicable Objective Statement:	Objective 3.3: Ensure that all vital/ critical facilities are protected from the effects of natural hazards to the maximum extent possible.
Estimated Cost:	unknown
Benefits:	Protect school facilities.
Plan for Implementation	
Responsible Organization/Department:	School superintendents
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	General budget
Local Planning Mechanisms to be Used in Implementation, if any:	School Board/LEPC
Progress Report	
Action Status	Continue
Report of Progress	Schools work with cities and county resources to protect buildings. All schools have early warning systems.

5 PLAN MAINTENANCE PROCESS

5 PLAN MAINTENANCE PROCESS 5.1

5.1 Monitoring, Evaluating, and Updating the Plan 5.1

5.1.1 Responsibility for Plan Maintenance 5.5.52

5.1.3 Plan Maintenance Process 5.2

5.2 Incorporation into Existing Planning Mechanisms 5.3

5.3 Continued Public Involvement 5.4

This chapter provides an overview of the overall strategy for plan maintenance and outlines the method and schedule for monitoring, updating and evaluating the plan. The chapter also discusses incorporating the plan into existing planning mechanisms and how to address continued public involvement.

5.1 Monitoring, Evaluating, and Updating the Plan

44 CFR Requirement 201.6(c)(4): The plan maintenance process shall include a section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.

5.1.1 Responsibility for Plan Maintenance

The MPC is not a standing committee, with oversight by a responsible agency or elected body. Many MPC representatives and stakeholders are represented on the Local Emergency Planning Committee (LEPC) as well as several other committees and groups in Barton County.
The Local Emergency Operations Plan (LEOP) is developed and maintained by the Emergency Management Director, as delegated by the County Commission. As such, the County Emergency Management Director (EMD) will now be responsible for overseeing the plan monitoring, evaluation and maintenance; however, it will be up to the County Commission, the Office of Emergency Management, and the local jurisdictions to carry out the goals and objectives outlined in the plan. Maintenance will involve agreement of the participating jurisdictions, including school and special districts, to:

- Meet annually, and after a disaster event, to monitor and evaluate the implementation of the plan;
- Act as a forum for hazard mitigation issues;
- Disseminate hazard mitigation ideas and activities to all participants;
- Pursue the implementation of high priority, low- or no-cost recommended actions;
- Maintain vigilant monitoring of multi-objective, cost-share, and other funding opportunities to help the community implement the plan's recommended actions for which no current funding exists;

- Monitor and assist in implementation and update of this plan;
- Keep the concept of mitigation in the forefront of community decision making by identifying plan recommendations when other community goals, plans, and activities overlap, influence, or directly affect increased community vulnerability to disasters;
- Report on plan progress and recommended changes to the County Board of Supervisors and governing bodies of participating jurisdictions; and
- Inform and solicit input from the public.

The LEPC is an advisory body and can only make recommendations to county, city, town, or district elected officials. Its primary duty is to evaluate hazards and ideas to mitigate. They are not responsible for implementing mitigation strategies in the county. Responsibility lies with the county commission, the Office of Emergency Management, and local governments. The EMD will assist in coordinating with local jurisdictions to review and promote mitigation proposals, listen to stakeholder concerns about hazard mitigation, pass concerns on to appropriate entities, and post relevant information in areas accessible to the public.

5.1.2 Plan Maintenance Schedule

The EMD will facilitate annual meetings and after a state or federally declared hazard event as appropriate to monitor progress and update the mitigation strategy. The Barton County EMD will be responsible for initiating the plan reviews and will invite members of the LEPC and jurisdictions to the meeting.

In coordination with all participating jurisdictions, a five-year written update of the plan will be submitted to the Missouri State Emergency Management Agency (SEMA) and FEMA Region VII per Requirement §201.6(c)(4)(i) of the Disaster Mitigation Act of 2000, unless disaster or other circumstances (e.g., changing regulations) require a change to this schedule.

5.1.3 Plan Maintenance Process

Progress on the proposed actions can be monitored by evaluating changes in vulnerabilities identified in the plan. The MPC (or other designated responsible entity) during the annual meeting should review changes in vulnerability identified as follows:

- Decreased vulnerability as a result of implementing recommended actions,
- Increased vulnerability as a result of failed or ineffective mitigation actions,
- Increased vulnerability due to hazard events, and/or
- Increased vulnerability as a result of new development (and/or annexation).

Future 5-year updates to this plan will include the following activities:

- Consideration of changes in vulnerability due to action implementation,
- Documentation of success stories where mitigation efforts have proven effective,
- Documentation of unsuccessful mitigation actions and why the actions were not effective,
- Documentation of previously overlooked hazard events that may have occurred since the previous plan approval,
- Incorporation of new data or studies with information on hazard risks,

- Incorporation of new capabilities or changes in capabilities,
- Incorporation of growth data and changes to inventories, and
- Incorporation of ideas for new actions and changes in action prioritization.

In order to best evaluate any changes in vulnerability as a result of plan implementation, the participating jurisdictions will adopt the following process:

- Each proposed action in the plan identified an individual, office, or agency responsible for action implementation. This entity will track and report on an annual basis to the county EMD on action status. The entity will provide input on whether the action as implemented meets the defined objectives and is likely to be successful in reducing risk.
- If the action does not meet identified objectives, the jurisdictional representative member will determine necessary remedial action, making any required modifications to the plan.

Changes will be made to the plan to remedy actions that have failed or are not considered feasible. Feasibility will be determined after a review of action consistency with established criteria, time frame, community priorities, and/or funding resources. Actions that were not ranked high but were identified as potential mitigation activities will be reviewed as well during the monitoring of this plan. Updating of the plan will be accomplished by written changes and submissions, as the EMD deems appropriate and necessary. Changes will be approved by the Barton County Commission and the governing boards of the other participating jurisdictions.

5.2 Incorporation into Existing Planning Mechanisms

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

Where possible, plan participants, including school and special districts, will use existing plans and/or programs to implement hazard mitigation actions. Those existing plans and programs were described in Section 2 of this plan. Based on the capability assessments of the participating jurisdictions, communities in Barton County will continue to plan and implement programs to reduce losses to life and property from hazards. This plan builds upon the momentum developed through previous and related planning efforts and mitigation programs and recommends implementing actions, where possible, through the following plans:

- General or master plans of participating jurisdictions;
- Ordinances of participating jurisdictions;
- Barton County Emergency Operations Plan;
- Capital improvement plans and budgets;
- Other community plans within the County, such as water conservation plans, storm water management plans, and parks and recreation plans;
- School and Special District Plans and budgets; and
- Other plans and policies outlined in the capability assessment sections for each jurisdiction in Chapter 2 of this plan.

Jurisdictional representatives involved in updating these existing planning mechanisms will be responsible for integrating the findings and actions of the mitigation plan, as appropriate. The EMD is also responsible for monitoring this integration and incorporation of the appropriate information into the five-year update of the multi-jurisdictional hazard mitigation plan.

Additionally, after the annual review of the Hazard Mitigation Plan, the Barton County Emergency Management Director will provide the updated Mitigation Strategy with current status of each mitigation action to the County Commission as well as all Mayors, City Clerks, and School District Superintendents. The Emergency Manager Director will request that the mitigation strategy be incorporated, where appropriate, in other planning mechanisms. This has not been done previously as it was not emphasized and now is the responsibility of the Emergency Manager Director. Currently, the Harry S Truman Coordinating Council is the Regional Planning Council (RPC) responsible for the 5-year update. We do not foresee this changing.

Below lists the planning mechanisms by jurisdiction into which the Hazard Mitigation Plan will be integrated.

Table 5.1 Planning Mechanisms Identified for Integration of Hazard Mitigation Plan

Jurisdiction	Planning Mechanisms	Integration Process for Previous Plan	Integration Process for Current Plan
Unincorporated Barton County	County LEOP	N/A	LEPC finalizing now for Commission LEOP
Golden City	County LEOP	N/A	Finalizing LEOP now for Council Adoption
Lamar	Comprehensive Plan	N/A	P/Z will include in 2020 Comp Plan
Lamar Heights	County LEPC	N/A	Village Board will incorporate into City Mitigation Plan
Liberal	City Master Plan	N/A	City will include in 2019 city master planning.
Mindenmines	City Master Plan	N/A	City will incorporate into Master Plan
Lamar R-1 School District	Master Plan	N/A	School Board will incorporate in Master Plan
Liberal R-2 School District	Master Plan	N/A	School Board will incorporate in Master Plan
Golden City R-3 School District	Master Plan	N/A	School Board will incorporate in Master Plan

5.3 Continued Public Involvement

44 CFR Requirement §201.6(c)(4)(iii): [The plan maintenance process shall include a] discussion on how the community will continue public participation in the plan maintenance process.

The hazard mitigation plan update process provides an opportunity to publicize success stories resulting from the plan's implementation and seek additional public comment. Information about the annual reviews will be posted in the local newspaper as well as on the Barton County website following each annual review of the mitigation plan. When the MPC reconvenes for the five-year update, it will coordinate with all stakeholders participating in the planning process. Included in this group will be those who joined the MPC after the initial effort to update and revise the plan. Public notice will be posted and public participation will be actively solicited, at a minimum, through available website postings and press releases to local media outlets, primarily newspapers.

Appendix A: References

FEMA Flood Insurance Study: https://msc.fema.gov/portal

Environmental Protection Agency Website for watershed details, http://cfpub.epa.gov/surf/locate/index.cfm

National Oceanic and Atmospheric Administration, National Centers for environmental Information: https://www.ncdc.noaa.gov/monitoring-references/maps/us-climate-regions.php

U.S. Climate Data Center, http://www.usclimatedata.com/climate/lamar/missouri/united-states/usmo0493

High Plains Regional Climate Center: http://www.hprcc.unl.edu/data/historical/index.php?state=mo&action=select_state&submit=Select+State

Missouri Historical Agricultural Weather Database, University of Missouri Extension, http://agebb.missouri.edu/weather/history/index.asp

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

U.S. Bureau of Census, 2010 Census, 2011-2015 American Community Survey 5-Year Estimates

U.S. Census Bureau, American Factfinder, http://factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t

U.S. Census Bureau Geography Area Series: 2012 County Business Patterns

USDA Census of Agriculture 2012, http://www.agcensus.usda.gov/Publications/2012/Full_Report/Census_by_State/Missouri/index.asp

Missouri State Emergency Management Agency, https:/www.fema.gov/openfema-dataset-hazard-mitigation-grants-v1

Barton County Hazard Mitigation Plan 2013

Federal Emergency Management Agency (FEMA)

Missouri Department of Natural Resources (MDNR)

National Drought Mitigation Center Drought Reporter

National Inventory of Dams

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

Department of Economic Development Missouri Economic Research and Information Center, Missouri Economic Research Brief Economic Contribution of Agribusiness: https://www.missourieconomy.org/pdfs/agribusiness_economic_contribution.pdf

Missouri Department of Elementary and Secondary Education, Missouri Comprehensive Data System, https://mcds.dese.mo.gov/quickfacts/Pages/District-and-School-Information.aspx

State of Missouri GIS data

Environmental Protection Agency

Flood Insurance Administration

Hazards US (HAZUS)

Missouri Department of Transportation

Missouri Department of Conservation

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 (NCEI);

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

U.S. Fish & Wildlife Service

United States Geological Survey (USGS)

Various articles and publications available on the internet

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/

Maps of effects of drought, National Drought Mitigation Center (NDMC) located at the University of Nebraska in Lincoln; http://www.drought.unl.edu/.

Historical drought impacts, National Drought Mitigation Center (NDMC) located at the University of Nebraska in Lincoln; at http://droughtreporter.unl.edu/ .

Recorded low precipitation, NOAA Regional Climate Center, (http://www.hprcc.unl.edu).
Water shortages, Missouri's Drought Response Plan, Missouri Department of Natural Resources, http://dnr.mo.gov/pubs/WR69.pdf

Populations served by groundwater by county, USGS-NWIS, http://maps.waterdata.usgs.gov/mapper/index.html

Census of Agriculture, http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_2_County_Level/Missouri/and http://www.agcensus.usda.gov/Publications/2012/Online_Resources/County_Profiles/Missouri/

USDA Risk Management Agency, Insurance Claims, http://www.rma.usda.gov/data/cause.htm

Natural Resources Defense Council, http://www.nrdc.org/globalWarming/watersustainability/

U.S. Seismic Hazard Map, United States Geological Survey, http://earthquake.usgs.gov/hazards/products/conterminous/2014/HazardMap2014_lg.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

United States Geological Survey, Did You Feel it? https://earthquake.usgs.gov/data/dyfi/

National Climatic Data Center, Storm Events Database, http://www.NCEI.noaa.gov/stormevents/

Heat Index Chart & typical health impacts from heat, National Weather Service; National Weather Service Heat Index Program, www.weather.gov/os/heat/index.shtml ;

Daily temperatures averages and extremes, High Plains Regional Climate Summary, http://www.hprcc.unl.edu/data/historical/index.php?state=ia&action=select_state&submit=Select+State;

Hyperthermia mortality, Missouri; Missouri Department of Health and Senior Service, http://health.mo.gov/living/healthcondiseases/hyperthermia/pdf/hyper1.pdf;

Hyperthermia mortality by Geographic area, Missouri Department of Health and Senior Services, http://health.mo.gov/living/healthcondiseases/hyperthermia/pdf/hyper2.pdf;

Watershed map, Environmental Protection Agency, http://cfpub.epa.gov/surf/county.cfm?fips_code=19169

FEMA Map Service Center, Digital Flood Insurance Rate Maps (DFIRM) for all jurisdictions, if available, msc.fema.gov/portal

NFIP Community Status Book, http://www.fema.gov/national-flood-insurance-program/national-flood-insurance-program-community-status-book

NFIP claims status, BureauNet, http://bsa.nfipstat.fema.gov/reports/reports.html

Flood Insurance Administration—Repetitive Loss List

National Climatic Data Center, Storm Events Database, http://www.NCEI.noaa.gov/stormevents/

USDA Risk Management Agency, Insurance Claims, http://www.rma.usda.gov/data/cause.htm

FEMA 320, Taking Shelter from the Storm, 3rd edition, http://www.weather.gov/media/bis/FEMA_SafeRoom.pdf Lightning Map, National Weather Service, http://www.lightningsafety.noaa.gov/stats/08_Vaisala_NLDN_Poster.pdf National Weather Service, http://www.lightningsafety.noaa.gov/stats/08_Vaisala_NLDN_Poster.pdf

Death and injury statistics from lightning strikes, National Weather Service.
Wind Zones in the U.S. map, FEMA, http://www.fema.gov/plan/prevent/saferoom/tsfs02_wind_zones.shtm;

Annual Windstorm Probability (65+knots) map U.S. 1980-1994, NSSL, http://www.nssl.noaa.gov/users/brooks/public_html/bigwind.gif

Hailstorm intensity scale, The Tornado and Storm Research Organization (TORRO), http://www.torro.org.uk/site/hscale.php;

USDA Risk Management Agency, Insurance Claims, http://www.rma.usda.gov/data/cause.htm
National Severe Storms Laboratory – hail map, http://www.nssl.noaa.gov/users/brooks/public_html/bighail.gif

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.NCEI.noaa.gov/stormevents/

Tornado History Project, map of tornado events, http://www.tornadohistoryproject.com/tornado/Missouri

Missouri Department of Conversation 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

Wind chill chart, National Weather Service, http://www.nws.noaa.gov/om/winter/windchill.shtml;

Average Number of House per year with Freezing Rain, American Meteorological Society. "Freezing Rain Events in the United States." http://ams.confex.com/ams/pdfpapers/71872.pdf;

USDA Risk Management Agency, Insurance Claims, http://www.rma.usda.gov/data/cause.htm

Any local Road Department data on the cost of winter storm response efforts.

National Climatic Data Center, Storm Events Database,
http://www.NCEI.noaa.gov/stormevents/

Appendix B – Planning Process

LEPC Agenda August 10, 2017

Barton County
Multi-Jurisdictional Hazard Mitigation Plan Update
Kick-off Planning Presentation
LEPC meeting August 10, 2017

Agenda

Disaster Mitigation Act of 2000 & Hazard Mitigation Planning

Grant Programs Linked to Approved Plan

New Plan Format

Planning Tasks / Multi-jurisdictional Approach

Participation Requirements

In-kind match timesheets

Public Involvement

Data Collection Questionnaires

Critical Facilities

Discussion of Hazards

Timeline

Handouts

- Hazard Mitigation Grant Program Fact Sheet
- Data Collection Questionnaires
- Timesheets
- Public Survey

LEPC minutes from August 10, 2017 – need to obtain from EMD

To	**Barton County Local Emergency Planning Committee**
From	**Heidi Scheffler, Environmental Planner** **Harry S Truman Coordinating Council**
Tel / E-mail	**417-649-6400 / hscheffler@hstcc.org**
Date	**August 16, 2017**
Subject	**Hazard Mitigation Minutes from Barton County Hazard Mitigation Planning Kickoff Meeting held at the Barton County quarterly LEPC meeting on August 10, 2017.**

This document is a record of attendance and a summary of the issues discussed during the above meeting. The presentation began with an introduction on the purpose of hazard mitigation planning, and grant programs linked to an approved plan. The hazard mitigation planning process was reviewed to include requirements for participation and public involvement and the use of data collection questionnaires and Critical Facilities Inventory. The planning committee participated in a brief discussion of the hazards that have the potential to impact Barton County. The meeting concluded with a discussion of the next steps and general timeline for the planning process. The meeting was held at the Thiebaud Auditorium located in Lamar, MO from 12:00 pm to 1:00 pm.

Attendees

See November 9, 2017 LEPC Sign-in sheet as example

Introductions

The meeting began with Tom Ryan, Barton County Emergency Management Director, discussing regular business of the LEPC. Then Heidi Scheffler, Environmental Planner with Harry S Truman Coordinating, began the Hazard Mitigation portion of the meeting by welcoming and thanking the attendees for coming and having all attendees introduce themselves and the jurisdiction or entity they were representing.

Hazard Mitigation Planning Purpose

Heidi Scheffler presented information on the purpose of Hazard Mitigation Planning and the Disaster Mitigation Act of 2000. The attendees were reminded this is an update of the Barton County Hazard Mitigation Plan, previously approved in December 2013 and expires in December 2018.

Grant Programs Linked to Approved Plan

Heidi Scheffler briefly discussed the FEMA Hazard Mitigation Assistance grants that require participation in an approved Hazard Mitigation Plan for jurisdictions to be eligible to apply. These include: Hazard Mitigation Grant Program, Pre-Disaster Mitigation Program, and Flood Mitigation Assistance Program. FEMA's Hazard Mitigation Assistance Programs Fact Sheet was handed out to provide attendees with more details.

New Plan format

Heidi Scheffler briefly discussed the new plan format that will be used for this plan update and outlined the differences between the new format and the old format. Heidi explained to the attendees that SEMA has recently come out with a new plan format including a detailed template to use on all Hazard Mitigation Plans. As a result of the new format this plan update is not as simple as editing and adding to the old plan, we are basically starting from scratch with the new format.

Planning Tasks / Multi-Jurisdictional Approach

Heidi Scheffler discussed the 9 Planning Steps for effective Hazard Mitigation Planning identified in FEMA's March 2013 *Handbook for Local Hazard Mitigation Planning*. This multi-jurisdictional approach allows for a more comprehensive risk assessment and resulting mitigation strategy for the entire planning area. The following jurisdictions have been invited to participate as "official participants" in the Barton County Multi-jurisdictional Hazard Mitigation Plan Update:

Barton County
City of Golden City
City of Lamar
City of Lamar Heights
City of Liberal
City of Mindenmines
Golden City R-3 School District
Lamar R-1 School District
Liberal R-2 School District

It was then brought to attention that the Town of Burgess is no longer an incorporated jurisdiction of Barton County, therefore will no longer be considered a potential official participant.

Participation Requirements

Heidi Scheffler also described the role of the HMPC. Each jurisdiction participating in development of the plan must meet the following minimum requirements:

1. Meeting Participation: at least 1 representative from each incorporated jurisdiction and school district should attend LEPC meeting during the Hazard Mitigation Planning Process. If a jurisdiction is unable to attend meeting, but is willing to fulfill all other requirements, then one-on-one meeting with the jurisdiction will count as meeting participation.
2. Provide data as requested.
3. Develop/update mitigation actions specific to your jurisdiction.
4. Provide comments on plan drafts as requested: Beginning with the November LEPC meeting, the plan draft will be made available for review and comments 2 weeks prior to meeting.
5. Provide Timesheets for In-Kind Match.
6. Formally adopt the mitigation plan by resolution.

Jurisdictions that choose not to participate in development of a FEMA-approved mitigation plan **will not** be eligible applicants for FEMA Hazard Mitigation Assistance Grants.

In-Kind Match and Timesheets

Heidi Scheffler described in detail the 25% local match requirement, 25% of which has already been paid in cash by Barton County leaving the remaining 75% of the local match to be accounted for through In-Kind match. Timesheets for the In-kind match need to include all time spent in meetings, email or phone conversations, collecting data, filling out worksheets, travel time & mileage, and anything else relevant to the hazard mitigation planning process. Hourly rate should be listed as the volunteer rate of $21.57 per hour, unless the individual makes more than $21.57 per hour (including benefits) then the persons actual hourly rate should be listed. Elected officials time is not applicable.

Planning for Public Involvement

The local hazard mitigation plan requirements state that the public needs to have the opportunity to comment on the plan. The public will be given two opportunities to comment on the plan, once during the drafting stage and another when the plan is complete in the final draft stage.

During the drafting stage, a public survey will be distributed to citizens throughout the county to receive input on what the communities feel are the most relevant hazards. The link to the survey will be posted on HSTCC website and Facebook page, and county and city officials will be encouraged to post the link on their websites and social media pages as well. Hard copies will also be distributed at various locations throughout the county.

When the first draft is complete and prior to plan approval, the public must be given an opportunity to review and comment on the plan. This requirement can be met by holding a public meeting, or making the plan document available and posting a public announcement in the newspaper. Heidi Scheffler asked attendees what method would work best for Barton County and what was done during the previous plan update to meet this requirement.

Mike Davis, Presiding Commissioner, responded stating that for the previous plan update brochures were offered to the public. He suggested we make the plan available to the public using brochures and newspaper announcements to inform the public. The County is also open to holding a public meeting if there is enough interest from the public. Other attendees mention that social media is also a good method to reach out to the public.

Data Collection Questionnaires

Representatives from local governments and school districts were provided with hard copies of Data Collection Questionnaires. The Data Collection Questionnaire is designed to collect information on existing capabilities within each jurisdiction to implement mitigation initiatives as well as collect information on previous hazard events. The questionnaires are different for local units of government and schools.

The attendees were asked to submit their Data Collection Questionnaires by September 15, 2017

Critical Facilities

The Data Collection Questionnaires also include an inventory of Critical Facilities. The Risk Assessment will include information on critical facilities for each jurisdiction. Heidi Scheffler discussed the different types of Critical facilities and some examples with attendees.

A GIS-based inventory of the critical facilities will be developed from information requested on the Data Collection Questionnaires as well as internet-based searches. Meeting participants were asked to identify locations of each critical facility so that a GIS-layer can be developed in order to overlay the critical facilities with the flood plain layers.

The County showed concerned about the locations of critical facilities being displayed in the hazard mitigation plan. As this is a public document, the county believes this to be a homeland security issue. Heidi Scheffler stated that critical facility locations are typically shown in hazard in mitigation plans, but if the communities are concerned about this issue, then we will work with them on a confidential basis. The locations of critical facilities still need to be collected and mapped to identify if there is an issue to with any critical facility being located inside a floodplain, but as the county has requested the locations can be kept internal and left off the final map that is displayed in the plan.

The attendees were asked to submit their Critical Facilities Inventory by September 15, 2017

Discussion/Prioritization of Hazards

Heidi Scheffler briefly discussed the hazards that will be included in the risk assessment showing the meeting attendees a comparison between the hazards included in the 2013 State plan, the 2013 Barton County Plan, and the 2018 Barton County plan. The biggest difference is that Tornadoes are now discussed as an individual hazard, whereas in the 2013 tornadoeswere included under the Thunderstorm hazard.

Next Steps/Timeline

Heidi Scheffler discussed the general timeline for completing the plan, including topics that will be discussed at each LEPC meeting.

Barton County
Multi-Jurisdictional Hazard Mitigation Plan Update
Planning Meeting #2
LEPC Meeting – November 9, 2017 at 12:00 p.m.
at Thiebaud Auditorium in Lamar Missouri

Agenda

Brief Review

Participation Requirements

Public Survey Update

Plan Update Format

Risk Assessment Update

Update Mitigation Goals

Discuss Mitigation Action Updates

Next Steps/Timeline

Barton County LEPC Meeting – March 29, 2018 at 12:00 p.m.
Multi-Jurisdictional Hazard Mitigation Plan - 2018 Update

Agenda

Progress update on first draft

Updating Mitigation Action Plans

Jurisdictional participation status

In-kind match update

Public Survey Results

Risk Assessment Summary

Appendix B: The Planning Process

LEPC Agenda's

BARTON COUNTY
EMERGENCY MANAGEMENT

Tom Ryan Director
1004 Gulf Street
Lamar, Mo. 64759
417-682-2201

LEPC MEETING
Aug 10, 2017

Tom Ryan called to order:

Opening Prayer: Jesse Irwin

Minutes from Last meeting:

Treasurers Report:

Old Business:

a) Web EOC
b) NIMS 300-400 Class BCHD – Joel Dermont
c) SEMA 2017 Conference @ Tan-Tar-A Aug 22-25
http://www.cvent.com/events/29th-annual-missouri-emergency-management-conference/event-summary-202eca58317146ec86bc8d431bc29a27.aspx
d) Dennis Kimrey · Barton County Communications Specialist – w/ updates on units
e) Mitigation Plan update – HSTCC – Heidi Scheffler Planner

New Business:

a) Lamar Free Fair – Are you ready
b) The Great Shake Out Oct 19th WebEOC Based
c) 2017 Solar Eclipse Aug 21st 11:45 – 14:40 – 13:13
d) Barton County Rescue and Recovery – Triathlon
e) BC Communication Trailer / Repeater Tower at Triathlon

Next meeting will be Thursday, November 09, 2017

BARTON COUNTY
EMERGENCY MANAGEMENT

Tom Ryan Director
1004 Gulf Street
Lamar, Mo. 64759
417-682-2201

LEPC MEETING
Nov 09, 2017

Tom Ryan called to order:

Opening Prayer: Jesse Irwin

Minutes from Last meeting:

Treasurers Report:

Old Business:

a) Web EOC
b) Alternate EOC Exercise Oct 26
c) NIMS 300-400 Class BCHD – Joel Dermont
d) BC OEM Warehouse relocated

New Business:

a) BC Repeater Trailer RSHOC adding
b) NWS Spotter Class 2018 Jan 24th or 31st 6:30 - 8:30
c) FEMA Developing plan for EOP for Churches
d) Mitigation Plan update – HSTCC – Heidi Scheffler Planner
e) Training Mass Fatalities Planning & Response for Rural USA March 08 Jeff City
Training - NIMS 300 April 10-12, NIMS 400 June 13-14 Springfield
Training – Points of Dispensing - Bolivar Health Dept. Nov 29

Next meeting will be Thursday, February 09, 2017

BARTON COUNTY
EMERGENCY MANAGEMENT

Tom Ryan Director
1004 Gulf Street
Lamar, Mo. 64759
417-682-2201

LEPC MEETING
March 29, 2018

Meeting called to order: Tom Ryan

Opening Prayer: Jesse Irwin

Minutes from Last meeting:

Treasurers Report:

Old Business:

a) NIMS 300-400 Class BCHD – Joel Dermont – Also Joplin/Neosho
b) WebEOC: can you sign in, any updates? List of staff, questions- Denise Kimrey
c) Mitigation Plan update – HSTCC – Heidi Scheffler Planner
d) Elliott Names badges - update
e) NWS – DSS Service – weather monitoring for special events
www.weather.gov/sgf/eventsupport

New Business:

a) Elliott: ID's & Scanner for meetings
b) IRIS: any issues? Changed RSS Feed – fire, severe weather, tornado ect
c) Severe Weather wk. sirens are up and working
d) NWS Spotter class tonight 18:00
e) BC Communication Trailer / Repeater Tower Duplexer RSHOC
f) TIER II Retention 3 yrs. deadline was March 01st to send in.
g) Mo Alert (RAVE Alert) Policy - Handout
h) New CEPF funding is out for 2018
i) MERC update - Handout
j) SEMA Training Jack has retired, June Simonton is taking over for now.
k) EMPG – Region D Exercise next month after SMESO meeting

Next meeting will be Thursday, May 10, 2018

BARTON COUNTY
EMERGENCY MANAGEMENT

Tom Ryan Director
1004 Gulf Street
Lamar, Mo. 64759
417-682-2201

LEPC MEETING
May 10, 2018

Meeting called to order: Tom Ryan

Opening Prayer: Jesse Irwin

Minutes from Last meeting:

Treasurers Report:

Old Business:

a) NIMS 300-400 Class BCHD – Joel Dermont
b) **WebEOC**: http://www.regiondwebeoc.org/wp/mo-reg-d-webeoc-account-request/webeoc-account-request-barton-county/
c) **WebEOC reset password site**: http://helpdesk.regiondwebeoc.org/open.php
d) Mitigation Plan update – HSTCC – Heidi Scheffler Planner

New Business:

a) **Barton Co Storm Shelter registration**
https://docs.google.com/forms/d/e/1FAIpQLSeXicj1Xs-_WGisZW4nN5sdmDfeI-e3Wbh3qOayMB1PYdewLw/viewform?formkey=dGpTV05PcEZYV0JWVXU5TG8tNGdJRXc6MQ&pli=1
b) **Barton Co Damage Report**:
https://docs.google.com/forms/d/e/1FAIpQLScxVa8gEMs8Gr7nA3TLpb5zCVAgX2zlPYshPUjzhG99MTQC1og/viewform?formkey=dHpPbG4xZ1ljY0RUSWJmeVVfQXMxWUE6MQ#gid=0
c) Reg D COAD Workshop June 7 10am – 2pm
d) American Red Cross Realignment
e) SEMA Conference Aug 21-24 Lake of Ozarks
f) Chemical Suicide for Emg Responders Newton Co
g) First Net – Update
h) AWR147 Rail Car Incident Response class
i) Four Corners Emergency Management Conference Dec 3rd – 5th Branson
j) WCEMSG Meeting in Lamar, May 24th 7pm Memorial Hall

Next meeting will be Thursday, August 9, 2018

BARTON COUNTY
EMERGENCY MANAGEMENT

Tom Ryan Director
1004 Gulf Street
Lamar, Mo. 64759
417-682-2201

LEPC MEETING
Aug 09, 2018

Meeting called to order: Tom Ryan

Opening Prayer: Jesse Irwin

Minutes from Last meeting:

Treasurers Report:

Old Business:

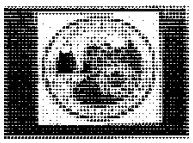
a) **WebEOC**: http://www.regiondwebeoc.org/wp/mo-reg-d-webeoc-account-request/webeoc-account-request-barton-county/
b) **WebEOC reset password site**: http://helpdesk.regiondwebeoc.org/open.php
c) Mitigation Plan update – HSTCC – Heidi Scheffler Planner

New Business:

a) Region D updates – Exercises upcoming
   - Aug 15th - 8:30 – Noon Greene Co OEM bring Laptop
   - Sept 18th – 8:30 – Noon DMACC (Monett) Full Scale Exercise
   - Oct 10th – 9:30 – 13:00 – SMESO – MoDot Sgf
b) SW Ctr for Independent Living – Shannon Porter
c) SEMA Conference Aug 21-24 Lake of Ozarks
d) 4 - Corners Emergency Management Conference Dec 3rd – 5th Branson @ Hilton

Next meeting will be Thursday, November 08, 2018

LEPC Minutes



BARTON COUNTY
EMERGENCY MANAGEMENT

Tom Ryan Director
1004 Gulf St.
Lamar, Mo. 64759
417-682-2201

LEPC MEETING
August 10, 2017

Tom Ryan called the meeting to order at 12:11 p.m. with 28 members present at the Thiebaud Meeting Room.

Kristina Crockett led the group with prayer. Introduction of those present was held.

Minutes of the June 8, 2017 meeting were passed out. Bill Rawlings motioned to approve minutes as read. Julie Stolting seconded motion and all agreed.

Treasurers Report for June and July were passed out. A balance of $3,808.11 was shown on July 31, 2017. John Davis motioned to approve Treasurer's report. Dixie Taylor seconded and all agreed.

Old Business:

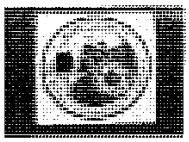
a) Web EOC update, Tom Ryan
b) Nims 300-400 update Joel Dermott
c) SEMA 2017 Conference @Tan-Tar-A Aug 22-25
d) Dennis Kimrey-Barton County Communications Specialist updates
e) Mitigation Plan update-HSTCC Heidi Scheffler Planner

New Business:

a) Lamar Free Fair-Are you ready?
b) The Great Shake Out October 19, 2017 Web EOC Based
c) 2017 solar Eclipse Aug 21st 11:45-14:40-13:13
d) Barton County Rescue and Recovery- Triathlon
e) BC Communication Trailer/Repeater Tower at Triathlon
f) Mitigation Program-Heidi Scheffler HSTCC

Motion was made by Rick Davied to adjourn meeting.
Bill Jeffries seconded and all agreed.

Next meeting will be November 9, 2017 at noon.



BARTON COUNTY
EMERGENCY MANAGEMENT

Tom Ryan Director
1100 Cherry St.
Lamar, Mo. 64759
417-682-2201

LEPC MEETING
November 9, 2017

Tom Ryan called the meeting to order at 12:09 p.m. with 32 members and present at the Thiebaud Meeting Room.

Jesse Irwin led the group with prayer. Introduction of those present was held.

Minutes of the August 10, 2017 meeting were passed out. Ben Reed motioned to approve minutes as read. Dixie Taylor seconded motion and all agreed.

Treasurers Report for August, September, and October were passed out. A balance of $3,449.11 was shown on October 31, 2017. Larry Beatty motioned to approve Treasurer's report. Bill Jeffries seconded and all agreed.

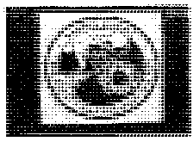
Old Business:

a) Web EOC update, Tom Ryan
b) Alternate EOC Exercise Oct 26, 2018Health Department
c) NIMS 300-400 follow up- Kaylee Timmons
d) Barton County OEM Warehouse relocated

New Business:

a) BC Repeater Trailer RSHOC adding
b) NWS Spotter Class 2018 Jan24th or 31st 6:30-8:30
c) FEMA Developing plan for EOP for Churches
d) Mitigation Plan update-HSTCC-Heidi Scheffier Planner
e) Training:
    1. Mass Fatalities, Planning & Response for Rural USA March 08 Jeff City
    2. NIMS 300 April 10-12 Springfield
    3. NIMS 400 June 13-14 Springfield
    4. Points of Dispensing-Bolivar Health Dept. Nov 29
    5. Informational Meeting on BCMH/Cox Thiebaud November 14

Motion was made by Julie Stolting to adjourn meeting. Mitch Shaw seconded and all agreed.
Next meeting will be February 9, 2017 at noon.



BARTON COUNTY
EMERGENCY MANAGEMENT

Tom Ryan Director
1004 Gulf St.
Lamar, Mo. 64759
417-682-2201

LEPC MEETING
March 29, 2018

Tom Ryan called the meeting to order at 12:09 p.m. with 26 members and present at the Thiebaud Meeting Room.

Paul Stebbins led the group with prayer. Introduction of those present was held.

Minutes of the November 9, 2017 meeting were passed out. Julie Stolting motioned to approve minutes as read. Bill Rawlings seconded motion and all agreed.

Treasurers Report for January and February were passed out. A balance of $3,014.11 was shown on February 28, 2018. Larry Beatty motioned to approve Treasurer's report. Dixie Taylor seconded and all agreed.

Old Business:

a) Nims 300-400 Class BCHD Kristi Runion
b) Web EOC can you sign in, any updates? List of staff, questions Denise Kimrey
c) Mitigation plan update-HSTCC-Heidi Scheffler Planner
d) Elliott Name Badges-update Tom
e) NWS- DSS Service-weather monitoring for special events
www.weather.gov/sgf/eventsupport

New Business:

a) Elliott: ID's & Scanner for meetings
b) IRIS: any issues? Changed RSS Feed-fire, severe weather, tornado ect.
c) Severe Weather wk. sirens are up and working
d) NWS Spotter class tonight 18:00
e) BC Communication Trailer/Repeater Tower Duplexer RSHOC
f) TIER II Retention 3 yrs. Deadline was March 1, 2018 to send in.
g) Mo Alert (RAVE Alert) Policy-Handout
h) New CEPF funding is out for 2018
i) MERC update-Handout-Julie
j) SEMA Training Jack has retired, June Simonton is taking over for now.
k) EMPG- Region D Exercise next month after SMESO meeting

Motion was made by Rusty Rives to adjourn meeting. Larry Beatty seconded and all agreed.
Next meeting will be May 10, 2018 at noon.

BARTON COUNTY
EMERGENCY MANAGEMENT

Tom Ryan Director
1100 Cherry St.
Lamar, Mo. 64759
417-682-2201

LEPC MEETING
May 10, 2018

Tom Ryan called the meeting to order at 12:12 p.m. with 21 members and present at the Thiebaud Meeting Room.

Jesse Irwin led the group with prayer. Introduction of those present was held.

Minutes of the March 29, 2018 meeting were passed out. Mike Davis motioned to approve minutes as read. Bill Rawlings seconded motion and all agreed.

Treasurers Report for March and April were passed out. A balance of $2,700.11 was shown on April 30, 2018. Julie Stolting motioned to approve Treasurer's report. Tammy Dieherra seconded and all agreed.

Old Business:

a) Nims 300-400 Class BCHD Kristi Runion
b) Web EOC http://www.regiondwebeoc.org/wp/mo-reg-d-webeoc-account-request/webeoc-account-request-barton-county/
c) WebEOC reset password site http://helpdesk.regiondwebeoc.org/open.php
d) Mitigation Plan update-HSTCC-Heidi Scheffler Planner

New Business:

a) Barton Co Storm Shelter registration https://does.google.com/forms/d/e/1FAIpQLSeXiciIXs-WGisZW4uN5sdmDfeLe3Wbh3qOayMBlPYdewLw/viewform?formkey=dG[TV05{cEZYV0JWVXU5TG8tNGdJRXc6MQ&pli=1
b) Barton Co Damage Report: http://docs.google.com/forms/d/e/1FAIpQLSexVa8gEMs8Gr7nA3TLpb5zCVApX2zPYshPUjzhG99MTQClog/viewform?formkey=dHpPbG4xZ1ljY0RUSWJmeVVfQXMxWUE6MQ#gid=0
c) Reg D COAD Workshop June 7 10am-2 pm
d) American Red Cross Realignment
e) SEMA Conference Aug 21-24 Lake of Ozarks
f) Chemical Suicide for Emg. Responders Newton Co.
g) First Net-Update
h) AWR147 Rail Car Incident Response class
i) Four Corners emergency management Conference Dec 3rd-5th Branson
j) WCEMSG Meeting in Lamar, May 24th 7pm Memorial Hall

Motion was made by Beth Harris to adjourn meeting. Jesse Irwin seconded and all agreed.
Next meeting will be August 9, 2018 at the Thiebaud Auditorium at noon.

LEPC Sign-In Sheets

BARTON COUNTY LEPC MEETING

Date: _Aug 10 2017_____

Number	Name	Ck	Organization	E-Mail	Cell #	T	Work #	T	Home #	Address	City	Zip
01	Alexander, Sandy		Lamar ACO #210	salexander@lamarmo.org	816-719-3740		417-682-3548		N/A	197 South Hwy KK	Lamar	64759
02	Baird, Jeff		MO Hwy Patrol	jndbaird@att.net	417-214-2584		N/A		417-682-6138			
03	Baker, Bev		City of Lamar	cityclerk@lamarmo.org	417-388-3223		417-682-5564		N/A			
04	Beatty, Larry	X	Lamar Fire Dept.	lcgtd41@yahoo	417-682-4696		417-682-5612		417-682-4696	1100 Broadway	Lamar	64759
05	Belcher, Jeremy			jeremybelcher850@yahoo.com	417-214-1548		417-682-5515		N/A		Lamar	64759
06	Brewer, Joe		City of Golden City Mayor	goldncty@mchsi.com	N/A		417-537-4351		N/A			
07	Brunner, Aimee		Barton Co Library				417-682-3355		417-578-8408	300 W. 10th	Lamar	64759
08	Buchanan, Paula	X	BC Health Dept.	buchup@alpha.mopublic.org	N/A		417-682-3383		N/A			
09	Calton, Lynn		City of Lamar Admin	lynncalton@ltiadon.com	417-793-2475		417-682-5564		417-682-2985			
10												
11	Cooper, Richard		Lamar Democrat	lamardemocrat@yahoo.com	N/A		417-682-5529		417-682-5637			
12	Cornell, Oliver		Lamar PD	dcornell@lamarmo.org	417-317-3967		417-682-3548		N/A	1000 Frances St.	Lamar	64759
13	Crockett, Kristina	X	Barton County Clerk	bartoncountyclerk@sbcglobal.net	417-214-1120		417-682-3529		417-682-3812			
14	Cuba, Stormy		Barton County Senior Citizens	stcitizen@sbcglobal.net			417-682-3881					
15	Curless, Nancy		Barton Chamber of Commerce	nancy@bartoncounty.com	417-262-0844		417-682-3595		417-682-5708			
16	Davied, Jeff		Liberal Fire	jeff9@live.com	417-214-0783		N/A		417-843-6708	346 NW 150th Ln	Liberal	64762
17	Davied, Rick		Liberal Fire Chief	rickster_65@hotmail.com	417-214-6703		N/A		417-843-6703	346 NW 150th Ln	Liberal	64762
18	Davis, Dustin		CPWSD #1 Rural Water	bartonpwsd@hotmail.com	417-540-3490		417-682-3401			521 NW 30th Ln	Lamar	64759
19	Davis, John		LPD	davis@lamarmo.org	417-262-0423		417-682-3546			1106 Broadway	Lamar	64759
20	Davis, Mike	X	Barton Co. Presiding	bccomm@ltiadon.com	417-214-4965		417-682-4110		417-682-5972	375 NW 20th Rd	Lamar	64759
21	Deherrera, Tammy	X	Barton Co Coroner	bartoncountycoroner@yahoo.com	417-214-2230		417-214-2075			606 Arthur Aull	Lamar	64759
22	Dermott, Dale		Barton Co Ham Radio Operator		417-262-3446		N/A				Lamar	64759
23	Dermott, Joel	X	Barton County Health Dept.	dermott1@alpha.mopublic.org			417-682-3363					
24	Endicott, Rusty		Barton Co. Electric Coop.	rendicott@bartonelectric.com	417-214-3188		417-682-5636		417-843-3188	71 W Hwy 160	Lamar	64759
25	England, Tom		BC Road & Bridge	tomcatengland@gmail.com	417-214-9208		417-682-4983		N/A	710 Hagny	Lamar	64759
26	Fast, Judy	X	Barton Co Comm Sect.	jfast@keinet.net	417-214-4628		417-682-4110		417-843-4221			
27	Fisher, Jim		Tamko (EPOCH)	jim_fisher@tamko.com	417-327-6523		417-682-9662		417-637-5346			
28	Gebelin, Mike		Mindenmines City Council	minden@pixius.net	417-842-3436		417-842-3216		417-842-3430	802 North Main St	Mindenmines	64769
29	Good, Jacob		Chief Jasper FD	jgood91@sbcglobal.net	417-338-3985							
30	Graham, Daniel		Lamar PD	dgraham@lamarmo.org	775-407-0052		417-682-3548		N/A	145 SE 30th Rd	Lamar	64759
31	Hargis, Kermit		SW MO Regional Planner	pocoe@windstream.net	417-399-1303		417-326-2489		417-326-6537	224 S Birum St	Bolivar	65613
32	Harris, Beth	X	BCMH	beth.harris@bcmh.net	417-214-6291		417-681-5148					
33	Harris, Jason		Mindenmines Fire Chief	minden@pixius.net	417-483-9247		417-842-3216		417-842-3681			
34	Harvey, William		Liberal School Superintendent	bharvey@liberal.k12.mo.us	417-214-0196		417-843-5115		417-843-5140			
35	Helms, Diane		LPD	dhelms@lamarmo.org	417-214-2629		417-682-3546			1106 Broadway	Lamar	64759
36	Hibdon, Catherine		Daniel Funeral Home/Animal S&R	chdchrist@sbcglobal.net	417-388-2563		417-682-5518			1201 Broadway	Lamar	64759
37	Hibdon, Roger		Daniel Funeral Home		417-850-1057		417-682-5518			1201 Broadway	Lamar	64759
38	Hill, Nikki		HSTCC	nhill@hstcc.org	417-699-6400					800 E. Pennell	Carl Junction	64834
Number	Name	Ck	Organization	E-Mail	Cell #	T	Work #	T	Home #	Address	City	Zip

BARTON COUNTY LEPC MEETING **Date: _Aug 10 2017_____**

40	Hunt Lisa		BCHD	lhunt@bchdhealth.com	417-262-2469		417-682-3363			103 Main St.	Golden City	64748
41	Irwin, Jesse		FCC - Ministerial Alliance	JDIrwin1964@gmail.com	417-262-3333				417-388-2025	1018 E Hwy C	Lamar	64759
42	Jeffries, Bill		Chief Sheldon Fire Dept.	sheldonfiremo@gmail.com	417-684-2746						Sheldon	
43	Jeffries, Nancy		Sheldon FD	mrsbgilly@hotmail.com	417-448-9551						Sheldon	
44	Johnson, Rick	X	Barton County Assessor		417-214-0226					110 West 1st St	Lamar	64759
45	Kelley, Joe		HSTCC	kikelley@hsstcc.org							Carl Junction	
47	Kelsey, Buddy		BC Road & Bridge		417-214-2577		417-682-4963		N/A	375 W 70th Ln	Liberal	64762
48	Kimrey, Dennis		Barton Co OEM Communications	DennisKimrey@gmail.com	417-448-7903					15403 S 1413 Rd	Nevada	64772
49	Kretschmer, Connie		Liberal Golden Homes	cmorelli@ckt.net	N/A		417-843-3215		620-347-8258			
50	Lake, Lee		Barton Co R&R	leelake@bartoncountyrescue.org	417-214-5443							
51	Lane, Shea	X	Cathlotic Charities of Southern Mo	slane@ccsomo.org	417-414-5154		417-720-4213			424 E	Springfield	65807
52	Layton, Terri		Red Cross	Teresa.Layton@Redcross.org	417-208-7280		417-624-4411		N/A	410 Jackson St.	Joplin	64801
53	Love, Martha		United Way 2-1-1	marthal@thelibrary.org	417-619-2144		417-616-0580		N/A	Library Center P O B	Springfield	65801
54	Luce, Toby		LPD	tluce@lamarmo.org	417-214-7662					1106 Broadway	Lamar	
55	Lynch, Ray	X	Public Works GoldenCity		417-576-7830		417-539-4351				Greenfield	
56												
57	Marti, Jerry		City of Lamar Heights Mayor	jmarti@pixius.net	417-483-7729		417-682-3357		417-682-3357			
58	Martin, Christine		Critters N Pals	hoss2cat@yahoo.com	417-214-1937		417-682-5335		417-682-9603			
59	Martin, Sterling	X	COAD/Farmer	N/A	417-825-0580		N/A		417-388-2594	777 NE 100th Lane	Lamar	64759
60	Maupin, Janet		Barton County Circuit Clerk	janet.maupin@courts.mo.gov	417-214-0087		417-682-4121		417-682-5764			
61	McGuire, Randy		Golden City Fire Chief	gcfd24@mchsi.com	417-262-3508		417-682-5513		417-537-9998			
62	McIntyre, Lajuana		Barton County Health Dept.	mcintl@lpha.mopublic.org	417-684-0485		417-682-3363					
63	Miller, David		American Red Cross	dl.miller@redcross.org	417-664-3373					619 N. Madison	Lebanon	65336
64	Moore, Teresa		Barton Co. Public Adm.	bartoncopa@tiadon.com	417-214-0326		417-682-5060		N/A	401 E. Central Rd	Lamar	64759
65	Pettengill, Breeyn		Golden City OEM	goldencity@mdhsi.com	417-232-4461		417-537-4351			980 W US Hwy 160	Lockwood	65682
66	Moyden, Jane		BC Health Dept.	pt@bchdhealth.com			417-682-3363					
67	Moyer, Mandy	X	Lamar R-1 School Dist.	mmoyer@lamar.k12.mo.us	573-539-8142		417-682-3527		N/A	202 W. 7th St.	Lamar	64759
68	Parker, Monte		Barton County REA	mparker@bartonelectric.com	417-214-2751		417-682-5636		417-681-5014			
69	Parrish, Barba		BC Treasurer	bparrishcolltreas@att.net	417-849-3119		417-682-5688		417-682-3425	706 Hagny	Lamar	64759
70	Peine, Brett		BCAD Director	peine-b@bartoncountyems.org	620-687-3899		417-682-3512					
71	Pettus, Bruce	X	MoDot	Bruce.Pettus@modot.mo.gov	417-766-3265		417-895-7688		N/A	1107 W Chestnut	Springfield	65801
72	Piper, Melinda		CPWSD #1 (Water)	bdcjwater@sbcglobal.net	417-214-1266		417-682-3401		417-884-5122			
73	Polnack, Glen		City of Liberal	g.polnack.cityofliberal@outlook.com			417-529-2135		417-843-2135			
74	Potter, Julie		Barton County Library	jpotter@bclib.info	417-214-0329		417-682-5355			79 NW 50th Rd	Lamar	64759
75	Pryor, Jody		MM Fire / City		620-875-6235							
76	Rawlings, Bill	X	Lamar Fire Dept Chief (Retired)	lamarfire@tiadon.com	417-214-0983		417-682-5512		417-682-5127	305 Blue Bell Terrac	Lamar	64759
77	Reed, Ben	X	District 1 Commissioner		417-214-2656							
78	Rives, Rusty	X	Chief Lamar PD	rrives@lamarmo.org	417-825-9951		417-682-3546		N/A			
80	Runion, Kristy	X	Barton Co. Health Dept.	Krunion@bchdhealth.com	417-682-1468		417-682-3363		417-537-8392	995 E. US Hwy 160	Lamar	64759
Number	Name	Ck	Organization	E-Mail	Cell #	T	Work #	T	Home #	Address	City	Zip
81	Russell, Denise	X	SEMA Area Coordinator - Reg D	denise.russell@sema.dps.mo.gov	573-821-4683							

BARTON COUNTY LEPC MEETING **Date: _Aug 10 2017_____**

82	Rutledge, Theresa		Lamar Postmaster	Teresa.a.Rutledge@usps.gov	417-840-3180		417-682-5435		417-276-4957				
83	Ryan, Shawna		LEPC / COAD / Animal S&R	lady_medic_42@yahoo.com	417-262-0344		N/A		417-682-6827	1400 Broadway St.	Lamar	64759	
84	Ryan, Tom	X	Barton County OEM	bartoncolepc@yahoo.com	417-262-0845		417-682-2201		417-682-6827	1400 Broadway St.	Lamar	64759	
85	Scheffler, Heidi	X	HSTCC	hscheffler@hstcc.org	417-434-5529		417-649-6400						
86	Schlichting, Angie		BCHD	aschlichting@bchdhealth.com	417-540-7897		417-682-5363						
87	Selvey, Lisa		Adm. Truman Healthcare	bartonadm@hotmail.com	417-214-5516		417-682-5718		N/A				
88	Shaw, Amy		BCSD Support Staff		417-262-0570						Lamar	64759	
89	Shaw, Mitch	X	Barton County Sheriff	mitchellshaw250@yahoo.com	417-214-0714		417-682-5515		417-682-2332	102 East 13th St.	Lamar	64759	
91	Shoff, Dayne	X	Lamar FD	dwdawg84@sbcglobal.net	417-682-1533		417-682-5512		417-682-2464	400 East 1st St.	Lamar	64759	
92	Stebbins, Paul	X	BCMH	pstebbins@bcmh.net	417-214-2921		417-681-5110		417-843-3622				
93	Stolting, Julie	X	American Red Cross	Julie.Stolting@redcross.org	417-529-6412		417-832-9500 x3112		417-291-2236	1545 NW Bypass	Springfield	65803	
94	Thomas, Crystal	X	Barton Co Public Adm	bartoncopublicassit@gmail.com	417-674-0931		417-682-5060		N/A	201 Bert St.	Jasper	64755	
95	Timmons, Kaylee	X	COAD Animal Unit	ktimmons@bchdhealth.com	417-214-4286		N/A		N/A	1000 Heagon St.	Lamar	64759	
96	Tucker, Jeff	X	Barton County District Two	xhog@sbcglobal.net	417-262-0316		417-682-5521		417-682-3736	202 West 2nd St.	Lamar	64759	
97	Warden, C.K.		Konantz-Warden Funeral Home	konantzwardenfh@msn.com			417-682-3344		N/A				
98													
99													
100													
103	LaFever, Patricia	X	Barton Co OEM		417-388-9708					606 Truman	Lamar	64759	
104	Overman, Patty		HSTCC										
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BARTON COUNTY LEPC MEETING Date: _Nov 09 2017_____

Number	Name	Ck	Organization	E-Mail	Cell #	T	Work #	T	Home #	Address	City	Zip
01	Alexander, Sandy		Lamar ACO #210	salexander@lamarmo.org	816-719-3740		417-682-3546		N/A	197 South Hwy KK	Lamar	64759
02	Baird, Jeff		MO Hwy Patrol	Jndbaird@att.net	417-214-2594		N/A		417-682-6139			
03	Baker, Bev		City of Lamar	cityclerk@lamarmo.org	417-388-3223		417-682-5554		N/A			
04	Beatty, Larry	X	Lamar Fire Dept.	bcad41@yahoo	417-682-4596		417-682-5512		417-682-4596	1100 Broadway	Lamar	64759
05	Belcher, Jeremy			jeremybelcher650@yahoo.com	417-214-1548		417-682-5515		N/A		Lamar	64759
06	Brewer, Joe		City of Golden City Mayor	goldnctv@mchsi.com	N/A		417-537-4351		N/A			
07	Brunner, Aimee		Barton Co Library				417-682-5355		417-576-6408	300 W. 10th	Lamar	64759
08	Buchanan, Paula		BC Health Dept.	buchup@lpha.mopublic.org	N/A		417-682-3363		N/A			
09	Calton, Lynn		City of Lamar Admin	lynncalton@tiadon.com	417-793-2475		417-682-5554		417-682-2995			
10												
11	Cooper, Richard		Lamar Democrat	lamardemocrat@yahoo.com	N/A		417-682-5529		417-682-5637			
12	Cornell, Oliver		Lamar PD	dcornell@lamarmo.org	417-317-3967		417-682-3546		N/A	1000 Frances St.	Lamar	64759
13	Crockett, Kristina	X	Barton County Clerk	bartoncountyclerk@sbcglobal.net	417-214-1120		417-682-3529		417-682-3912			
14	Cuba, Stormy		Barton County Senior Citizens	srcitizen@sprmet/cp			417-682-3881					
15	Curless, Nancy		Barton Chamber of Commerce	nancy@bartoncounty.ocm	417-262-0844		417-682-3595		417-682-5708			
16	Davied, Jeff		Liberal Fire	jeff89@live.com	417-214-0763		N/A		417-843-6706	346 NW 150th Ln	Liberal	64762
17	Davied, Rick		Liberal Fire Chief	ricskter_65@hotmail.com	417-214-6703		N/A		417-843-6703	346 NW 150th Ln	Liberal	64762
18	Davis, Dustin		CPWSD #1 Rural Water	bartonpwso@hotmail.com	417-540-3490		417-682-3401			521 NW 30th Ln	Lamar	64759
19	Davis, John		LPD	jdavis@lamarmo.org	417-262-0423		417-682-3546			1106 Broadway	Lamar	64759
20	Davis, Mike	X	Barton Co. Presiding	bccomm@tiadon.com	417-214-4965		417-682-4110		417-682-5972	375 NW 20th Rd	Lamar	64759
21	Deherrera, Tammy	X	Barton Co Coroner	bartoncountycoroner@yahoo.com	417-214-2230		417-214-2075			606 Arthur Aull	Lamar	64759
22	Dermott, Dale		Barton Co Ham Radio Operator		417-262-3446		N/A				Lamar	64759
23	Dermott, Joel	X	Barton County Health Dept.	dermott1@lpha.mopublic.org			417-682-3363					
24	Endicott, Rusty		Barton Co. Electric Coop.	rendicott@bartonelectric.com	417-214-3188		417-682-5636		417-843-3188	71 W Hwy 160	Lamar	64759
25	England, Tom		BC Road & Bridge	tomcatengland@gmail.com	417-214-9206		417-682-4963		N/A	710 Hagny	Lamar	64759
26	Fast, Judy	X	Barton Co Comm Sect.	jfast@keinet.net	417-214-4628		417-682-4110		417-843-4221			
27	Fisher, Jim		Tamko (EPOCH)	jim_fisher@tamko.com	417-327-6523		417-682-9662		417-637-5346			
28	Gebelin, Mike	X	Mindenmines City Council	minden@pixius.net	417-842-3436		417-842-3216		417-842-3430	802 North Main St	Mindenmine	64769
29	Good, Jacob	X	Chief Jasper FD	jgood91@sbcglobal.net	417-338-3995							
30	Graham, Daniel		Lamar PD	dgraham@lamarmo.org	775-407-0052		417-682-3546		N/A	145 SE 30th Rd	Lamar	64759
31	Hargis, Kermit		SW MO Regional Planner	pccoe@windstream.net	417-399-1303		417-326-2489		417-326-6537	224 S Birum St	Bolivar	65613
32	Harris, Beth	X	BCMH	beth.harris@bcmh.net	417-214-6291		417-681-5149					
33	Harris, Jason		Mindenmines Fire Chief	minden@pixius.net	417-483-9247		417-842-3216		417-842-3681			
34	Harvey, William		Liberal Schol Superintendent	bharvey@liberal.k12.mo.us	417-214-0196		417-843-5115		417-843-5140			
35	Helms, Diane		LPD	dhelms@lamarmo.org	417-214-2629		417-682-3546			1106 Broadway	Lamar	64759
36	Hibdon, Catherine		Daniel Funeral Home/Animal S&R	ch4christ@sbcglobal.net	417-388-2553		417-682-5518			1201 Broadway	Lamar	64759
37	Hibdon, Roger		Daniel Funeral Home		417-850-1057		417-682-5518			1201 Broadway	Lamar	64759
38	Hill, Nikki		HSTCC	nhill@hstcc.org	417-699-6400					800 E. Pennell	Carl Junctio	64834
Number	Name	Ck	Organization	E-Mail	Cell #	T	Work #	T	Home #	Address	City	Zip

BARTON COUNTY LEPC MEETING **Date: _Nov 09 2017_____**

Number	Name	Ck	Organization	E-Mail	Cell #	T	Work #	T	Home #	Address	City	Zip
40	Hunt Lisa		BCHD	lhunt@bchdhealth.com	417-262-2469		417-682-3363			103 Main St.	Golden City	64748
41	Irwin, Jesse		FCC - Ministerial Alliance	JDIrwin1964@gmail.com	417-262-3333				417-388-2025	1016 E Hwy C	Lamar	64759
42	Jeffries, Bill		Chief Sheldon Fire Dept.	sheldonfiremo@gmail.com	417-684-2746						Sheldon	
43	Jeffries, Nancy		Sheldon FD	mrsbgilly@hotmail.com	417-448-9551						Sheldon	
44	Johnson, Rick	X	Barton County Assessor		417-214-0226					110 West 1st St	Lamar	64759
46	Kelley, Joe		HSTCC	kjkelley@hsstcc.org							Carl Junction	
47	Kelsey, Buddy		BC Road & Bridge		417-214-2577		417-682-4963		N/A	375 W 70th Ln	Liberal	64762
48	Kimrey, Dennis	X	Barton Co OEM Communications	Dennis.dimrey@gmail.com	417-448-7903					15403 S 1413 Rd	Nevada	64772
49	Kretschmer, Connie		Liberal Golden Homes	cmorelli@ckt.net	N/A		417-843-3215		620-347-8258			
50	Lake, Lee		Barton Co R&R	leelake@bartoncountyrescue.org	417-214-5443							
51	Lane, Shea	X	Cathlotic Charities of Southern Mo	slane@ccsomo.org	417-414-5154		417-720-4213			424 E	Springfield	65807
52	Layton, Terri		Red Cross	Teresa.Layton@Redcross.org	417-208-7280		417-624-4411		N/A	410 Jackson St.	Joplin	64801
53	Love, Martha		United Way 2-1-1	marthal@thelibrary.org	417-619-2144		417-616-0580		N/A	Library Center P O B	Springfield	65801
54	Luce, Toby		LPD	tluce@lamarmo.org	417-214-7662					1106 Broadway	Lamar	
55	Lynch, Ray	X	Public Works GoldenCity		417-576-7830		417-539-4351				Greenfield	
56												
57	Marti, Jerry		City of Lamar Heights Mayor	jmarti@pixius.net	417-483-7729		417-682-3357		417-682-3357			
58	Martin, Christine		Critters N Pals	hoss2cat@yahoo.com	417-214-1937		417-682-5335		417-682-9603			
59	Martin, Sterling	X	COAD/Farmer	N/A	417-825-0580		N/A		417-388-2594	777 NE 100th Lane	Lamar	64759
60	Maupin, Janet		Barton County Circuit Clerk	janet.maupin@courts.mo.gov	417-214-0087		417-682-4121		417-682-5764			
61	McGuire, Randy		Golden City Fire Chief	gcfd24@mchsi.com	417-262-3508		417-682-5513		417-537-9998			
62	McIntyre, Lajuana	X	Barton County Health Dept.	mcintl@lpha.mopublic.org	417-684-0485		417-682-3363					
63	Miller, David		American Red Cross	dl.miller@redcross.org	417-664-3373					619 N. Madison	Lebanon	65336
64	Moore, Teresa		Barton Co. Public Adm.	bartoncopa@tiadon.com	417-214-0326		417-682-5060		N/A	401 E. Central Rd	Lamar	64759
65	Pettengill, Breeyn		Golden City OEM	goldencity@mchsi.com	417-232-4461		417-537-4351			980 W US Hwy 160	Lockwood	65682
66	Moyden, Jane		BC Health Dept.	pt@bchdhealth.com			417-682-3363					
67	Moyer, Mandy	X	Lamar R-1 School Dist.	mmoyer@lamar.k12.mo.us	573-539-8142		417-682-3527		N/A	202 W. 7th St.	Lamar	64759
68	Parker, Monte		Barton County REA	mparker@bartonelectric.com	417-214-2751		417-682-5636		417-681-5014			
69	Parrish, Barba		BC Treasurer	bparrishcolltreas@att.net	417-849-3119		417-682-5888		417-682-3425	706 Hagny	Lamar	64759
70	Peine, Brett		BCAD Director	peine-b@bartoncountyems.org	620-687-3899		417-682-3512					
71	Pettus, Bruce	X	MoDot	Bruce.Pettus@modot.mo.gov	417-766-3265		417-895-7688		N/A	1107 W Chestnut	Springfield	65801
72	Piper, Melinda		CPWSD #1 (Water)	bdcjwater@sbcglobal.net	417-214-1266		417-682-3401		417-884-5122			
73	Polnack, Glen		City of Liberal	g.polnack.cityofliberal@outlook.com			417-529-2135		417-843-2135			
74	Potter, Julie		Barton County Library	jpotter@bclib.info	417-214-0329		417-682-5355			79 NW 50th Rd	Lamar	64759
75	Pryor, Jody		MM Fire / City		620-875-6235							
76	Rawlings, Bill	X	Lamar Fire Dept Chief (Retired)	lamarfire@tiadon.com	417-214-0983		417-682-5512		417-682-5127	305 Blue Bell Terrac	Lamar	64759
77	Reed, Ben	X	District 1 Commissioner		417-214-2656							
78	Rives, Rusty	X	Chief Lamar PD	rrives@lamarmo.org	417-825-9951		417-682-3546		N/A			
80	Runion, Kristy	X	Barton Co. Health Dept.	Krunion@bchdhealth.com	417-682-1468		417-682-3363		417-537-8392	995 E. US Hwy 160	Lamar	64759
81	Russell, Denise	X	SEMA Area Coordinator - Reg D	denise.russell@sema.dps.mo.gov	573-821-4683							

BARTON COUNTY LEPC MEETING Date: _Nov 09 2017_____

82	Rutledge, Theresa		Lamar Postmaster	Teresa.a.Rutledge@usps.gov	417-840-3180		417-682-5435		417-276-4957			
83	Ryan, Shawna		LEPC / COAD / Animal S&R	lady_medic_42@yahoo.com	417-262-0344		N/A		417-682-6827	1400 Broadway St.	Lamar	64759
84	Ryan, Tom	X	Barton County OEM	bartoncolepc@yahoo.com	417-262-0345		417-682-2201		417-682-6827	1400 Broadway St.	Lamar	64759
85	Scheffler, Heidi	X	HSTCC	hscheffler@hstcc.org	417-434-5529		417-649-6400					
86	Schlichting, Angie	X	BCHD	aschlichting@bchdhealth.com	417-540-7697		417-682-5363					
87	Selvey, Lisa		Adm. Truman Healthcare	bartonadm@hotmail.com	417-214-5516		417-682-5718		N/A			
88	Shaw, Amy		BCSD Support Staff		417-262-0570						Lamar	64759
89	Shaw, Mitch	X	Barton County Sheriff	mitchellshaw250@yahoo.com	417-214-0714		417-682-5515		417-682-2332	102 East 13th St.	Lamar	64759
91	Shoff, Dayne	X	Lamar FD	dwdawd84@sbcglobal.net	417-682-1533		417-682-5512		417-682-2464	400 East 1st St.	Lamar	64759
92	Stebbins, Paul	X	BCMH	pstebbins@bcmh.net	417-214-2921		417-681-5110		417-843-3622			
93	Stolting, Julie	X	American Red Cross	Julie.Stolting@redcross.org	417-529-6412		417-832-9500 x3112		417-291-2238	1545 NW Bypass	Springfield	65803
94	Thomas, Crystal	X	Barton Co Public Adm	bartoncopublicassit@gmail.com	417-674-0931		417-682-5060		N/A	201 Bert St.	Jasper	64755
95	Timmons, Kaylee	X	COAD Animal Unit	ktimmons@bchdhealth.com	417-214-4286		N/A		N/A	1000 Heagon St.	Lamar	64759
96	Tucker, Jeff	X	Barton County District Two	xhog@sbcglobal.net	417-262-0316		417-682-5521		417-682-3736	202 West 2nd St.	Lamar	64759
97	Warden, C.K.		Konantz-Warden Funeral Home	konantzwardenth@msn.com			417-682-3344		N/A			
98												
99												
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103	LaFever, Patricia	X	Barton Co OEM		417-388-9708					606 Truman	Lamar	64759
104	Overman, Patty		HSTCC									
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BARTON COUNTY LEPC MEETING Date: ____March 29, 2018_____

Number	Name	Ck	Organization	E-Mail	Cell #	T	Work #	T	Home #	Address	City	Zip
01	Alexander, Sandy		Lamar ACO #210	salexander@lamarmo.org	816-719-3740		417-682-3546		N/A	197 South Hwy KK	Lamar	64759
02	Baird, Jeff		MO Hwy Patrol	Jndbaird@att.net	417-214-2594		N/A		417-682-6139			
03	Baker, Bev		City of Lamar	cityclerk@lamarmo.org	417-388-3223		417-682-5554		N/A			
04	Beatty, Larry	X	Lamar Fire Dept.	bcad41@yahoo	417-682-4596		417-682-5512		417-682-4596	1100 Broadway	Lamar	64759
05	Belcher, Jeremy			jeremybelcher650@yahoo.com	417-214-1548		417-682-5515		N/A		Lamar	64759
06	Brewer, Joe		City of Golden City Mayor	goldncty@mchsi.com	N/A		417-537-4351		N/A			
07	Brunner, Aimee		Barton Co Library				417-682-5355		417-576-6408	300 W. 10th	Lamar	64759
08	Buchanan, Paula		BC Health Dept.	buchup@lpha.mopublic.org	N/A		417-682-3363		N/A			
09	Calton, Lynn		City of Lamar Admin	lynncalton@tiadon.com	417-793-2475		417-682-5554		417-682-2995			
10	Clements, Chelsea		BCSD, BC Animal S&R	chelsea.24.2007@hotmail.com	417-214-3496		417-682-5541		N/A			
11	Cooper, Richard		Lamar Democrat	lamardemocrat@yahoo.com	N/A		417-682-5529		417-682-5637			
12	Cornell, Oliver		Lamar PD	dcornell@lamarmo.org	417-317-3967		417-682-3546		N/A	1000 Frances St.	Lamar	64759
13	Crockett, Kristina		Barton County Clerk	bartoncountyclerk@sbcglobal.net	417-214-1120		417-682-3529		417-682-3912			
14	Cuba, Stormy		Barton County Senior Citizens	srcitizen@spfmet/cp			417-682-3881					
15	Curless, Nancy		Barton Chamber of Commerce	nancy@bartoncounty.com	417-262-0844		417-682-3595		417-682-5708			
16	Davied, Jeff		Liberal Fire	jeff89@live.com	417-214-0763		N/A		417-843-6706	346 NW 150th Ln	Liberal	64762
17	Davied, Rick		Liberal Fire Chief	ricskter_65@hotmail.com	417-214-6703		N/A		417-843-6703	346 NW 150th Ln	Liberal	64762
18	Davis, Dustin		CPWSD #1 Rural Water	bartonpwso@hotmail.com	417-540-3490		417-682-3401			521 NW 30th Ln	Lamar	64759
19	Davis, John		LPD	jdavis@lamarmo.org	417-262-0423		417-682-3546			1106 Broadway	Lamar	64759
20	Davis, Mike	X	Barton Co. Presiding	bccomm@tiadon.com	417-214-4965		417-682-4110		417-682-5972	375 NW 20th Rd	Lamar	64759
21	Deherrera, Tammy		Barton Co Coroner	bartoncountycoroner@yahoo.com	417-214-2230		417-214-2075			808 Arthur Aull	Lamar	64759
22	Dermott, Dale		Barton Co Ham Radio Operator		417-262-3446		N/A				Lamar	64759
23	Dermott, Joel		Barton County Health Dept.	dermott1@lpha.mopublic.org			417-682-3363					
24	Endicott, Rusty		Barton Co. Electric Coop.	rendicott@bartonelectric.com	417-214-3188		417-682-5636		417-843-3188	71 W Hwy 160	Lamar	64759
25	England, Tom		BC Road & Bridge	tomcatengland@gmail.com	417-214-9206		417-682-4963		N/A	710 Hagny	Lamar	64759
26	Fast, Judy	X	Barton Co Comm Sect.	jfast@keinet.net	417-214-4628		417-682-4110		417-843-4221			
27	Fisher, Jim		Tamko (EPOCH)	jim_fisher@tamko.com	417-327-6523		417-682-9682		417-637-5348			
28	Gebelin, Mike	X	Mindenmines City Council	minden@pixius.net	417-842-3436		417-842-3216		417-842-3430	802 North Main St	Mindenmines	64769
29	Good, Jacob		Chief Jasper FD	jgood91@sbcglobal.net	417-338-3995							
30	Graham, Daniel		Lamar PD	dgraham@lamarmo.org	775-407-0052		417-682-3546		N/A	145 SE 30th Rd	Lamar	64759
31	Hargis, Kermit		SW MO Regional Planner	pocoe@windstream.net	417-399-1303		417-326-2489		417-326-6537	224 S Birum St	Bolivar	65613
32	Harris, Beth	X	BCMH	beth.harris@bcmh.net	417-214-6291		417-681-5149					
33	Harris, Jason		Mindenmines Fire Chief	minden@pixius.net	417-483-9247		417-842-3216		417-842-3681			
34	Harvey, William		Liberal Schol Superintendent	bharvey@liberal.k12.mo.us	417-214-0196		417-843-5115		417-843-5140			
35	Helms, Diane		LPD	dhelms@lamarmo.org	417-214-2629		417-682-3546			1106 Broadway	Lamar	64759
36	Hibdon, Catherine		Daniel Funeral Home/Animal S&	ch4christ@sbcglobal.net	417-388-2553		417-682-5518			1201 Broadway	Lamar	64759
37	Hibdon, Roger		Daniel Funeral Home		417-850-1057		417-682-5518			1201 Broadway	Lamar	64759
38	Hill, Nikki		HSTCC	nhill@hstcc.org	417-699-6400					800 E. Pennell	Carl Junction	64834
Number	Name	Ck	Organization	E-Mail	Cell #	T	Work #	T	Home #	Address	City	Zip

BARTON COUNTY LEPC MEETING **Date: ____March 29, 2018_____**

Number	Name	Ck	Organization	E-Mail	Cell #	T	Work #	T	Home #	Address	City	Zip
40	Hunt Lisa	X	BCHD	lhunt@bchdhealth.com	417-262-2469		417-682-3363			103 Main St.	Golden City	64748
41	Irwin, Jesse		FCC - Ministerial Alliance	JDIrwin1964@gmail.com	417-262-3333				417-398-2025	1016 E Hwy C	Lamar	64759
42	Jeffries, Bill		Chief Sheldon Fire Dept.	sheldonfiremo@gmail.com	417-684-2746						Sheldon	
43	Jeffries, Nancy		Sheldon FD	mrsbgilly@hotmail.com	417-448-9551						Sheldon	
44	Johnson, Rick		Barton County Assessor		417-214-0226					110 West 1st St	Lamar	64759
46	Kelley, Joe		HSTCC	kikelley@hsstcc.org							Carl Junction	
47	Kelley, Mike		MO State House Rep	mike.kelley@house.mo.gov	417-483-7456		573-751-2105		417-681-0213	303 Walnut St.	Lamar	64759
48	Kelsey, Buddy		BC Road & Bridge		417-214-2577		417-682-4963		N/A	375 W 70th Ln	Liberal	64762
49	Kretschmer, Connie		Liberal Golden Homes	cmorelli@ckt.net	N/A		417-843-3215		620-347-8258			
50	Lake, Lee		Barton Co R&R	leelake@bartoncountyrescue.org	417-214-5443							
51	Layton, Terri		Red Cross	Teresa.Layton@Redcross.org	417-208-7280		417-624-4411		N/A	410 Jackson St.	Joplin	64801
52	Love, Martha		United Way 2-1-1	marthal@thelibrary.org	417-619-2144		417-616-0580		N/A	Library Center P O B	Springfield	65801
53	Luce, Toby		LPD	tluce@lamarmo.org	417-214-7662					1106 Broadway	Lamar	
54	Lynch, Ray		Public Works GoldenCity		417-576-7830		417-539-4351				Greenfield	
55	Macomber, Kathy	X	U of MO Extension	MacombeK@Missouri.edu	417-793-2842		417-682-3579		N/A			
56	Marti, Jerry		City of Lamar Heights Mayor	jmarti@pixius.net	417-483-7729		417-682-3357		417-682-3357			
57	Martin, Christine		Critters N Pals	hoss2cat@yahoo.com	417-214-1937		417-682-5335		417-682-9603			
58	Martin, Sterling		COAD/Farmer	N/A	417-825-0580		N/A		417-398-2594	777 NE 100th Lane	Lamar	64759
59	Maupin, Janet		Barton County Circuit Clerk	janet.maupin@courts.mo.gov	417-214-0087		417-682-4121		417-682-5764			
60	McGuire, Randy		Golden City Fire Chief	gcfd24@mchsi.com	417-262-3508		417-682-5513		417-537-9998			
61	McIntyre, Lajuana		Barton County Health Dept.	mcintl@lpha.mopublic.org	417-684-0485		417-682-3363					
62	Miller, David		American Red Cross	dl.miller@redcross.org	417-664-3373					619 N. Madison	Lebanon	65336
63	Moore, Teresa		Barton Co. Public Adm.	bartoncopa@tiadon.com	417-214-0326		417-682-5060		N/A	401 E. Central Rd	Lamar	64759
64	Morey, Randy		BC Road & Bridge		417-682-2558		417-682-4963		N/A	67 NE 40th Ln	Lamar	64759
65	Moyden, Jane		BC Health Dept.	pt@bchdhealth.com			417-682-3363					
66	Moyer, Mandy		Lamar R-1 School Dist.	mmoyer@lamar.k12.mo.us	573-539-8142		417-682-3527		N/A	202 W. 7th St.	Lamar	64759
67	Parker, Monte		Barton County REA	mparker@bartonelectric.com	417-214-2751		417-682-5636		417-681-5014			
68	Parrish, Barba		BC Treasurer	bparrishcolltreas@att.net	417-849-3119		417-682-5888		417-882-3425	706 Hagny	Lamar	64759
69	Peine, Brett		BCAD Director	peine-b@bartoncountyems.org	620-687-3899		417-682-3512					
70	Pettus, Bruce	X	MoDot	Bruce.Pettus@modot.mo.gov	417-766-3265		417-895-7688		N/A	1107 W Chestnut	Springfield	65801
71	Pettus, Bruce		MoDot	Bruce.Pettus@modot.mo.gov	417-766-3265		417-895-7688		N/A	1107 W. Chestnut	Springfield	65801
72	Piper, Melinda		CPWSD #1 (Water)	bdciwater@sbcglobal.net	417-214-1266		417-682-3401		417-884-5122			
73	Polnack, Glen	X	City of Liberal	g.polnack.cityofliberal@outlook.com			417-529-2135		417-843-2135			
74	Potter, Julie		Barton County Library	jpotter@bclib.info	417-214-0329		417-682-5355			79 NW 50th Rd	Lamar	64759
75	Pryor, Jody		MM Fire / City		620-675-8235							
76	Rawlings, Bill	X	Lamar Fire Dept Chief (Retired)	lamarfire@tiadon.com	417-214-0983		417-682-5512		417-682-5127	305 Blue Bell Terrac	Lamar	64759
77	Reed, Ben	X	District 1 Commissioner		417-214-2656							
78	Rives, Rusty	X	Chief Lamar PD	rrives@lamarmo.org	417-825-9951		417-682-3546		N/A			
80	Runion, Kristy	X	Barton Co. Health Dept.	Krunion@bchdhealth.com	417-682-1468		417-682-3363		417-537-8392	995 E. US Hwy 160	Lamar	64759
81	Russell, Denise	X	SEMA Area Coordinator - Reg D	denise.russell@sema.dps.mo.gov	573-821-4683							

BARTON COUNTY LEPC MEETING Date: ____March 29, 2018_____

82	Rutledge, Theresa		Lamar Postmaster	Teresa.a.Rutledge@usps.gov	417-840-3180		417-682-5435		417-276-4957			
83	Ryan, Shawna		LEPC / COAD / Animal S&R	lady_medic_42@yahoo.com	417-262-0344		N/A		417-682-6827	1400 Broadway St.	Lamar	64759
84	Ryan, Tom	X	Barton County OEM	bartoncolepc@yahoo.com	417-262-0345		417-682-2201		417-682-6827	1400 Broadway St.	Lamar	64759
85	Scheffler, Heidi	X	HSTCC	hscheffler@hstcc.org	417-434-5529		417-649-6400					
86	Schlichting, Angie	X	BCHD	aschlichting@bchdhealth.com	417-540-7697		417-682-5363					
87	Selvey, Lisa		Adm. Truman Healthcare	bartonadm@hotmail.com	417-214-5518		417-682-5718		N/A			
88	Shaw, Amy		BCSD Support Staff		417-262-0570						Lamar	64759
89	Shaw, Mitch		Barton County Sheriff	mitchellshaw250@yahoo.com	417-214-0714		417-682-5515		417-682-2332	102 East 13th St.	Lamar	64759
91	Shoff, Dayne	X	Lamar FD	dwdawg84@sbcglobal.net	417-682-1533		417-682-5512		417-682-2464	400 East 1st St.	Lamar	64759
92	Stebbins, Paul	X	BCMH	pstebbins@bcmh.net	417-214-2921		417-681-5110		417-843-3622			
93	Stolting, Julie		American Red Cross	Julie.Stolting@redcross.org	417-529-6412		417-832-9500 x3112		417-291-2238	1545 NW Bypass	Springfield	65803
94	Taffner, Lori		Barton Co. Health Dept	taffnl@lpha.mopublic.org			417-682-3363					
95	Taylor, Dixie		Mayor Golden City		417-214-2455		417-537-4351		417-537-4371	900 High Street	Golden City	
96	Thomas, Crystal		Barton Co Public Adm	bartoncopublicassit@gmail.com	417-674-0931		417-682-5060		N/A	201 Bert St.	Jasper	64755
97	Timmons, Kaylee	X	COAD Animal Unit	ktimmons@bchdhealth.com	417-214-4286		N/A		N/A	1000 Heagon St.	Lamar	64759
98	Tucker, Jeff	X	Barton County District Two	xhog@sbcglobal.net	417-262-0318		417-682-5521		417-682-3736	202 West 2nd St.	Lamar	64759
99	Warden, C.K.		Konantz-Warden Funeral Home	konantzwardenfh@msn.com			417-682-3344		N/A			
100	Willhite, Charles		Thorco Ind	charles.willhite@thorco.com	417-214-0066		417-682-3375					
103												
104	Lane, Shea	X	Catholic Charities of Southern Mo									
105	Kimrey, Dennis	X	Barton Co OEM Communications									
106	Pettengill, Breeyn	X	Golden City OEM									
107	LaFever, Patricia	X	Barton Co OEM, LPD ACO									
108	Overman, Patty	X	HSTCC									
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Total		26										
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BARTON COUNTY LEPC MEETING **Date: _____May 10, 2018_____**

Number	Name	Ck	Organization	E-Mail	Cell #	T	Work #	T	Home #	Address	City	Zip
01	Alexander, Sandy		Lamar ACO #210	salexander@lamarmo.org	816-719-3740		417-682-3546		N/A	197 South Hwy KK	Lamar	64759
02	Baird, Jeff		MO Hwy Patrol	Jndbaird@att.net	417-214-2594		N/A		417-682-6139			
03	Baker, Bev		City of Lamar	cityclerk@lamarmo.org	417-388-3223		417-682-5554		N/A			
04	Beatty, Larry		Lamar Fire Dept.	bcad41@yahoo	417-682-4596		417-682-5512		417-682-4596	1100 Broadway	Lamar	64759
05	Belcher, Jeremy			jeremybelcher650@yahoo.com	417-214-1548		417-682-5515		N/A		Lamar	64759
06	Brewer, Joe		City of Golden City Mayor	goldncty@mchsi.com	N/A		417-537-4351		N/A			
07	Brunner, Aimee		Barton Co Library				417-682-5355		417-576-6408	300 W. 10th	Lamar	64759
08	Buchanan, Paula		BC Health Dept.	buchup@lpha.mopublic.org	N/A		417-682-3363		N/A			
09	Calton, Lynn		City of Lamar Admin	lynncalton@tiadon.com	417-793-2475		417-682-5554		417-682-2995			
10												
11	Cooper, Richard		Lamar Democrat	lamardemocrat@yahoo.com	N/A		417-682-5529		417-682-5637			
12	Cornell, Oliver		Lamar PD	dcornell@lamarmo.org	417-317-3967		417-682-3546		N/A	1000 Frances St.	Lamar	64759
13	Crockett, Kristina		Barton County Clerk	bartoncountyclerk@sbcglobal.net	417-214-1120		417-682-3529		417-682-3912			
14	Cuba, Stormy		Barton County Senior Citizens	srcitizen@spfmet/cp			417-682-3881					
15	Curless, Nancy		Barton Chamber of Commerce	nancy@bartoncounty.ocm	417-262-0844		417-682-3595		417-682-5708			
16	Davied, Jeff		Liberal Fire	jeff89@live.com	417-214-0763		N/A		417-843-6706	346 NW 150th Ln	Liberal	64762
17	Davied, Rick		Liberal Fire Chief	ricskter_65@hotmail.com	417-214-6703		N/A		417-843-6703	346 NW 150th Ln	Liberal	64762
18	Davis, Dustin		CPWSD #1 Rural Water	bartonpwso@hotmail.com	417-540-3490		417-682-3401			521 NW 30th Ln	Lamar	64759
19	Davis, John		LPD	jdavis@lamarmo.org	417-262-0423		417-682-3546			1106 Broadway	Lamar	64759
20	Davis, Mike	X	Barton Co. Presiding	bccomm@tiadon.com	417-214-4965		417-682-4110		417-682-5972	375 NW 20th Rd	Lamar	64759
21	Deherrera, Tammy	X	Barton Co Coroner	bartoncountycoroner@yahoo.com	417-214-2230		417-214-2075			606 Arthur Aull	Lamar	64759
22	Dermott, Dale		Barton Co Ham Radio Operator		417-262-3446		N/A				Lamar	64759
23	Dermott, Joel	X	Barton County Health Dept.	dermott1@lpha.mopublic.org			417-682-3363					
24	Endicott, Rusty		Barton Co. Electric Coop.	rendicott@bartonelectric.com	417-214-3188		417-682-5636		417-843-3188	71 W Hwy 160	Lamar	64759
25	England, Tom		BC Road & Bridge	tomcatengland@gmail.com	417-214-9206		417-682-4963		N/A	710 Hagny	Lamar	64759
26	Fast, Judy	X	Barton Co Comm Sect.	jfast@keinet.net	417-214-4628		417-682-4110		417-843-4221			
27	Fisher, Jim		Tamko (EPOCH)	jim_fisher@tamko.com	417-327-6523		417-682-9662		417-637-5348			
28	Gebelin, Mike		Mindenmines City Council	rminden@pixius.net	417-842-3436		417-842-3216		417-842-3430	802 North Main St	Mindenmine	64769
29	Good, Jacob		Chief Jasper FD	jgood91@sbcglobal.net	417-338-3995							
30	Graham, Daniel		Lamar PD	dgraham@lamarmo.org	775-407-0052		417-682-3546		N/A	145 SE 30th Rd	Lamar	64759
31	Hargis, Kermit		SW MO Regional Planner	pocoe@windstream.net	417-399-1303		417-326-2489		417-326-6537	224 S Birum St	Bolivar	65613
32	Harris, Beth	X	BCMH	beth.harris@bcmh.net	417-214-6291		417-681-5149					
33	Harris, Jason		Mindenmines Fire Chief	rminden@pixius.net	417-483-9247		417-842-3216		417-842-3681			
34	Harvey, William		Liberal Schol Superintendent	bharvey@liberal.k12.mo.us	417-214-0196		417-843-5115		417-843-5140			
35	Helms, Diane		LPD	dhelms@lamarmo.org	417-214-2629		417-682-3546			1106 Broadway	Lamar	64759
36	Hibdon, Catherine		Daniel Funeral Home/Animal S&R	ch4christ@sbcglobal.net	417-388-2553		417-682-5518			1201 Broadway	Lamar	64759
37	Hibdon, Roger		Daniel Funeral Home		417-850-1057		417-682-5518			1201 Broadway	Lamar	64759
38	Hill, Nikki		HSTCC	nhill@hstcc.org	417-699-6400					800 E. Pennell	Carl Junctio	64834
Number	Name	Ck	Organization	E-Mail	Cell #	T	Work #	T	Home #	Address	City	Zip

BARTON COUNTY LEPC MEETING **Date: _____May 10, 2018_____**

40	Hunt Lisa		BCHD	lhunt@bchdhealth.com	417-262-2469		417-682-3363			103 Main St.	Golden City	64748
41	Irwin, Jesse		FCC - Ministerial Alliance	JDIrwin1964@gmail.com	417-262-3333				417-398-2025	1016 E Hwy C	Lamar	64759
42	Jeffries, Bill		Chief Sheldon Fire Dept.	sheldonfiremo@gmail.com	417-684-2746						Sheldon	
43	Jeffries, Nancy		Sheldon FD	mrsbgilly@hotmail.com	417-448-9551						Sheldon	
44	Johnson, Rick	X	Barton County Assessor		417-214-0226					110 West 1st St	Lamar	64759
46	Kelley, Joe		HSTCC	kjkelley@hsstcc.org							Carl Junction	
47	Kelsey, Buddy		BC Road & Bridge		417-214-2577		417-682-4963		N/A	375 W 70th Ln	Liberal	64762
48	Kimrey, Dennis		Barton Co OEM Communications	DennisKimrey@gmail.com	417-448-7903					15403 S 1413 Rd	Nevada	64772
49	Kretschmer, Connie		Liberal Golden Homes	cmorelli@ckt.net	N/A		417-843-3215		620-347-8258			
50	Lake, Lee		Barton Co R&R	leelake@bartoncountyrescue.org	417-214-5443							
51	Lane, Shea	X	Cathlotic Charities of Southern Mo	slane@ccsomo.org	417-414-5154		417-720-4213			424 E	Springfield	65807
52	Layton, Terri		Red Cross	Teresa.Layton@Redcross.org	417-208-7280		417-624-4411		N/A	410 Jackson St.	Joplin	64801
53	Love, Martha		United Way 2-1-1	marthal@thelibrary.org	417-619-2144		417-616-0580		N/A	Library Center P O B	Springfield	65801
54	Luce, Toby		LPD	tluce@lamarmo.org	417-214-7662					1106 Broadway	Lamar	
55	Lynch, Ray	X	Public Works GoldenCity		417-576-7830		417-539-4351				Greenfield	
56												
57	Marti, Jerry		City of Lamar Heights Mayor	jmarti@pixius.net	417-483-7729		417-682-3357		417-682-3357			
58	Martin, Christine		Critters N Pals	hoss2cat@yahoo.com	417-214-1937		417-682-5335		417-682-9603			
59	Martin, Sterling	X	COAD/Farmer	N/A	417-825-0580		N/A		417-398-2594	777 NE 100th Lane	Lamar	64759
60	Maupin, Janet		Barton County Circuit Clerk	janet.maupin@courts.mo.gov	417-214-0087		417-682-4121		417-682-5764			
61	McGuire, Randy		Golden City Fire Chief	gcfd24@mchsi.com	417-262-3508		417-682-5513		417-537-9998			
62	McIntyre, Lajuana		Barton County Health Dept.	mcintl@lpha.mopublic.org	417-684-0485		417-682-3363					
63	Miller, David		American Red Cross	dl.miller@redcross.org	417-684-3373					619 N. Madison	Lebanon	65336
64	Moore, Teresa		Barton Co. Public Adm.	bartoncopa@tiadon.com	417-214-0326		417-682-5060		N/A	401 E. Central Rd	Lamar	64759
65	Pettengill, Breeyn		Golden City OEM	goldencv@mchsi.com	417-232-4461		417-537-4351			980 W US Hwy 160	Lockwood	65682
66	Moyden, Jane		BC Health Dept.	jpt@bchdhealth.com			417-682-3363					
67	Moyer, Mandy		Lamar R-1 School Dist.	mmoyer@lamar.k12.mo.us	573-539-8142		417-682-3527		N/A	202 W. 7th St.	Lamar	64759
68	Parker, Monte		Barton County REA	mparker@bartonelectric.com	417-214-2751		417-682-5636		417-681-5014			
69	Parrish, Barba		BC Treasurer	bparrishcolltreas@att.net	417-849-3119		417-682-5888		417-682-3425	706 Hagny	Lamar	64759
70	Peine, Brett		BCAD Director	peine-b@bartoncountyems.org	620-687-3899		417-682-3512					
71	Pettus, Bruce	X	MoDot	Bruce.Pettus@modot.mo.gov	417-766-3265		417-895-7688		N/A	1107 W Chestnut	Springfield	65801
72	Piper, Melinda		CPWSD #1 (Water)	bdciwater@sbcglobal.net	417-214-1266		417-682-3401		417-884-5122			
73	Polnack, Glen		City of Liberal	g.polnack.cityofliberal@outlook.com			417-529-2135		417-843-2135			
74	Potter, Julie		Barton County Library	jpotter@bclib.info	417-214-0329		417-682-5355			79 NW 50th Rd	Lamar	64759
75	Pryor, Jody		MM Fire / City		620-875-6235							
76	Rawlings, Bill	X	Lamar Fire Dept Chief (Retired)	lamarfire@tiadon.com	417-214-0983		417-682-5512		417-682-5127	305 Blue Bell Terrac	Lamar	64759
77	Reed, Ben	X	District 1 Commissioner		417-214-2656							
78	Rives, Rusty		Chief Lamar PD	rrives@lamarmo.org	417-825-9951		417-682-3546		N/A			
80	Runion, Kristy	X	Barton Co. Health Dept.	Krunion@bchdhealth.com	417-682-1468		417-682-3363		417-537-8392	995 E. US Hwy 160	Lamar	64759
Number	**Name**	**Ck**	**Organization**	**E-Mail**	**Cell #**	**T**	**Work #**	**T**	**Home #**	**Address**	**City**	**Zip**
81	Russell, Denise	X	SEMA Area Coordinator - Reg D	denise.russell@sema.dps.mo.gov	573-821-4683							

BARTON COUNTY LEPC MEETING Date: _____May 10, 2018_____

82	Rutledge, Theresa		Lamar Postmaster	Teresa.a.Rutledge@usps.gov	417-840-3180		417-682-5435		417-276-4957			
83	Ryan, Shawna		LEPC / COAD / Animal S&R	lady_medic_42@yahoo.com	417-262-0344		N/A		417-682-6827	1400 Broadway St.	Lamar	64759
84	Ryan, Tom	X	Barton County OEM	bartoncolepc@yahoo.com	417-262-0345		417-682-2201		417-682-6827	1400 Broadway St.	Lamar	64759
85	Scheffler, Heidi	X	HSTCC	hscheffler@hstcc.org	417-434-5529		417-649-6400					
86	Schlichting, Angie		BCHD	aschlichting@bchdhealth.com	417-540-7697		417-682-5363					
87	Selvey, Lisa		Adm. Truman Healthcare	bartonadm@hotmail.com	417-214-5516		417-682-5718		N/A			
88	Shaw, Amy		BCSD Support Staff		417-262-0570						Lamar	64759
89	Shaw, Mitch	X	Barton County Sheriff	mitchellshaw250@yahoo.com	417-214-0714		417-682-5515		417-682-2332	102 East 13th St.	Lamar	64759
91	Shoff, Dayne	X	Lamar FD	dwdawg84@sbcglobal.net	417-682-1533		417-682-5512		417-682-2464	400 East 1st St.	Lamar	64759
92	Stebbins, Paul	X	BCMH	pstebbins@bcmh.net	417-214-2921		417-681-5110		417-843-3622			
93	Stolting, Julie	X	American Red Cross	Julie.Stolting@redcross.org	417-529-6412		417-832-9500 x3112		417-291-2238	1545 NW Bypass	Springfield	65803
94	Thomas, Crystal	X	Barton Co Public Adm	bartoncopublicassit@gmail.com	417-674-0931		417-682-5060		N/A	201 Bert St.	Jasper	64755
95	Timmons, Kaylee	X	COAD Animal Unit	ktimmons@bchdhealth.com	417-214-4286		N/A		N/A	1000 Heagon St.	Lamar	64759
96	Tucker, Jeff	X	Barton County District Two	xhog@sbcglobal.net	417-262-0316		417-682-5521		417-682-3736	202 West 2nd St.	Lamar	64759
97	Warden, C.K.		Konantz-Warden Funeral Home	konantzwardenfh@msn.com			417-682-3344		N/A			
98												
99												
100												
103	LaFever, Patricia	X	Barton Co OEM		417-388-9708					606 Truman	Lamar	64759
104	Overman, Patty		HSTCC									
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BARTON COUNTY LEPC MEETING Date: ____August 9, 2018_____

Number	Name	Ck	Organization	E-Mail	Cell #	T	Work #	T	Home #	Address	City	Zip
01	Alexander, Sandy		Lamar ACO #210	salexander@lamarmo.org	816-719-3740		417-682-3546		N/A	197 South Hwy KK	Lamar	64759
02	Baird, Jeff		MO Hwy Patrol	Jndbaird@att.net	417-214-2594		N/A		417-682-6139			
03	Baker, Bev		City of Lamar	cityclerk@lamarmo.org	417-388-3223		417-682-5554		N/A			
04	Beatty, Larry		Lamar Fire Dept.	bcad41@yahoo	417-682-4596		417-682-5512		417-682-4596	1100 Broadway	Lamar	64759
05	Belcher, Jeremy			jeremybelcher650@yahoo.com	417-214-1548		417-682-5515		N/A		Lamar	64759
06	Brewer, Joe		City of Golden City Mayor	goldmcty@mchsi.com	N/A		417-537-4351		N/A			
07	Bruriner, Aimee		Barton Co Library				417-682-5355		417-576-6408	300 W. 10th	Lamar	64759
08	Buchanan, Paula		BC Health Dept	buchup@lpha.mopublic.org	N/A		417-682-3363		N/A			
09	Cooper, Richard		Lamar Democrat	lamardemocrat@yahoo.com	N/A		417-682-5529		417-682-5637			
10	Cornell, Oliver		Lamar PD	dcornell@lamarmo.org	417-317-3967		417-682-3546		N/A	1000 Frances St.	Lamar	64759
11	Crockett, Kristina	X	Barton County Clerk	bartoncountyclerk@sbcglobal.net	417-214-1120		417-682-3529		417-682-3912			
12	Cuba, Stormy		Barton County Senior Citizens	srcitizen@spfmet/cp			417-682-3881					
13	Curless, Nancy		Barton Chamber of Commerce	nancy@bartoncounty.ocm	417-262-0844		417-682-3595		417-682-5708			
14	Davied, Jeff		Liberal Fire	jeff89@live.com	417-214-0763		N/A		417-843-6706	346 NW 150th Ln	Liberal	64762
15	Davied, Rick		Liberal Fire Chief	rickster_65@hotmail.com	417-214-6703		N/A		417-843-6703	346 NW 150th Ln	Liberal	64762
16	Davis, Dustin		CPWSD #1 Rural Water	bartonpwso@hotmail.com	417-540-3490		417-682-3401			521 NW 30th Ln	Lamar	64759
17	Davis, John		LPD	jdavis@lamarmo.org	417-262-0423		417-682-3546			1106 Broadway	Lamar	64759
18	Davis, Mike	X	Barton Co. Presiding	bccomm@tiadon.com	417-214-4965		417-682-4110		417-682-5972	375 NW 20th Rd	Lamar	64759
19	Deherrera, Tammy		Barton Co Coroner	bartoncountycoroner@yahoo.com	417-214-2230		417-214-2075			606 Arthur Aull	Lamar	64759
20	Dermott, Dale		Barton Co Ham Radio Operator		417-262-3446		N/A				Lamar	64759
21	Dermott, Joel	X	Barton County Health Dept	dermott1@lpha.mopublic.org			417-682-3363					
22	Endicott, Rusty		Barton Co. Electric Coop.	rendicott@bartonelectric.com	417-214-3188		417-682-5636		417-843-3188	71 W Hwy 160	Lamar	64759
23	England, Tom		BC Road & Bridge	tomcatengland@gmail.com	417-214-9206		417-682-4963		N/A	710 Hagny	Lamar	64759
24	Fast, Judy	X	Barton Co Comm Sect.	jjfast@keinet.net	417-214-4628		417-682-4110		417-843-4221			
25	Fisher, Jim		Tamko (EPOCH)	jim_fisher@tamko.com	417-327-6523		417-682-9662		417-637-5346			
26	Gebelin, Mike	X	Mindenmines City Council	minden@pixius.net	417-842-3436		417-842-3216		417-842-3430	802 North Main St	Mindenmines	64769
27	Good, Jacob		Chief Jasper FD	jgood91@sbcglobal.net	417-338-3995							
28	Graham, Daniel		Lamar PD	dgraham@lamarmo.org	775-407-0052		417-682-3546		N/A	145 SE 30th Rd	Lamar	64759
29	Harris, Beth		BCMH	beth.harris@bcmh.net	417-214-6291		417-681-5149					
30	Harris, Jason		Mindenmines Fire Chief	minden@pixius.net	417-483-9247		417-842-3216		417-842-3681			
31	Harvey, William		Liberal Schol Superintendent	bharvey@liberal.k12.mo.us	417-214-0196		417-843-5115		417-843-5140			
32	Helms, Diane		LPD	dhelms@lamarmo.org	417-214-2629		417-682-3546			1106 Broadway	Lamar	64759
33	Hibdon, Catherine		Daniel Funeral Home/Animal S&R	ch4christ@sbcglobal.net	417-388-2553		417-682-5518			1201 Broadway	Lamar	64759
34	Hibdon, Roger		Daniel Funeral Home		417-850-1057		417-682-5518			1201 Broadway	Lamar	64759
35	Hill, Nikki		HSTCC	nhill@hstcc.org	417-699-6400					800 E. Pennell	Carl Junction	64834
36	Hanshaw, Brent	X	Liberal Fire Chief	bhanshaw.89@gmail.com	417-214-3800		417-843-3500			108 S Hwy 43	Liberal	64762
37												
38												
Number	Name	Ck	Organization	E-Mail	Cell #	T	Work #	T	Home #	Address	City	Zip

BARTON COUNTY LEPC MEETING **Date: ____August 9, 2018_____**

Number	Name	Ck	Organization	E-Mail	Cell #	T	Work #	T	Home #	Address	City	Zip
40	Hunt Lisa		BCHD	lhunt@bchdhealth.com	417-262-2469		417-682-3363			103 Main St.	Golden City	64748
41	Irwin, Jesse		FCC - Ministerial Alliance	JDIrwin1964@gmail.com	417-262-3333				417-398-2025	1016 E Hwy C	Lamar	64759
42	Jeffries, Bill	X	Chief Sheldon Fire Dept.	sheldonfiremo@gmail.com	417-884-2746						Sheldon	
43	Jeffries, Nancy		Sheldon FD	mrsbgilly@hotmail.com	417-448-9551						Sheldon	
44	Johnson, Rick	X	Barton County Assessor		417-214-0226					110 West 1st St	Lamar	64759
45	Kelley, Joe		HSTCC	kikelley@hsstcc.org							Carl Junction	
47	Kelsey, Buddy		BC Road & Bridge		417-214-2577		417-682-4963		N/A	375 W 70th Ln	Liberal	64762
48	Kimrey, Dennis	X	Barton Co OEM Communications	DennisKimrey@gmail.com	417-448-7903					15403 S 1413 Rd	Nevada	64772
49	Kretschmer, Connie		Liberal Golden Homes	cmorelli@ckt.net	N/A		417-843-3215		620-347-8258			
50	Lake, Lee		Barton Co R&R	leelake@bartoncountyrescue.org	417-214-5443							
51	Lane, Shea		Cathlotic Charities of Southern Mo	slane@ccsomo.org	417-414-5154		417-720-4213			424 E	Springfield	65807
52	Layton, Terri		Red Cross	Teresa.Layton@Redcross.org	417-208-7260		417-624-4411		N/A	410 Jackson St.	Joplin	64801
53	Love, Martha		United Way 2-1-1	marthal@thelibrary.org	417-819-2144		417-616-0560		N/A	Library Center P O B	Springfield	65801
54	Luce, Toby		LPD	tluce@lamarmo.org	417-214-7662					1106 Broadway	Lamar	
55	Lynch, Ray		Public Works GoldenCity		417-576-7830		417-539-4351				Greenfield	
56	Marti, Jerry		City of Lamar Heights Mayor	jmarti@pixius.net	417-483-7729		417-682-3357		417-682-3357			
57	Martin, Christine		Critters N Pals	hoss2cat@yahoo.com	417-214-1937		417-682-5335		417-682-9603			
58	Martin, Sterling	X	COAD/Farmer	N/A	417-825-0580		N/A		417-398-2594	777 NE 100th Lane	Lamar	64759
59	McGuire, Randy		Golden City Fire Chief	gcfd24@mchsi.com	417-262-3508		417-682-5513		417-537-9998			
0	McIntyre, Lajuana		Barton County Health Dept.	mcintl@lpha.mopublic.org	417-684-0465		417-682-3363					
61	Miller, David		American Red Cross	dl.miller@redcross.org	417-864-3373					619 N. Madison	Lebanon	65336
62	Moore, Teresa		Barton Co. Public Adm.	bartoncopa@tiadon.com	417-214-0326		417-682-5060		N/A	401 E. Central Rd	Lamar	64759
63	Moyden, Jane		BC Health Dept.	pt@bchdhealth.com			417-682-3363					
64	Moyer, Mandy		Lamar R-1 School Dist.	mmoyer@lamar.k12.mo.us	573-539-8142		417-682-3527		N/A	202 W. 7th St.	Lamar	64759
65	Parker, Monte		Barton County REA	mparker@bartonelectric.com	417-214-2751		417-682-5636		417-681-5014			
66	Parrish, Barba	X	BC Treasurer	bparrishcolltreas@att.net	417-849-3119		417-682-5888		417-682-3425	706 Hagny	Lamar	64759
67	Peine, Brett		BCAD Director	peine-b@bartoncountyems.org	620-687-3899		417-682-3512					
68	Pettengill, Breeyn	X	Golden City OEM	goldencity@mchsi.com	417-232-4461		417-537-4351			980 W US Hwy 160	Lockwood	65682
69	Pettus, Bruce		MoDot	Bruce.Pettus@modot.mo.gov	417-766-3265		417-895-7688		N/A	1107 W Chestnut	Springfield	65801
70	Piper, Melinda		CPWSD #1 (Water)	bdcjwater@sbcglobal.net	417-214-1266		417-682-3401		417-884-5122			
71	Polnack, Glen	X	City of Liberal	g.polnack.cityofliberal@outlook.com			417-529-2135		417-843-2135			
72	Potter, Julie		Barton County Library	jpotter@bclib.info	417-214-0329		417-682-5355			79 NW 50th Rd	Lamar	64759
73	Pryor, Jody		MM Fire / City		620-875-6235							
74	Rawlings, Bill	X	Lamar Fire Dept Chief (Retired)	lamarfire@tiadon.com	417-214-0983		417-682-5512		417-682-5127	305 Blue Bell Terrac	Lamar	64759
75	Reed, Ben	X	District 1 Commissioner		417-214-2656							
76	Rives, Rusty		Chief Lamar PD	rrives@lamarmo.org	417-825-9951		417-682-3546		N/A			
77	Runion, Kristy	X	Barton Co. Health Dept.	Krunion@bchdhealth.com	417-682-1468		417-682-3363		417-537-8392	995 E. US Hwy 160	Lamar	64759
78												
80												

BARTON COUNTY LEPC MEETING Date: August 9, 2018

81	Russell, Denise	X	SEMA Area Coordinator - Reg D	denise.russell@sema.dps.mo.gov	573-821-4683							
82	Rutledge, Theresa		Lamar Postmaster	Teresa.a.Rutledge@usps.gov	417-840-3180		417-682-5435		417-276-4957			
83	Ryan, Shawna		LEPC / COAD / Animal S&R	lady_medic_42@yahoo.com	417-262-0344		N/A		417-682-6827	1400 Broadway St.	Lamar	64759
84	Ryan, Tom	X	Barton County OEM	bartoncoolepc@yahoo.com	417-262-0345		417-682-2201		417-682-6827	1400 Broadway St.	Lamar	64759
85	Scheffler, Heidi	X	HSTCC	hscheffler@hstcc.org	417-434-5529		417-649-6400					
86	Schlichting, Angie		BCHD	aschlichting@bchdhealth.com	417-540-7697		417-682-5363					
87	Selvey, Lisa	X	Adm. Truman Healthcare	bartonadm@hotmail.com	417-214-5516		417-682-5718		N/A			
88	Shaw, Mitch	X	Barton County Sheriff	mitchellshaw250@yahoo.com	417-214-0714		417-682-5515		417-682-2332	102 East 13th St.	Lamar	64759
89	Shoff, Dayne		Lamar FD	dwdawg84@sbcglobal.net	417-682-1533		417-682-5512		417-682-2464	400 East 1st St.	Lamar	64759
91	Stebbins, Paul	X	BCMH	pstebbins@bcmh.net	417-214-2921		417-681-5110		417-843-3622			
92	Stolting, Julie	X	American Red Cross	Julie.Stolting@redcross.org	417-529-6412		417-832-9500 x3112		417-291-2238	1545 NW Bypass	Springfield	65803
93	Thomas, Crystal		Barton Co Public Adm	bartoncopublicassit@gmail.com	417-874-0931		417-682-5060		N/A	201 Bert St.	Jasper	64755
94	Timmons, Kaylee	X	COAD Animal Unit	ktimmons@bchdhealth.com	417-214-4288		N/A		N/A	1000 Heagon St.	Lamar	64759
95	Tucker, Jeff		Barton County District Two	xhog@sbcglobal.net	417-262-0316		417-682-5521		417-682-3736	202 West 2nd St.	Lamar	64759
96	Warden, C.K.		Konantz-Warden Funeral Home	konantzwardenfh@msn.com			417-682-3944		N/A			
97	Wilson, Michelle	X	Golden City FD / OEM / Red Cross		417-793-9347						Lamar	64759
98												
99												
100												
103	LaFever, Patricia		Barton Co OEM		417-388-9708					606 Truman	Lamar	64759
104	Overman, Patty		HSTCC									
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Public Notice

AFFIDAVIT OF PUBLICATION

STATE OF MISSOURI } **ss.**

County of Barton

The Lamar Democrat, Inc., publishers of the *Lamar Democrat,* a newspaper of general circulation regularly and consecutively published in Lamar, Barton County, Missouri, for a period of three years or more, which has been admitted to the post office in Lamar, Missouri, as a periodical mail matter; that said newspaper has a list of bona fide subscribers to said newspaper for a definite period of time; that the notice here to attached has been published once a week for One weeks, and on the same day of each week, and that the said notice was published in said newspaper in compliance with the provisions of section 493.050 Revised Statutes of Missouri of 2000.

That said notice was published in said newspaper from

July 18, 2018 to July 18, 2018

First insertion July 18, 2018

Second insertion _____, 20____

Third insertion _____, 20____

Fourth insertion _____, 20____

Melissa Little
Signature

Subscribed and sworn to before me this 18th day of July, 2018.

My commission expires 7-10-21

Notary Public Signature _____

Printer's Fee $ 64.60

MERRY MELODY METZGER
Notary Public - Notary Seal
Barton County - State of Missouri
Commission Number 13501580
My Commission Expires Jul 10, 2021

TRUMAN COORDINATING COUNCIL

PHONE: (417) 649-6400
FAX: (417) 649-6409
800 EAST PENNEL, CARL JUNCTION, MO 64834
Website: HSTCC.org

Barton County, Missouri
PRESS RELEASE

For Immediate Release
July 18, 2018

Contact: Heidi Scheffler, Environmental Planner
417-649-6400

Public Comment Invited on the
Barton County Hazard Mitigation Plan

The Federal Disaster Mitigation Act of 2000 requires communities to develop an approved local hazard mitigation plan. Without such a plan, communities are not eligible for certain federal funding. Representatives from county departments, the incorporated cities, public school districts, and other mitigation planning stakeholders worked together to develop this plan update which was spearheaded by the Harry S Truman Coordinating Council. The plan addresses hazards ranging from extreme heat and severe winter storms to tornadoes and flooding, and considers the impacts of these events on local communities. Based on the results of an updated risk assessment of the hazards, committee members updated the strategies for their jurisdictions to reduce damages caused by the various hazards.

The public is invited to provide comments and input on the draft of the completed plan. Public comments will be considered and incorporated into the plan, as appropriate. The draft of the plan will be available to view from **July 19 to August 20, 2018**. The plan can be viewed online at: https://www.hstcc.org/hazard-mitigation; or in printed form during normal business hours at: Barton County Courthouse, County Clerk's Office. **The deadline to submit public comments is August 20, 2018.** Contact: Heidi Scheffler: 800 E Pennell, Carl Junction, MO 64834; 417-649-6400; hscheffler@hstcc.org.

7. 18

48 • Wednesday, July 18, 2018 www.lamardemocrat.com info@lamardemocrat.com Lamar Democrat, Lamar, MO

LEGALS

Legals, continued from page 3B

Public Comment Invited on the Barton County Hazard Mitigation Plan

The Federal Disaster Mitigation Act of 2000 requires communities to develop an approved local hazard mitigation plan. Without such a plan, communities are not eligible for certain federal funding. Representatives from county departments, the incorporated cities, public school districts, and other mitigation planning stakeholders worked together to develop this plan update which was spearheaded by the Harry S Truman Coordinating Council. The plan addresses hazards ranging from extreme heat and severe winter storms to tornadoes and flooding, and considers the impacts of these events on local communities. Based on the results of an updated risk assessment of the hazards, committee members updated the strategies for their jurisdictions to reduce damages caused by the hazard events.

The public is invited to provide comments and input on the draft of the completed plan. Public comment will be considered and incorporated into the plan, as appropriate. The draft of the plan will be available to view from July 19 to August 20, 2018. The plan can be viewed online at http://www.bartoncogov.org/hazard-mitigation, or in person from 8am-4pm, normal business hours at Barton County Courthouse, County Clerk's Office. The deadline to submit public comments is August 20, 2018. Contact: Heidi Scheffler, 601 E. Pennell, Carl Junction, MO 64834, 417-649-6450, hscheffler@bartoncogov.org.

7-18-1c

Notice of a Hearing for Conditional Use Permit

Notice is hereby given that an application has been filed with the Lamar Planning & Zoning Commission for a conditional use in a R-1 (Single Family Residential District) zone for the property located at 1007 Pecan Street. Requesting the Conditional use Permit is for 30 Hangout (Tavern). The property is owned by Marissa Angel. Property description is: All of Lots 223 and 225, in College Hill Addition to the City of Lamar, Barton County, Missouri, according to the recorded plat thereof. Subject to all easements, restrictions, and agreements of record.

The conditional use permit is requested in order to allow the City Council to operate in the R-1 zone without a permanent resident.

A public hearing will be held on Tuesday, August 7, 2018 at 6:30 pm in the council room of City Hall, 1116 Broadway, Lamar MO. All parties in interest and citizens shall have the opportunity to be heard.

7-18-1c

Notice of Foreclosure Sale

Notice is hereby given that the undersigned shall, as provided in §443.044, RSMo, or any other applicable limitation provisions. Nothing in §475.120, RSMo, shall be construed to bar any action against a conservator thereby appointed or barred through a claim barred as to such persons by §517.021, RSMo.

Date of conservator's letters: August 15, 2017

Date of first publication: 6-27-18

By: JAMES V. SMITH-REED, Judge
6-27-3 t, 7-11, 7-18-4tc

IN THE 29TH JUDICIAL CIRCUIT CIRCUIT COURT, WARREN COUNTY, MISSOURI

Judge or Division: DAVID M. SPLINTER

In the matter of: L.L.L.

LISA ABBOTT, Juvenile Officer, Plaintiff/Petitioner,

STACY [illegible] BAKER, Mother

SARAH ALBERT, Father

ERIN [illegible], Unknown Father

Notice Upon Order for Service by Publication Termination of Parental Rights

The State of Missouri to: Defendant, John Doe. Unknown Father of the above named juvenile

Suit or other action has been commenced against you in the Circuit Court of Barton County, State of Missouri, at Lamar, the object and general nature of which is the termination of parental rights as to the above named juvenile.

You are further notified, pursuant to Section 211.462.2 RSMo., of your right to have counsel, and if you cannot afford counsel and are financially unable to employ counsel, counsel shall be appointed by the Court.

The names of all the parties to said action are stated above in the caption hereof and the name and address of the plaintiff is Lisa Abbott, 108 W. Cherry, Nevada, MO 64772.

You are further notified that, unless you file an answer or other pleading or shall otherwise appear and defend against the aforesaid petition within forty-five (45) days after the 2nd day of July, 2018, judgment by default will be rendered against you.

Witness my hand and seal of the Circuit Court at Nevada on 6-27-2018

s/ Melinda Mahaney
Clerk
7-4-3 t, 7-18, 25-4tc

NOTICE OF TRUSTEE'S SALE

Default having been made in the terms of that certain note secured by Deed of Trust executed by Wayne E. Post and Bobbi L. Post, husband and wife, dated May 16, 2003 and recorded on June 9, 2003 in Book 693, Page 180, in Document No. 1286, Office of Recorder of Deeds, Barton County, Missouri. The Successor Trustee will on August 6, 2018, between the hours of 9:00 o'clock A.M. and 1:00 P.M. more particularly at 12:00 P.M. at the Barton County Courthouse, 1007 Broadway, Lamar, Barton County, Missouri, sell at public sale to the highest bidder for cash, the following described:

All of Lots two (2) and three (3), in Block one (1), of Hall's Addition to the city of Lamar, in Barton County, Missouri, except 75 feet off the entire south side of said lot 3, subject to easements of record.

Brady Abts, 1004 Main, Mishawaka, IN, 08-991-32480-991002980.

Lot Number 1019, in Block 10 in Three (3) Rivers Addition, Township Thirty-six (36) North, Range Twenty-three (23) West, and containing Seven Hundred Twenty-two (722) square feet, more or less, according to the plat thereof recorded in Book 2, Page 2 of the Plat Records of Barton County, Missouri.

Pendley, Dale A. & Anita, 208 Depot St., Golden City, MO. 19-070-36-030-006-000.00. All of Lot Twelve (12) in Block Two (2) of Golden City, Barton County, Missouri, according to the recorded plat thereof.

MO. 06-080-02-018-0-00-034.000. A tract Commencing 25' S of the NW Corner of the SE Quarter of Sec 2, Twp 33, Rge 35, Thence E

NOTICE OF DELINQUENT TAX SALE

The following is a publication of the land to be sold in Barton County, Missouri, upon which real estate taxes for [illegible] and penalties and interest thereon are due and unpaid as of December 31, 2017. Unless the taxes, penalties and interest thereon are paid in full, the real estate will be sold at public auction at the front door of the Barton County Courthouse, Lamar, Missouri, on the 6th day of August, 2018, beginning at 9:00 o'clock A.M. and continuing from day to day thereafter until all of said real estate is sold. The amount of taxes, penalties and interest due on each tract of real estate is the amount set opposite the description of such real estate.

Appendix C Data Collection

Data Collection Questionnaire's

Multi-Jurisdictional

Hazard Mitigation Plan

Data Collection Questionnaire

For Local Governments

County: Barton

Jurisdiction: _____

Return by: September 15, 2017

Please complete this data collection questionnaire as accurately and completely as possible as this information will appear in the mitigation plan. A data collection questionnaire must be completed for each "jurisdiction" that wishes to be included in the plan. According to FEMA's definition a jurisdiction is any local government, including counties, municipalities, cities, towns, school districts, special districts, councils of government, and tribal organizations. Any of these entities as well as publicly funded colleges and universities that do not participate in the planning process **will not** be eligible applicants for FEMA mitigation funding programs. Please note: School Districts and other Educational Institutions should complete the Data Collection Questionnaire indicated "For School Districts and Educational Institutions".

Prepared by: _____
Phone: _____
Email: _____
Date: _____

Please return questionnaires by mail, email, or fax to:

Heidi Scheffler, Environmental Planner
Harry S Truman Coordinating Council
800 E Pennel St.
Carl Junction, MO
Ph: 417-649-6400
Fx:417-649-6409
Email: hscheffler@hstcc.org

CAPABILITY ASSESSMENT
&
INCORPORATION OF EXISTING PLANS, STUDIES, REPORTS AND TECHNICAL INFORMATION

The purpose of this section is to collect information to document existing capabilities as well as determine existing plans, studies, reports, and technical information that may need to be incorporated in the mitigation plan. Although some of this information may have been captured in your previous mitigation plan, it is important to ensure this information is current in the plan update.

Please indicate which of the following your jurisdiction has in place. For elements that do not pertain to your type of public entity, please indicate with "N/A". If applicable, please provide a completion date for the element. If your jurisdiction does not have a particular element, and a higher level of government has the authority pertaining to your jurisdiction, please indicate this in the comments column. If your jurisdiction has any of the **underlined and bolded** elements, please provide a copy of the document to the contact listed on the front and indicate method in the comments column (i.e. available on the web, will email or mail).

Element	Yes, No, N/A	Comments
Planning Capabilities		
Comprehensive Plan	Date: NO	
Builder's Plan	Date:	
Capital Improvement Plan	Date:	
City Emergency Operations Plan	Date:	
County Emergency Operations Plan	Date: Yes	
Local Recovery Plan	Date:	
County Recovery Plan	Date:	
City Mitigation Plan	Date:	
County Mitigation Plan	Date: Yes	
Debris Management Plan	Date:	
Economic Development Plan	Date:	
Transportation Plan	Date:	
Land-use Plan	Date:	
Flood Mitigation Assistance (FMA) Plan	Date:	
Watershed Plan	Date:	
Firewise or other fire mitigation plan	Date:	
Critical Facilities Plan (Mitigation/Response/Recovery)	Date:	

Element	Yes, No, N/A	Comments
Policies/Ordinance		
Zoning Ordinance	NO	
Building Code	Version: NO	
Floodplain Ordinance	Date: /	
Subdivision Ordinance	NO	
Tree Trimming Ordinance	NO	
Nuisance Ordinance	NO	
Storm Water Ordinance	/	
Drainage Ordinance		
Site Plan Review Requirements		
Historic Preservation Ordinance		
Landscape Ordinance	NO	
Program		
Zoning/Land Use Restrictions	NO	
Codes Building Site/Design	/	
Hazard Awareness Program	/	
National Flood Insurance Program	/	
Community Rating System (CRS) program under the National Flood Insurance Program (NFIP)?	If so, what is your current level rating?	
National Weather Service (NWS) Storm Ready Certification	Yes	
Firewise Community Certification	NO	
Building Code Effectiveness Grading (BCEGs)	NO	
ISO Fire Rating	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 (City)	NO	
Hazard Analysis/Risk Assessment (County)	Yes, 2013	
Evacuation Route Map	Yes	- NO - 9/27/19 - 126
Critical Facilities Inventory	Yes	on file @ Comm. office
Vulnerable Population Inventory	No	
Land Use Map	NO	

Element	Yes, No, N/A	Comments
Staff/Department		Full Time or Part Time?
Building Code Official	NO	
Building Inspector	NO	
Mapping Specialist (GIS)	Yes	
Engineer	NO	
Development Planner	/	
Public Works Official	/	
Emergency Management Coordinator	Yes	Tami Ryan
NFIP Floodplain Administrator	NO	
Bomb and/or Arson Squad	/	
Emergency Response Team	/	
Hazardous Materials Expert	NO	
Local Emergency Planning Committee	Yes	
County Emergency Management Commission	Yes	
Sanitation Department	NO	
Transportation Department	/	
Economic Development Department	/	
Housing Department	/	
Historic Preservation	/	
Non-Governmental Organizations (NGOs)	Is there a local chapter? Yes or No	
American Red Cross	NO	
Salvation Army	Yes	
Veterans Groups	Yes	
Local Environmental Organization	NO	
Homeowner Associations	NO	
Neighborhood Associations	NO	
Chamber of Commerce	Yes	
Community Organizations (Lions, Kiwanis, etc.	Yes	
Financial Resources	Is your jurisdiction able to? Yes or No	
Apply for Community Development Block Grants	NO	
Fund projects thru Capital Improvements funding	NO	
Authority to levy taxes for specific purposes		
Fees for water, sewer, gas, or electric services		
Impact fees for new development		
Incur debt through general obligation bonds		
Incur debt through special tax bonds		
Incur debt through private activities		
Withhold spending in hazard prone areas		

For plan updates, the plan maintenance process outlined in your previous plan requires all participating jurisdictions to incorporate the requirements of the mitigation plan into other planning mechanisms, when appropriate. A key element of effective implementation of mitigation is for the mitigation plan to be incorporated in existing authorities, policies, programs, and resources. Next to each applicable planning mechanism, indicate how your jurisdiction incorporated the previous mitigation plan. If no incorporation has occurred, please explain, including background information detailing any challenges preventing incorporation.

Planning Capabilities	Method of Incorporation Since Previous Plan or Challenges Preventing Incorporation
Comprehensive Plan	NO
Builder's Plan	NO
Capital Improvement Plan	
Local Recovery Plan	Yes
County Recovery Plan	Yes
Debris Management Plan	NO
Economic Development Plan	NO
Transportation Plan	NO
Land-use Plan	NO
Watershed Plan	NO
Firewise or other Fire Mitigation Plan such as Community Wildfire Protection Plan	NO

Additional Questions

1. How is your government structure organized? (Commission, Mayor/City Council, how many members)

2. List any past or ongoing public education or information programs, such as for responsible water use, fire safety, household preparedness, or environmental education. NONE

3. List any other past or ongoing projects or programs designed to reduce disaster losses. These may include projects to protect critical facilities. Be sure to include pending or approved projects submitted for FEMA mitigation grants. NONE

4. Describe any hazard-related concerns or issues regarding the vulnerability of special needs populations, such as the elderly, disabled, low-income, or migrant farm workers.
Weather.

5. How many outdoor warning sirens are in your community? 17 County - Golden City - 1 Liberal - 1 Lamar Heights - 1 Mixed Emotions - 1 Lamar - 6

How are they activated (indicate responsible department/personnel)? Via Barton Co OEM & BCSD 911

6. Does your community utilize any other warning systems such as Cable Override, Reverse 911, etc? If so, please describe them. IRIS - Phone - Text - Email Notification System

7. Does your community have designated public tornado shelters/saferooms? If so, are they constructed in accordance with FEMA standards? NO

Please provide address locations:

8. List residential, commercial and industrial development in your jurisdiction since last plan update.
Mennonites & Amish Groups.

9. Describe development trends and expected growth areas. Is any new development expected to occur in the 100-year floodplain? Is any new development expected to occur in any other known hazard areas? If possible, please provide a map indicating potential/planned growth areas. NO

10. Are any new facilities or infrastructure planned for construction during the next five years? If so, please provide facility name and purpose along with proposed locations, if known. Hwy 160 By Walmart

11. Please list major employers in your jurisdiction with an estimated number of employees.
200 - Mercy - Barton Co Hospital
250 - Utility workers

12. Please list Mitigation Planning Committee members who served during the development of the previously approved plan. Was the process set forth for monitoring the implementation of the previously approved mitigation plan adhered to? Did the Committee meet as was specified in the previously approved plan? Why or why not?

LERA Group

13. Describe your jurisdiction's participation in the NFIP. Include information about how compliance with the NFIP is enforced locally.

N/A

VULNERABILITY ASSESSMENT

The purpose of this worksheet is to assess the vulnerable buildings, populations, critical facilities, infrastructure, and other important assets in your community by using the best available data to complete the table. Use the table on the next page to compile a detailed inventory of specific assets at risk including critical facilities and infrastructure; natural, cultural, and historical assets; and economic assets. In the hazard specific column of the asset inventory table, indicate (by assigned abbreviation) which of the following hazards the asset is vulnerable to:

Flooding (Riverine & Flash)-**FL**	Attack (nuclear, conventional, chemical, and biological)-**A**
Levee Failure-**LF**	Civil Disorder-**CD**
Dam Failure-**DF**	Cyber Disruption-**CyD**
Earthquake-**EQ**	Fires (urban/structural)-F
Land Subsidence / Sinkholes-**LSS**	Hazardous Materials Incidents-**HM**
Droughts-**D**	Mass Transportation Accident-**MTA**
Extreme Temperatures-**ET**	Nuclear Power Plants-**NPP**
Severe Thunderstorms-**ST**	Public Health Emergencies/Environmental Issues-**PH**
Severe Winter-**SWW**	Special Events-**SE**
Tornadoes-**T**	Terrorism-**TX**
Wildfire-**WF**	Utilities (interruptions & system failures)-**U**

Critical Facilities and Infrastructure

A critical facility may be defined as one that is essential in providing utility or direction either during the response to an emergency or during the recovery operation. FEMA's HAZUS-MH loss estimation software uses the following three categories of critical assets. 'Essential facilities' are those that if damaged would have devastating impacts on disaster response and/or recovery. 'High potential loss facilities' are those that would have a high loss or impact on the community. Transportation and lifeline facilities are third category of critical assets; examples are provided below.

Essential Facilities	**High Potential Loss Facilities**	**Transportation and Lifeline**
Hospitals and other medical facilities	Power plants	Highways, bridges, and tunnels
Police stations	Dams/levees	Railroads and facilities
Fire station	Military installations	Bus facilities
Emergency Operations Centers	Hazardous material sites	Airports
	Schools	Water treatment facilities
	Shelters	Natural gas facilities and pipelines
	Day care centers	Oil facilities and pipelines
	Nursing homes	Communications facilities
	Main government buildings	

Economic Assets

Economic assets at risk may include major employers or primary economic sectors, such as agriculture, whose losses or inoperability would have severe impacts on the community and its ability to recover from disaster.

Asset Inventory

Please list critical facilities and other community assets, the square feet, values, and occupancy/capacity. If not applicable, enter "N/A"). In the last column, use the codes from the previous page to indicate hazards to which the asset is vulnerable. Add as many rows as needed. If this information is available in GIS format, please provide.

Critical Facilities

Name of Asset	Address	Square Feet	*Replacement Value (Insured)	Contents Value	Occupancy/ Capacity #	Hazards
Essential Facilities such as hospitals and other medical facilities, police and fire stations, Emergency Operations Centers						
Ex-Barton Co Memorial	29 W US 156 Ln		25 mill	5 mill	25	-All-
Lamar Police Dept.	1001 Broadway		2 mill	500,000	20	
Barton Co Sheriff Dept	100 Cherry St.		10 mill	2.5 mill	20	
Lamar Fire Dept	100 Broadway		10 mill	12 mill	30	
Liberal FD	205 S Main St		1 mill	1.5 mill	25	
Golden Belt FD	806 Brooks Ave		1 mill	1 mill	25	
EOC Barton Co	1004 E. 11th St.	400	1.5 mill	25,000	10	

Name of Asset	Address	Square Feet	*Replacement Value (Insured)	Contents Value	Occupancy/ Capacity #	Hazards
High Potential Loss Facilities such as power plants, dams/levees, military installations, hazardous materials sites, shelters, day care centers, nursing homes, main government buildings (Do not include schools—they will be reported by the school districts)						
Lamar Land Fill			1 mil	50 mil	5	
Lamar City Lake						
Lamar National Guard						
Lamar Daycare						
Truman Health Care						
Barton Co Comm House						
Transportation and Lifelines such as highways, bridges, and tunnels; railroads and facilities, bus facilities, airports, water treatment facilities, natural gas facilities and pipelines, oil facilities, oil facilities and pipelines, communications facilities						
Lamar Water Plant						
160 Hwy						
96 Hwy						
Burlington Northern RR						
MWA RR						
Lamar Mun. Airport						

***If replacement cost data is not available, use the best available data (assessed valuation or other method for estimating cost) and explain any data deficiencies.**

Economic Assets (Major Employers, etc)

Asset	Address	Product/ Service	Value (if known)	Number of Employees	Hazards

HISTORIC HAZARD EVENTS

Please fill out the sheet on the next page for each significant hazard event that affected **Your Jurisdiction. Make as many copies as necessary to record all events** and complete with as much detail as possible. This includes all events associated with the hazards listed below that have caused previous damage in your jurisdiction. It is especially important to capture events that either were not included in the previous Hazard Mitigation Plan or occurred since the plan was completed. Attach supporting documentation, photocopies of newspaper articles, or other original sources.

Jurisdiction	
Type of event	
Nature and magnitude of event **Location**	
Date of event	
Injuries	
Deaths	
Property damage	
Infrastructure damage	
Crop damage	
Business/economic impacts	
Road/school/other closures	
Other damage	
Insured losses	
Federal/state disaster relief funding	
Opinion on likelihood of occurring again	
Source of information	
Comments	

Jurisdiction	
Type of event	
Nature and magnitude of event	
Location	
Date of event	
Injuries	
Deaths	
Property damage	
Infrastructure damage	
Crop damage	
Business/economic impacts	
Road/school/other closures	
Other damage	
Insured losses	
Federal/state disaster relief funding	
Opinion on likelihood of occurring again	
Source of information	
Comments	

Barton County Service Providers Survey

Please list all providers of the following service in your jurisdiction.

Water _____

Sewer _____

Electricity _____

Fire Protection _____

Ambulance _____

Telephone _____

Internet _____

Cable / Satellite _____

Trash _____

Other _____

Multi-Jurisdictional

Hazard Mitigation Plan

Data Collection Questionnaire

For Local Governments

County: Barton

Jurisdiction: Golden City

Return by: September 15, 2017

Please complete this data collection questionnaire as accurately and completely as possible as this information will appear in the mitigation plan. A data collection questionnaire must be completed for each "jurisdiction" that wishes to be included in the plan. According to FEMA's definition a jurisdiction is any local government, including counties, municipalities, cities, towns, school districts, special districts, councils of government, and tribal organizations. Any of these entities as well as publicly funded colleges and universities that do not participate in the planning process **will not** be eligible applicants for FEMA mitigation funding programs. Please note: School Districts and other Educational Institutions should complete the Data Collection Questionnaire indicated "For School Districts and Educational Institutions".

Prepared by: Barbara Cappell
Phone: 417-537-4351
Email: CClerk@mchsi.com
Date: 10/23/17

Please return questionnaires by mail, email, or fax to:

Heidi Scheffler, Environmental Planner
Harry S Truman Coordinating Council
800 E Pennel St.
Carl Junction, MO
Ph: 417-649-6400
Fx:417-649-6409
Email: hscheffler@hstcc.org

CAPABILITY ASSESSMENT
&
INCORPORATION OF EXISTING PLANS, STUDIES, REPORTS AND TECHNICAL INFORMATION

The purpose of this section is to collect information to document existing capabilities as well as determine existing plans, studies, reports, and technical information that may need to be incorporated in the mitigation plan. Although some of this information may have been captured in your previous mitigation plan, it is important to ensure this information is current in the plan update.

Please indicate which of the following your jurisdiction has in place. For elements that do not pertain to your type of public entity, please indicate with "N/A". If applicable, please provide a completion date for the element. If your jurisdiction does not have a particular element, and a higher level of government has the authority pertaining to your jurisdiction, please indicate this in the comments column. If your jurisdiction has any of the **underlined and bolded** elements, please provide a copy of the document to the contact listed on the front and indicate method in the comments column (i.e. available on the web, will email or mail).

Element	Yes, No, N/A	Comments
Planning Capabilities		
Comprehensive Plan	Date: NA	
Builder's Plan	Date: NA	
Capital Improvement Plan	Date: NA	
City Emergency Operations Plan	Date: NA	
County Emergency Operations Plan	Date: NA	
Local Recovery Plan	Date: NA	
County Recovery Plan	Date: NA	
City Mitigation Plan	Date: NA	
County Mitigation Plan	Date: Dec 2013	
Debris Management Plan	Date: NA	
Economic Development Plan	Date: NA	
Transportation Plan	Date: NA	
Land-use Plan	Date: NA	
Flood Mitigation Assistance (FMA) Plan	Date: NA	
Watershed Plan	Date: NO	
Firewise or other fire mitigation plan	Date: NO	
Critical Facilities Plan (Mitigation/Response/Recovery)	Date: NO	

Element	Yes, No, N/A	Comments
Policies/Ordinance		
Zoning Ordinance	NA	
Building Code	Version:	
Floodplain Ordinance	Date: 06/04/2012	
Subdivision Ordinance		
Tree Trimming Ordinance	NA	
Nuisance Ordinance	Yes	
Storm Water Ordinance	NO	
Drainage Ordinance	NO	
Site Plan Review Requirements	NO	
Historic Preservation Ordinance	NO	
Landscape Ordinance	NO	
Program		
Zoning/Land Use Restrictions	NO	
Codes Building Site/Design	NO	
Hazard Awareness Program	NO	
National Flood Insurance Program	Yes	
Community Rating System (CRS) program under the National Flood Insurance Program (NFIP)?	If so, what is your current level rating? 7	
National Weather Service (NWS) Storm Ready Certification	NO	
Firewise Community Certification	NA	
Building Code Effectiveness Grading (BCEGs)	NA	
ISO Fire Rating	Rating: 7	
Economic Development Program	NO	
Land Use Program	NO	
Public Education/Awareness	NO	
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 (City)	NO	
Hazard Analysis/Risk Assessment (County)	NO	
Evacuation Route Map	NO	
Critical Facilities Inventory	NO	
Vulnerable Population Inventory	NO	
Land Use Map	NO	

Element	Yes, No, N/A	Comments
Staff/Department		Full Time or Part Time?
Building Code Official	NO	
Building Inspector	NO	
Mapping Specialist (GIS)	NO	
Engineer	Yes	Part
Development Planner	NO	
Public Works Official	Yes	Full
Emergency Management Coordinator	Yes	Part
NFIP Floodplain Administrator	Yes	Part
Bomb and/or Arson Squad	NO	
Emergency Response Team	NO	
Hazardous Materials Expert	NO	
Local Emergency Planning Committee	NO	
County Emergency Management Commission	?	
Sanitation Department	NO	
Transportation Department	NO	
Economic Development Department	NO	
Housing Department	NO	
Historic Preservation	NO	
Non-Governmental Organizations (NGOs)	**Is there a local chapter? Yes or No**	
American Red Cross	NO	
Salvation Army	NO	
Veterans Groups	NO	
Local Environmental Organization	NO	
Homeowner Associations	NO	
Neighborhood Associations	NO	
Chamber of Commerce	NO	
Community Organizations (Lions, Kiwanis, etc.	NO	
Financial Resources	**Is your jurisdiction able to? Yes or No**	
Apply for Community Development Block Grants	Yes	
Fund projects thru Capital Improvements funding	Yes	
Authority to levy taxes for specific purposes	Yes	
Fees for water, sewer, gas, or electric services	Yes	
Impact fees for new development	NO	
Incur debt through general obligation bonds	Yes	
Incur debt through special tax bonds	Yes	
Incur debt through private activities	NO	
Withhold spending in hazard prone areas	NO	

For plan updates, the plan maintenance process outlined in your previous plan requires all participating jurisdictions to incorporate the requirements of the mitigation plan into other planning mechanisms, when appropriate. A key element of effective implementation of mitigation is for the mitigation plan to be incorporated in existing authorities, policies, programs, and resources. Next to each applicable planning mechanism, indicate how your jurisdiction incorporated the previous mitigation plan. If no incorporation has occurred, please explain, including background information detailing any challenges preventing incorporation.

Planning Capabilities	Method of Incorporation Since Previous Plan or Challenges Preventing Incorporation
Comprehensive Plan	?
Builder's Plan	?
Capital Improvement Plan	?
Local Recovery Plan	?
County Recovery Plan	?
Debris Management Plan	?
Economic Development Plan	?
Transportation Plan	?
Land-use Plan	?
Watershed Plan	?
Firewise or other Fire Mitigation Plan such as Community Wildfire Protection Plan	?

Additional Questions

1. How is your government structure organized? (Commission, Mayor/City Council, how many members)
   Le Board members

2. List any past or ongoing public education or information programs, such as for responsible water use, fire safety, household preparedness, or environmental education.
   School Fire Safety

3. List any other past or ongoing projects or programs designed to reduce disaster losses. These may include projects to protect critical facilities. Be sure to include pending or approved projects submitted for FEMA mitigation grants.
   NA

4. Describe any hazard-related concerns or issues regarding the vulnerability of special needs populations, such as the elderly, disabled, low-income, or migrant farm workers.
   NA

5. How many outdoor warning sirens are in your community? - 1

   How are they activated (indicate responsible department/personnel)? - Barton County Emer Management
   by radio frequency

6. Does your community utilize any other warning systems such as Cable Override, Reverse 911, etc? If so, please describe them.
   NO

7. Does your community have designated public tornado shelters/saferooms? If so, are they constructed in accordance with FEMA standards?
   yes

   Please provide address locations: Golden City School - 120x Walnut

8. List residential, commercial and industrial development in your jurisdiction since last plan update.
   Casey's General Store

9. Describe development trends and expected growth areas. Is any new development expected to occur in the 100-year floodplain? Is any new development expected to occur in any other known hazard areas? If possible, please provide a map indicating potential/planned growth areas.
   NO

10. Are any new facilities or infrastructure planned for construction during the next five years? If so, please provide facility name and purpose along with proposed locations, if known.
    NO

11. Please list major employers in your jurisdiction with an estimated number of employees.
    Golden Bison Feeds Farms - 45
    Central States Fabrication - 12
    Golden City Foundry - 10
    Golden City Schools - 44
    Casey's General Store - 7
    MFA Produce Exchange - 19
    Golden City Grain & Cotton - 5
    Wyatt House - 13

12. Please list Mitigation Planning Committee members who served during the development of the previously approved plan. Was the process set forth for monitoring the implementation of the previously approved mitigation plan adhered to? Did the Committee meet as was specified in the previously approved plan? Why or why not?

Don't know

13. Describe your jurisdiction's participation in the NFIP. Include information about how compliance with the NFIP is enforced locally.

Don't know

Asset Inventory

Please list critical facilities and other community assets, the square feet, values, and occupancy/capacity. If not applicable, enter "N/A"). In the last column, use the codes from the previous page to indicate hazards to which the asset is vulnerable. Add as many rows as needed. If this information is available in GIS format, please provide.

Critical Facilities

Name of Asset	Address	Square Feet	*Replacement Value (Insured)	Contents Value	Occupancy/ Capacity #	Hazards
Essential Facilities such as hospitals and other medical facilities, police and fire stations, Emergency Operations Centers						
Golden City Fire Station	8010 Brock	4800	?	?		
Wyatt House	707 Wyatt	?	?	?	6	

Name of Asset	Address	Square Feet	*Replacement Value (Insured)	Contents Value	Occupancy/ Capacity #	Hazards
High Potential Loss Facilities such as power plants, dams/levees, military installations, hazardous materials sites, shelters, day care centers, nursing homes, main government buildings (Do not include schools—they will be reported by the school districts)						
Wyatt House	707 Wyatt Ave	3000	?		6	
Transportation and Lifelines such as highways, bridges, and tunnels; railroads and facilities, bus facilities, airports, water treatment facilities, natural gas facilities and pipelines, oil facilities, oil facilities and pipelines, communications facilities						

***If replacement cost data is not available, use the best available data (assessed valuation or other method for estimating cost) and explain any data deficiencies.**

Economic Assets (Major Employers, etc)

Asset	Address	Product/ Service	Value (if known)	Number of Employees	Hazards
Golden Business Forms	708 Main Str	Printing		45	
Central States Pubication	669 & US Hwy 160	Precision Machining		12	
Golden City Foundry	709 Main Str	Metal castings			
Golden City School	1208 Walnut Str			4/4	
Casey's General Store	208 C Str	Convient Store		7	
MFA Petroleum Exchange	700 Vine Str	Farm Supplies		18	
South Haven	707 Wyatt	Residential Care Facility		13	

HISTORIC HAZARD EVENTS

Please fill out the sheet on the next page for each significant hazard event that affected **Your Jurisdiction. Make as many copies as necessary to record all events** and complete with as much detail as possible. This includes all events associated with the hazards listed below that have caused previous damage in your jurisdiction. It is especially important to capture events that either were not included in the previous Hazard Mitigation Plan or occurred since the plan was completed. Attach supporting documentation, photocopies of newspaper articles, or other original sources.

Jurisdiction	Golden City
Type of event	Flood
Nature and magnitude of event	
Location	Golden City
Date of event	April 2017
Injuries	NO
Deaths	NO
Property damage	YES
Infrastructure damage	NO
Crop damage	NO
Business/economic impacts	NO
Road/school/other closures	NO
Other damage	NO
Insured losses	NO
Federal/state disaster relief funding	NO
Opinion on likelihood of occurring again	YES - Flood plain
Source of information	
Comments	

Jurisdiction	Golden City
Type of event	Thunderstorm - Lighting
Nature and magnitude of event	
Location	Golden City
Date of event	Sept 2017
Injuries	—
Deaths	—
Property damage	Yes $8000
Infrastructure damage	Yes
Crop damage	NO
Business/economic impacts	
Road/school/other closures	NO
Other damage	NO
Insured losses	$41006
Federal/state disaster relief funding	NO
Opinion on likelihood of occurring again	likely
Source of information	
Comments	

Barton County Service Providers Survey

Please list all providers of the following service in your jurisdiction.

Water City of Golden City

Sewer City of Golden City

Electricity Empire District Electric

Fire Protection City of GC

Ambulance Barton County Amb. District

Telephone Centurylink, Mediacom

Internet Mediacom, CenturyLink, Natvision

Cable / Satellite Mediacom, Dish, Direct TV

Trash BSU Waste Services LLC

Other GAS - Spire

Multi-Jurisdictional

Hazard Mitigation Plan

Data Collection Questionnaire

For Local Governments

County: Barton

Jurisdiction: LAMAR

Return by: September 15, 2017

Please complete this data collection questionnaire as accurately and completely as possible as this information will appear in the mitigation plan. A data collection questionnaire must be completed for each "jurisdiction" that wishes to be included in the plan. According to FEMA's definition a jurisdiction is any local government, including counties, municipalities, cities, towns, school districts, special districts, councils of government, and tribal organizations. Any of these entities as well as publicly funded colleges and universities that do not participate in the planning process **will not** be eligible applicants for FEMA mitigation funding programs. Please note: School Districts and other Educational Institutions should complete the Data Collection Questionnaire indicated "For School Districts and Educational Institutions".

Prepared by: LYNN CALTON
Phone: 417-682-5554
Email: lynncalton@tiadon.com
Date:

Please return questionnaires by mail, email, or fax to:

Heidi Scheffler, Environmental Planner
Harry S Truman Coordinating Council
800 E Pennel St.
Carl Junction, MO
Ph: 417-649-6400
Fx:417-649-6409
Email: hscheffler@hstcc.org

CAPABILITY ASSESSMENT
&
INCORPORATION OF EXISTING PLANS, STUDIES, REPORTS AND TECHNICAL INFORMATION

The purpose of this section is to collect information to document existing capabilities as well as determine existing plans, studies, reports, and technical information that may need to be incorporated in the mitigation plan. Although some of this information may have been captured in your previous mitigation plan, it is important to ensure this information is current in the plan update.

Please indicate which of the following your jurisdiction has in place. For elements that do not pertain to your type of public entity, please indicate with "N/A". If applicable, please provide a completion date for the element. If your jurisdiction does not have a particular element, and a higher level of government has the authority pertaining to your jurisdiction, please indicate this in the comments column. If your jurisdiction has any of the **underlined and bolded** elements, please provide a copy of the document to the contact listed on the front and indicate method in the comments column (i.e. available on the web, will email or mail).

Element	Yes, No, N/A	Comments
Planning Capabilities		
Comprehensive Plan	Date: 1994	
Builder's Plan	Date: IBC, 2006	
Capital Improvement Plan	Date: No	
City Emergency Operations Plan	Date: YES	LEPC
County Emergency Operations Plan	Date: YES	LEPC
Local Recovery Plan	Date: No	
County Recovery Plan	Date: N/A	
City Mitigation Plan	Date: No	
County Mitigation Plan	Date: N/A	
Debris Management Plan	Date: No	
Economic Development Plan	Date: Yes	
Transportation Plan	Date: No	
Land-use Plan	Date: YES	
Flood Mitigation Assistance (FMA) Plan	Date: No	
Watershed Plan	Date: No	
Firewise or other fire mitigation plan	Date: No	
Critical Facilities Plan (Mitigation/Response/Recovery)	Date: YES	

Element	Yes, No, N/A	Comments
Policies/Ordinance		
Zoning Ordinance	YES	
Building Code	Version: 2006	
Floodplain Ordinance	Date: 2011	
Subdivision Ordinance	YES	
Tree Trimming Ordinance	YES	
Nuisance Ordinance	YES	
Storm Water Ordinance	YES	
Drainage Ordinance	YES	
Site Plan Review Requirements	YES	
Historic Preservation Ordinance	No	
Landscape Ordinance	No	
Program		
Zoning/Land Use Restrictions	YES	
Codes Building Site/Design	YES	
Hazard Awareness Program	No	
National Flood Insurance Program	YES	
Community Rating System (CRS) program under the National Flood Insurance Program (NFIP)?	If so, what is your current level rating? No	
National Weather Service (NWS) Storm Ready Certification	No	
Firewise Community Certification	No	
Building Code Effectiveness Grading (BCEGs)	No	
ISO Fire Rating	Rating: 5	
Economic Development Program	YES	
Land Use Program	YES	
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)	YES	
Mutual Aid Agreements	YES	
Studies/Reports/Maps		
Hazard Analysis/Risk Assessment (City)	No	
Hazard Analysis/Risk Assessment (County)	N/A	
Evacuation Route Map	No	
Critical Facilities Inventory	No	
Vulnerable Population Inventory	No	
Land Use Map	YES	

Element	Yes, No, N/A	Comments
Staff/Department		Full Time or Part Time?
Building Code Official	YES	F.T.
Building Inspector	YES	F.T.
Mapping Specialist (GIS)	NO	—
Engineer	YES	F.T.
Development Planner	NO	—
Public Works Official	YES	F.T.
Emergency Management Coordinator	YES	F.T.
NFIP Floodplain Administrator	YES	F.T.
Bomb and/or Arson Squad	NO	—
Emergency Response Team	YES	F.T.
Hazardous Materials Expert	NO	—
Local Emergency Planning Committee	YES	P.T.
County Emergency Management Commission	YES	P.T.
Sanitation Department	YES	F.T.
Transportation Department	YES	F.T.
Economic Development Department	YES	P.T.
Housing Department	NO	—
Historic Preservation	NO	—
Non-Governmental Organizations (NGOs)	Is there a local chapter? Yes or No	
American Red Cross	NO	
Salvation Army	NO	
Veterans Groups	YES	
Local Environmental Organization	NO	
Homeowner Associations	YES	
Neighborhood Associations	NO	
Chamber of Commerce	YES	
Community Organizations (Lions, Kiwanis, etc.	YES	
Financial Resources	Is your jurisdiction able to? Yes or No	
Apply for Community Development Block Grants	YES	
Fund projects thru Capital Improvements funding	YES	
Authority to levy taxes for specific purposes	YES	
Fees for water, sewer, gas, or electric services	YES	
Impact fees for new development	NO	
Incur debt through general obligation bonds	YES	
Incur debt through special tax bonds	YES	
Incur debt through private activities	NO	
Withhold spending in hazard prone areas	YES	

For plan updates, the plan maintenance process outlined in your previous plan requires all participating jurisdictions to incorporate the requirements of the mitigation plan into other planning mechanisms, when appropriate. A key element of effective implementation of mitigation is for the mitigation plan to be incorporated in existing authorities, policies, programs, and resources. Next to each applicable planning mechanism, indicate how your jurisdiction incorporated the previous mitigation plan. If no incorporation has occurred, please explain, including background information detailing any challenges preventing incorporation.

Planning Capabilities	Method of Incorporation Since Previous Plan or Challenges Preventing Incorporation
Comprehensive Plan	
Builder's Plan	
Capital Improvement Plan	
Local Recovery Plan	
County Recovery Plan	
Debris Management Plan	
Economic Development Plan	
Transportation Plan	
Land-use Plan	
Watershed Plan	
Firewise or other Fire Mitigation Plan such as Community Wildfire Protection Plan	

Additional Questions

1. How is your government structure organized? (Commission, Mayor/City Council, how many members)
   MAYOR / COUNCIL
2. List any past or ongoing public education or information programs, such as for responsible water use, fire safety, household preparedness, or environmental education.
   THRU CITY HALL
3. List any other past or ongoing projects or programs designed to reduce disaster losses. These may include projects to protect critical facilities. Be sure to include pending or approved projects submitted for FEMA mitigation grants.
   NO BUILDING ALLOWED IN 100 YR. FLOODPLAIN
4. Describe any hazard-related concerns or issues regarding the vulnerability of special needs populations, such as the elderly, disabled, low-income, or migrant farm workers.
   OXYGEN TANKS & GENERATORS AVAILABLE
5. How many outdoor warning sirens are in your community? 5

   How are they activated (indicate responsible department/personnel)?
   FIRE DEPT.
6. Does your community utilize any other warning systems such as Cable Override, Reverse 911, etc? If so, please describe them. NO
7. Does your community have designated public tornado shelters/saferooms? If so, are they constructed in accordance with FEMA standards? YES, NO

   Please provide address locations: MEMORIAL HALL BASEMENT
8. List residential, commercial and industrial development in your jurisdiction since last plan update.
   REDNECK, FAST EDDIES, WALMART, ORSCHLIN
9. Describe development trends and expected growth areas. Is any new development expected to occur in the 100-year floodplain? Is any new development expected to occur in any other known hazard areas? If possible, please provide a map indicating potential/planned growth areas.
   WEST OF I-49, NO DEVELOPMENT ALLOWED IN FLOODPLAIN
10. Are any new facilities or infrastructure planned for construction during the next five years? If so, please provide facility name and purpose along with proposed locations, if known.
    UNKNOWN
11. Please list major employers in your jurisdiction with an estimated number of employees.
    TAMKO, REDNECK, LEGACY, HEARTLAND

12. Please list Mitigation Planning Committee members who served during the development of the previously approved plan. Was the process set forth for monitoring the implementation of the previously approved mitigation plan adhered to? Did the Committee meet as was specified in the previously approved plan? Why or why not?

UNKNOWN, NO, NO

13. Describe your jurisdiction's participation in the NFIP. Include information about how compliance with the NFIP is enforced locally.

CITY HAS NFIP ORDINANCE, ENFORCEMENT BY CITY.

VULNERABILITY ASSESSMENT

The purpose of this worksheet is to assess the vulnerable buildings, populations, critical facilities, infrastructure, and other important assets in your community by using the best available data to complete the table. Use the table on the next page to compile a detailed inventory of specific assets at risk including critical facilities and infrastructure; natural, cultural, and historical assets; and economic assets. In the hazard specific column of the asset inventory table, indicate (by assigned abbreviation) which of the following hazards the asset is vulnerable to:

Flooding (Riverine & Flash)-**FL**	Attack (nuclear, conventional, chemical, and biological)-**A**
Levee Failure-**LF**	Civil Disorder-**CD**
Dam Failure-**DF**	Cyber Disruption-**CyD**
Earthquake-**EQ**	Fires (urban/structural)-**F**
Land Subsidence / Sinkholes-**LSS**	Hazardous Materials Incidents-**HM**
Droughts-**D**	Mass Transportation Accident-**MTA**
Extreme Temperatures-**ET**	Nuclear Power Plants-**NPP**
Severe Thunderstorms-**ST**	Public Health Emergencies/Environmental Issues-**PH**
Severe Winter-**SWW**	Special Events-**SE**
Tornadoes-**T**	Terrorism-**TX**
Wildfire-**WF**	Utilities (interruptions & system failures)-**U**

Critical Facilities and Infrastructure

A critical facility may be defined as one that is essential in providing utility or direction either during the response to an emergency or during the recovery operation. FEMA's HAZUS-MH loss estimation software uses the following three categories of critical assets. 'Essential facilities' are those that if damaged would have devastating impacts on disaster response and/or recovery. 'High potential loss facilities' are those that would have a high loss or impact on the community. Transportation and lifeline facilities are third category of critical assets; examples are provided below.

Essential Facilities	**High Potential Loss Facilities**	**Transportation and Lifeline**
Hospitals and other medical facilities	Power plants	Highways, bridges, and tunnels
Police stations	Dams/levees	Railroads and facilities
Fire station	Military installations	Bus facilities
Emergency Operations Centers	Hazardous material sites	Airports
	Schools	Water treatment facilities
	Shelters	Natural gas facilities and pipelines
	Day care centers	Oil facilities and pipelines
	Nursing homes	Communications facilities
	Main government buildings	

Economic Assets

Economic assets at risk may include major employers or primary economic sectors, such as agriculture, whose losses or inoperability would have severe impacts on the community and its ability to recover from disaster.

Asset Inventory

Please list critical facilities and other community assets, the square feet, values, and occupancy/capacity. If not applicable, enter "N/A"). In the last column, use the codes from the previous page to indicate hazards to which the asset is vulnerable. Add as many rows as needed. If this information is available in GIS format, please provide.

Critical Facilities

Name of Asset	Address	Square Feet	*Replacement Value (Insured)	Contents Value	Occupancy/ Capacity #	Hazards
Essential Facilities such as hospitals and other medical facilities, police and fire stations, Emergency Operations Centers						
BARTON CO. MEM HOSPITAL	29 NW 1ST LANE	37.505801	8N -94.300800W			T, F, MTA, PH
POLICE STATION	1106 BROADWAY	37.403658	0N -94.275815W			T, F, SE, TX
FIRE STATION	1102 BROADWAY	37.494120	0N -94.275648W			T, F, WF
E.O.C.	1101 CHERRY	37.494232	7N -94.278612W			T, F, MTA, SE, TX, WF

Name of Asset	Address	Square Feet	*Replacement Value (Insured)	Contents Value	Occupancy/ Capacity #	Hazards
High Potential Loss Facilities such as power plants, dams/levees, military installations, hazardous materials sites, shelters, day care centers, nursing homes, main government buildings (Do not include schools—they will be reported by the school districts)						
POWER SUBSTATIONS	600 PARRY	37.50	31902N -	94.267920	W	T, F, U
DAM	2003 HAGNY	37.480	5080N -	94.261750	W	DF, ST
SCHOOL	503 MAPLE	37.501	4785 N -	94.281966	W	F, T, CD, MTA, PH
NURSING HOME	206 W. 1ST ST.	37.508	7111 N -	94.278230	W	F, T
NURSING HOME	100 SW 1ST LANE	37.500	7588N -	94.300528	W	F, T
CITY HALL	1104 BROADWAY	37.4939	333 N -	94.275718	W	F, T, CD, U
Transportation and Lifelines such as highways, bridges, and tunnels; railroads and facilities, bus facilities, airports, water treatment facilities, natural gas facilities and pipelines, oil facilities, oil facilities and pipelines, communications facilities						
HIGHWAY 160						HM, FL
HIGHWY I-49						HM, FL
BNSF RR						HM, FL, MTA
MNA RR						HM, FL, MTA
MUNICIPAL AIRPORT	73 W. HWY 160					ST, TX
WATER TREATMENT PLANT	2003 HAGNY					T, H, HM, U

***If replacement cost data is not available, use the best available data (assessed valuation or other method for estimating cost) and explain any data deficiencies.**

Economic Assets (Major Employers, etc)

Asset	Address	Product/ Service	Value (if known)	Number of Employees	Hazards
TAMKO	601 W. 17TH St	ROOFING			FL, T
REDNECK	1705 GULF ST.	DEER STANDS			FL, T
LEGACY	510 W. 12TH ST.	FARM EQUIP.			FL, T

HISTORIC HAZARD EVENTS

Please fill out the sheet on the next page for each significant hazard event that affected **Your Jurisdiction. Make as many copies as necessary to record all events** and complete with as much detail as possible. This includes all events associated with the hazards listed below that have caused previous damage in your jurisdiction. It is especially important to capture events that either were not included in the previous Hazard Mitigation Plan or occurred since the plan was completed. Attach supporting documentation, photocopies of newspaper articles, or other original sources.

Jurisdiction	LAMAR
Type of event	FLOOD
Nature and magnitude of event	WATER IN BUILDINGS
Location	W. 10TH ST.
Date of event	APRIL 2017
Injuries	NONE
Deaths	NONE
Property damage	MINOR
Infrastructure damage	NONE
Crop damage	NONE
Business/economic impacts	STORES CLOSED 2 DAYS
Road/school/other closures	HWY 160 CLOSURE
Other damage	—
Insured losses	UNKNOWN
Federal/state disaster relief funding	NONE
Opinion on likelihood of occurring again	EACH SPRING
Source of information	ME
Comments	

Jurisdiction	
Type of event	
Nature and magnitude of event	
Location	
Date of event	
Injuries	
Deaths	
Property damage	
Infrastructure damage	
Crop damage	
Business/economic impacts	
Road/school/other closures	
Other damage	
Insured losses	
Federal/state disaster relief funding	
Opinion on likelihood of occurring again	
Source of information	
Comments	

Barton County Service Providers Survey

Please list all providers of the following service in your jurisdiction.

Water CITY OF LAMAR

Sewer CITY OF LAMAR

Electricity CITY OF LAMAR

Fire Protection CITY OF LAMAR

Ambulance BARTON CO.

Telephone 417-682-5554

Internet lynncalton@tiadon.com

Cable / Satellite YES

Trash CITY OF LAMAR

Other

Multi-Jurisdictional

Hazard Mitigation Plan

Data Collection Questionnaire

For Local Governments

County: Barton

Jurisdiction: Lamar Heights

Return by: 1/19/18

Please complete this data collection questionnaire as accurately and completely as possible as this information will appear in the mitigation plan. A data collection questionnaire must be completed for each "jurisdiction" that wishes to be included in the plan. According to FEMA's definition a jurisdiction is any local government, including counties, municipalities, cities, towns, school districts, special districts, councils of government, and tribal organizations. Any of these entities as well as publicly funded colleges and universities that do not participate in the planning process **will not** be eligible applicants for FEMA mitigation funding programs. Please note: School Districts and other Educational Institutions should complete the Data Collection Questionnaire indicated "For School Districts and Educational Institutions".

Prepared by: Jeremy Mabry
Phone: 417.483.7729
Email: jeremymabry@me.com
Date: 1-12-18

Please return questionnaires by mail, email, or fax to:

Heidi Scheffler, Environmental Planner
Harry S Truman Coordinating Council
800 E Pennel St.
Carl Junction, MO
Ph: 417-649-6400
Fx:417-649-6409
Email: hscheffler@hstcc.org

CAPABILITY ASSESSMENT
&
INCORPORATION OF EXISTING PLANS, STUDIES, REPORTS AND TECHNICAL INFORMATION

The purpose of this section is to collect information to document existing capabilities as well as determine existing plans, studies, reports, and technical information that may need to be incorporated in the mitigation plan. Although some of this information may have been captured in your previous mitigation plan, it is important to ensure this information is current in the plan update.

Please indicate which of the following your jurisdiction has in place. For elements that do not pertain to your type of public entity, please indicate with "N/A". If applicable, please provide a completion date for the element. If your jurisdiction does not have a particular element, and a higher level of government has the authority pertaining to your jurisdiction, please indicate this in the comments column. If your jurisdiction has any of the **underlined and bolded** elements, please provide a copy of the document to the contact listed on the front and indicate method in the comments column (i.e. available on the web, will email or mail).

Comprehensive Plan	Date: NO ✓	
Builder's Plan	Date: NO ✓	
Capital Improvement Plan	Date: NO ✓	
City Emergency Operations Plan	Date: NO ✓	
County Emergency Operations Plan	Date: ~~NO~~ N/A ✓	
Local Recovery Plan	Date: NO	
County Recovery Plan	Date: N/A	
City Mitigation Plan	Date: NO 4/2013	
County Mitigation Plan	Date: ~~N/A~~ 4/2013	
Debris Management Plan	Date: NO	
Economic Development Plan	Date:	
Transportation Plan	Date: NO	
Land-use Plan	Date: NO	
Flood Mitigation Assistance (FMA) Plan	Date: ~~NO~~ NO	
Watershed Plan	Date:	
Firewise or other fire mitigation plan	Date: NO	
Critical Facilities Plan (Mitigation/Response/Recovery)	Date: NO	

Zoning Ordinance	NO	
Building Code	Version: NO	
Floodplain Ordinance	Date: NO	
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	
Zoning/Land Use Restrictions	NO	
Codes Building Site/Design	NO	
Hazard Awareness Program	NO	
National Flood Insurance Program	YES	
Community Rating System (CRS) program under the National Flood Insurance Program (NFIP)?	If so, what is your current level rating? ?	
National Weather Service (NWS) Storm Ready Certification	NO	
Firewise Community Certification	NO	
Building Code Effectiveness Grading (BCEGs)	NO	
ISO Fire Rating	Rating:	
Economic Development Program	NO	
Land Use Program	NO	
Public Education/Awareness	NO	
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	NO	
Hazard Analysis/Risk Assessment (City)	NO Yes 2013	
Hazard Analysis/Risk Assessment (County)	N/A Yes 2013	
Evacuation Route Map	NO	
Critical Facilities Inventory	NO	
Vulnerable Population Inventory	NO	
Land Use Map	NO	

Building Code Official	NO	
Building Inspector	NO	
Mapping Specialist (GIS)	NO	
Engineer	NO	
Development Planner	NO	
Public Works Official	NO	
Emergency Management Coordinator	NO	
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	NO	
Sanitation Department	NO	
Transportation Department	NO	
Economic Development Department	NO	
Housing Department	NO	
Historic Preservation	NO	
American Red Cross		
Salvation Army		
Veterans Groups		
Local Environmental Organization		
Homeowner Associations		
Neighborhood Associations		
Chamber of Commerce		
Community Organizations (Lions, Kiwanis, etc.		
Apply for Community Development Block Grants	NO	
Fund projects thru Capital Improvements funding	YES	
Authority to levy taxes for specific purposes	NO	
Fees for water, sewer, gas, or electric services	NO	
Impact fees for new development	NO	
Incur debt through general obligation bonds	NO	
Incur debt through special tax bonds	NO	
Incur debt through private activities	NO	
Withhold spending in hazard prone areas	NO	

For plan updates, the plan maintenance process outlined in your previous plan requires all participating jurisdictions to incorporate the requirements of the mitigation plan into other planning mechanisms, when appropriate. A key element of effective implementation of mitigation is for the mitigation plan to be incorporated in existing authorities, policies, programs, and resources. Next to each applicable planning mechanism, indicate how your jurisdiction incorporated the previous mitigation plan. If no incorporation has occurred, please explain, including background information detailing any challenges preventing incorporation.

Comprehensive Plan	
Builder's Plan	
Capital Improvement Plan	
Local Recovery Plan	
County Recovery Plan	
Debris Management Plan	N/A
Economic Development Plan	
Transportation Plan	
Land-use Plan	
Watershed Plan	
Firewise or other Fire Mitigation Plan such as Community Wildfire Protection Plan	

Additional Questions

1. How is your government structure organized? (Commission, Mayor/City Council, how many members)

   MAYOR/CITY COUNCIL - 5

2. List any past or ongoing public education or information programs, such as for responsible water use, fire safety, household preparedness, or environmental education.

   N/A

3. List any other past or ongoing projects or programs designed to reduce disaster losses. These may include projects to protect critical facilities. Be sure to include pending or approved projects submitted for FEMA mitigation grants.

   N/A

4. Describe any hazard-related concerns or issues regarding the vulnerability of special needs populations, such as the elderly, disabled, low-income, or migrant farm workers.

   N/A

5. How many outdoor warning sirens are in your community?

   2

   How are they activated (indicate responsible department/personnel)?

   COUNTY

6. Does your community utilize any other warning systems such as Cable Override, Reverse 911, etc? If so, please describe them.

   NO

7. Does your community have designated public tornado shelters/saferooms? If so, are they constructed in accordance with FEMA standards?

   Please provide address locations:

   NO

8. List residential, commercial and industrial development in your jurisdiction since last plan update.

   N/A

9. Describe development trends and expected growth areas. Is any new development expected to occur in the 100-year floodplain? Is any new development expected to occur in any other known hazard areas? If possible, please provide a map indicating potential/planned growth areas.

   NO

10. Are any new facilities or infrastructure planned for construction during the next five years? If so, please provide facility name and purpose along with proposed locations, if known.

    NO

11. Please list major employers in your jurisdiction with an estimated number of employees.

    NONE

12. Please list Mitigation Planning Committee members who served during the development of the previously approved plan. Was the process set forth for monitoring the implementation of the previously approved mitigation plan adhered to? Did the Committee meet as was specified in the previously approved plan? Why or why not?

N/A

13. Describe your jurisdiction's participation in the NFIP. Include information about how compliance with the NFIP is enforced locally.

VULNERABILITY ASSESSMENT

The purpose of this worksheet is to assess the vulnerable buildings, populations, critical facilities, infrastructure, and other important assets in your community by using the best available data to complete the table. Use the table on the next page to compile a detailed inventory of specific assets at risk including critical facilities and infrastructure; natural, cultural, and historical assets; and economic assets. In the hazard specific column of the asset inventory table, indicate (by assigned abbreviation) which of the following hazards the asset is vulnerable to:

Flooding (Riverine & Flash)-**FL**	Attack (nuclear, conventional, chemical, and biological)-**A**
Levee Failure-**LF**	Civil Disorder-**CD**
Dam Failure-**DF**	Cyber Disruption-**CyD**
Earthquake-**EQ**	Fires (urban/structural)-**F**
Land Subsidence / Sinkholes-**LSS**	Hazardous Materials Incidents-**HM**
Droughts-**D**	Mass Transportation Accident-**MTA**
Extreme Temperatures-**ET**	Nuclear Power Plants-**NPP**
Severe Thunderstorms-**ST**	Public Health Emergencies/Environmental Issues-**PH**
Severe Winter-**SWW**	Special Events-**SE**
Tornadoes-**T**	Terrorism-**TX**
Wildfire-**WF**	Utilities (interruptions & system failures)-**U**

Critical Facilities and Infrastructure

A critical facility may be defined as one that is essential in providing utility or direction either during the response to an emergency or during the recovery operation. FEMA's HAZUS-MH loss estimation software uses the following three categories of critical assets. 'Essential facilities' are those that if damaged would have devastating impacts on disaster response and/or recovery. 'High potential loss facilities' are those that would have a high loss or impact on the community. Transportation and lifeline facilities are third category of critical assets; examples are provided below.

Essential Facilities	**High Potential Loss Facilities**	**Transportation and Lifeline**
Hospitals and other medical facilities	Power plants	Highways, bridges, and tunnels
Police stations	Dams/levees	Railroads and facilities
Fire station	Military installations	Bus facilities
Emergency Operations Centers	Hazardous material sites	Airports
	Schools	Water treatment facilities
	Shelters	Natural gas facilities and pipelines
	Day care centers	Oil facilities and pipelines
	Nursing homes	Communications facilities
	Main government buildings	

Economic Assets

Economic assets at risk may include major employers or primary economic sectors, such as agriculture, whose losses or inoperability would have severe impacts on the community and its ability to recover from disaster.

Asset Inventory

Please list critical facilities and other community assets, the square feet, values, and occupancy/capacity. If not applicable, enter "N/A"). In the last column, use the codes from the previous page to indicate hazards to which the asset is vulnerable. Add as many rows as needed. If this information is available in GIS format, please provide.

Critical Facilities

Name of Asset	Address	Square Feet	Replacement Value (insured)	Contents value	Occupancy Capacity	Hazards
Essential Facilities such as hospitals and other medical facilities, police and fire stations, Emergency Operations Centers						

Name or Asset	Address	Square Feet	Replacement Value (Insured)	Contents Value	Occupancy/ Capacity #	Hazards
High Potential Loss Facilities: Fire stations, EMS stations, police stations, power plants, government buildings, hospitals, nursing homes, major employers, banks, communication centers, military installations, hazardous materials sites, shelters, daycare centers, nursing homes, and schools. They are reported by the school districts.						
Transportation and Lifelines: Highways, bridges, airports, railroads, airfacilities, bus facilities, and ports, water treatment facilities, natural gas facilities, and pipelines, oil facilities, and pipelines, communication facilities.						

*If replacement cost data is not available, use the best available data (assessed valuation or other method for estimating cost) and explain any data deficiencies.

Economic Assets (Major Employers, etc)

Asset	Address	Product/ Service	Value (if known)	Number of Employees	Hazards
	NONE				

HISTORIC HAZARD EVENTS

Please fill out the sheet on the next page for each significant hazard event that affected **Your Jurisdiction. Make as many copies as necessary to record all events** and complete with as much detail as possible. This includes all events associated with the hazards listed below that have caused previous damage in your jurisdiction. It is especially important to capture events that either were not included in the previous Hazard Mitigation Plan or occurred since the plan was completed. Attach supporting documentation, photocopies of newspaper articles, or other original sources.

Jurisdiction	
Type of event	
Nature and magnitude of event	
Location	
Date of event	
Injuries	
Deaths	
Property damage	
Infrastructure damage	
Crop damage	
Business/economic impacts	
Road/school/other closures	
Other damage	
Insured losses	
Federal/state disaster relief funding	
Opinion on likelihood of occurring again	
Source of information	
Comments	

Jurisdiction	
Type of event	
Nature and magnitude of event	
Location	
Date of event	
Injuries	
Deaths	
Property damage	
Infrastructure damage	
Crop damage	
Business/economic impacts	
Road/school/other closures	
Other damage	
Insured losses	
Federal/state disaster relief funding	
Opinion on likelihood of occurring again	
Source of information	
Comments	

Barton County Service Providers Survey

Please list all providers of the following service in your jurisdiction.

Water BARTON COUNTY PWSD #1

Sewer NONE Septic

Electricity REA, CITY OF LAMAR, KCP&L

Fire Protection BARTON COUNTY

Ambulance BARTON COUNTY

Telephone BELL

Internet COX, PIXIUS,

Cable / Satellite COX, DIRECTV, DISH

Trash

Other

Multi-Jurisdictional

Hazard Mitigation Plan

Data Collection Questionnaire

For Local Governments

County: Barton

Jurisdiction: Liberal

Return by: 1/19/2018

Please complete this data collection questionnaire as accurately and completely as possible as this information will appear in the mitigation plan. A data collection questionnaire must be completed for each "jurisdiction" that wishes to be included in the plan. According to FEMA's definition a jurisdiction is any local government, including counties, municipalities, cities, towns, school districts, special districts, councils of government, and tribal organizations. Any of these entities as well as publicly funded colleges and universities that do not participate in the planning process **will not** be eligible applicants for FEMA mitigation funding programs. Please note: School Districts and other Educational Institutions should complete the Data Collection Questionnaire indicated "For School Districts and Educational Institutions".

Prepared by: Doris Ann Fast
Phone: 417-843-2135
Email: d.fast.city of liberal@outlook.com
Date: 1-18-18

Please return questionnaires by mail, email, or fax to:

Heidi Scheffler, Environmental Planner
Harry S Truman Coordinating Council
800 E Pennel St.
Carl Junction, MO
Ph: 417-649-6400
Fx:417-649-6409
Email: hscheffler@hstcc.org

CAPABILITY ASSESSMENT
&
INCORPORATION OF EXISTING PLANS, STUDIES, REPORTS AND TECHNICAL INFORMATION

The purpose of this section is to collect information to document existing capabilities as well as determine existing plans, studies, reports, and technical information that may need to be incorporated in the mitigation plan. Although some of this information may have been captured in your previous mitigation plan, it is important to ensure this information is current in the plan update.

Please indicate which of the following your jurisdiction has in place. For elements that do not pertain to your type of public entity, please indicate with "N/A". If applicable, please provide a completion date for the element. If your jurisdiction does not have a particular element, and a higher level of government has the authority pertaining to your jurisdiction, please indicate this in the comments column. If your jurisdiction has any of the **underlined and bolded** elements, please provide a copy of the document to the contact listed on the front and indicate method in the comments column (i.e. available on the web, will email or mail).

Element	Yes, No, N/A	Comments
Planning Capabilities		
Comprehensive Plan	Date:	
Builder's Plan	Date: Don't Know	
Capital Improvement Plan	Date: Don't Know	
City Emergency Operations Plan	Date: April 6, 2012	Chapter 325
County Emergency Operations Plan	Date: January 2009	
Local Recovery Plan	Date: Don't Know	
County Recovery Plan	Date: Don't Know	
City Mitigation Plan	Date: Don't Know	
County Mitigation Plan	Date: Don't Know	
Debris Management Plan	Date: Don't know	
Economic Development Plan	Date:	
Transportation Plan	Date: no	
Land-use Plan	Date: no	
Flood Mitigation Assistance (FMA) Plan	Date: Don't Know	
Watershed Plan	Date:	
Firewise or other fire mitigation plan	Date: N/A	
Critical Facilities Plan (Mitigation/Response/Recovery)	Date: Don't Know	

Element	Yes, No, N/A	Comments
Policies/Ordinance		
Zoning Ordinance	No	
Building Code	Version: N/A	
Floodplain Ordinance	Date: Jan. 11, 2011	Chapter 410
Subdivision Ordinance	N/A	
Tree Trimming Ordinance	No	
Nuisance Ordinance	Yes	Section 220
Storm Water Ordinance	yes	Chapter 700
Drainage Ordinance	yes	" "
Site Plan Review Requirements	N/A	
Historic Preservation Ordinance	N/A	
Landscape Ordinance	N/A	
Program		
Zoning/Land Use Restrictions	N/A	
Codes Building Site/Design	N/A	
Hazard Awareness Program	Don't Know	
National Flood Insurance Program	Don't Know	
Community Rating System (CRS) program under the National Flood Insurance Program (NFIP)?	If so, what is your current level rating?	
National Weather Service (NWS) Storm Ready Certification	Don't Know	
Firewise Community Certification	N/A	
Building Code Effectiveness Grading (BCEGs)	N/A	
ISO Fire Rating	Rating: 7	
Economic Development Program	Don't Know	
Land Use Program	N/A	
Public Education/Awareness	Don't Know	
Property Acquisition	Don't Know	
Planning/Zoning Boards	N/A	
Stream Maintenance Program	N/A	
Tree Trimming Program	yes	
Engineering Studies for Streams (Local/County/Regional)	No	
Mutual Aid Agreements	yes	
Studies/Reports/Maps		
Hazard Analysis/Risk Assessment (City)	Don't Know	
Hazard Analysis/Risk Assessment (County)	Don't Know	
Evacuation Route Map	N/A	
Critical Facilities Inventory	Don't Know	
Vulnerable Population Inventory	Don't Know	
Land Use Map	Don't Know	

Element Staff/Department	Yes, No, N/A	Comments Full Time or Part Time?
Building Code Official	N/A	
Building Inspector	No	
Mapping Specialist (GIS)	No	
Engineer	No	
Development Planner	No	
Public Works Official	Yes	Full time
Emergency Management Coordinator	Don't Know	
NFIP Floodplain Administrator	" "	
Bomb and/or Arson Squad	N/A	
Emergency Response Team	Yes	Don't Know
Hazardous Materials Expert	No	
Local Emergency Planning Committee	Yes	Don't Know
County Emergency Management Commission	Yes	" "
Sanitation Department	N/A	
Transportation Department	N/A	
Economic Development Department	Don't Know	
Housing Department	N/A	
Historic Preservation	N/A	
Non-Governmental Organizations (NGOs)	Is there a local chapter? Yes or No	
American Red Cross	No	
Salvation Army	No	
Veterans Groups	Yes	
Local Environmental Organization	No	
Homeowner Associations	No	
Neighborhood Associations	No	
Chamber of Commerce	No	
Community Organizations (Lions, Kiwanis, etc.	Civic Groups, Veterans, Senior Services, Friends	
Financial Resources	Is your jurisdiction able to? Yes or No	
Apply for Community Development Block Grants	Don't Know	
Fund projects thru Capital Improvements funding	" "	
Authority to levy taxes for specific purposes	" "	
Fees for water, sewer, gas, or electric services	yes	
Impact fees for new development	no	
Incur debt through general obligation bonds	Don't Know	
Incur debt through special tax bonds	" "	
Incur debt through private activities	no	
Withhold spending in hazard prone areas	no	

For plan updates, the plan maintenance process outlined in your previous plan requires all participating jurisdictions to incorporate the requirements of the mitigation plan into other planning mechanisms, when appropriate. A key element of effective implementation of mitigation is for the mitigation plan to be incorporated in existing authorities, policies, programs, and resources. Next to each applicable planning mechanism, indicate how your jurisdiction incorporated the previous mitigation plan. If no incorporation has occurred, please explain, including background information detailing any challenges preventing incorporation.

Planning Capabilities	Method of Incorporation Since Previous Plan or Challenges Preventing Incorporation
Comprehensive Plan	Don't Know
Builder's Plan	
Capital Improvement Plan	
Local Recovery Plan	
County Recovery Plan	
Debris Management Plan	
Economic Development Plan	
Transportation Plan	
Land-use Plan	
Watershed Plan	
Firewise or other Fire Mitigation Plan such as Community Wildfire Protection Plan	Wildfires are not a problem

Additional Questions

1. How is your government structure organized? (Commission, Mayor/City Council, how many members)
   Mayor/ City Council we have 4 members for council
2. List any past or ongoing public education or information programs, such as for responsible water use, fire safety, household preparedness, or environmental education.
   The City of Liberal doesn't have the funding or personnel for education programs.
3. List any other past or ongoing projects or programs designed to reduce disaster losses. These may include projects to protect critical facilities. Be sure to include pending or approved projects submitted for FEMA mitigation grants. Liberal School is working on a Tornado Shelter.
4. Describe any hazard-related concerns or issues regarding the vulnerability of special needs populations, such as the elderly, disabled, low-income, or migrant farm workers.
   Transportation
5. How many outdoor warning sirens are in your community? We have two in the City Limits of Liberal
   How are they activated (indicate responsible department/personnel)? County
6. Does your community utilize any other warning systems such as Cable Override, Reverse 911, etc? If so, please describe them. not that I'm aware of.
7. Does your community have designated public tornado shelters/saferooms? If so, are they constructed in accordance with FEMA standards? Yes / No

   Please provide address locations: Methodist Church 105 College St., Christian Church 113 E. Yale,
8. List residential, commercial and industrial development in your jurisdiction since last plan update.
   We have had some new houses built in Brookfield Drive.
9. Describe development trends and expected growth areas. Is any new development expected to occur in the 100-year floodplain? Is any new development expected to occur in any other known hazard areas? If possible, please provide a map indicating potential/planned growth areas.
   no / no
10. Are any new facilities or infrastructure planned for construction during the next five years? If so, please provide facility name and purpose along with proposed locations, if known.
    The Liberal School has received a grant for a storm shelter to be built.
11. Please list major employers in your jurisdiction with an estimated number of employees.
    Barton Mutual Insurance, Casey's
    Liberal School

12. Please list Mitigation Planning Committee members who served during the development of the previously approved plan. Was the process set forth for monitoring the implementation of the previously approved mitigation plan adhered to? Did the Committee meet as was specified in the previously approved plan? Why or why not?

I'm guessing our City Council

13. Describe your jurisdiction's participation in the NFIP. Include information about how compliance with the NFIP is enforced locally.

Floodplain management Ordinance - March 2010

VULNERABILITY ASSESSMENT

The purpose of this worksheet is to assess the vulnerable buildings, populations, critical facilities, infrastructure, and other important assets in your community by using the best available data to complete the table. Use the table on the next page to compile a detailed inventory of specific assets at risk including critical facilities and infrastructure; natural, cultural, and historical assets; and economic assets. In the hazard specific column of the asset inventory table, indicate (by assigned abbreviation) which of the following hazards the asset is vulnerable to:

Flooding (Riverine & Flash)-**FL**	Attack (nuclear, conventional, chemical, and biological)-**A**
Levee Failure-**LF**	Civil Disorder-**CD**
Dam Failure-**DF**	Cyber Disruption-**CyD**
Earthquake-**EQ**	Fires (urban/structural)-**F**
Land Subsidence / Sinkholes-**LSS**	Hazardous Materials Incidents-**HM**
Droughts-**D**	Mass Transportation Accident-**MTA**
Extreme Temperatures-**ET**	Nuclear Power Plants-**NPP**
Severe Thunderstorms-**ST**	Public Health Emergencies/Environmental Issues-**PH**
Severe Winter-**SWW**	Special Events-**SE**
Tornadoes-**T**	Terrorism-**TX**
Wildfire-**WF**	Utilities (interruptions & system failures)-**U**

Critical Facilities and Infrastructure

A critical facility may be defined as one that is essential in providing utility or direction either during the response to an emergency or during the recovery operation. FEMA's HAZUS-MH loss estimation software uses the following three categories of critical assets. 'Essential facilities' are those that if damaged would have devastating impacts on disaster response and/or recovery. 'High potential loss facilities' are those that would have a high loss or impact on the community. Transportation and lifeline facilities are third category of critical assets; examples are provided below.

Essential Facilities	**High Potential Loss Facilities**	**Transportation and Lifeline**
Hospitals and other medical facilities	Power plants	Highways, bridges, and tunnels
Police stations	Dams/levees	Railroads and facilities
Fire station	Military installations	Bus facilities
Emergency Operations Centers	Hazardous material sites	Airports
	Schools	Water treatment facilities
	Shelters	Natural gas facilities and pipelines
	Day care centers	Oil facilities and pipelines
	Nursing homes	Communications facilities
	Main government buildings	

Economic Assets

Economic assets at risk may include major employers or primary economic sectors, such as agriculture, whose losses or inoperability would have severe impacts on the community and its ability to recover from disaster.

Asset Inventory

Please list critical facilities and other community assets, the square feet, values, and occupancy/capacity. If not applicable, enter "N/A"). In the last column, use the codes from the previous page to indicate hazards to which the asset is vulnerable. Add as many rows as needed. If this information is available in GIS format, please provide.

Critical Facilities

Name of Asset	Address	Square Feet	*Replacement Value (Insured)	Contents Value	Occupancy/ Capacity #	Hazards
Essential Facilities such as hospitals and other medical facilities, police and fire stations, Emergency Operations Centers						
Cox Barton County Hospital	29 n.w. 1st Lane Lamar Mo		64762			
Liberal Police Dept.	207 S. Main Liberal, Mo.					
Barton County Sheriff	1010 Cherry St Lamar, Mo.					
Barton County Fire Dept						
Liberal Rural Fire Dept	S. Main Liberal, Mo.					

Name of Asset	Address	Square Feet	*Replacement Value (Insured)	Contents Value	Occupancy/ Capacity #	Hazards
High Potential Loss Facilities such as power plants, dams/levees, military installations, hazardous materials sites, shelters, day care centers, nursing homes, main government buildings (Do not include schools—they will be reported by the school districts)						
City of Liberal	209 S. Main Liberal, Ks					
Transportation and Lifelines such as highways, bridges, and tunnels; railroads and facilities, bus facilities, airports, water treatment facilities, natural gas facilities and pipelines, oil facilities, oil facilities and pipelines, communications facilities						
City of Liberal	209 S. main Liberal, Ks.		- water plant			
BNSF R.R.						
Southern Star			Gas System pipeline			

***If replacement cost data is not available, use the best available data (assessed valuation or other method for estimating cost) and explain any data deficiencies.**

Economic Assets (Major Employers, etc)

Asset	Address	Product/ Service	Value (if known)	Number of Employees	Hazards
Cenkon Natural	1201 E 23rd St, Great Bend, Ks.				
Cosentyx	1321 W. 10th, Liberal, Ks				

HISTORIC HAZARD EVENTS

Please fill out the sheet on the next page for each significant hazard event that affected **Your Jurisdiction. Make as many copies as necessary to record all events** and complete with as much detail as possible. This includes all events associated with the hazards listed below that have caused previous damage in your jurisdiction. It is especially important to capture events that either were not included in the previous Hazard Mitigation Plan or occurred since the plan was completed. Attach supporting documentation, photocopies of newspaper articles, or other original sources.

Jurisdiction	
Type of event	
Nature and magnitude of event	
Location	
Date of event	
Injuries	
Deaths	
Property damage	
Infrastructure damage	
Crop damage	
Business/economic impacts	
Road/school/other closures	
Other damage	
Insured losses	
Federal/state disaster relief funding	
Opinion on likelihood of occurring again	
Source of information	
Comments	

Jurisdiction	
Type of event	
Nature and magnitude of event	
Location	
Date of event	
Injuries	
Deaths	
Property damage	
Infrastructure damage	
Crop damage	
Business/economic impacts	
Road/school/other closures	
Other damage	
Insured losses	
Federal/state disaster relief funding	
Opinion on likelihood of occurring again	
Source of information	
Comments	

Barton County Service Providers Survey

Please list all providers of the following service in your jurisdiction.

Water City of Liberal

Sewer City of Liberal

Electricity KCP&L

Fire Protection Liberal Rural Fire Department

Ambulance Barton County Ambulance

Telephone Windstream

Internet Pixius

Cable / Satellite Media Com

Trash Republic Trash Service

Other

Multi-Jurisdictional
Hazard Mitigation Plan

Data Collection Questionnaire
For Local Governments

County: Barton

Jurisdiction: City of Mindenmines

Return by: 1/19/2018

Please complete this data collection questionnaire as accurately and completely as possible as this information will appear in the mitigation plan. A data collection questionnaire must be completed for each "jurisdiction" that wishes to be included in the plan. According to FEMA's definition a jurisdiction is any local government, including counties, municipalities, cities, towns, school districts, special districts, councils of government, and tribal organizations. Any of these entities as well as publicly funded colleges and universities that do not participate in the planning process **will not** be eligible applicants for FEMA mitigation funding programs. Please note: School Districts and other Educational Institutions should complete the Data Collection Questionnaire indicated "For School Districts and Educational Institutions".

Prepared by: Jean Higgins
Phone: 417-842-3216
Email: mindenq@pixius.net
Date: 01/22/2018

Please return questionnaires by mail, email, or fax to:

Heidi Scheffler, Environmental Planner
Harry S Truman Coordinating Council
800 E Pennel St.
Carl Junction, MO
Ph: 417-649-6400
Fx:417-649-6409
Email: hscheffler@hstcc.org

CAPABILITY ASSESSMENT
&
INCORPORATION OF EXISTING PLANS, STUDIES, REPORTS AND TECHNICAL INFORMATION

The purpose of this section is to collect information to document existing capabilities as well as determine existing plans, studies, reports, and technical information that may need to be incorporated in the mitigation plan. Although some of this information may have been captured in your previous mitigation plan, it is important to ensure this information is current in the plan update.

Please indicate which of the following your jurisdiction has in place. For elements that do not pertain to your type of public entity, please indicate with "N/A". If applicable, please provide a completion date for the element. If your jurisdiction does not have a particular element, and a higher level of government has the authority pertaining to your jurisdiction, please indicate this in the comments column. If your jurisdiction has any of the **underlined and bolded** elements, please provide a copy of the document to the contact listed on the front and indicate method in the comments column (i.e. available on the web, will email or mail).

Comprehensive Plan	Date: NO	
Builder's Plan	Date: NO	
Capital Improvement Plan	Date: NO	
City Emergency Operations Plan	Date: YES	
County Emergency Operations Plan	Date: NO	
Local Recovery Plan	Date: NO	
County Recovery Plan	Date: NO	
City Mitigation Plan	Date: NO	
County Mitigation Plan	Date: YES DECEMBER 2013	
Debris Management Plan	Date: NO	
Economic Development Plan	Date: NO	
Transportation Plan	Date: NO	
Land-use Plan	Date: NO	
Flood Mitigation Assistance (FMA) Plan	Date: NO	
Watershed Plan	Date: NO	
Firewise or other fire mitigation plan	Date: NO	
Critical Facilities Plan (Mitigation/Response/Recovery)	Date: NO	

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Zoning Ordinance	NO	
Building Code	Version: NO	
Floodplain Ordinance	Date: NO	
Subdivision Ordinance	NO	
Tree Trimming Ordinance	NO	
Nuisance Ordinance	YES	
Storm Water Ordinance	YES	
Drainage Ordinance	NO	
Site Plan Review Requirements	NO	
Historic Preservation Ordinance	NO	
Landscape Ordinance	No	
Zoning/Land Use Restrictions	NO	
Codes Building Site/Design	NO	
Hazard Awareness Program	NO	
National Flood Insurance Program	YES	
Community Rating System (CRS) program under the National Flood Insurance Program (NFIP)?	If so, what is your current level rating? NO	
National Weather Service (NWS) Storm Ready Certification	NO	
Firewise Community Certification	NO	
Building Code Effectiveness Grading (BCEGs)	NO	
ISO Fire Rating	Rating: NA	
Economic Development Program	NO	
Land Use Program	NO	
Public Education/Awareness	NO	
Property Acquisition	NO	
Planning/Zoning Boards	NO	
Stream Maintenance Program	NO	
Tree Trimming Program	YES	
Engineering Studies for Streams (Local/County/Regional)	NO	
Mutual Aid Agreements	YES	
Hazard Analysis/Risk Assessment (City)	NO	
Hazard Analysis/Risk Assessment (County)	NO	
Evacuation Route Map	NO	
Critical Facilities Inventory	NO	
Vulnerable Population Inventory	NO	
Land Use Map	NO	

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Building Code Official	NO	
Building Inspector	NO	
Mapping Specialist (GIS)	NO	
Engineer	NO	
Development Planner	NO	
Public Works Official	YES	FULL TIME
Emergency Management Coordinator	YES	PART TIME
NFIP Floodplain Administrator	NO	
Bomb and/or Arson Squad	NO	
Emergency Response Team	YES	PARTTIME
Hazardous Materials Expert	NO	
Local Emergency Planning Committee	YES	PART TIME
County Emergency Management Commission	NO	
Sanitation Department	NO	
Transportation Department	NO	
Economic Development Department	NO	
Housing Department	NO	
Historic Preservation	NO	
American Red Cross	NO	
Salvation Army	NO	
Veterans Groups	NO	
Local Environmental Organization	NO	
Homeowner Associations	NO	
Neighborhood Associations	NO	
Chamber of Commerce	NO	
Community Organizations (Lions, Kiwanis, etc.	NO	
Apply for Community Development Block Grants	YES	
Fund projects thru Capital Improvements funding	YES	
Authority to levy taxes for specific purposes	YES	
Fees for water, sewer, gas, or electric services	YES	
Impact fees for new development	NO	
Incur debt through general obligation bonds	YES	
Incur debt through special tax bonds	YES	
Incur debt through private activities	NO	
Withhold spending in hazard prone areas	NO	

01/22/2018 17:26 FAX 006

For plan updates, the plan maintenance process outlined in your previous plan requires all participating jurisdictions to incorporate the requirements of the mitigation plan into other planning mechanisms, when appropriate. A key element of effective implementation of mitigation is for the mitigation plan to be incorporated in existing authorities, policies, programs, and resources. Next to each applicable planning mechanism, indicate how your jurisdiction incorporated the previous mitigation plan. If no incorporation has occurred, please explain, including background information detailing any challenges preventing incorporation.

Comprehensive Plan	NO
Builder's Plan	NO
Capital Improvement Plan	NO
Local Recovery Plan	NO
County Recovery Plan	NO
Debris Management Plan	NO
Economic Development Plan	NO
Transportation Plan	NO
Land-use Plan	NO
Watershed Plan	NO
Firewise or other Fire Mitigation Plan such as Community Wildfire Protection Plan	NO

LACK OF INFORMATION OR PARTICIPATION

01/22/2018 17:27 FAX 007

Additional Questions

1. How is your government structure organized? (Commission, Mayor/City Council, how many members)
   MAYOR/CITY COUNCIL = COUNCIL IS MADE UP OF 4 ALDERMEN & 1 MAYOR
2. List any past or ongoing public education or information programs, such as for responsible water use, fire safety, household preparedness, or environmental education. FLYERS HAVE BEEN SENT OUT WITH UTILITY BILLS EXPLAINING WATER RESPONSIBILITY.
3. List any other past or ongoing projects or programs designed to reduce disaster losses. These may include projects to protect critical facilities. Be sure to include pending or approved projects submitted for FEMA mitigation grants. NONE
4. Describe any hazard-related concerns or issues regarding the vulnerability of special needs populations, such as the elderly, disabled, low-income, or migrant farm workers. MINDENMINES HAS SEVERAL ELDERLY & SPECIAL NEEDS INDIVIDUALS THAT HAVE NO PLACE TO GO DURING AN EMERGENCY
5. How many outdoor warning sirens are in your community? 2

   How are they activated (indicate responsible department/personnel)? COUNTY DISPATCH
6. Does your community utilize any other warning systems such as Cable Override, Reverse 911, etc? If so, please describe them. NO
7. Does your community have designated public tornado shelters/saferooms? If so, are they constructed in accordance with FEMA standards? NO

   Please provide address locations:
8. List residential, commercial and industrial development in your jurisdiction since last plan update.
   NONE
9. Describe development trends and expected growth areas. Is any new development expected to occur in the 100-year floodplain? Is any new development expected to occur in any other known hazard areas? If possible, please provide a map indicating potential/planned growth areas.
   MINDENMINES IS RAPIDLY DECLINING IN POPULATION - NEW DEVELOPMENT IS NOT EXPECTED.
10. Are any new facilities or infrastructure planned for construction during the next five years? If so, please provide facility name and purpose along with proposed locations, if known.
    NO
11. Please list major employers in your jurisdiction with an estimated number of employees.
    CROSS MANUFACTURING = 10 to 15 EMPLOYEES
    BANK OF MINDEN = 15 EMPLOYEES

01/22/2018 17:27 FAX 008

12. Please list Mitigation Planning Committee members who served during the development of the previously approved plan. Was the process set forth for monitoring the implementation of the previously approved mitigation plan adhered to? Did the Committee meet as was specified in the previously approved plan? Why or why not? MIKE GEBELIN ATTENDED COUNTY MEETING ON BEHALF OF CITY. VERY LITTLE WAS FOLLOWED THRU DUE TO LACK OF PARTICIPATION FROM CITIZENS

13. Describe your jurisdiction's participation in the NFIP. Include information about how compliance with the NFIP is enforced locally. NO PARTICIPATION

VULNERABILITY ASSESSMENT

The purpose of this worksheet is to assess the vulnerable buildings, populations, critical facilities, infrastructure, and other important assets in your community by using the best available data to complete the table. Use the table on the next page to compile a detailed inventory of specific assets at risk including critical facilities and infrastructure; natural, cultural, and historical assets; and economic assets. In the hazard specific column of the asset inventory table, indicate (by assigned abbreviation) which of the following hazards the asset is vulnerable to:

Flooding (Riverine & Flash)-**FL**	Attack (nuclear, conventional, chemical, and biological)-**A**
Levee Failure-**LF**	Civil Disorder-**CD**
Dam Failure-**DF**	Cyber Disruption-**CyD**
Earthquake-**EQ**	Fires (urban/structural)-**F**
Land Subsidence / Sinkholes-**LSS**	Hazardous Materials Incidents-**HM**
Droughts-**D**	Mass Transportation Accident-**MTA**
Extreme Temperatures-**ET**	Nuclear Power Plants-**NPP**
Severe Thunderstorms-**ST**	Public Health Emergencies/Environmental Issues-**PH**
Severe Winter-**SWW**	Special Events-**SE**
Tornadoes-**T**	Terrorism-**TX**
Wildfire-**WF**	Utilities (interruptions & system failures)-**U**

Critical Facilities and Infrastructure

A critical facility may be defined as one that is essential in providing utility or direction either during the response to an emergency or during the recovery operation. FEMA's HAZUS-MH loss estimation software uses the following three categories of critical assets. 'Essential facilities' are those that if damaged would have devastating impacts on disaster response and/or recovery. 'High potential loss facilities' are those that would have a high loss or impact on the community. Transportation and lifeline facilities are third category of critical assets; examples are provided below.

Essential Facilities	**High Potential Loss Facilities**	**Transportation and Lifeline**
Hospitals and other medical facilities	Power plants	Highways, bridges, and tunnels
Police stations	Dams/levees	Railroads and facilities
Fire station	Military installations	Bus facilities
Emergency Operations Centers	Hazardous material sites	Airports
	Schools	Water treatment facilities
	Shelters	Natural gas facilities and pipelines
	Day care centers	Oil facilities and pipelines
	Nursing homes	Communications facilities
	Main government buildings	

Economic Assets

Economic assets at risk may include major employers or primary economic sectors, such as agriculture, whose losses or inoperability would have severe impacts on the community and its ability to recover from disaster.

Asset Inventory

Please list critical facilities and other community assets, the square feet, values, and occupancy/capacity. If not applicable, enter "N/A"). In the last column, use the codes from the previous page to indicate hazards to which the asset is vulnerable. Add as many rows as needed. If this information is available in GIS format, please provide.

Critical Facilities

Name of Asset	Address	Square Feet	*Replacement Value (Insured)	Contents Value	Occupancy/ Capacity #	Hazards
Essential Facilities such as hospitals and other medical facilities, police and fire stations, Emergency Operations Centers						
MANSFIELD VOL. FIRE DEPT	502 MAIN STREET	1400	$100,000.00	$165,000.00		T/ST/LV/SWD

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Name of Asset	Address	Square Feet	*Replacement Value (Insured)	Contents Value	Occupancy/ Capacity #	Hazards
High Potential Loss Facilities such as power plants, dams/levees, military installations, hazardous materials sites, shelters, day care centers, nursing homes, main government buildings (Do not include schools—they will be reported by the school districts)						
MEDICINE LODGE CITY HALL	103 MAIN STREET	1600	$150,000.00	$30,000.00		ST/T/L/SWW
MEDICINE LODGE PUBLIC WORKS	502 MAIN STREET	1600	$170,000.00	$50,000.00		ST/T/W/SWW
Transportation and Lifelines such as highways, bridges, and tunnels; railroads and facilities, bus facilities, airports, water treatment facilities, natural gas facilities and pipelines, oil facilities, oil facilities and pipelines, communications facilities						
MEDICINE LODGE WATER DEPT	705 MAIN STREET	1200	$150,000.00	$25,000.00		ST/T/L/SWW

*If replacement cost data is not available, use the best available data (assessed valuation or other method for estimating cost) and explain any data deficiencies.

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11

Economic Assets (Major Employers, etc)

Name	Address	Product Service	Value (If known)	Number of Employees	Hazards
BANK OF MIDWEST	601 MAIN	FINANCIAL	UNKNOWN	15	T/V/SNW/ST
CROSS MACHINERY	301 MAIN	MANUFACTURING	UNKNOWN	12	T/V/SNW/ST

HISTORIC HAZARD EVENTS

Please fill out the sheet on the next page for each significant hazard event that affected **Your Jurisdiction. Make as many copies as necessary to record all events** and complete with as much detail as possible. This includes all events associated with the hazards listed below that have caused previous damage in your jurisdiction. It is especially important to capture events that either were not included in the previous Hazard Mitigation Plan or occurred since the plan was completed. Attach supporting documentation, photocopies of newspaper articles, or other original sources.

Jurisdiction	
Type of event	
Nature and magnitude of event	
Location	
Date of event	
Injuries	
Deaths	
Property damage	
Infrastructure damage	
Crop damage	
Business/economic impacts	
Road/school/other closures	
Other damage	
Insured losses	
Federal/state disaster relief funding	
Opinion on likelihood of occurring again	
Source of information	
Comments	

Jurisdiction	
Type of event	
Nature and magnitude of event	
Location	
Date of event	
Injuries	
Deaths	
Property damage	
Infrastructure damage	
Crop damage	
Business/economic impacts	
Road/school/other closures	
Other damage	
Insured losses	
Federal/state disaster relief funding	
Opinion on likelihood of occurring again	
Source of information	
Comments	

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Barton County Service Providers Survey

Please list all providers of the following service in your jurisdiction.

Water CITY OF MINDENMINES

Sewer CITY OF MINDENMINES

Electricity WESTAR ENERGY

Fire Protection MINDENMINES VOLUNTEER FIRE DEPT

Ambulance BARTON COUNTY AMBULANCE

Telephone WINDSTREAM / AT&T

Internet PIXIUS COMMUNICATIONS / WTCUSA

Cable / Satellite DIRECTV / DISH NETWORK

Trash REPUBLIC SERVICES

Other

Harry S Truman Coordinating Council & Development Cor
HSTCC
Heidi Scheffler
Planner
800 Pennell
Carl Junction, MO 64834
Email: hscheffler@hstcc.org
Office: 417-649-64
Fax: 417-649-64
Barton ♦ Jasper ♦ Newton ♦ McDonald

Multi-Jurisdiction
Hazard Mitigation P

Data Collection Questionnaire

For School Districts and Educational Institutions

County: Barton

School District / Educational Institution Name: Golden City R-III

Return by: Brigham

Please complete this data collection questionnaire as accurately and completely as possible as this information will appear in the mitigation plan. A data collection questionnaire must be completed for each "jurisdiction" that wishes to be included in the plan. According to FEMA's definition a jurisdiction is any local government, including counties, municipalities, cities, towns, school districts, special districts, councils of government, and tribal organizations. Any of these entities as well as publicly funded colleges and universities that do not participate in the planning process **will not** be eligible applicants for FEMA mitigation funding programs.

Prepared by: Steven Brigham II
Phone: 417-537-4900
Email: stevebrigham@goldencity.k12.mo.us
Date: 1/1/18

Please return questionnaires by mail, email, or fax to:

Heidi Scheffler, Environmental Planner
Harry S Truman Coordinating Council
800 E Pennel St.
Carl Junction, MO
Ph: 417-649-6400
Fx:417-649-6409
Email: hscheffler@hstcc.org

03/27/2018 14:56 14175378717 GOLDEN CITY SCHOOL PAGE 01/06

CAPABILITY ASSESSMENT
&
INCORPORATION OF EXISTING PLANS, STUDIES, REPORTS AND TECHNICAL INFORMATION

The purpose of this section is to collect information to document existing capabilities as well as determine existing plans, studies, reports, and technical information that may need to be incorporated in the mitigation plan.

Please indicate which of the following your school district / institution has in place. For elements that do not pertain to you, please indicate with "N/A". If applicable, please provide a completion date for the element. If your school district / institution has any of the **underlined and bolded** elements, please provide a copy of the document to the contact indicated on the front of this questionnaire and indicate method in the comments column (i.e. available on the web, will email or mail).

Planning Elements	Yes / No	Date of Last Update	Comments
Master Plan	Yes	In progress 2017	
Capital Improvement Plan	NA	NA	NA
School Emergency Plan			
Shelter in place protocols			
Evacuation protocols	Yes	2017	
Weapons Policy	yes	2017	

Administrative/Technical

Identify the technical and personnel resources responsible for activities related to hazard mitigation/loss prevention within your school district / institution.

Resource	Yes / No	Department	Comments
Full-time building official (i.e. Principal)	Yes	Principal / Superintendent	
Emergency Manager	Yes	Principal / Superintendent	
Grant Writer	NA	NA	
Public Information Officer	Yes	Principal / Superintendent	

Financial Resources

Identify whether your school district /institution has access to or is eligible to use the following financial resources for hazard mitigation.

Financial Resource	Access to/Eligible to Use (Yes / No)	Comments
Capital improvements project funding	Yes	
Local funds	Yes	
General obligation bonds	NA	
Special tax bonds	NA	
Private activities/donations	NA	
State and federal funds	Yes	

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Additional Capabilities Questions

1. Are your buildings equipped with a public address system or other emergency alert system? Please describe. In progress in conjuction with the other new storm system.
2. Do your school's buildings have NOAA Weather Radios?

   yes
3. List any past or ongoing projects or programs designed to reduce disaster losses. These may include projects to protect facilities or provide education regarding potential hazards.

   Training for all staff and students where students need informed for their class. (Chemistry)
4. List any other past or ongoing projects or programs designed to reduce disaster losses. These may include projects to protect critical facilities.

   In progress
5. Do any of your buildings have designated tornado shelters or "saferooms"? If so, are they constructed in accordance with FEMA standards?

   No (Basement)
6. Did your school district / institution make any additions to buildings or construct new buildings since the last plan update (2010)? Please list the buildings and the improvement.

   No
7. Does your school district / institution plan to remodel or construct any buildings in the next 5 years? If so, please list the building or proposed building and planned improvements. Are any planned construction activities in known hazard areas?

   No
8. What percentage is your projected enrollment expected to increase or decrease in the next five years?

   Stable (drop in enrollment last 10 years)
9. Do you have your own campus police? Please explain your police department or who you rely on for security needs.

   No

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VULNERABILITY ASSESSMENT

Asset Inventory

The purpose of this worksheet is to assist in the assessment of the vulnerable populations and facilities owned by your school district / institution. Use the table below to compile a detailed inventory of specific assets at risk. In the hazard specific column of the asset inventory table, indicate (by assigned abbreviation) which of the following hazards the asset is vulnerable to:

Flooding (Riverine & Flash)-**FL**	Attack (nuclear, conventional, chemical, and biological)-**A**
Levee Failure-**LF**	Civil Disorder-**CD**
Dam Failure-**DF**	Cyber Disruption-**CyD**
Earthquake-**EQ**	Fires (urban/structural)-**F**
Land Subsidence / Sinkholes-**LSS**	Hazardous Materials Incidents-**HM**
Droughts-**D**	Mass Transportation Accident-**MTA**
Extreme Temperatures-**ET**	Nuclear Power Plants-**NPP**
Severe Thunderstorms-**ST**	Public Health Emergencies/Environmental Issues-**PH**
Severe Winter-**SWW**	Special Events-**SE**
Tornadoes-**T**	Terrorism-**TX**
Wildfire-**WF**	Utilities (interruptions & system failures)-**U**

Please list buildings owned by your school district / institution including the square feet, values, and occupancy/capacity. If not applicable or not available, enter "N/A". Add as many rows as needed. **If you have this data in GIS formats, or other formats, please provide in lieu of this.**

Name of Asset	Address	Square Feet	Replacement Value (insured)	Contents Value	Occupancy/ Capacity #	Hazards
Main School building	1208 Walnut Street		$8,549,936	$1,387,853		
Concession Stand			$33,663	$2,563		
Cool Shack			$25,170	$2,563		
Greenhouse			$58,907	$5,125		

Name of Asset	Address	Square Feet	Replacement Value (insured)	Contents Value	Occupancy Capacity #	Hazards
Industrial Arts Building			$370,229	$51,250		—
Storage Shed			$4,152	$2,050		—
Playground Equipment			$29,874	—		—
Baseball Field			$40,634	—		—

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Multi-jurisdictional Mitigation Plan
HISTORIC HAZARD EVENTS

Please fill out one sheet for each significant hazard event that affected **your school district / institution** with as much detail as possible. This includes all hazard events listed on the Vulnerability Assessment page that have caused previous damage. Attach supporting documentation, photocopies of newspaper articles, or other original sources.

Type of event	
Nature and magnitude of event	
Location	
Date of event	
Injuries	
Deaths	
Property damage	
Infrastructure damage	
Crop damage	
Business/economic impacts	
Road/school/other closures	
Other damage	
Insured losses	
Federal/state disaster relief funding	
Opinion on likelihood of occurring again	
Source of information	
Comments	Gum Fire 1990-91

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Multi-Jurisdictional

Hazard Mitigation Plan

Data Collection Questionnaire

For School Districts and Educational Institutions

County: Barton

School District / Educational Institution Name: Lamar R-1 School District

Return by: _____

Please complete this data collection questionnaire as accurately and completely as possible as this information will appear in the mitigation plan. A data collection questionnaire must be completed for each "jurisdiction" that wishes to be included in the plan. According to FEMA's definition a jurisdiction is any local government, including counties, municipalities, cities, towns, school districts, special districts, councils of government, and tribal organizations. Any of these entities as well as publicly funded colleges and universities that do not participate in the planning process **will not** be eligible applicants for FEMA mitigation funding programs.

Prepared by: Dr. Zach Harris
Phone: 417 682 3527
Email: harrisz@lamar.k12.mo.us
Date: 1/19/17

Please return questionnaires by mail, email, or fax to:

Heidi Scheffler, Environmental Planner
Harry S Truman Coordinating Council
800 E Pennel St.
Carl Junction, MO
Ph: 417-649-6400
Fx:417-649-6409
Email: hscheffler@hstcc.org

CAPABILITY ASSESSMENT
&
INCORPORATION OF EXISTING PLANS, STUDIES, REPORTS AND TECHNICAL INFORMATION

The purpose of this section is to collect information to document existing capabilities as well as determine existing plans, studies, reports, and technical information that may need to be incorporated in the mitigation plan.

Please indicate which of the following your school district / institution has in place. For elements that do not pertain to you, please indicate with "N/A". If applicable, please provide a completion date for the element. If your school district / institution has any of the **underlined and bolded** elements, please provide a copy of the document to the contact indicated on the front of this questionnaire and indicate method in the comments column (i.e. available on the web, will email or mail).

Planning Elements	Yes/No	Date of Latest Version	Comments
Master Plan	Yes		Additional saferooms
Capital Improvement Plan	Yes		Additional saferooms
School Emergency Plan Shelter in place protocols Evacuation protocols	Yes		Vary by building-housed in individual buildings
Weapons Policy	Yes		Board Policy

Administrative/Technical

Identify the technical and personnel resources responsible for activities related to hazard mitigation/loss prevention within your school district / institution.

Personnel Resources	Yes/No	Department/Position	Comments
Full-time building official (i.e. Principal)	Yes		
Emergency Manager	Yes		
Grant Writer	No		
Public Information Officer	Yes		

Financial Resources

Identify whether your school district /institution has access to or is eligible to use the following financial resources for hazard mitigation.

Financial Resources	Accessible/Eligible to Use (Y/N)	Comments
Capital improvements project funding	Yes	Saferoom proj
Local funds	Yes	Saferoom proj
General obligation bonds	No	
Special tax bonds	No	
Private activities/donations	Possibly	

State and federal funds	Yes	Saferoom proj

Additional Capabilities Questions

1. Are your buildings equipped with a public address system or other emergency alert system? Please describe. Yes, intercom in each building

2. Do your school's buildings have NOAA Weather Radios? Yes

3. List any past or ongoing projects or programs designed to reduce disaster losses. These may include projects to protect facilities or provide education regarding potential hazards. 2013 saferoom

4. List any other past or ongoing projects or programs designed to reduce disaster losses. These may include projects to protect critical facilities.

5. Do any of your buildings have designated tornado shelters or "saferooms"? If so, are they constructed in accordance with FEMA standards? Our MS saferoom was constructed to FEMA standards but without FEMA funds.

6. Did your school district / institution make any additions to buildings or construct new buildings since the last plan update (2010)? Please list the buildings and the improvement. 8.5 million dollar remodel and new construction bond issue. This project included a saferoom at the MS.

7. Does your school district / institution plan to remodel or construct any buildings in the next 5 years? If so, please list the building or proposed building and planned improvements. Are any planned construction activities in known hazard areas? No plans at this point.

8. What percentage is your projected enrollment expected to increase or decrease in the next five years? Slight decline over the past 5 years. Currently stable.

9. Do you have your own campus police? Please explain your police department or who you rely on for security needs. No. We have an SRO in conjunction with our local PD.

VULNERABILITY ASSESSMENT

Asset Inventory

The purpose of this worksheet is to assist in the assessment of the vulnerable populations and facilities owned by your school district / institution. Use the table below to compile a detailed inventory of specific assets at risk. In the hazard specific column of the asset inventory table, indicate (by assigned abbreviation) which of the following hazards the asset is vulnerable to:

Flooding (Riverine & Flash)-**FL**	Attack (nuclear, conventional, chemical, and biological)-**A**
Levee Failure-**LF**	Civil Disorder-**CD**
Dam Failure-**DF**	Cyber Disruption-**CyD**
Earthquake-**EQ**	Fires (urban/structural)-**F**
Land Subsidence / Sinkholes-**LSS**	Hazardous Materials Incidents-**HM**
Droughts-**D**	Mass Transportation Accident-**MTA**
Extreme Temperatures-**ET**	Nuclear Power Plants-**NPP**
Severe Thunderstorms-**ST**	Public Health Emergencies/Environmental Issues-**PH**
Severe Winter-**SWW**	Special Events-**SE**
Tornadoes-**T**	Terrorism-**TX**
Wildfire-**WF**	Utilities (interruptions & system failures)-**U**

Please list buildings owned by your school district / institution including the square feet, values, and occupancy/capacity. If not applicable or not available, enter "N/A". Add as many rows as needed. **If you have this data in GIS formats, or other formats, please provide in lieu of this.**

Name of Asset	Address	Square Feet	Replacement Value (Insured)	Contents Value	Oc cu pa nc y/ Ca pa ci y
East Primary	1600 E. Hwy 160	40,789	5,351,9408	441,558	50(
Middle School	601 Gulf	88,935	11,532,120	651,855	10(
West Elementary	6th and Walnut	31,250	3,721,980	252,371	50(
High School	503 Maple	44,850	5,467,200	529,980	75(
Lamar Career and Tech Center	401 Maple	26,725	3,876,000	347,010	30(

Multi-jurisdictional Mitigation Plan
HISTORIC HAZARD EVENTS

Please fill out one sheet for each significant hazard event that affected **your school district / institution** with as much detail as possible. This includes all hazard events listed on the Vulnerability Assessment page that have caused previous damage. Attach supporting documentation, photocopies of newspaper articles, or other original sources.

Type of event	
Nature and magnitude of event	
Location	
Date of event	
Injuries	
Deaths	
Property damage	
Infrastructure damage	
Crop damage	
Business/economic impacts	
Road/school/other closures	
Other damage	
Insured losses	
Federal/state disaster relief funding	
Opinion on likelihood of occurring again	
Source of information	
Comments	

Multi-jurisdictional Mitigation Plan
HISTORIC HAZARD EVENTS

Please fill out one sheet for each significant hazard event that affected **your school district /institution** with as much detail as possible. This includes all hazard events listed on the Vulnerability Assessment page that have caused previous damage. Attach supporting documentation, photocopies of newspaper articles, or other original sources.

Type of event	
Nature and magnitude of event	
Location	
Date of event	
Injuries	
Deaths	
Property damage	
Infrastructure damage	
Crop damage	
Business/economic impacts	
Road/school/other closures	
Other damage	
Insured losses	
Federal/state disaster relief funding	
Opinion on likelihood of occurring again	
Source of information	
Comments	

Multi-Jurisdictional

Hazard Mitigation Plan

Data Collection Questionnaire

For School Districts and Educational Institutions

County: Barton

School District / Educational Institution Name: Liberal R-2 School District

Return by: 1/12/2018

Please complete this data collection questionnaire as accurately and completely as possible as this information will appear in the mitigation plan. A data collection questionnaire must be completed for each "jurisdiction" that wishes to be included in the plan. According to FEMA's definition a jurisdiction is any local government, including counties, municipalities, cities, towns, school districts, special districts, councils of government, and tribal organizations. Any of these entities as well as publicly funded colleges and universities that do not participate in the planning process **will not** be eligible applicants for FEMA mitigation funding programs.

Prepared by: Bill Harvey
Phone: 417-843-5115 x.224
Email: bharvey@liberal.k12.mo.us
Date: 1/9/2018

Please return questionnaires by mail, email, or fax to:

Heidi Scheffler, Environmental Planner
Harry S Truman Coordinating Council
800 E Pennel St.
Carl Junction, MO
Ph: 417-649-6400
Fx:417-649-6409
Email: hscheffler@hstcc.org

CAPABILITY ASSESSMENT
&
INCORPORATION OF EXISTING PLANS, STUDIES, REPORTS AND TECHNICAL INFORMATION

The purpose of this section is to collect information to document existing capabilities as well as determine existing plans, studies, reports, and technical information that may need to be incorporated in the mitigation plan.

Please indicate which of the following your school district / institution has in place. For elements that do not pertain to you, please indicate with "N/A". If applicable, please provide a completion date for the element. If your school district / institution has any of the **underlined and bolded** elements, please provide a copy of the document to the contact indicated on the front of this questionnaire and indicate method in the comments column (i.e. available on the web, will email or mail).

Planning Elements	Yes/No	Date of Latest Version	Comments
Master Plan	Yes	2/26/2010	
Capital Improvement Plan	Yes	4/17/2014	
School Emergency Plan Shelter in place protocols Evacuation protocols	Yes	4/17/2014	
Weapons Policy	Yes	4/17/2014	

Administrative/Technical

Identify the technical and personnel resources responsible for activities related to hazard mitigation/loss prevention within your school district / institution.

Personnel Resources	Yes/No	Department/Position	Comments
Full-time building official (i.e. Principal)	Yes	Superintendent of Schools	Building Principals
Emergency Manager	Yes	Superintendent of Schools	
Grant Writer	Yes	Superintendent of Schools	
Public Information Officer	Yes	Superintendent of Schools	

Financial Resources

Identify whether your school district /institution has access to or is eligible to use the following financial resources for hazard mitigation.

Financial Resources	Accessible/Eligible to Use (Y/N)	Comments
Capital improvements project funding	Yes	
Local funds	Yes	
General obligation bonds	Yes	
Special tax bonds	Yes	
Private activities/donations	Yes	
State and federal funds	Yes	

Additional Capabilities Questions

1. Are your buildings equipped with a public address system or other emergency alert system? Please describe.

   Yes. Both campuses are equipped with intercom systems and alarm systems that warn students and staff of fire, tornado and intruder situations.

2. Do your school's buildings have NOAA Weather Radios?

   Yes

3. List any past or ongoing projects or programs designed to reduce disaster losses. These may include projects to protect facilities or provide education regarding potential hazards.

   The district sends our educational brochures that inform the students and their parents on various safety procedures. The school works with the Barton County Emergency Management team on providing this information.

4. List any other past or ongoing projects or programs designed to reduce disaster losses. These may include projects to protect critical facilities.

   The "Facility Use" notification instructs the public on procedures during a severe weather crisis.

5. Do any of your buildings have designated tornado shelters or "saferooms"? If so, are they constructed in accordance with FEMA standards?

   No

6. Did your school district / institution make any additions to buildings or construct new buildings since the last plan update (2010)? Please list the buildings and the improvement.

   No

7. Does your school district / institution plan to remodel or construct any buildings in the next 5 years? If so, please list the building or proposed building and planned improvements. Are any planned construction activities in known hazard areas?

   Yes. The district has applied for a FEMA Storm Shelter Grant at the MS/HS campus. Eventually the district will try to secure funds for a similar shelter to be placed at the Elementary campus.

8. What percentage is your projected enrollment expected to increase or decrease in the next five years?

   Remain nearly steady.

9. Do you have your own campus police? Please explain your police department or who you rely on for security needs.

   The district does not have its own campus police. The City of Liberal provides police protection during school hours.

VULNERABILITY ASSESSMENT

Asset Inventory

The purpose of this worksheet is to assist in the assessment of the vulnerable populations and facilities owned by your school district / institution. Use the table below to compile a detailed inventory of specific assets at risk. In the hazard specific column of the asset inventory table, indicate (by assigned abbreviation) which of the following hazards the asset is vulnerable to:

Flooding (Riverine & Flash)-**FL**	Attack (nuclear, conventional, chemical, and biological)-**A**
Levee Failure-**LF**	Civil Disorder-**CD**
Dam Failure-**DF**	Cyber Disruption-**CyD**
Earthquake-**EQ**	Fires (urban/structural)-**F**
Land Subsidence / Sinkholes-**LSS**	Hazardous Materials Incidents-**HM**
Droughts-**D**	Mass Transportation Accident-**MTA**
Extreme Temperatures-**ET**	Nuclear Power Plants-**NPP**
Severe Thunderstorms-**ST**	Public Health Emergencies/Environmental Issues-**PH**
Severe Winter-**SWW**	Special Events-**SE**
Tornadoes-**T**	Terrorism-**TX**
Wildfire-**WF**	Utilities (interruptions & system failures)-**U**

Please list buildings owned by your school district / institution including the square feet, values, and occupancy/capacity. If not applicable or not available, enter "N/A". Add as many rows as needed. **If you have this data in GIS formats, or other formats, please provide in lieu of this.**

Name of Asset	Address	Square Feet	Replacement Value (Insured)	Contents Value	Occupancy/ Capacity #	Hazards
High School/Middle School	205 N. Payne	56,627	5,897,015	1,258,831	2500	T, SE, PH, SWW, F
Elementary School	401 E. Yale	30,060	3,060,457	658,585	1500	T, SE, PH, SWW, F
Elementary Gym/Old HS	108 S. Payne	25,606	1,856,897	137,843	500	T, SE, PH, SWW, F
Superintendent Office/Main.	107 S. Payne	4,160	285,711	61,264	50	T, SWW, F

Name of Asset	Address	Square Feet	Replacement Value (Insured)	Contents Value	Occupancy/ Capacity #	Hazards
Bus Garage	506 Maple	6000	214,387	12,992	50	T, SWW, F
Football Concession Stand	205 N. Payne	120	12,346	6,961	25	T, SE, SWW, F
Shiloh School Building	205 N. Payne	600	78,480	6,699	25	T, SE, SWW, F
Elementary Art Trailer (Lease)	401 E. Yale	1344	0	5,924	50	T, SE, SWW, F
Football Field Press Box	205 N. Payne	720	15,188	5,298	15	T, SE, SWW, F
Greenhouse	205 N. Payne	1440	72,530	15,000	25	T, SE, SWW, F

Multi-jurisdictional Mitigation Plan
HISTORIC HAZARD EVENTS

Please fill out one sheet for each significant hazard event that affected **your school district / institution** with as much detail as possible. This includes all hazard events listed on the Vulnerability Assessment page that have caused previous damage. Attach supporting documentation, photocopies of newspaper articles, or other original sources.

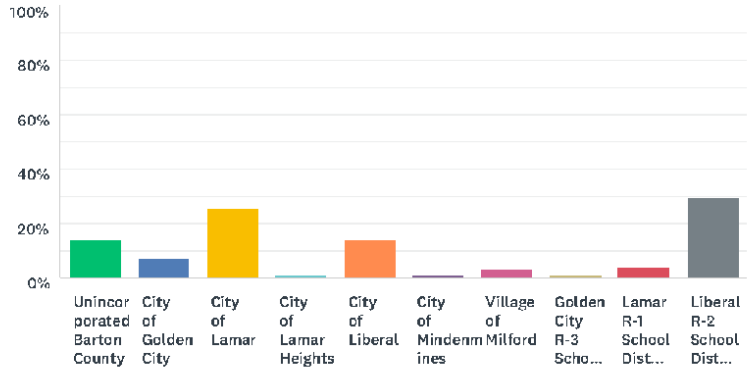
Type of event	Severe Thunderstorm Winds
Nature and magnitude of event	Roof Collapse due to strong winds. Possible weakened by previous Ice Storm.
Location	Superintendent Office/Maintenance Shop
Date of event	5/8/2008
Injuries	None
Deaths	None
Property damage	$38,947
Infrastructure damage	None
Crop damage	None
Business/economic impacts	None
Road/school/other closures	None
Other damage	Damage to Football Field Lights
Insured losses	$68,947
Federal/state disaster relief funding	None
Opinion on likelihood of occurring again	Possible
Source of information	Insurance Records
Comments	

Public Survey Results

Public Survey: Barton County Multi-Jurisdictional Hazard Mitigation Plan SurveyMonkey

Q1 Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.

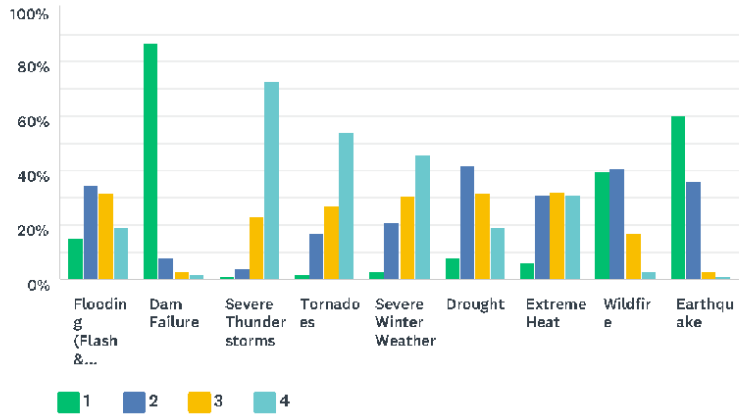
Answered: 101 Skipped: 0



ANSWER CHOICES	RESPONSES	
Unincorporated Barton County	13.86%	14
City of Golden City	6.93%	7
City of Lamar	25.74%	26
City of Lamar Heights	0.99%	1
City of Liberal	13.86%	14
City of Mindenmines	0.99%	1
Village of Milford	2.97%	3
Golden City R-3 School District	0.99%	1
Lamar R-1 School District	3.96%	4
Liberal R-2 School District	29.70%	30
TOTAL		101

Q2 The hazards addressed in the Multi-jurisdictional Hazard Mitigation Plan Update are listed below. Please indicate your opinion on the likelihood for each hazard to impact YOUR JURISDICTION (identified above). Please rate EACH hazard 1 through 4 as follows: 1=Unlikely, 2=Occasional, 3=Likely, 4=Highly Likely

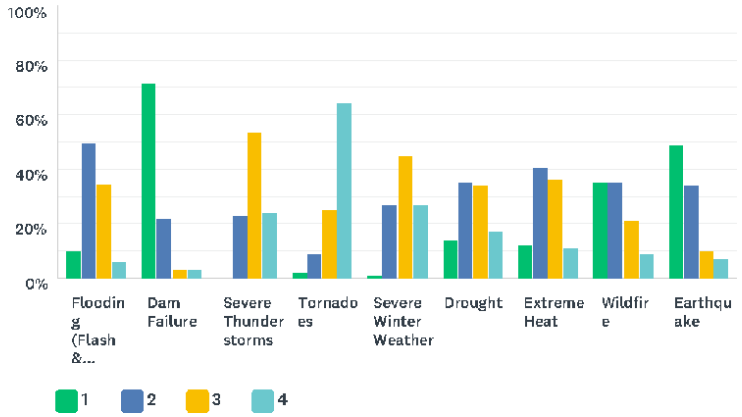
Answered: 101 Skipped: 0



	1	2	3	4	TOTAL
Flooding (Flash & River)	14.85% 15	34.65% 35	31.68% 32	18.81% 19	101
Dam Failure	86.73% 85	8.16% 8	3.06% 3	2.04% 2	98
Severe Thunderstorms	0.99% 1	3.96% 4	22.77% 23	72.28% 73	101
Tornadoes	2.00% 2	17.00% 17	27.00% 27	54.00% 54	100
Severe Winter Weather	2.97% 3	20.79% 21	30.69% 31	45.54% 46	101
Drought	8.08% 8	41.41% 41	31.31% 31	19.19% 19	99
Extreme Heat	6.00% 6	31.00% 31	32.00% 32	31.00% 31	100
Wildfire	39.39% 39	40.40% 40	17.17% 17	3.03% 3	99
Earthquake	60.00% 60	36.00% 36	3.00% 3	1.00% 1	100

Q3 Please indicate your opinion on the potential magnitude of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard 1 through 4 as follows: 1=Negligible, 2=Limited, 3=Critical, 4=Catastrophic

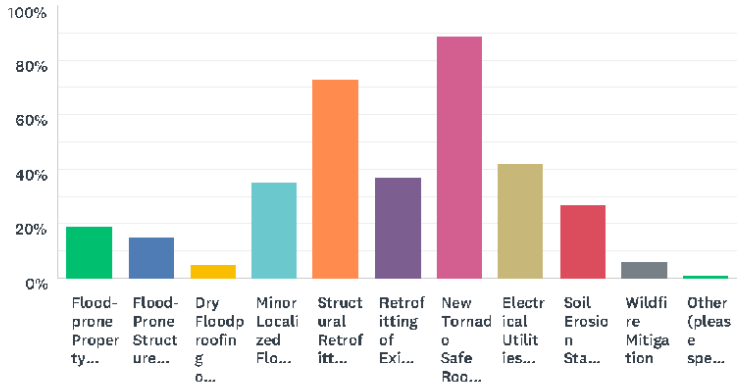
Answered: 101 Skipped: 0



	1	2	3	4	TOTAL
Flooding (Flash & River)	9.90% 10	49.50% 50	34.65% 35	5.94% 6	101
Dam Failure	71.72% 71	22.22% 22	3.03% 3	3.03% 3	99
Severe Thunderstorms	0.00% 0	22.77% 23	53.47% 54	23.76% 24	101
Tornadoes	1.98% 2	8.91% 9	24.75% 25	64.36% 65	101
Severe Winter Weather	1.00% 1	27.00% 27	45.00% 45	27.00% 27	100
Drought	14.00% 14	35.00% 35	34.00% 34	17.00% 17	100
Extreme Heat	12.12% 12	40.40% 40	36.36% 36	11.11% 11	99
Wildfire	35.00% 35	35.00% 35	21.00% 21	9.00% 9	100
Earthquake	49.00% 49	34.00% 34	10.00% 10	7.00% 7	100

Q4 FEMA Hazard Mitigation Assistance Grants are administered by the State Emergency Management Agency. Listed below are some types of projects considered. Please check all those that could benefit your jurisdiction, in your opinion:

Answered: 100 Skipped: 1



ANSWER CHOICES	RESPONSES	
Flood-prone Property Acquisition & Structure Demolition /Relocation	19.00%	19
Flood-Prone Structure Elevation	15.00%	15
Dry Floodproofing of Historical Residential Structures and/or Non-residential Structures	5.00%	5
Minor Localized Flood Reduction Projects (storm water management or localized flood control projects)	35.00%	35
Structural Retrofitting of Existing Buildings to Add a Tornado Safe Room	73.00%	73
Retrofitting of Existing Buildings, and Facilities from Wind Damage.	37.00%	37
New Tornado Safe Room Construction	89.00%	89
Electrical Utilities Infrastructure Retrofit	42.00%	42
Soil Erosion Stabilization	27.00%	27
Wildfire Mitigation	6.00%	6
Other (please specify)	1.00%	1
Total Respondents: 100		

#	OTHER (PLEASE SPECIFY)	DATE
1	The clean up if dead trees and logs from the streams and water ways and shore lines.	12/7/2017 11:02 PM

Q5 Please comment on any other issues that the Barton County Hazard Mitigation Planning Committee should consider in developing a strategy to reduce future losses caused by hazard events.

Answered: 23 Skipped: 78

#	RESPONSES	DATE
1	The tornado shelter is extremely important to me for our students at Liberal R-2 Schools. My mom was killed near Franklin, Kansas before the same tornado reached Liberal on May 4, 2003. I realize this question is about developing a strategy to reduce future losses and I would be willing to help the committee in any way if needed.	1/15/2018 10:32 AM
2	a tornado shelter would be beneficial to the citizens and and students of Liberal.	1/9/2018 1:52 PM
3	A community center location for any of the possible hazardous weather related occurrences that would lead to family displacement.	1/8/2018 3:16 PM
4	n/a	1/8/2018 12:03 PM
5	It would be extremely nice to have somewhere in the community for community residents and school students to take shelter from tornadoes and severe thunderstorms.	1/8/2018 11:42 AM
6	I think all the schools need a safe room and some safe rooms that are accessible by handicapped people and older residents.	1/5/2018 4:49 PM
7	The devastation of property would be nothing compared to the loss of life that will occur when a tornado hits Liberal, Missouri. There is no safe shelter for the masses. Very few families have a shelter or basement that they would be able to survive a tornado. A public safe shelter from tornadoes is desperately needed.	1/5/2018 3:51 PM
8	I think the city of Liberal and in particular the schools need a tornado safe area. We often have severe wind issues.	1/5/2018 2:59 PM
9	More safe rooms	1/5/2018 2:19 PM
10	N/A	1/5/2018 2:07 PM
11	A tornado shelter would be extremely beneficial to the students in the school district as there is no safe place currently!	1/5/2018 1:45 PM
12	NA	1/5/2018 1:38 PM
13	Liberal R-2 Schools and the community would greatly benefit from having a Tornado Shelter in place.	1/5/2018 1:38 PM
14	We need more community safety buildings for extreme weather or tornadoes since we are right in the alley of path of most extreme storms.	1/5/2018 1:31 PM
15	Educate MoDOT that when they replace a bridge with one that is taller yet shorter that water does not flow taller	12/6/2017 11:30 PM
16	Thank you for all you do!	12/6/2017 8:33 AM
17	Trimming trees from power lines	12/6/2017 7:37 AM
18	Tom does an amazing	12/6/2017 7:32 AM
19	County road and bridge problemswith drainage and road damage during flooding.	12/6/2017 12:29 AM
20	Better identifying of public shelters for storms or other power outage or severe hazardous situations.(cold/hot weather)	12/5/2017 11:48 PM
21	Insure the roads coming in and out of golden city are useable during flooding and severe weather	11/16/2017 1:52 PM
22	-	8/28/2017 10:44 AM
23	Communication failure between city and county radio, phone lines, and internet would greatly limit resource allocation and response.	8/28/2017 10:34 AM

Appendix D: STAPLEES

SHOW-ME COUNTY MULTI-JURISDICTIONAL LOCAL HAZARD MITIGATION PLAN

Action Title: All Hazard Education	Jurisdiction: Barton
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	3	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	3	
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)	3	
Will historic structures be saved or protected?	3	
Could it be implemented quickly?	3	
STAPLEE Score	27	

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.	8
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	8
Mitigation Effectiveness Score		16

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 43

Priority Level: ☑ High (30+ points) ☐ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): Tom

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: all hazards workshop	**Jurisdiction:** Barton
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	3	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	3	
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)	3	
Will historic structures be saved or protected?	3	
Could it be implemented quickly?	3	
STAPLEE Score	27	

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.	9
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	9
Mitigation Effectiveness Score		16

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 43

Priority Level: ☑ High (30+ points) ☐ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): Tom

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: All Hazards.	**Jurisdiction:** Barton
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	2	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	3	
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)	3	
Will historic structures be saved or protected?	0	
Could it be implemented quickly?	3	
STAPLEE Score	23	

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.	5
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
Mitigation Effectiveness Score		10

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 33

Priority Level: ☑ High (30+ points) ☐ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): Tom Ryan

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: Building Flood Plain	**Jurisdiction:** Barton
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	2	
T: Is it Technically feasible and potentially successful?	3	
A: Does the jurisdiction have the administrative capacity to execute this action?	0	
P: Is it Politically acceptable?	0	
L: Is there Legal authority to implement?	0	
E: Is it Economically beneficial?	0	
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)	3	
Will historic structures be saved or protected?	0	
Could it be implemented quickly?	0	
STAPLEE Score	6	

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.	6
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
Mitigation Effectiveness Score		16

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 22

Priority Level: ☐ High (30+ points) ☐ Medium (25-29 points) ☑ Low (less than 25 points)

Completed by (name/title/phone #): Tom

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: County Dam	**Jurisdiction:** Barton
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	2	
A: Does the jurisdiction have the administrative capacity to execute this action?	0	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	0	
E: Is it Economically beneficial?	2	
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)	2	
Will historic structures be saved or protected?	0	
Could it be implemented quickly?	0	
STAPLEE Score	12	

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.	8
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	6
Mitigation Effectiveness Score		14

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 26

Priority Level: ☐ High (30+ points) ☑ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): Tom R

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: Flood Warning	**Jurisdiction:** Barton
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	2	
T: Is it Technically feasible and potentially successful?	3	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	2	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	3	
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)	3	
Will historic structures be saved or protected?	1	
Could it be implemented quickly?	2	
STAPLEE Score	22	

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.	9
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	9
Mitigation Effectiveness Score		18

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 40

Priority Level: ☑ High (30+ points) ☐ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): Tom

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: Alleviate Flood Hazard Cond.	**Jurisdiction:** Barton
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	3	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	3	
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)	3	
Will historic structures be saved or protected?	3	
Could it be implemented quickly?	3	
STAPLEE Score	27	

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.	8
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
Mitigation Effectiveness Score		18

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 45

Priority Level: ☑ High (30+ points) ☐ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): Tom Pyle

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: Flood Insurance	**Jurisdiction:** Bolton
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	1	
T: Is it Technically feasible and potentially successful?	3	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
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)	3	
Will historic structures be saved or protected?	3	
Could it be implemented quickly?	3	
STAPLEE Score	27	

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.	5
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
Mitigation Effectiveness Score		15

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 42

Priority Level: ☑ High (30+ points) ☐ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): Tom Ryan, Emergency Management Director

SHOW-ME COUNTY MULTI-JURISDICTIONAL LOCAL HAZARD MITIGATION PLAN

Action Title: Flood Plain	**Jurisdiction:** Barton
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	~~0~~	
T: Is it Technically feasible and potentially successful?	2	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	2	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	3	
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)	2	
Will historic structures be saved or protected?	1	
Could it be implemented quickly?	2	
STAPLEE Score	18	

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.	7
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
Mitigation Effectiveness Score		17

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 35

Priority Level: ☑ High (30+ points) ☐ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): Tom

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: Flood Prone Property	**Jurisdiction:** Barton
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	0	
T: Is it Technically feasible and potentially successful?	3	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	1	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	3	
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)	3	
Will historic structures be saved or protected?	3	
Could it be implemented quickly?	3	
STAPLEE Score	22	

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.	6
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
Mitigation Effectiveness Score		16

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 38

Priority Level: ☑ High (30+ points) ☐ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): Tom

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: GIS	Jurisdiction: Barton
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	3	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	3	
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)	3	
Will historic structures be saved or protected?	3	
Could it be implemented quickly?	3	
STAPLEE Score	27	

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.	6
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	8
Mitigation Effectiveness Score		14

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 41

Priority Level: ☑ High (30+ points) ☐ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): Tom Lyn

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: Inventory Eng Services	**Jurisdiction:** Barton
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	3	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	3	
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)	3	
Will historic structures be saved or protected?	3	
Could it be implemented quickly?	3	
STAPLEE Score	27	

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.	9
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	8
Mitigation Effectiveness Score		14

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 41

Priority Level: ☑ High (30+ points) ☐ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): Tom

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: Key Facilities	**Jurisdiction:** Barton
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	3	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	2	
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)	3	
Will historic structures be saved or protected?	3	
Could it be implemented quickly?	2	
STAPLEE Score	25	

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.	5
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
Mitigation Effectiveness Score		15

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 40

Priority Level: ☑ High (30+ points) ☐ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): Tom Lyon

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: County-Wide Haz 1111 Ann.	Jurisdiction: Barton
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	3	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	3	
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)	3	
Will historic structures be saved or protected?	3	
Could it be implemented quickly?	3	
STAPLEE Score	27	

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.	8
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
Mitigation Effectiveness Score		18

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 45

Priority Level: ☑ High (30+ points) ☐ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): Tom K

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title:	**Jurisdiction:**
Tornado	Barton
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	3	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	3	
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)	3	
Will historic structures be saved or protected?	3	
Could it be implemented quickly?	3	
STAPLEE Score	27	

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.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
Mitigation Effectiveness Score		15

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 42

Priority Level: ☑ High (30+ points) ☐ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): Tom Ryan

SHOW-ME COUNTY MULTI-JURISDICTIONAL LOCAL HAZARD MITIGATION PLAN

Action Title: Co Wide Warning Storm Sirens System	Jurisdiction: Barton
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	3	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	3	
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)	3	
Will historic structures be saved or protected?	3	
Could it be implemented quickly?	3	
STAPLEE Score	27	

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.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
Mitigation Effectiveness Score		15

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 42

Priority Level: ☑ High (30+ points) ☐ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): Tom

SHOW-ME COUNTY MULTI-JURISDICTIONAL LOCAL HAZARD MITIGATION PLAN

Action Title: Barton GIS	**Jurisdiction:** Golden City
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	3	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	3	
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)	3	
Will historic structures be saved or protected?	2	
Could it be implemented quickly?	3	
STAPLEE Score	26	

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.	5
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	8
Mitigation Effectiveness Score		13

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 39

Priority Level: ☑ High (30+ points) ☐ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): Breyon Pettengill, City Collector, 417-537-4351

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title:	**Jurisdiction:**
Emergency Inventory	Golden City
Action ID: 9	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	3	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	3	
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)	3	
Will historic structures be saved or protected?	2	
Could it be implemented quickly?	3	
STAPLEE Score	26	

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.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
Mitigation Effectiveness Score		20

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 #): Breeyn Pettengill, City Collector, 417-537-4351

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: MPC - LEPC	**Jurisdiction:** Golden City
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	3	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	3	
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)	3	
Will historic structures be saved or protected?	2	
Could it be implemented quickly?	3	
STAPLEE Score	26	

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.	6
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
Mitigation Effectiveness Score		16

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 42

Priority Level: ☑ High (30+ points) ☐ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): Bree Bettenhill, City Collector, 417-537-4351

SHOW-ME COUNTY MULTI-JURISDICTIONAL LOCAL HAZARD MITIGATION PLAN

Action Title: Reserve Fund	**Jurisdiction:** Golden City
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	3	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	3	
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)	3	
Will historic structures be saved or protected?	3	
Could it be implemented quickly?	3	
STAPLEE Score	27	

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.	5
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
Mitigation Effectiveness Score		15

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 42

Priority Level: ☑ High (30+ points) ☐ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): Breeya Pettengill, City Collector, 417-537-4351

SHOW-ME COUNTY MULTI-JURISDICTIONAL LOCAL HAZARD MITIGATION PLAN

Action Title: Promote Community Shelters	**Jurisdiction:** Golden City
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	3	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	3	
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)	3	
Will historic structures be saved or protected?	0	
Could it be implemented quickly?	3	
STAPLEE Score	24	

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.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
Mitigation Effectiveness Score		15

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 39

Priority Level: ☑ High (30+ points) ☐ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): Brenda Pettengill, City Collector, 417-537-4351

SHOW-ME COUNTY MULTI-JURISDICTIONAL LOCAL HAZARD MITIGATION PLAN

Action Title: Storm Sirens	**Jurisdiction:** Golden City
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	3	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	3	
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)	3	
Will historic structures be saved or protected?	3	
Could it be implemented quickly?	3	
STAPLEE Score	27	

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.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
Mitigation Effectiveness Score		20

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 47

Priority Level: ☒ High (30+ points) ☐ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): Breeya Pettengill, City Collector, 417-537-4351

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: Flood Hazard Conditions	**Jurisdiction:** Lamar
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	2	
T: Is it Technically feasible and potentially successful?	2	
A: Does the jurisdiction have the administrative capacity to execute this action?	1	
P: Is it Politically acceptable?	2	
L: Is there Legal authority to implement?	1	
E: Is it Economically beneficial?	1	
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)	2	
Will historic structures be saved or protected?	2	
Could it be implemented quickly?	1	
STAPLEE Score	14	

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.	7
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	9
Mitigation Effectiveness Score		16

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 30

Priority Level: ☒ High (30+ points) ☐ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): Ross Worsley / City Admin. / 682-5554

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title:	**Jurisdiction:**
KEY FACILITIES	Lamar
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	2	
A: Does the jurisdiction have the administrative capacity to execute this action?	2	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	2	
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)	2	
Will historic structures be saved or protected?	1	
Could it be implemented quickly?	3	
STAPLEE Score	21	

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.	7
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	9
Mitigation Effectiveness Score		16

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 37

Priority Level: ☑ High (30+ points) ☐ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): Ross Wobbler/Emergency Manager/682-5534

SHOW-ME COUNTY MULTI-JURISDICTIONAL LOCAL HAZARD MITIGATION PLAN

Action Title: MP2	Jurisdiction: Lamar
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	3	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	3	
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)	2	
Will historic structures be saved or protected?	1	
Could it be implemented quickly?	3	
STAPLEE Score	24	

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.	8
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	8
Mitigation Effectiveness Score		16

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 40

Priority Level: ☒ High (30+ points) ☐ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): Ross Woessner / City Admin / 682 5554

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: Storm Warning Sirens	**Jurisdiction:** Lamar
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	2	
A: Does the jurisdiction have the administrative capacity to execute this action?	2	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	3	
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)	3	
Will historic structures be saved or protected?	2	
Could it be implemented quickly?	1	
STAPLEE Score	23	

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.	7
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	7
Mitigation Effectiveness Score		14

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 37

Priority Level: ☑ High (30+ points) ☐ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): Russ Worsley / City Admin / 682-5534

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title:	**Jurisdiction:**
DAM INUNDATION MAP	LAMAR
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	2	
A: Does the jurisdiction have the administrative capacity to execute this action?	2	
P: Is it Politically acceptable?	2	
L: Is there Legal authority to implement?	2	
E: Is it Economically beneficial?	2	
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)	2	
Will historic structures be saved or protected?	1	
Could it be implemented quickly?	1	
STAPLEE Score	17	

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.	7
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	7
Mitigation Effectiveness Score		14

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 31

Priority Level: ☑ High (30+ points) ☐ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): Ross Wiesley/City Admin/682-5554

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: Inventory	**Jurisdiction:** Liberal
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	2	
T: Is it Technically feasible and potentially successful?	2	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	2	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	2	
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)	3	
Will historic structures be saved or protected?	0	
Could it be implemented quickly?	2	
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.	~~10~~ 7
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	6
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 #): Dawn Ann Frost, City Clerk

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: Key Facilites	**Jurisdiction:** Liberal
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	3	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	3	
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)	3	
Will historic structures be saved or protected?	0	
Could it be implemented quickly?	2	
STAPLEE Score	23	

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.	5
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
Mitigation Effectiveness Score		

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 10

Priority Level: ☒ High (30+ points) ☐ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): Doris Ann Jost, City Clerk

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: MBC	**Jurisdiction:** Liberal
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	2	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	3	
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)	3	
Will historic structures be saved or protected?	0	
Could it be implemented quickly?	2	
STAPLEE Score	22	

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.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
Mitigation Effectiveness Score		20

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 42

Priority Level: ☑ High (30+ points) ☐ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): Doris Assistant City Clerk

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: Reserve Funding	**Jurisdiction:** Liberal
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	0	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	2	
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)	3	
Will historic structures be saved or protected?	0	
Could it be implemented quickly?	3	
STAPLEE Score	20	

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.	5
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
Mitigation Effectiveness Score		10

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 30

Priority Level: ☒ High (30+ points) ☐ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): Doris Ann Jast City Clerk

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: Storm Sirens	**Jurisdiction:** Liberal
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	3	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	3	
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)	3	
Will historic structures be saved or protected?	0	
Could it be implemented quickly?	3	
STAPLEE Score	24	

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.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
Mitigation Effectiveness Score		15

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 39

Priority Level: ☑ High (30+ points) ☐ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): Dana Ann Fast, City Clerk

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: Stormwater Study	**Jurisdiction:** Liberal
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	2	
T: Is it Technically feasible and potentially successful?	1	
A: Does the jurisdiction have the administrative capacity to execute this action?	1	
P: Is it Politically acceptable?	1	
L: Is there Legal authority to implement?	2	
E: Is it Economically beneficial?	1	
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)	3	
Will historic structures be saved or protected?	0	
Could it be implemented quickly?	0	
STAPLEE Score	11	

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.	5
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
Mitigation Effectiveness Score		10

Total Score (STAPLEE Score + Mitigation Effectiveness Score): 21

Priority Level: ☐ High (30+ points) ☐ Medium (25-29 points) ☑ Low (less than 25 points)

Completed by (name/title/phone #): Doris Ann Fast, City Clerk

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: Floodplain ordinance	**Jurisdiction:** Liberal
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	1	
T: Is it Technically feasible and potentially successful?	0	
A: Does the jurisdiction have the administrative capacity to execute this action?	2	
P: Is it Politically acceptable?	2	
L: Is there Legal authority to implement?	2	
E: Is it Economically beneficial?	0	
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)	2	
Will historic structures be saved or protected?	0	
Could it be implemented quickly?	2	
STAPLEE Score	11	

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.	5
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
Mitigation Effectiveness Score		10

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 #): Dana Ann Fast, City Clerk

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: INVENTORY	**Jurisdiction:** Mindenmines
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	3	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	3	
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)	3	
Will historic structures be saved or protected?	0	
Could it be implemented quickly?	3	
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.	7
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	7
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 #): Jason Higgins/Clerk/417-842-3216

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: KEY FACILITY PROTECTION	**Jurisdiction:** Mindenmines
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	3	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	3	
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)	3	
Will historic structures be saved or protected?	0	
Could it be implemented quickly?	3	
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.	6
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
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 #): Jon Higgins/City Clerk/417-842-3216

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: MFC	**Jurisdiction:** Mindenmines
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	3	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	2	
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)	3	
Will historic structures be saved or protected?	0	
Could it be implemented quickly?	3	
STAPLEE Score	23	

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.	7
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	7
Mitigation Effectiveness Score		14

Total Score (STAPLEE Score – Mitigation Effectiveness Score): 37

Priority Level: ☑ High (30+ points) ☐ Medium (25-29 points) ☐ Low (less than 25 points)

Completed by (name/title/phone #): Jason Higgins / Clerk / 417-842-3216

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: Reserve Funding	**Jurisdiction:** Miademines
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	1	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	2	
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)	2	
Will historic structures be saved or protected?	0	
Could it be implemented quickly?	1	
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.	5
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
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 #): John Hess/City Clerk/ 417-842-3216

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: PROMOTE COMMUNITY STORM SHELTER FOR ALL RESIDENTS	**Jurisdiction:** Mindenmines
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	2	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	2	
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)	3	
Will historic structures be saved or protected?	0	
Could it be implemented quickly?	2	
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.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
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 #): Jason Higgins / City Clerk / 417-342-3216

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: STORM SIRENS	**Jurisdiction:** Miadin mines
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	3	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	3	
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)	3	
Will historic structures be saved or protected?	3	
Could it be implemented quickly?	3	
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.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
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 #): Jean Higgins / City Clerk / 417-842-3216

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: STORM WATER DRAINAGE	**Jurisdiction:** Minden mines
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?	3	
T: Is it Technically feasible and potentially successful?	3	
A: Does the jurisdiction have the administrative capacity to execute this action?	3	
P: Is it Politically acceptable?	3	
L: Is there Legal authority to implement?	3	
E: Is it Economically beneficial?	3	
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)	3	
Will historic structures be saved or protected?	0	
Could it be implemented quickly?	3	
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.	6
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 #): Jean Higgins/City Clerk/417-542-3216

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: Key facilities	**Jurisdiction:** Liberal R-2, Lamar R-1, Golden City R-3
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?		3
T: Is it Technically feasible and potentially successful?		3
A: Does the jurisdiction have the administrative capacity to execute this action?		3
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		3
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)		3
Will historic structures be saved or protected?		3
Could it be implemented quickly?		3
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.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	8
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 #): _____

William A. Young

SHOW-ME COUNTY
MULTI-JURISDICTIONAL
LOCAL HAZARD MITIGATION PLAN

Action Title: L&PC	**Jurisdiction:** Lamar #-1 Liberal #-2 Golden City #-3
Action ID:	

STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?		3
T: Is it Technically feasible and potentially successful?		3
A: Does the jurisdiction have the administrative capacity to execute this action?		3
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		3
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)		3
Will historic structures be saved or protected?		2
Could it be implemented quickly?		3
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.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	7
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 #):

William O. Lamar

SHOW-ME COUNTY MULTI-JURISDICTIONAL LOCAL HAZARD MITIGATION PLAN

Action Title: Safe rooms	Jurisdiction: Lamar R-1, Liberal R-2, Golden City R-3
Action ID:	

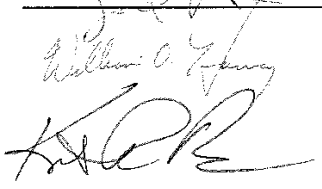
STAPLEE Criteria	Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	Score
S: Is it Socially acceptable?		3
T: Is it Technically feasible and potentially successful?		3
A: Does the jurisdiction have the administrative capacity to execute this action?		3
P: Is it Politically acceptable?		3
L: Is there Legal authority to implement?		3
E: Is it Economically beneficial?		3
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)		3
Will historic structures be saved or protected?		2
Could it be implemented quickly?		2
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.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	7
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 #): _____



Appendix E: Adoption Resolutions

COUNTY OF BARTON, Missouri

RESOLUTION NO. 2018-1

A RESOLUTION OF THE *COUNTY OF BARTON* ADOPTING THE 2018 BARTON COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION *PLAN*

WHEREAS the COUNTY OF BARTON recognizes the threat that natural hazards pose to people and property within the COUNTY OF BARTON and

WHEREAS the COUNTY OF BARTON has participated in the preparation of a multi- hazard mitigation plan, hereby known as the 2018 BARTON County Multi-Jurisdictional Hazard Mitigation Plan, 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 COUNTY OF BARTON from the impacts of future hazards and disasters; and

WHEREAS the COUNTY OF BARTON recognizes that land use policies have a major impact on whether people and property are exposed to natural hazards, the COUNTY OF BARTON will endeavor to integrate the *Plan* into the comprehensive planning process and

WHEREAS adoption by the COUNTY OF BARTON demonstrates their commitment to hazard mitigation and achieving the goals outlined in the *Plan*

NOW THEREFORE, BE IT RESOLVED BY THE COUNTY OF BARTON, in the State of Missouri, THAT:

In accordance with *COUNTY COMMISSION* the *COUNTY OF BARTON* adopts the final FEMA-*HAZARD MITIGATION PLAN*.

ADOPTED by a vote of 3 in favor and Ø against, and Ø abstaining, this 25 day of June, 2018

By Mike Davis

MIKE DAVIS, PRESIDING COMMISSIONER

ATTEST:

By Kristina Crockett

KRISTINA CROCKETT, BARTON COUNTY CLERK

APPROVED AS TO FORM:

By _____

RESOLUTION NO. 01/2018

A RESOLUTION OF THE CITY OF GOLDEN CITY ADOPTING THE BARTON COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

WHEREAS the City of Golden City recognizes the threat that natural hazards pose to people and property within the City of Golden City; and

WHEREAS the City of Golden City has participated in the preparation of a multi- hazard mitigation plan, hereby known as the Barton County Multi-Jurisdictional Hazard Mitigation Plan, 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 City of Golden City from the impacts of future hazards and disasters; and

WHEREAS the City of Golden City recognizes that land use policies have a major impact on whether people and property are exposed to natural hazards, the City of Golden City will endeavor to integrate the *Plan* into the comprehensive planning process and

WHEREAS adoption by the City of Golden City demonstrates their commitment to hazard mitigation and achieving the goals outlined in the *Plan*

NOW THEREFORE, BE IT RESOLVED BY THE City of Golden City in the State of Missouri, **THAT:** In accordance with City of Golden City, the City of Golden City adopts the final FEMA-*approved plan*.

ADOPTED by a vote of 6 in favor and 0 against, and 0 abstaining, this 2nd day of July, 2018

Walt Nims, Mayor, Golden City

ATTEST:

Barbara Chappell, City Clerk

APPROVED AS TO FORM:

Walt Nims, Mayor

RESOLUTION NO. 428

A RESOLUTION OF THE CITY OF LAMAR, ADOPTING THE BARTON COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

WHEREAS the City of Lamar recognizes the threat that natural hazards pose to people and property within the City of Lamar and

WHEREAS the City of Lamar has participated in the preparation of a multi- hazard mitigation plan, hereby known as the Barton County Multi-Jurisdictional Hazard Mitigation Plan, 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 City of Lamar from the impacts of future hazards and disasters; and

WHEREAS the City of Lamar recognizes that land use policies have a major impact on whether people and property are exposed to natural hazards, the City of Lamar will endeavor to integrate the *Plan* into the comprehensive planning process and

WHEREAS adoption by the City of Lamar demonstrates their commitment to hazard mitigation and achieving the goals outlined in the *Plan*

NOW THEREFORE, BE IT RESOLVED BY THE CITY OF LAMAR, in the State of Missouri, THAT: In accordance with ordinances of the City of Lamar adopts the final FEMA-approved plan.

Passed and adopted this 20th day of August, 2018

COUNTY OF BARTON SEAL of CITY OF LAMAR STATE OF MISSOURI

Kent M. Harris, Mayor

Bev Baker, City Clerk

City of Lamar Heights, Missouri RESOLUTION NO. 5

A RESOLUTION OF THE City of Lamar Heights ADOPTING THE BARTON COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION *PLAN*

WHEREAS the City of Lamar Heights recognizes the threat that natural hazards pose to people and property within the City of Lamar Heights; and

WHEREAS the City of Lamar Heights has participated in the preparation of a multi- hazard mitigation plan, hereby known as the Barton County Multi-Jurisdictional Hazard Mitigation Plan, 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 City of Lamar Heights from the impacts of future hazards and disasters; and

WHEREAS the City of Lamar Heights recognizes that land use policies have a major impact on whether people and property are exposed to natural hazards, the City of Lamar Heights will endeavor to integrate the *Plan* into the comprehensive planning process and

WHEREAS adoption by the City of Lamar Heights demonstrates their commitment to hazard mitigation and achieving the goals outlined in the *Plan*

NOW THEREFORE, BE IT RESOLVED BY THE City of Lamar Heights, in the State of Missouri, THAT:

In accordance with City of Lamar Heights, the City of Lamar Heights adopts the final FEMA-*approved plan*.

ADOPTED by a vote of 4 in favor and 0 against, and 0 abstaining, this 12 day of July, 2018.

By (Sig): _____

Print name: JERRY MARTI

ATTEST:

By (Sig.): _____

Print name: JAMES SUMA

APPROVED AS TO FORM:

By (Sig.): _____

Print name: _____

City of Liberal, Missouri

Resolution No. 07-18

A RESOLUTION OF THE CITY OF LIBERAL, MISSOURI ADOPTING THE SHOW-ME COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN:

WHEREAS the City of Liberal recognizes the threat that natural hazards pose to people and property within the City of Liberal; and

WHEREAS the City of Liberal has participated in the preparation of the multi-hazard mitigation plan, hereby known as the Show-Me County Multi-Jurisdictional Hazard Mitigation Plan, here after 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 City Liberal, Missouri from the impacts of future hazards and disasters; and

WHEREAS THE City of Liberal recognizes that land use policies have a major impact on whether people and property are exposed to natural hazards, the City of Liberal will endeavor to integrate the Plan into the comprehensive planning process; and

WHEREAS adoption by the City of Liberal demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Plan

NOW THEREFORE, BE IT RESOLVED BY THE BOARD OF ALDERMEN OF THE CITY OF LIBERAL IN THE STATE OF MISSOURI THAT:

In accordance with the Liberal Municipal Code, the Board of Aldermen of the City of Liberal, Missouri, adopts the final FEMA approved plan.

Passed by the Board of Aldermen of the City of Liberal, Missouri on the 17th day of July 2018.

ADOPTED by a vote of 4 in favor and -0- against and -0- abstaining.

Jimmy Smith, Mayor

Attest:

Doris Fast

Doris Fast, City Clerk

CITY OF MINDENMINES, MISSOURI

RESOLUTION NO. 500

A RESOLUTION OF THE **CITY OF MINDENMINES, MISSOURI**, ADOPTING THE BARTON COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION *PLAN*

WHEREAS the **CITY OF MINDENMINES, MISSOURI** recognizes the threat that natural hazards pose to people and property within the **CITY OF MINDENMINES, MISSOURI**; and

WHEREAS the **CITY OF MINDENMINES, MISSOURI** has participated in the preparation of a multi-hazard mitigation plan, hereby known as the Barton County Multi-Jurisdictional Hazard Mitigation Plan, 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 **CITY OF MINDENMINES, MISSOURI** from the impacts of future hazards and disasters; and

WHEREAS the **CITY OF MINDENMINES, MISSOURI** recognizes that land use policies have a major impact on whether people and property are exposed to natural hazards, the **CITY OF MINDENMINES, MISSOURI** will endeavor to integrate the *Plan* into the comprehensive planning process and

WHEREAS adoption by the **CITY OF MINDENMINES, MISSOURI** demonstrates their commitment to hazard mitigation and achieving the goals outlined in the *Plan*

NOW THEREFORE, BE IT RESOLVED BY THE **CITY OF MINDENMINES, MISSOURI**, in the State of Missouri, THAT:

In accordance with **ORDINANCE 501**, the **CITY OF MINDENMINES, MISSOURI** adopts the final FEMA-*approved plan*.

ADOPTED by a vote of 4 in favor and 0 against, and 0 abstaining, this 26th day of June, 2018.

By (Sig): _____

Print name: Missie Shaw

ATTEST:

By (Sig.): _____

Print name: Jason Higgins

APPROVED AS TO FORM:

By (Sig.): _____

Print name: Jimmy Morton

LAMAR R-1 SCHOOL DISTRICT, Missouri RESOLUTION

NO. _____

A RESOLUTION OF THE *LAMAR R-1 SCHOOL DISTRICT* ADOPTING THE BARTON COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION *PLAN*

WHEREAS the Lamar R-1 School District recognizes the threat that natural hazards pose to people and property within the (*local governing body/school district*); and

WHEREAS the Lamar R-1 School District) has participated in the preparation of a multi- hazard mitigation plan, hereby known as the [Show-Me] County Multi-Jurisdictional Hazard Mitigation Plan, 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 Lamar R-1 School District) from the impacts of future hazards and disasters; and

WHEREAS the Lamar R-1 School District recognizes that land use policies have a major impact on whether people and property are exposed to natural hazards, the Lamar R-1 School District) will endeavor to integrate the *Plan* into the comprehensive planning process and

WHEREAS adoption by the Lamar R-1 School District demonstrates their commitment to hazard mitigation and achieving the goals outlined in the *Plan*

NOW THEREFORE, BE IT RESOLVED BY THE *LAMAR R-1 SCHOOL DISTRICT,* in the State of Missouri, THAT:

In accordance with local rule for adopting resolutions, the Lamar R-1 School District adopts the final FEMA-approved plan.

ADOPTED by a vote of 6 in favor and 0 against, and 0 abstaining, this 16th day of August, 2018.

By (Sig): _____

Print name: ZACH HARRIS

ATTEST:

By (Sig.): Robbie Edge

Print name: Robbie Edge

APPROVED AS TO FORM:

By (Sig.): _____

Print name: _____

Liberal R-II School District Liberal, Missouri

RESOLUTION NO. _____

A RESOLUTION OF THE LIBERAL R-II SCHOOL DISTRICT ADOPTING THE BARTON COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION *PLAN*

WHEREAS the Liberal R-II School District recognizes the threat that natural hazards pose to people and property within the Liberal R-II School District; and

WHEREAS the Liberal R-II School District has participated in the preparation of a multi- hazard mitigation plan, hereby known as the Barton County Multi-Jurisdictional Hazard Mitigation Plan, 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 Liberal R-II School District from the impacts of future hazards and disasters; and

WHEREAS the Liberal R-II School District recognizes that land use policies have a major impact on whether people and property are exposed to natural hazards, the Liberal R-II School District will endeavor to integrate the *Plan* into the comprehensive planning process and

WHEREAS adoption by the Liberal R-II School District demonstrates their commitment to hazard mitigation and achieving the goals outlined in the *Plan*

NOW THEREFORE, BE IT RESOLVED BY THE LIBERAL R-II SCHOOL DISTRICT, in the State of Missouri, THAT:

In accordance with a vote of a majority of the Board of Education, the Liberal R-II School District adopts the final FEMA-*approved plan*.

ADOPTED by a vote of 5 in favor and 0 against, and 0 abstaining, this 26th day of June, 2018.

By (Sig): Brian K. King

Print name: Brian K. King

ATTEST:

By (Sig.): William O. Harvey

Print name: William O. Harvey

APPROVED AS TO FORM:

By (Sig.): _____

Print name: _____

Golden City R-III School District,

1208 Walnut Street, Golden City, Missouri

RESOLUTION NO. 1

A RESOLUTION OF THE GOLDEN CITY R-III SCHOOL DISTRICT ADOPTING THE BARTON COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION *PLAN*

- WHEREAS the GOLDEN CITY R-III SCHOOL DISTRICT recognizes the threat that natural hazards pose to people and property within the GOLDEN CITY R-III SCHOOL DISTRICT; and
- WHEREAS the GOLDEN CITY R-III SCHOOL DISTRICT has participated in the preparation of a multi- hazard mitigation plan, hereby known as the Barton County Multi-Jurisdictional Hazard Mitigation Plan, 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 GOLDEN CITY R-III SCHOOL DISTRICT) from the impacts of future hazards and disasters; and
- WHEREAS the GOLDEN CITY R-III SCHOOL DISTRICT recognizes that land use policies have a major impact on whether people and property are exposed to natural hazards, the GOLDEN CITY R-III SCHOOL DISTRICT will endeavor to integrate the Plan into the comprehensive planning process and
- WHEREAS adoption by the GOLDEN CITY R-III SCHOOL DISTRICT demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Plan

NOW THEREFORE, BE IT RESOLVED BY THE GOLDEN CITY R-III SCHOOL DISTRICT, in the State of Missouri, THAT: In accordance with Board of Education rules and regulations, the GOLDEN CITY R-III SCHOOL DISTRICT adopts the final FEMA-*approved plan.*

ADOPTED by a vote of 6 in favor and 0 against, and 0 abstaining, this 18th day of July, 2018

By, Board of Education President (Sig): Chet Parker

Chet Parker

ATTEST:

By, Board of Education Secretary (Sig.): Jamie Baker

Jamie Baker

By, Superintendent of Schools (Sig.):

Keith R. Rook