

1 INTRODUCTION AND PLANNING PROCESS

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1.1 PURPOSE

Hazard mitigation is “any actions taken to reduce or eliminate the long-term risk to human life and property from natural hazards”. We understand that hazard events will continue to occur, and at their worst can result in death and destruction of property and infrastructure. The work done to minimize the impact of hazard events to life and property is called hazard mitigation. Pike County, participating jurisdictions, school districts and special districts developed this multi-jurisdictional local hazard mitigation plan update to reduce future losses from hazards.

- The County of Pike, City of Bowling Green, City of Louisiana, City of Clarksville, Bowling Green R-I, Louisiana R-II, Pike County R-III, Mudlick Prairie Levee District, and Pike Grain Drainage and Levee District adopted the plan as a Prerequisite for mitigation grant eligibility and cite the current legislation authorizing plan development.

Robert T. Stafford Disaster Relief and Emergency Act (Public Law 93-288) as amended by the Disaster Mitigation Act of 2000 (Public Law 106-390) and the implementing regulations set forth by the Interim Final Rule published in the *Federal Register* on February 26, 2002, (44 CFR §201.6) and finalized on October 31, 2007.

FEMA’s Local Mitigation Planning Handbook, March 2013 and FEMA’s Local Mitigation Plan Review Guide, October 1, 2011.

1.2 BACKGROUND AND SCOPE

This plan is a 5-year update of a plan that was approved on May 24, 2017. The plan and update were prepared pursuant to the requirements of the Disaster Mitigation Act of 2000 to result in the eligibility for the Federal Emergency Management Agency (FEMA) Hazard Mitigation Assistance Grant programs.

- Following is a list of participants in both the previous plan as well as the current plan: The County of Pike, City of Bowling Green, City of Louisiana, City of Clarksville, Bowling Green R-I, Louisiana R-II, Pike County R-III, Mudlick Prairie Levee District, and Pike Grain Drainage and Levee District

In addition to securing Hazard Mitigation Grant Funding eligibility, the plan is useful for incorporating hazard mitigation planning and principals into other documents, such as zoning

regulations and land use plans.

1.3 PLAN ORGANIZATION

Set forth the outline of the plan. If there are changes in the format from the previously approved plan, explain what they are and why the changes were made.

- 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 provides details on the changes made in the plan update.

Table 1.1. Changes Made in Plan Update

Plan Section	Summary of Updates
Chapter 1 - Introduction and Planning Process	Updated members of the Mitigation Planning Committee (MPC) and participating jurisdictions formally adopted the MPC.
Chapter 2 - Planning Area Profile and Capabilities	Noted new GIS capabilities for participating jurisdictions.
Chapter 3 - Risk Assessment	Combined extreme heat and extreme cold into one hazard: extreme temperatures.
Chapter 4 - Mitigation Strategy	The mitigation category of each action was added to the action worksheets.
Chapter 5 - Plan Implementation and Maintenance	Updated MPC meetings for evaluating and updating the plan to quarterly.

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.

Pike County Commissioners contracted with the Mark Twain Regional Council of Governments (MTRCOG) to facilitate the update of the multi-jurisdictional local hazard

mitigation plan. In fulfillment of this role, the MTRCOG:

- Assisted 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),
- Facilitated the entire plan development process,
- Identified the data that MPC participants could provide and conduct the research and documentation necessary to augment that data,
- Assisted in soliciting public input,
- Produced 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. Jurisdictional Representatives of Pike County Mitigation Planning Committee

Name		Title	Department	Jurisdiction/Agency/Organization
Chris	Gamm	Presiding Commissioner	Administration	Pike County
Bill	Allen	Commissioner	Administration	Pike County
Tom	Wallace	Commissioner	Administration	Pike County
Linda	Luebrecht	City Administrator	Administration	City of Bowling Green
Memarie	Gonzalez	City Clerk	Administration	City of Louisiana
Jennifer	Calvin	City Clerk	Administration	City of Clarksville
Richard	Murray	Emergency Management Director	Administration	Pike County
Martin	Hanley	Director	Administration	Pike County R-III School
Matthew	Frederickson	Superintendent	Administration	Bowling Green R-I School
Stephen	Hunter	Asst. Superintendent	Administration	Bowling Green R-I School
Todd	Smith	Superintendent	Administration	Louisiana R-II School
WM	Sheppard	Commissioner	Administration	Mudlick Prairie Levee District and Pike Grain Drainage and Levee Dist.

Table 1.3 demonstrates each member’s expertise in the six mitigation categories (Prevention, Property Protection, Natural Resource Protection, Emergency Services, Structural Flood Control Projects and Public Information.

Table 1.3. MPC Capability with Six Mitigation Categories

Community Department/Office	Preventive Measures	Structure and Infrastructure Projects		Natural Resource Protection	Public Information	Emergency Services
		Property Protection	Structural Flood Control Projects			

County Commission	✓	✓	✓	✓	✓	
EMD	✓	✓	✓	✓	✓	✓
City Clerk					✓	
Mayor					✓	
School Administrator	✓	✓			✓	
911	✓	✓			✓	✓

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 the increase the public’ 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.

Locals governments have the responsibility to protect the health, safety, and welfare of their citizens. Proactive mitigation policies and actions help to 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 reality. No where’s difficulty is more apparent than in small rural communities like those in Northeast Missouri. The County of Pike, City of Bowling Green, City of Louisiana, City of Clarksville, Bowling Green R-I, Louisiana R-II, Pike County R-III, Mudlick Prairie Levee District, and Pike Grain Drainage and Levee District participated in all elements of the planning process.

Local government jurisdictions and the school districts were invited to participate in the planning process via email and in many cases follow up phone calls and personal visits. (Appendix B-public documentation). Committee members were placed on a contact list featuring email and contact information. They were also directed to the Mark Twain Regional Council of Governments webpage.

Local government jurisdictions, school districts and special districts are required to participate in the planning process and formally adopt the plan. The County of Pike, City of Bowling

Green, City of Louisiana, City of Clarksville, Bowling Green R-I, Louisiana R-II, Pike County R-III, Mudlick Prairie Levee District, and Pike Grain Drainage and Levee District participated in the plan update by meeting minimal requirements as described in the next paragraph. Each participating jurisdiction has formally adopted the mitigation plan.

Minimum participation requirements included:

- Designation of a representative to serve on the MPC
- Provision of sufficient information to support plan development by completion and return of Data Collection Questionnaires and validating/correcting critical facility inventories.
- When applicable provide progress reports on mitigation actions from previously approved plan and identify additional mitigation actions plan.
- Eliminate from further consideration those actions from the previously approved plan that were not implemented because they were impractical, inappropriate, not cost-effective, or were otherwise not feasible.
- Review and comment on plan drafts
- Provide documentation to show time donated to the planning effort (if a FEMA planning grant was awarded to the county); and
- Formally adopt the mitigation plan prior to submittal to SEMA and FEMA for final approval

Table 1.4. Jurisdictional Participation in Planning Process

Jurisdiction	Planning Meeting	Data Collection Questionnaire Response	Update/Develop Mitigation Actions
Pike County	✓	✓	✓
City of Bowling Green	✓	✓	✓
City of Louisiana	✓	✓	✓
City of Clarksville		✓	✓
Bowling Green R-I		✓	✓
Louisiana R-II		✓	✓
Pike County R-III		✓	✓
Mudlick Prairie Levee District	✓	✓	✓
Pike Grain Drainage and Levee District	✓	✓	✓

1.4.2 The Planning Steps

Table 1.5. 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, and 4)

Table 1.6. Schedule of MPC Meetings

Meeting	Topic	Date
Informational Meeting	Communicated directly with Pike County Commission and local jurisdictions to discuss the planning process and importance of participation	September 2021
Planning Participation	Every local jurisdiction was contacted by email and phone calls to discuss the planning process and importance of participation	September - October 2021
Planning Meeting	Purpose, process, planning area, building the team and stakeholders, participation requirements, public outreach, data collection questionnaires, discussion of hazards, risk assessment, determine/update goals and actions, review of the draft plan, discussion of plan update process, plan maintenance, discussion of adoption resolutions	October 4, 2021 Pike County Fairgrounds

In September, MTRCOG staff met with the Pike County Commissioners to begin the planning process. On October 4, 2021 a Planning Meeting was held for the Pike County Plan Update. Local jurisdictions were notified by e-mail and letter of the Planning Meeting. Personal phone calls were made to promote attendance at the Planning Meeting. The agenda for the Planning Meeting is included in Appendix B as well as the minutes for the Planning Meeting.

Representatives from Pike County, City of Bowling Green, City of Louisiana, Mudlick Prairie Levee District, and Pike Grain Drainage and Levee District attended the planning meeting.

Representatives from City of Clarksville, Bowling Green R-I, Louisiana R-II, and Pike County R-III participated via phone and email and provided the necessary information to be included in the plan.

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.

The Planning Meeting agenda is included in Appendix B which includes discussion, minutes, participation sheet and copies of the handouts. As stated in the minutes, the participants felt a survey tool would not be effective and chose to solicit public involvement at the local level as they would be key contacts for obtaining public comment. Public notice was also posted on the Mark Twain Regional Council of Governments website, Facebook page and a notice was posted at the Pike County Courthouse.

A subsequent public notice was posted in the Bowling Green Times newspaper and City Halls in December 2021 inviting additional public input regarding the update. Comments were invited in December 2021. See Appendix B.

No public comments were received which is characteristic for the area. The public in Pike County typically does not become active in planning activities such as plan development or updates.

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.

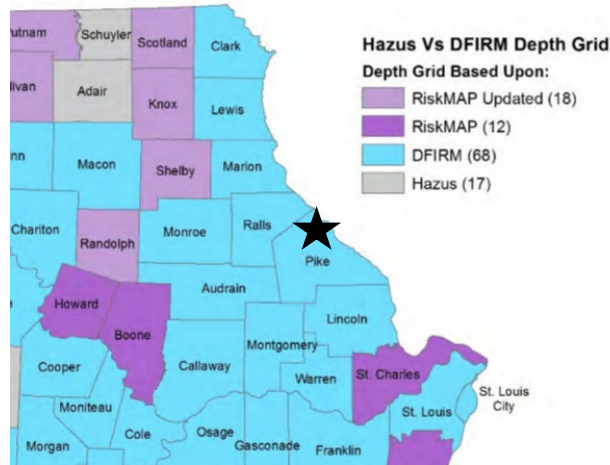
The Pike County stakeholders were invited to attend the Planning Meeting, review the updated plan and provide their input. Stakeholders invited to participate include police departments, fire departments, economic developer, water districts, and Missouri Department of Transportation. Neighboring communities were informed of the Pike County plan update and were invited to attend or offer input to the plan as necessary. No comments were received from the stakeholders during the planning process.

Name		Title	Department	Agency/Organization
Dan	Redington	Warden	MO Department of Corrections	Northeast Correctional Center
Taya	Sheppard	Coordinator	Water and Levee	Mudlick Prairie Levee District and Pike Grain Drainage and Levee
Richard	Murray	Director	Emergency Management	Pike County

Coordination with FEMA Risk MAP Project

Pike County currently is in the DFIRM Status. Risk Map provides mitigation planning support in a variety of ways including helping in the assessment of risks and identifying action items to reduce vulnerability. In addition, this will provide tools to improve understanding of risk by local officials and the general public.

Figure 1.1. RiskMAP Study Status Map



Integration of Other Data, Reports, Studies, and Plans

Other relevant documents critical to the formation of the plan include, mitigation plan of the state and adjacent counties, reports from university extensions, Flood Insurance Studies (FIS), Flood Insurance Rate Maps (FIRMs), State Department of Natural Resources (DNR) dam information, the National Inventory of Dams (NID), dam inspection reports, state fire reports, Wildland /Urban Interface and Intermix areas from the ILVIS Lab-Department of Forest Ecology and Management – University of Wisconsin, local comprehensive plans, economic development plans, capital improvement plans, US Department of Agriculture’s (USDA) Risk Management Agency Crop Insurance Statistics, and local budgets.

Examples of information that was incorporated into the plan include:

- FEMA FIRM maps
- DNR dam inspection reports
- County Master Plan: future growth trends
- SEMA’s Arc GIS helped with mapping for hazards
- 2018 State Hazard Mitigation Plan- building counts and content exposure
- American Factfinder and 2019 American Community survey, demography.

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

Participating jurisdictions was asked to review the following and provide comment on them:

- 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 information obtained from the jurisdictions can be reviewed in Section 4 of this document. Data Collection Questionnaires were disseminated to jurisdictions in attendance. Participants were requested to review and complete the questionnaires.

Step 5: Assess the Problem: Identify Assets and Estimate Losses (Handbook Task 5)

Assets were identified with demographic data from the US Census, Census of Agriculture, GIS Structure data, Data Collection Questionnaires and information from the MTRCOG.

All loss estimates could not be provided due to lack of information provided by participating Jurisdictions. Value of building in the community was obtained and is provided in the plan.

Step 6: Set Goals (Handbook Task 6)

The MPC reviewed the goals from the previously approved plan at the Pike County Multi-Jurisdictional Plan update Planning Meeting and accepted the following goals:

Goal 1: Protect the lives and livelihood of all the citizens.

Goal 2: Decrease the impact of natural hazards.

Goal 3: Ensure continued operation of government and emergency function in a disaster.

***Step 7: Review Possible Mitigation Actions and Activities
(Handbook Task 6)***

Participating jurisdictions were asked to review the mitigation strategy from the previously approved plan and note changes and update as it pertains to their individual jurisdictions. Committee members were requested to address progress (or lack thereof) on previously identified actions in the previously approved plan. MPC members were encouraged to continue forward only those actions that substantively address long-term mitigation solutions to the risk identified in the risk assessment.

There were minimal changes to any of the risk assessment in the plan. The MPC used the STAPLEE method to analyze and prioritize proposed actions. Members were provided a copy of the FEMA publication Mitigation Ideas – A Resource for Reducing Risk to Natural Hazard at the Planning meeting.

Step 8: Draft an Action Plan
(Handbook Task 6)

The action worksheets, including the plan for implementation, submitted by each jurisdiction for the updated Mitigation Strategy are included in Chapter 4.

Step 9: Adopt the Plan
(Handbook Task 8)

After the majority of the draft plan was composed, adoption resolution examples were given to the jurisdictional representatives and requested for adoption by whatever tools their jurisdictions utilize for such activities.

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

Part of the plan draft development included an outline of plan maintenance (Chapter 5) and was discussed and accepted by the MPC. This process includes reviews annually and in the wake of any significant hazard event, as well as provisions for the five-year update process.