9221 Ward Parkway, Ste. 300 Kansas City, MO 64114-3323



March 29, 2017

Mr. Ernie Rhodes, Director State Emergency Management Agency P. O. Box 116 Jefferson City, Missouri 65102

Subject: Review of the McDonald County Hazard Mitigation Plan

Dear Mr. Rhodes:

The purpose of this letter is to provide the status of the above referenced Local Hazard Mitigation Plan, pursuant to the requirements of 44 CFR Part 201 - Mitigation Planning and the Local Multi-Hazard Mitigation Planning Guidance. The Local Hazard Mitigation Plan Review Tool documents the Region's review and compliance with all required elements of 44 CFR Part 201.6, as well as identifies the jurisdictions participating in the planning process. FEMA's approval will be for a period of five years effective starting with the approval date indicated below.

Prior to the expiration of the plan the community will be required to review and revise their plan to reflect changes in development, progress in local mitigation efforts, and changes in priorities, and resubmit it for approval in order to continue to be eligible for mitigation project grant funding.

Plan Name	Date Submitted	Date Approved	Date of Plan Adoption	Date of Plan Expiration	Review Status
McDonald County	March 15, 2017	March 29, 2017	February 9, 2017	March 29, 2022	Approved

If you have any questions or concerns, please contact Joe Chandler, Planning Team Lead, at (816) 283-7071.

Sincerely,

Digitally signed by KENNETH G SESSA KENNETH G SESSA DN: c=US. Government, ou=Department of Homeland Security, ou=FEMA, ou=People, cn=KENNETH G SESSA, 0.9.2342.19200300.100.1.1=0830449627.FEMA Date: 2017.03.30 09:03:08 -05'00'

Kenneth Sessa, Acting Director Mitigation Division

# MCDONALD COUNTY MISSOURI

# 2016 Multi-Jurisdictional

# **Hazard Mitigation Plan**

Approved by FEMA 3/29/2017



800 E Pennel St. Carl Junction, Missouri 64834 Phone: 417-649-6400

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hstcc.org

### **CONTRIBUTORS**

### **McDonald County Hazard Mitigation Planning Committee**

### **Jurisdictional Representatives**

Name	Title	Jurisdiction/Agency/Organization
Keith Lindquist	Presiding Commissioner	McDonald County
John Bunch Eastern Commissioner McDonald County		McDonald County
		McDonald County
Gregg Sweeten	Emergency Management Director/ Mayor	McDonald County/ City of Pineville
Melissa Ziemianin	City Clerk	City of Pineville
Charla Geller	Emergency Management Director	Newton County
Kimberly Bell	County Clerk	McDonald County
Michael Hall	Sheriff	McDonald County
Robert Campbell	Director of Facilities	McDonald County Schools
Adam Lett	Safety Director	McDonald County Schools
Karla McNorton	City Clerk	City of Goodman
John Lafley	·	
Tina Depriest		
Bill Martin Trustee Village of Jane		Village of Jane
Joe Lahr	Fire Chief/Trustee White Rock Fire Departm of Jane	
Kenneth Mickelson	Firefighter	White Rock Fire Department
Ed Malcom	Firefighter	White Rock Fire Department
John Sellers	Mayor	City of Anderson
Shelby Turner	Emergency Manager	City of Anderson
Andi Browning	City Clerk	City of Anderson
		City of Lanagan
Monica Blue		
Joe Carpenter	Mayor	City of Southwest City

### **Stakeholder Representatives**

Name		Title	Agency/Organization
Mike	Ross	Director	Freeman Ambulance
Mark	Kalmbach	Director of Physical Plant	Crowder College
Aaron	Rice	Environmental Manager	Tyson Foods
Pam	Satchel	Safety Manager	Tyson Foods
Wendy	Mathews	Director of Clinical Ed.	Golden Living Center
Angie	Smith	Assistant of Nursing	Golden Living Center
Denisa	Douthit	Business Owner	Noel & Ginger Blue
	·		

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

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### **EXECUTIVE SUMMARY**

The purpose of hazard mitigation is to reduce or eliminate long-term risk to people and property from hazards. McDonald 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 November 16, 2011. 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 McDonald County Multi-Hazard Mitigation Plan is a multi-jurisdictional plan that covers the following 10 jurisdictions that participated in the planning process:

- McDonald County
- City of Anderson
- City of Goodman
- City of Lanagan
- City of Noel
- City of Pineville
- City of Southwest City
- Village of Jane
- McDonald County School District

The Village of Ginger Blue was invited to participate in the planning process, but did not meet all of the established requirements for official participation. When the future five-year update is developed for this plan, this jurisdiction will again be invited to participate.

McDonald County and the entities listed above developed a Multi-Jurisdictional Hazard Mitigation Plan that was approved by FEMA on [date] (hereafter referred to as the [date] 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 McDonald County and participating jurisdictions. The MPC updated the risk assessment that identified and profiled hazards that pose a risk to McDonald County and analyzed jurisdictional vulnerability to these hazards. The MPC also examined the capabilities in place to mitigate the hazard damages, with emphasis on changes that have occurred since the previously approved plan was adopted. The MPC determined that the planning area is vulnerable to several hazards that are identified, profiled, and analyzed in this plan. Riverine and flash flooding, winter storms, severe thunderstorms/hail/lightning/high winds, and tornadoes are among the hazards that historically have had a significant impact.

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

- 1. Increase entity's internal capabilities to mitigate the effects of natural hazards.
- 2. Enhance existing or design new entity's policies that will reduce the potential damaging effects of hazards without hindering other community goals without the use of punitive constraints.
- 3. Protect entity's most vulnerable populations, buildings, and critical facilities through the implementation of cost-effective and technically feasible mitigation projects.
- 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.

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

### **PREREQUISITES**

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

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

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

- Unincorporated McDonald County
- City of Anderson
- City of Goodman
- City of Lanagan
- City of Noel
- City of Pineville
- City of Southwest City
- Village of Jane
- McDonald County School District

A model resolution can be found on the following page.

Model Resolution
Resolution #
Adopting the McDonald County Multi-Jurisdictional Local Hazard Mitigation Plan
Whereas, the (Name of Government/District/Organization seeking FEMA approval of hazard mitigation plan) recognizes the threat that natural hazards pose to people and property within our community; and
Whereas, undertaking hazard mitigation actions will reduce the potential for harm to people and property from future hazard occurrences; and
<b>Whereas,</b> the U.S. Congress passed the Disaster Mitigation Act of 2000 ("Disaster Mitigation Act") emphasizing the need for pre-disaster mitigation of potential hazards;
<b>Whereas</b> , the Disaster Mitigation Act made available hazard mitigation grants to state and local governments; and
<b>Whereas</b> , an adopted Local Hazard Mitigation Plan is required as a condition of future funding for mitigation projects under multiple FEMA pre- and post-disaster mitigation grant programs; and
Whereas, the (Name of Government/District/Organization) fully participated in the hazard mitigation planning process to prepare this Multi-Jurisdictional Local Hazard Mitigation Plan; and
<b>Whereas</b> , the Missouri State Emergency Management Agency and the Federal Emergency Management Agency Region VII officials will review the "County A Multi-Jurisdictional Local Hazard Mitigation Plan," and approved it as to form and content; and
Whereas, the (Name of Government/District/Organization) desires to comply with the requirements of the Disaster Mitigation Act and to augment its emergency planning efforts by formally adopting the County A Multi-Jurisdictional Local Hazard Mitigation Plan; and
<b>Whereas</b> , adoption by the governing body for the (Name of Government/District/Organization) demonstrates the jurisdictions' commitment to fulfilling the mitigation goals outlined in this Multi-Jurisdictional Local Hazard Mitigation Plan; and
<b>Whereas</b> , adoption of this legitimizes the plan and authorizes responsible agencies to carry out responsibilities under the plan;
<b>Now, therefore, be it resolved,</b> that the (Name of Government/District/Organization) has adopted the "County A Multi-Jurisdictional Local Hazard Mitigation Plan" as an official plan.
Date:

Certifying Official:

### 1 INTRODUCTION AND PLANNING PROCESS

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### 1.1 Purpose

Hazard mitigation is "any action 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. McDonald County and the participating jurisdictions and school districts developed this multi-jurisdictional local hazard mitigation plan update to reduce future losses from hazard events.

For jurisdictions to be eligible for mitigation grants, they must adopt the plan. Jurisdictions who do not formally adopt the plan will not be eligible for pre-disaster mitigation grants. The citation below illustrates the authorizing legislation of local hazard mitigation plans:

"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 CPR §201.6) and finalized on October 31, 2007. (Hereafter, these requirements and regulations will be referred to collectively as the Disaster Mitigation Act or DMA) The regulations established the requirements for local hazard mitigation plans are in the Robert T. Stafford Disaster Relief and Emergency Act (Public Law 93-288)."

### 1.2 BACKGROUND AND SCOPE

This document is the 5-year update of a plan that was approved on November 16, 2011. The plan and the 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.

The following local governments and school districts participated in both the original plan as well as the plan update, which allows them to adopt the plan and secure eligibility for Hazard Mitigation Grant funding they could not otherwise obtain.

- McDonald County
- City of Anderson

- City of Goodman
- City of Lanagan
- City of Noel
- City of Pineville
- City of Southwest City
- Village of Jane
- McDonald County School District

In addition to securing 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

This latest (2015) update document involved review, evaluation, and amendment of the existing Plan. It addresses the same natural hazards that were addressed in the original Plan, with manmade/technological hazards not addressed except in the context of cascading damages. The following is a breakdown of the organization of the 2014 McDonald County Hazard Mitigation Plan Update.

- Section 1: Introduction and Planning Process
- Section 2: Planning Area Profile and Capabilities
- Section 3: Risk Assessment
- Section 4: Mitigation Strategy
- Section 5: Plan Implementation and Maintenance
- Appendices

**Table 1.1** summarizes the changes made in the plan by section.

### Table 1.1. Changes Made in Plan Update

Section	Changes/Updates Made
Section 1	The history of the original plan and the process of updating it were outlined.
Section 2	All Census and economic demographic data was updated.
Section 3	All Hazard Event Data was updated and new risk and vulnerability analysis were performed using the new data.
Section 4	All previous action plans were updated and new action plans were added.
Section 5	The plan maintenance process was revamped and detailed to include annual and spontaneous plan review meetings.

### 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.

McDonald County, Missouri 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:

- Assisted in establishing a Mitigation Planning Committee (MPC) as defined by the Disaster Mitigation Act (DMA).
- Ensured the updated plan met the DMA requirements as established by federal regulations and followed 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 conducted 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 coordinated 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.

Jurisdictional Representatives and Stakeholders McDonald Mitigation Table 1.2. Planning Committee

		Jurisdiction/Agency/Organization	
Keith Lindquist	Presiding Commissioner	McDonald County	
John Bunch	Eastern Commissioner	McDonald County	
David Holloway	Western Commissioner	McDonald County	
Gregg Sweeten	Emergency Management Director/ Mayor	McDonald County/ City of Pineville	
Melissa Ziemianin	City Clerk	City of Pineville	
Charla Geller	Emergency Management Director	Newton County	
Kimberly Bell	County Clerk	McDonald County	
Michael Hall	Sheriff	McDonald County	
Robert Campbell	Director of Facilities	McDonald County Schools	
Adam Lett	Safety Director	McDonald County Schools	
Karla McNorton	City Clerk	City of Goodman	
John Lafley	Emergency Management Director/Mayor	City of Noel	
Tina Depriest	City Clerk	City of Noel	
Bill Martin	Trustee	Village of Jane	
Joe Lahr	Fire Chief/Trustee	White Rock Fire Department/ Village of	
		Jane	
Kenneth Mickelson	Firefighter	White Rock Fire Department	
Ed Malcom	Firefighter	White Rock Fire Department	
		City of Anderson	
Shelby Turner	Emergency Manager	City of Anderson	
Andi Browning	City Clerk	City of Anderson	
Stan Haywood	Mayor (pro-term)	City of Lanagan	
Monica Blue	City Clerk	City of Lanagan	
Joe Carpenter	Mayor	City of Southwest City	
Mike Ross	Director	Freeman Ambulance	
Mark Kalmbach	Director of Physical Plant	Crowder College	
Aaron Rice	Environmental Manager	Tyson Foods	
Pam Satchel	Safety Manager	Tyson Foods	
Wendy Mathews Director of Clinical Ed.		Golden Living Center	
Angie Smith	Assistant of Nursing	Golden Living Center	
Denisa Douthit	Business Owner	Noel & Ginger Blue	

### 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 McDonald County. However, despite this, all of McDonald County's communities participated in the planning process, with the exception of the Village of Ginger Blue.

Local Government jurisdictions were sent letters and emails followed up with phone contact inviting them to participate in the planning process. Public notices for planning meeting were also posted in local newspapers. Committee members were placed on a contact list featuring email addresses and phone numbers. Appendix B provides documentation of the planning process including public involvement solicitations and meeting notices.

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 MPC meeting or participation in one-one meetings 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.
- 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	Action Plan Worksheets / Previous Action Assessment	STAPLEEs for New Actions	Plan Adoption	PARTICIPATION
McDonald County	Υ	Υ	Y	Y	Υ	PARTICIPANT
City of Anderson	Υ	Υ	Υ	N/A	Υ	PARTICIPANT
Village of Ginger Blue	N	N	N	N	N	NON- PARTICIPANT
City of Goodman	Υ	Υ	У	У	Υ	PARTICIPANT
Village of Jane	Υ	Υ	Y	N/A	Υ	PARTICIPANT
City of Lanagan	Υ	Υ	Y	N/A	Υ	PARTICIPANT
City of Noel	Υ	Υ	Υ	N/A	Υ	PARTICIPANT
City of Pineville	Υ	Υ	У	Υ	Υ	PARTICIPANT
City of Southwest City	Y	у	Y	Υ	Υ	PARTICIPANT
McDonald Co Schools R-1	у	у	у	Υ	Υ	PARTICIPANT

### 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 soliciting local jurisdictions for a representative to participate on the MPC and attend meetings. The kick-off meeting was held on March 16, 2016 at 3:00 P.M. at the Pineville Community Center. The 2011 HMP was reviewed and the timeline, goals, and data collection needs were discussed for the 2016 HMP update. Following this meeting the data collection questionnaires for local government was mailed to each jurisdiction with a letter explaining the questionnaire. The MPC was urged to contact and collect input from stakeholders in their jurisdictions. There were phone calls, some emails, and some one-one meetings during the process outside of the three scheduled meetings, as the MPC members asked questions, discussed issues, and provided data for the planning effort, such as completed questionnaires.

Table 1.5. Schedule of MPC Meetings

Meeting	Торіс	Date/Time/Location
Kick-off Meeting	Review of the 2011 plan; plan development including proposed timeline, requirements for local jurisdictions, and data collection needs; and review was conducted of weather events, mitigation efforts, and changes in local jurisdictions from 2011 to 2016	3/16/2016 3:00 P.M. Pineville Community Center
Planning Meeting #2	Review of the 9 tasks for completing the plan update; public survey outreach; discussion of risk assessment requirements and went through a sample risk assessment; the MPC broke into groups to discuss the progress/updates of the 2011 actions.	6/6/2016 2:30 P.M. Pineville Community Center
Planning Meeting #3	Review of previous meeting; currently working on risk assessment 10 hazards (chapter 3); assessment of 2011 action still needed; review of public survey results; new action plans and STAPLEEs needed.	2:00 P.M.

### 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.

In an effort to gain public involvement in the planning process a public notice was posted in local newspapers advertising each scheduled meeting. Documentation can be found in Appendix B. Various stakeholders from the county and neighboring communities were present and offered their input during the scheduled meetings.

During the second meeting which was held on June 6, 2016 at 2:30 pm, a discussion was held about additional public outreach strategies. HSTCC announced that the public survey (posted on SurveyMonkey) has been emailed out to multiple people in each jurisdiction as well as posted on various social media websites. HSTCC also stated is important to get the survey out to the public. The survey will be left in post offices and libraries throughout the county, and several attendees suggested leaving the survey at health clinics as well.

According to the public survey results, the hazards of greatest concern in McDonald County are flooding and tornadoes. The hazard of second greatest concern is serve thunderstorms. Open ended responses on the public survey showed concern for two hazards that were not listed in the survey, those hazards are earthquakes and contaminated water. The complete results from the public survey is documented in Appendix C.

# 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.

#### **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 McDonald County has an effective FIRM.

**Figure 1.1** shows the locations of RiskMAP deployed watershed and current projects through the State of Missouri.

MISSOURI

| Clark | Charles | Clark |

Figure 1.1. Map of Missouri RiskMAP Projects

#### Integration of Other Data, Reports, Studies, and Plans

No Activity Discovery Preliminary FIS/FIRM Notice of Final Determ Effective FIS/FIRM

**FEMA** 

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.

required to be verified before a new FIRM may be released. In some cases, a community and levee owner will be allowed a 24 month period

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

During the second meeting on June 6, 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 georeferenced 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 HMPC committee reviewed the goals from the previously approved plan at the second (June 6, 2016) and third (July 19, 2016) meetings. The 2011 goals were accepted with minimal changes to the wording. The goals for the 2016 update are as follows:

- 1. Increase internal capabilities to mitigate the effects of natural hazards.
- 2. Enhance existing or design new policies that will reduce the potential damaging effects of hazards without hindering other community goals.
- 3. Protect entity's most vulnerable populations, buildings, and critical facilities through the implementation of cost-effective and technically feasible mitigation projects.
- 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.

### Step 7: Review Possible Mitigation Actions and Activities

During of the second meeting held on June 6, 2016, the MCP broke into small groups to discuss the previous mitigation actions for their respective communities. Several attendees provided updates on their previous mitigation actions. Documentation of the updates provided during this meeting is located in the meeting minutes found in Appendix B.

### Step 8: Draft an Action Plan

The focus of the third meeting, held on July 19, 2016, 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. They

were also asked to provide an action worksheet for each new and ongoing action, and a STAPLEE prioritization worksheet for each new action (ongoing actions will carry forward the previous prioritization). After reviewing past and proposed mitigation activities and prioritizing them with the STAPLEE process, a draft action plan was composed. 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.

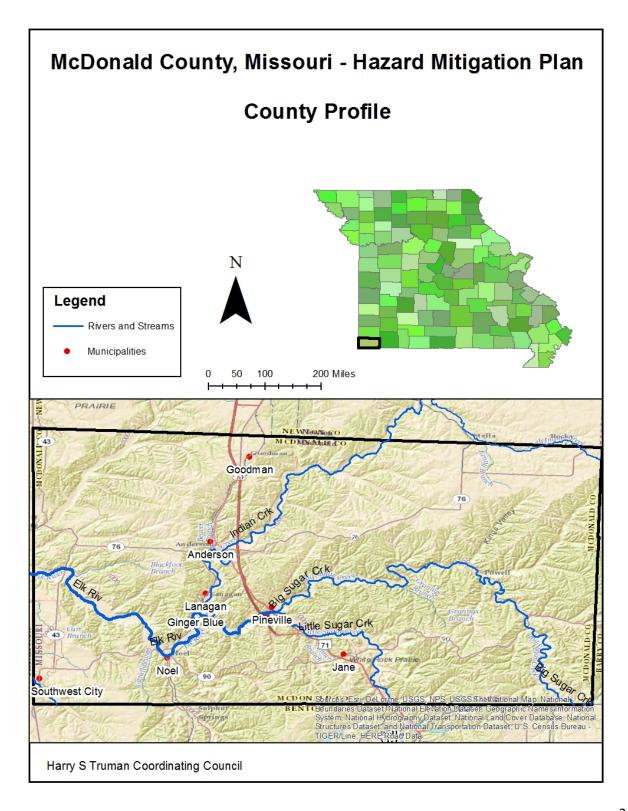
### Step 10: Implement, Evaluate, and Revise the Plan (Handbook Tasks 7 & 9)

During the final meeting, held on July 19, 2016, 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

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	2.2.6	Noel	2.20
	2.2.7	Pineville	2.21
	2.2.8	Southwest City	2.21
	2.2.9	McDonald County (R-1) Schools Profiles and Mitigation Capabilities	2.27

# 2.1 McDonald County Planning Area Profile Figure 2.1. McDonald County Profile



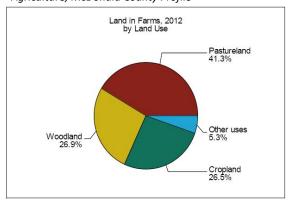
### 2.1.2 Geography, Geology and Topography

McDonald County is located in the far Southwest corner of Missouri and has total area of 540 square miles. Bordering counties include Newton County Missouri to the North, Barry County Missouri to the East, Benton County Arkansas to the South, and Delaware and Ottawa Counties Oklahoma to the West. The City of Pineville is the county seat and is centrally located in McDonald County. It is at the intersection of "Three Rivers", which includes Big Sugar Creek, Little Sugar Creek, and the Elk River. Pineville hosts facilities for the University of Missouri Extension Service and the "Tourist Welcome Center".

McDonald County is mostly rural with the majority of development located inside or near the limits of only 6 incorporated cities, and 2 villages, as well as a few unincorporated townships. The majority of these urban centers are located along the Interstate-49 and Highway 59 corridors in the Western half of the county. The majority of development is also located along the Elk River Corridor and its 3 main tributaries Indian Creek, Big Sugar Creek, and Little Sugar Creek.

The primary land uses in McDonald County, as shown in Figure 2.1.2, are agricultural (cropland and pastureland) and woodland. The most abundant industry in the county

Figure 2.1.2 McDonald County Land Use, 2012 Source: U.S. Department of Agriculture 2012 Census of Agriculture, McDonald County Profile



is also agriculture. Most of the county's residents strive to keep the rural life that the county has been known for over many generations. Some discourage growth, and even though most of these farms have less than \$10,000 a year, that income provides a considerable enrichment of the quality of life loved by the rural families.

As part of the Ozark Mountains, McDonald County's topography is mostly uniform. The county is known for its hills and valley's ranging from gently rolling hills to steep bluffs. The soils in the area tend to be shallow and rocky. Rocks in the area are formed from clean limestone with chert nodules. The geologic formation in this region is known as the Mississippian Osagean Series Limestone, and is also part of the St. Joe Limestone formation which includes all of the Ozark Plateaus in Northern Arkansas, Oklahoma, and Southern Missouri. This limestone formation preserves many fossils from the Mississippian sub period.

This type of Karst Topography creates many caves as well as flowing rivers and streams winding throughout the hills and valleys of the county. As the water cuts through the limestone, it's created many caves and set forth paths for many rivers and streams that cut deeply into valleys or hollows. Beautiful steep bluffs dot the country side and raise several hundred feet parallel to McDonald County's rivers and streams. There are also many natural forests located between valleys and rivers and streams, and some prairie land in the southwestern part of the county, near Southwest City, where the topography is flatter.

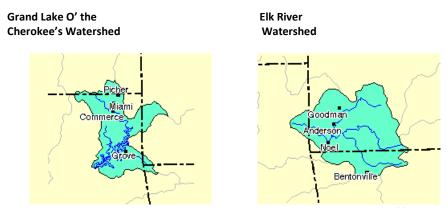
McDonald County is known for its many beautiful clear water streams, the major river is the Elk River. In the 19th century many residents said elk antlers and elk bones were found scattered

around the main river. The area currently boasts many recreational opportunities and is known well for its many campsites and canoe outfitters along the Elk River and its three main tributaries: Indian Creek, Big Sugar Creek, and Little Sugar Creek.

The Elk River Watershed encompasses nearly all of McDonald County and continues into Oklahoma and drains into the Grand Lake O' the Cherokee's Watershed. There are two small area's in the Northwest and Southwest parts of the county that are not part of the Elk River Watershed, however these areas are still part of the Grand Lake O' the Cherokee's Watershed. All of the Rivers and streams in McDonald County flow from East to West. See **Figure 2.2** for land coverage in the Elk River and Grand Lake O' the Cherokee's Watersheds.

Drinking water sources in McDonald County include Grand Lake O' Cherokees and Elk River Watersheds, and the Ozark Plateaus aquifer system. These water sources are essential for healthy communities and the sustained economic vitality of the region. Water quality issues include the identification of possible contamination, alternative solutions to limit contamination through proper construction techniques, the expansion of rural water districts, well drilling regulation, and the protection of recreational water sources from contamination.

Figure 2.2. Elk River and Grand Lake Watersheds



Source: U.S. Environmental Protection Agency, Surf Your Watershed: <a href="https://cfpub.epa.gov/surf/state.cfm?statepostal=MO">https://cfpub.epa.gov/surf/state.cfm?statepostal=MO</a>

### 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 2.3** 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. McDonald County however, is located on the far southwest corner of the central climate region, bordered on the south and 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. McDonald County's climate is likely to experience characteristics typical of both the Central and South climate regions.

Figure 2.3. U.S. Climate Regions

### 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

The average annual temperature in McDonald County is 56.9° F. The normal average high temperature in July is 88.0°F and the normal average low temperature in January is 23.8°F. These temperatures do tend to fluctuate, occasional record highs in July reach above 100°F and occasional record lows in January reach below 0°F. The average annual precipitation for this region is 43.67 inches; precipitation is normally expected year round with the heaviest precipitation around the months of May and September. The average annual snowfall in the region is 8.2 inches with the majority of snowfall occurring in the months of December, January, and February. Overall the normal climate in McDonald County is fairly mild.

Table 2.1. McDonald County Average Monthly Precipitation

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average Precip. in.	2.39	2.39	3.77	4.19	5.7	4.94	3.37	3.16	4.79	3.77	4.04	3.02

### 2.1.4 Population/Demographics

The population in McDonald County grew significantly from 2000 to 2010, increasing from 21,681 persons in 2000 to 23,083 persons in 2010. However the most recent population estimates suggests a population decrease from 2010 to 2015. The total population for McDonald County has decreased by 1.91 percent; the areas with the most significant change occurred in the Village of Jane with a decrease of 3.88 percent and unincorporated McDonald County with a decrease of 2.58 percent. The City of Anderson is the only jurisdiction in McDonald County with a population increase from 2010 to 2015. This population decrease is in contrast with the State and the National population changes. During the same time period, the State of Missouri's population increased by 1.58 percent, and the United States increased by 4.10 percent. **Table 2.2** shows McDonald County population changes by jurisdiction from 2000 to 2010 to 2015.

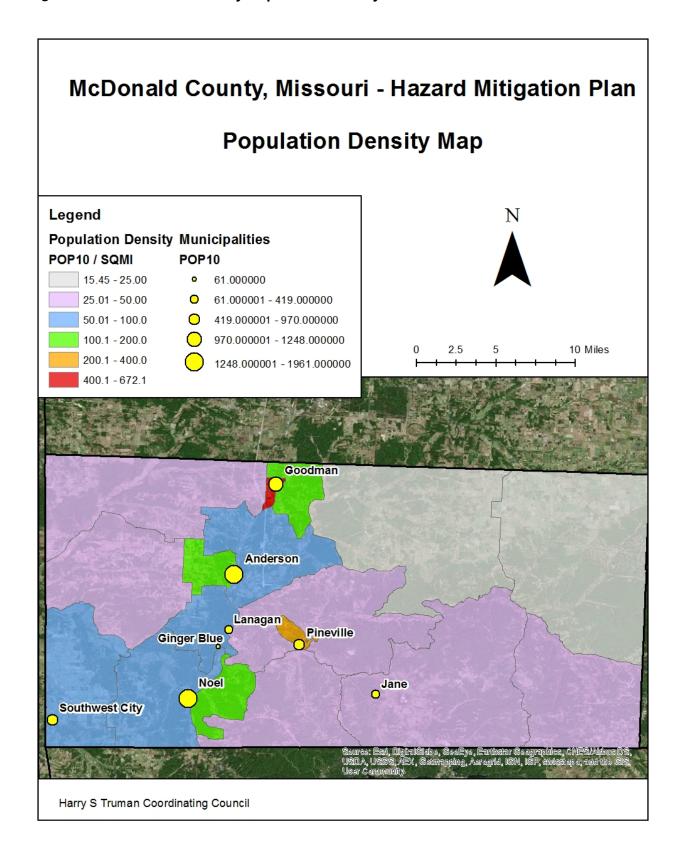
Table 2.2. McDonald County Population 2000-2010-2015 by Community

Jurisdiction	2000 Census Population	2010 Census Population	2015 Population Estimates	2000-2010 % Change	2010-2015 % Change
McDonald County Total	21,681	23,083	22,643	6%	-1.91%
Anderson	1,856	1,961	1,982	6%	1.07%
Goodman	1,183	1,248	1,233	5%	-1.20%
Jane	372	309	297	-17%	-3.88%
Lanagan	411	419	412	2%	-1.67%
Noel	1,480	1,832	1,824	24%	-0.44%
Pineville	768	791	786	3%	-0.63%
Southwest City	850	970	958	14%	-1.24%
Unincorporated McDonald County	14,761	15,553	15,151	5%	-2.58%
Missouri	5,595,211	5,988,927	6,083,672	7%	1.58%
USA	281,421,906	308,745,538	321,418,820	10%	4.10%

Source: U.S. Bureau of the Census, American Fact Finder, Community Facts.

The population density map (**Figure 2.4**) 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 three largest cities in McDonald County are Anderson with a population of 1,961, Goodman with a population of 1,248, and Noel with a population of 1,832. The areas with the overall highest-density populations (orange and red areas on the map) include portions of Goodman and Pineville. The areas with a medium-density population (blue and green on the map) stretch from the Northcentral area surrounding Goodman to the Southwest corner surrounding Southwest City. This medium density area also passes through the cities of Anderson, Lanagan, and Noel. The areas with a lower-density population (purple and gray areas on the map) include the Northwest corner, the central area surrounding Pineville, and the entire Eastern half of the county.

**McDonald County Population Density** Figure 2.4.



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. McDonald County population under five is 6.65% and the population over 65 is 14.26%, these numbers are comparable to the National and State age distribution, see **Table 2.3**. There are approximately 8,404 households in McDonald County. Of the total households, 6,074 are family households and 2,330 are non-family households. The average family size in McDonald County is 3.17 persons and the average household size is 2.73 persons. These numbers are also comparable to the state and national household and family size. See **Table 2.4**.

Table 2.3. McDonald County Age Distribution Comparison

Jurisdiction	Percent Under 5	Percent 5-18	Percent 18-64	Percent 65 & Over
McDonald County	6.65 %	19.54 %	59.78 %	14.26 %
State of Missouri	6.15 %	16.72 %	61.43 %	15.70 %
United States	6.19 %	16.72 %	62.23 %	14.86 %

Source: U.S. Bureau of the Census, American Fact Finder, Community Facts,

Table 2.4. McDonald Household Size Comparison

Jurisdiction	Family Households	Non-Family Households	Total Households	Average Family Size	Average Household size
McDonald County	6,074	2,330	8,404	3.17	2.73
State of Missouri	1,552,133	823,478	2,375,611	3.00	2.45
United States	77,538,296	39,177,996	116,716,292	3.14	2.58

Source: U.S. Bureau of the Census, American Fact Finder, Community Facts,

The per capita income estimate from 2014 in McDonald County is \$18,093. The per capita income in 2010 was \$17,070. Median household income increased by twenty-nine percent from \$27,010 in 2000 to \$38,122 in 2014. This increase in household income may suggest that households may be better equipped to prevent injury and death during a hazard event. However it may also suggest that households will have more valuable property susceptible to damage during a hazard event. Similarly, the increase in median home values shown in **Table 2.5** shows a higher property value that may be susceptible to damage during a hazard event. The year the 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. McDonald County Median Home Values

Median Home Values							
Year	McDonald Co.	Missouri	U.S.				
2000	58,100	89,900	119,600				
2014	84,200	136,700	175,700				
Percent Increase 30.99 34.23 31.96							

Source: U.S. Bureau of the Census, American Fact Finder, 2010-2014 American Community Survey 5- year Estimates

Table 2.6. McDonald County Year Home Built

	Year Home Built								
Place	2010 or later	2000-2009	1980-1999	1960-1979	1940-1959	1939 or earlier			
McDonald County	1.8%	16.7%	35.2%	25.7%	11.7%	9.5%			
Missouri	1%	14.5%	27.3%	27.8%	16%	13.4%			
U.S.	1.1%	14.9%	27.9%	26.9%	16.4%	12.9%			

Source: U.S. Bureau of the Census, American Fact Finder, 2010-2014 American Community Survey 5- year Estimates

**Table 2.7** lists additional economic and demographic data that can also affect the populations vulnerability to hazard events.

Table 2.7. Unemployment, Poverty, Education, and Language Percentage Demographics, McDonald County, Missouri

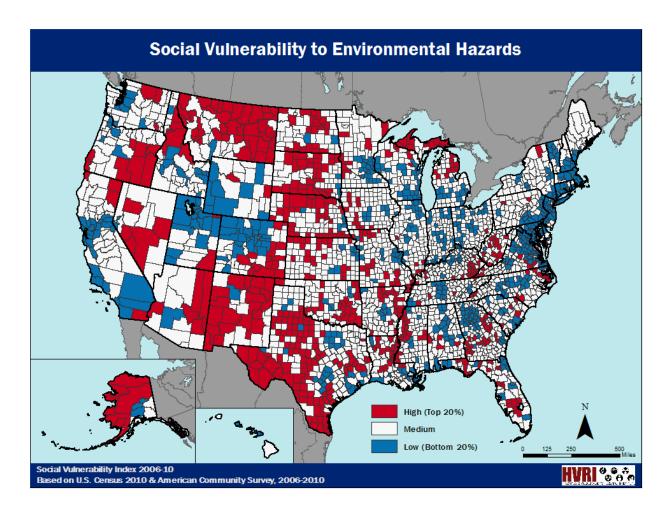
	(18-64) In	Percent of Population Unemployed	Percent of Population Below the Poverty Level	Percentage of Population (High School graduate)	Percentage of Population (Bachelor's degree or higher)	Percentage of population (spoken language other than English
McDonald County	71.67%	6.21%	21.7%	78.3%	12.3%	13.7%
State	77.5%	6.5%	15.6%	88%	26.7%	6.1%
Nation	76.84%	6.9%	15.6%	86.3%	29.3%	20.9%

Source: U.S. Bureau of the Census, American Fact Finder, 2010-2014 American Community Survey 5- year Estimates

The University of South Carolina developed an index to evaluate and rank the ability to respond to, cope with, recover from, and adapt to disasters. The index synthesizes 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, McDonald County has a medium social vulnerability to Environmental Hazards.

Social Vulnerability Figure 2.5.



### 2.1.5 History



McDonald County's history pre-dates the civil war. McDonald County was created on March 3, 1849 when the Missouri legislature divided Newton County approximately in half, creating McDonald County from the southern portion. McDonald County's name originated from one Alexander McDonald, a Revolutionary War soldier. In 1850, a confrontation between the communities Rutledge and Maryville competed violently for the county seat. So fiercely in fact, three people died in the confrontations. Eventually, Pineville, originally named Maryville after the wife of an early settler, became the official County seat in January of 1858. McDonald County is also home to the famous Mason and Dixon's line of 36 degree-30'; the Missouri Compromise line of 1820. This was a line established that slavery could not venture north above the line. It remained there until 1865. McDonald County has one high school and it is called McDonald County High School. There is one middle school and several elementary schools throughout the county as well.

### 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, McDonald County, Missouri

Place	Management, Business, Science, and Arts Occupations	Service Occupations %	Sales and Office Occupations %	Natural Resources, Construction, and Maintenance Occupations %	Production, Transportation, and Material Moving Occupations %
McDonald County	21%	16%	24%	15%	24%
Anderson	22%	22%	16%	5%	35%
Goodman	15%	23%	26%	16%	21%
Jane	10%	8%	31%	12%	39%
Lanagan	6%	17%	20%	11%	46%
Noel	12%	22%	17%	5%	44%
Pineville	27%	18%	28%	12%	15%
Southwest City	16%	14%	18%	18%	34%

Source: U.S. Census, 2014 American Community Survey, 5-year Estimates.

### 2.1.7 Agriculture

Table 2.9. Agricultural Statistics, McDonald County, Missouri

Place	# of farms	Total Acres Farmland	Avg. Farm Size acres	Total Cropland acres	Irrigated Land acres	Market Value of Products sold, avg per farm \$1000	Top Crops	# of farm jobs	% of work force
McDonald County	926	186,599	202	49,452	303	\$189,865	Corn, Wheat	571	6%
State of Missouri	99,171	43,944,490	285	15,259,319	1,180,886	\$9,164,886	Soybeans	56,543	2%
National	2,109,303	914,527,657	434	389,690,414	55,822,231	\$187,097	Corn	2,109,303	2%

Source: U.S. Census of Agriculture 2012

Table 2.10. Top Commodities, McDonald County, Missouri

	Poultry and Eggs	Cattle and Calvess	Other Crops and Hay	Milk from Cows
Value of Sales	\$155,725,000	\$13,836,000	\$2,312,000	\$1,674,000

Source: U.S. Census of Agriculture 2012

### 2.1.8 FEMA Hazard Mitigation Assistance Grants in Planning Area

**Table 2.11** shows FEMA HMA Grants in McDonald County since the previous plan update. There has been a total of \$6,878,203 awarded.

Table 2.11. FEMA HMA Grants in County from 2010-2016

Project Type	Sub applicant	Award Date	Project Total
206.2: Safe Room (Tornado and Severe Wind Shelter) - Public Structures	McDonald County R-1 School District	2011	\$ 3,233,964
206.2: Safe Room (Tornado and Severe Wind Shelter) - Public Structures	McDonald County R-1 School District	2011	\$ 1,919,239
206.2: Safe Room (Tornado and Severe Wind Shelter) - Public Structures	McDonald County R-1 School District	2011	\$ 1,725,000

Source: Missouri State Emergency Management Agency,

### 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 McDonald County

McDonald County includes 8 incorporated municipalities and many small unincorporated communities. The municipalities involved in the 2016 update of the McDonald County Hazard Mitigation Plan are the City of Anderson, City of Goodman, Village of Jane, City of Lanagan, City of Noel, City of Pineville, City of Southwest City, and the McDonald County R-1 School District. The Village of Ginger Blue has decided not to participate in this update.

By Missouri Statute (Section 48.020.1) McDonald 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 McDonald County Commission, a three member Board with final authority. McDonald 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 McDonald County have autonomy from County Regulation, and conduct their own business on varying scales and through varying structures.

Departments within McDonald County's government include:

- Board of Commissioners: Presiding Commissioner, Eastern Commissioner, and Western Commissioner
- County Assessor
- Circuit Clerk
- County Collector
- Coroner
- County Clerk
- County Supervisor
- Crime Victims Advocate
- Emergency Management/Floodplain Administrator
- Health Department Representative
- Prosecuting Attorney
- Public Administrator
- Recorder
- Road & Bridge Maintenance Representative
- Sheriff

- Treasurer
- University of Missouri Extension Office

#### Mitigation Initiatives/Capabilities

The McDonald County Emergency Management Department (EMD) is in charge of the preparation of emergency or disastrous events. The Emergency Management Department consists of an Emergency Manager/Floodplain Manager, County Commissioners, McDonald County Sheriff's Department, Municipal Police Departments, and Fire Departments. The duties of the EMD include the writing of an Emergency Operations Plan (EOP), coordinating intergovernmental emergency response and preparedness agencies, and implementing measures identified in the EOP that increase preparedness and response times. The EOP identities facilities of specific importance and which require special protection and/or attention in case of a hazardous event. The plan also develops and maintains mutual assistance agreements among the various and overlapping agencies, encourages exercises and drills to maintain awareness, develops procedures to circumvent transportation and utility closures, and identifies vulnerability within the existing civic infrastructure. The joint communication between the agencies generally encourages cooperation between jurisdictions to reduce all disaster response times, and preparedness.

The National Incident Management System (NIMS) has been adopted by McDonald 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 McDonald County R-1 School District has its own Emergency Operations Plan. Yearly, the school reassesses risks and incorporates those risks and mitigation strategies into their plan. Drills (such as for tornadoes, fire, earthquake, evacuation and intruder) are practiced monthly within the school year to assist with better response time. They have set up direct communications with the county sheriff's department.

The majority of Hazard Mitigation Planning emphasizes on floodplain management regulations and the participation in the National Flood Insurance Program (NFIP). The McDonald County Floodplain Manager is the principal administrator in the daily implementation of flood loss reduction activities including enforcing the community's flood damage prevention ordinance and related policies of the community, and any of the activities related to administration of the National Flood Insurance Program (NFIP). The McDonald County Floodplain Ordinance is designed to safeguard health, safety, and property in times of flood by regulating construction in the floodplain. There are also city floodplain ordinances that limit the amount and type of construction in the floodplain. Jurisdictions with floodplain ordinances include Anderson, Goodman, Noel, Pineville, Southwest City, and Jane.

McDonald County also maintains a septic ordinance to protect the health, safety and welfare of its residents. Furthermore, several communities have storm water regulations that are designed to minimize the negative effects of storm water runoff caused by development. The regulations outline proper mitigation measures for erosion, detention, discharge, and conveyance of storm water.

Other mitigation measures conducted throughout McDonald County include:

- Geographic Information Systems (GIS) have facilitated the development of mapped floodplain areas. Many property owners in the County participate in the NFIP.
- The School District of McDonald County have done extensive planning a training of both staff and students to be better prepared in the event of any disaster situation to include severe

storms, fires, and on campus intruders. Bus evacuations are also a part of the emergency training for the district.

- The school district has installed Storm shelters at most of the schools in McDonald County.
- The County receives NWS (National Weather Service) warnings and alerts needed officials and emergency responders. Many residents have NWS radios and several cities have sirens.
- Tabletop Exercises practices for planning sponsored by the county for Emergency Preparedness and Ag Emergency Preparedness.

There are adequate fire, police, rescue, emergency medical, and information equipment is available to city and County agencies. Ambulance services are assisted by first responders to give the county full coverage and there is also helicopter evacuation service available.

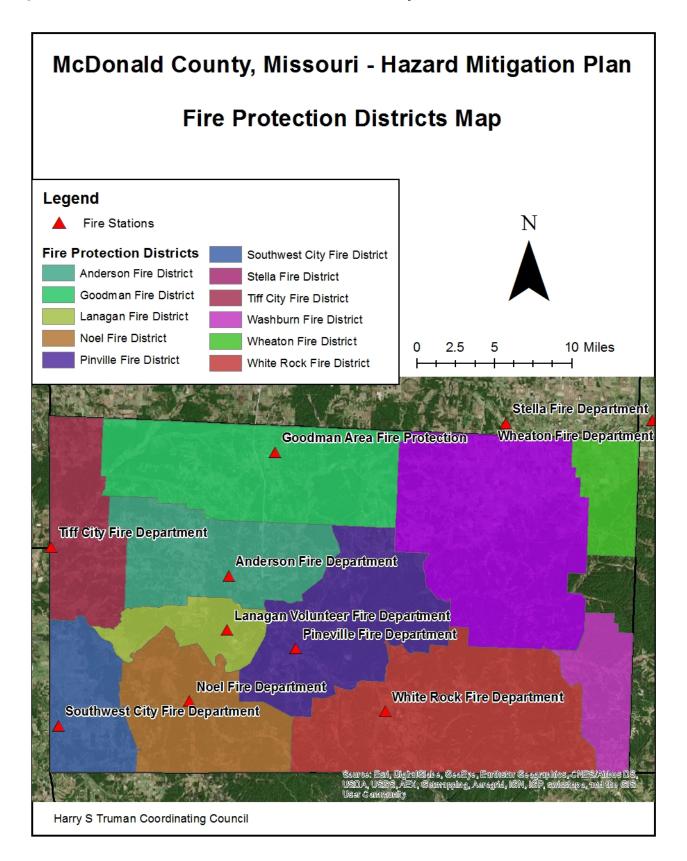
There are 7 law enforcement agencies in McDonald County, one Sheriff's and six municipal Police Departments. The Anderson Police Department, Goodman Police Department, Lanagan Police Department, Noel Marshal's Office, Pineville Marshal's Office and the Southwest City Police Department are the municipal agencies. The McDonald County Sheriff's Department is based out of Pineville, Missouri. The State Highway Patrol Troop D has troopers that are stationed within McDonald County.

The Medical facilities in McDonald County consist of the McDonald County Health Department, Tri-County Health in Anderson, Freeman Health Clinic in Anderson, Dr. Hill's clinic in Pineville, Anderson, Goodman, and Southwest City, and the Noel Mercy Medical Clinic. The Freeman Ambulance Services supports all emergency transport to medical facilities in McDonald County. Freeman Ambulance Services transports patients to Freeman Medical, Mercy Hospital, Northwest Medical of Springdale, Northwest Medical on Benton, Arkansas, and Integris Grove General Hospital in Grove, Oklahoma. Freeman Medical, Mercy Hospital, and the Northwest Medical Center of Springdale, Arkansas provide emergency helicopter evacuation services for the region.

There are 11 fire departments that are either stationed in or who service McDonald County. The fire departments in McDonald County include the Anderson Fire Department, Goodman Area Fire Protection, Lanagan Volunteer Fire Department, Noel Fire Department, Pineville Fire Department, Southwest City Volunteer Fire Department, Tiff City Volunteer Fire Department, and White Rock Volunteer Fire Department. The fire departments that service McDonald County but are located outside the county include the Stella Fire Department in Newton County, and the Wheaton Fire Department and the Washburn Fire Department in Barry County. Each Fire Department and/or District in McDonald County has a First Responders Unit that also provides emergency and medical response services.

Figure 2.6 shows Fire Protection Districts in McDonald County.

Figure 2.6. Fire Protection Districts in McDonald County



## 2.2.2 Anderson

The city of Anderson is located at the intersections of Highways 59 and 76, just West of Interstate 49. Anderson is defined as a 4<sup>th</sup> class city run by a Mayor and a four member City Council. Anderson also has planning commission whose goal is to promote responsible development and efficient use of the cities resources. Additional city staff include:

- Citv clerk
- Water department/court clerk
- · Building inspector
- Municipal judge

## Population and demographics:

- 2000 Census: 1,8562010 Census: 1,961
- 2010 Median Household Income: \$37,870
- 2014 Total Housing Units: 990
- Median Gross rent: \$589
- Median Housing Value: \$73,100
- Housing built prior to 1939: 149 (15%)
- Mobile Home Count:
- New construction since 2011 HMP: 4 new single-family homes and 1 new commercial building.

#### **Utilities:**

- Water and Sewer: City of Anderson
- Electric: Empire District Electric and New Mac Electric Co-op

Law enforcement is provided by the Anderson Police Department. The Anderson 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 McDonald County 911
- Plans are in place for evacuation of all residents (in event of disaster) at the 80 bed skilled nursing home facility.
- Fire safety programs at local schools and public events.

## 2.2.3 Goodman

The city of Goodman is located in the Northcentral portion of the county just East of Interstate 49 with Highway 59 running through the city limits. Goodman is defined as a 4<sup>th</sup> class city run by a Mayor and a five member City Council. Additional city staff includes:

- City clerk
- City Supervisor
- City employee
- Emergency Management Director
- Emergency Management Assistant
- Municipal judge
- City attorney

Recreation Director

Tax collector

City attorney

Public works director

**Emergency manager** 

- Building code official/Building inspector
- Public works official

#### Population and demographics:

2000 Census: 1,1832010 Census: 1,248

• 2010 Median Household Income: \$31,556

2014 Total Housing Units: 532Median Gross rent: \$620

Median Housing Value: \$63,100

• Housing built prior to 1939: 61 (11.5%)

#### **Utilities:**

Water and Sewer: City of Goodman

• Electric: Empire District Electric and New Mac Electric Co-op

Law enforcement is provided by the Goodman Police Department. Goodman Area Fire Protection 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:

- 1 outdoor warning siren, activated by McDonald County 911 and/or Goodman Area Fire Protection
- Fire safety programs at local schools and public events.

## 2.2.4 Jane

The Village of Jane is located in the Southcentral portion of the county near the intersection of Interstate 49 and Highway 90. Jane is a small village run by a five member Board of Trustee's. Additional Village staff includes a city clerk.

#### Population and demographics:

2000 Census: 3722010 Census: 309

2010 Median Household Income: \$38,224

• 2014 Total Housing Units: 191

Median Gross rent: \$696

• Median Housing Value: \$55,000

Housing built prior to 1939: 20 (10.5%)

• New construction since 2011 HMP: 1 new manufacturing plant.

#### **Utilities:**

Water and Sewer: Public Water Sewer District # 1

• Electric: New Mac Electric Co-op

Law enforcement is provided by the McDonald County Sheriff's Department. The White Rock 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:

McDonald County 911 puts out severe weather warning.

# 2.2.5 Lanagan

The city of Lanagan is located along Highway 59 approximately 3 miles South of Anderson. Lanagan is defined as a 4<sup>th</sup> class city run by a Mayor and a five member City Council. Additional city staff include a City Clerk.

## Population and demographics:

2000 Census: 4112010 Census: 419

• 2010 Median Household Income: \$27,212

2014 Total Housing Units: 228Median Gross rent: \$574

Median Housing Value: \$58,600Housing built prior to 1939: 35 (15.4%)

#### **Utilities:**

Water City of LanaganSewer: Septic Tanks

• Electric: Empire District Electric

Law enforcement is provided by the Lanagan Police Department. The Lanagan 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:

1 outdoor warning siren, activated by manually by Lanagan Police Chief.

## 2.2.6 Noel

The city of Noel is located in the Southwestern portion of the county near the intersection of Highways 59 and 90. Noel is defined as a 4<sup>th</sup> class city run by a Mayor and a six member City Council. Noel also has planning commission whose goal is to promote responsible development and efficient use of the cities resources. Additional city staff include:

City clerk

Building code official

Building Inspector

Public works official

## Population and demographics:

2000 Census: 1,4802010 Census: 1.832

2010 Median Household Income: \$27,282

2014 Total Housing Units: 717Median Gross rent: \$586

• Median Housing Value: \$97,300

Housing built prior to 1939: 146 (20.4%)

#### **Utilities:**

Water: Noel Water Company

Sanitation official

.

Sewer: City of Noel

• Electric: Empire District Electric

Law enforcement is provided by the Noel Marshall's Office. The Noel 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:

- Move sewer pump station to prevent damage by flooding.
- 1 outdoor warning siren and have a grant to add 1 more.
- Fire safety education in school
- Try to get Elk River dredged at Lake Sinclair.

## 2.2.7 Pineville

The city of Pineville is located at the intersections of Highways 59 and 76, just West of Interstate 49. Pineville is defined as a 4<sup>th</sup> class city run by a Mayor and a four member City Council. Pineville also has planning commission whose goal is to promote responsible development and efficient use of the cities resources. Additional city staff include:

- City clerk
  - Code Officer
  - Public works supervisor plus 3 employees
  - Municipal judge

- City prosecutor
- Court clerk
- Emergency management Coordinator (volunteer)

## Population and demographics:

• 2000 Census: 768

• 2010 Census:791

2010 Median Household Income: \$30,804

• 2014 Total Housing Units: 455

Median Gross rent: \$710

Median Housing Value: \$77,300

Housing built prior to 1939: 60 (13.2%)

 New construction since 2011 HMP: New subdivision (Pineville Country Homes) and a new barbecue restaurant.

#### **Utilities:**

Water and Sewer: City of Pineville

• Electric: Empire District Electric

Law enforcement is provided by the Pineville Marshal's Office. The Pineville 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 McDonald County 911
- Tornado shelter at local school.
- Annual fire safety programs at schools, and public information on household preparedness.

# 2.2.8 Southwest City

The city of Southwest City is located in the far Southwest corner of the county near the intersection of Highways 90 and 43. Southwest City is defined as a 4<sup>th</sup> class city run by a Mayor and a four member City Council. Additional city staff include:

City clerk

Public works

#### Population and demographics:

2000 Census: 8502010 Census: 970

• 2010 Median Household Income: \$29,537

• 2014 Total Housing Units: 392

Median Gross rent: \$501

• Median Housing Value: \$81,300

Housing built prior to 1939: 77 (19.6%)

#### **Utilities:**

Water and Sewer: City of Southwest City

• Electric: Empire District Electric

Law enforcement is provided by the Southwest City Police Department. The Southwest City 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:

- Tornado shelter at local school.
- 1 outdoor warning siren, activated by McDonald County 911.

Insert a table **(Table 2.5)** for the unincorporated county based on data that have been collected by distribution of the Data Collection Questionnaire to each of the participating communities. For documents such as the Comprehensive Plan, give dates.

Table 2.12. McDonald County Jurisdictional Mitigation Capabilities Summary Table

Capabilities	McDonald County	Anderson	Goodman	Jane	Lanagan	Noel	Pineville	Southwest City
Planning Capabilities								
Comprehensive Plan	No	No	No	No	No	No	Yes, 03/2016	No
Builder's Plan	No	No	No	No	No		Yes	No
Local Emergency Plan	No	Yes, 2010	No	No	No	Yes	Yes	Yes

Capabilities	<b>McDonald</b> County	Anderson	Goodman	Jane	Lanagan	Noel	Pineville	Southwest City
County Emergency Plan	Yes, updated 01/04/2016	Yes, 2015	Yes	Yes	Yes, updated 01/04/2 016	Yes	Yes	Yes
Local Recovery Plan	No	No	No	No	No		No	No
County Recovery Plan	No	No	No	No	No	No	No	No
Local Mitigation Plan	No	Yes, 2011	Yes, 2011	Yes, 2011	Yes, 2011	Yes, 2011	Yes, 2011	Yes, 2011
County Mitigation Plan	Yes, adopted 07/11/2011	Yes, 2011	Yes, 2011	Yes, 2011	Yes, adopted 07/07/2 011	Yes	Yes, 2011	Yes, 2011
Economic Development Plan	No	No	No	No	No	No	No	No
Transportation Plan	No	No	No	No	No	No	No	No
Land-use Plan	No	No	No	No	No	No	No	No
Flood Mitigation Assistance (FMA) Plan	No	No	No	No	No	No	No	No
Watershed Plan		No	No	No	No	No	No	No
Firewise or other fire mitigation plan	No	No	No	No	No	No	No	No
Critical Facilities Plan (Mitigation/Response/Re covery)	No	No	No	No	No	No	No	No
Policies/Ordinance								
Zoning Ordinance	No	Yes	Yes	Yes	No	Yes	No	Yes
Building Code	No	Yes, IBM 2008	Yes, IBM 2009	No	No	IBC	Yes, IBM 2005	No
Floodplain Ordinance	Yes, 04/21/2016	Yes, 2010	No	Yes, 2010	No	2015	Yes, 04/13/2 010	No
Subdivision Ordinance	No	No	Yes	No	No	Yes	Yes, 01/3/20 08	No
Tree Trimming Ordinance	No	No	No	No	No	Yes	No	No
Nuisance Ordinance	No	Yes	Yes	No	No	Yes	Yes, 09/08/1 994	No
Storm Water Ordinance	No	No	No	No	No	Yes	Yes, 09/08/1 994	No
Drainage Ordinance	No	No	Yes	No	No	Yes	No	No
Site Plan Review Requirements	No	Yes	Yes	No	No	No	Yes	No
Historic Preservation Ordinance	No	No	No	No	No	Yes	No	No
Landscape Ordinance	No	Yes	No	No	No	Yes	No	No
Debris Management Plan	No	No	No	No	No	No	No	No
Program								

Capabilities	McDonald County	Anderson	Goodman	Jane	Lanagan	Noel	Pineville	Southwest City
Zoning/Land Use Restrictions	No	Yes	Yes	Yes	No	Yes	No	No
Codes Building Site/Design	No	No	Yes	No	No	Yes	Yes	No
National Flood Insurance Program (NFIP) Participant -	Yes	Yes	Yes	No	No	Yes	Yes	Yes
NFIP Community Rating System (CRS) Participating Community	No	No	No	No	No	No	No	No
Hazard Awareness Program	No	No	Yes	No	No	Yes	No	No
National Weather Service (NWS) Storm Ready	No	No	No	No	No	Yes	No	No
Building Code Effectiveness Grading (BCEGs)	No	No	No	No	No	No	No	No
ISO Fire Rating	9	7	6	n/a	n/a	n/a	7	n/a
Economic Development Program	No	No	No	No	No	No	No	No
Land Use Program	No	No	Yes	No	No	No	No	No
Public Education/Awareness	No	No	No	No	No	Yes	No	No
Property Acquisition	No	No	No	No	No	No	No	No
Planning/Zoning Boards	No	Yes	No	No	No	Yes	Yes, Plannin g only	Yes
Stream Maintenance Program	No	No	No	No	No	Yes	No	No
Tree Trimming Program	No	No	No	No	No	Yes	No	No
Engineering Studies for Streams (Local/County/Regional)	No	No	No	No	No	No	No	No
Mutual Aid Agreements	Yes	Yes	Yes	No	No	Yes	Yes	No
Studies/Reports/Maps								
Hazard Analysis/Risk Assessment (Local)	No	No	No	No	No	Yes	No	No
Hazard Analysis/Risk Assessment (County)	Yes	Yes	Yes	Yes, 2011 Hazard Mitigatio n Plan	Yes	Yes	Yes	Yes
Flood Insurance Maps	No	No	No	No	No	No	No	No
FEMA Flood Insurance Study (Detailed)	No	No	No	No	No	No	No	No
Evacuation Route Map	No	No	No	No	No	No	Yes	No
Critical Facilities Inventory	No	No	No	No	No	No	Yes	No
Vulnerable Population Inventory	No	No	No	No	No	No	Yes	No
Land Use Map	No	No	No	No	No	Yes	No	No

Capabilities	McDonald County	Anderson	Goodman	Jane	Lanagan	Noel	Pineville	Southwest City
Staff/Department								
Building Code Official	No	No	Yes, part time	No	No	Yes 2015 IBC	Yes, part time	No
Building Inspector	No	Yes, part time	Yes, part time	No	No	Yes	Yes, part time	No
Mapping Specialist (GIS)	Yes	No	No	No	No	No	No	No
Engineer	No	No	No	No	No	No	Yes, Contrac t	No
Development Planner	No	No	No	No	No	No	No	No
Public Works Official	No	Yes, full time	Yes, full time	No	Yes	Yes	Yes, full time	Yes
Emergency Management Director	Yes, full time	No	Yes, part time	No	No	Yes	Yes, volunte er	No
NFIP Floodplain Administrator	Yes, full time	Yes, volunteer	Yes, part time	No	No	Yes	Yes, volunte er	No
Bomb and/or Arson Squad	No	No	No	No	No	No	No	No
Emergency Response Team	Yes, 1 full time plus volunteers	Yes, part time	No	No	No	Yes	No	NO
Hazardous Materials Expert	No	No	No	No	No	Yes	No	No
Local Emergency Planning Committee	Yes	No	No	No	No	No	Yes, volunte er	No
County Emergency Management Commission	No	No	No	No	No	No	No	No
Sanitation Department	No	No	Yes, part time	No	No	Yes	No	No
Transportation Department	Yes	No	No	No	No	No	No	No
Economic Development Department	No	No	No	No	No	No	No	No
Housing Department	No	No	No	No	No	Yes	No	No
Planning Consultant	No	No	No	No	No	No	No	No
Regional Planning Agencies	Yes	Yes, HSTCC	Yes, HSTC C	Yes, HSTCC	Yes, HSTCC	Yes, HSTCC	Yes, HSTCC	Yes, HSTCC
Historic Preservation	No	No	No	No	No	No	No	No
Non-Governmental Organizations (NGOs)								
American Red Cross	Yes	No	No	No	Yes, County	No	No	No
Salvation Army	No	No	No	No	No	No	No	No

Capabilities	McDonald County	Anderson	Goodman	Jane	Lanagan	Noel	Pineville	Southwest City
Veterans Groups	Yes	No	No	No	No	No	No	No
Environmental Organization	Yes	No	No	No	No	No	No	No
Homeowner Associations	No	No	No	No	No	No	No	No
Neighborhood Associations	No	No	No	No	No	No	No	No
Chamber of Commerce	Yes	No	Yes	No	Yes, County	No	Yes	No
Community Organizations (Lions, Kiwanis, etc.	No	No	No	No	No	Yes	No	No
Local Funding Availability								
Ability to apply for Community Development Block Grants	Yes	Yes	Yes	No	Yes	No	Yes	No
Ability to fund projects through Capital Improvements funding	Yes	Yes	Yes	No	No	No	Yes	No
Authority to levy taxes for a specific purpose	Yes	Yes, with vote	Yes	No	Yes	Yes, with vote	Yes	Yes, with vote
Fees for water, sewer, gas, or electric services	No	Yes	Yes	No	Yes	Yes	Yes	Yes
Impact fees for new development	No	No	Yes	No	No	No	Yes	No
Ability to incur debt through general obligation bonds	Yes	Yes	Yes	No	No	Yes	Yes	No
Ability to incur debt through special tax bonds	Yes	Yes	Yes	No	No	Yes	Yes	No
Ability to incur debt through private activities	No	Yes	Yes	No	No	No	No	No
Ability to withhold spending in hazard prone areas	No	Yes, all spending is approved by council	Yes	No	No	No	Yes	No

Source: Data Collection Questionnaire, 2016

# 2.2.9 McDonald County (R-1) Schools Profiles and Mitigation Capabilities

There are 9 public elementary schools in McDonald County. These facilities include: Anderson Elementary, Goodman Elementary, Noel Elementary, Noel Primary, Pineville Elementary, Pineville Primary, Rocky Comfort Elementary, Southwest City Elementary, and White Rock Elementary. There is 1 middle school facility in McDonald County, the facility is located in Anderson and is named the Anderson Middle School. There is 1 public high school in McDonald County. This facility in known as the McDonald County High School and is located in Anderson. There are portions of McDonald County that are served by adjacent school districts including: Neosho R-5, East Newton R-6, Seneca R-7, Wheaton R-3, and Southwest Barry County R-5. There is a University of Missouri Extension and Outreach office located in Pineville. There is also a campus for Crowder College located in Jane, Crowder College is a two-year institution based in Neosho, MO (Newton County).

Figure 2.7. McDonald County School District Map

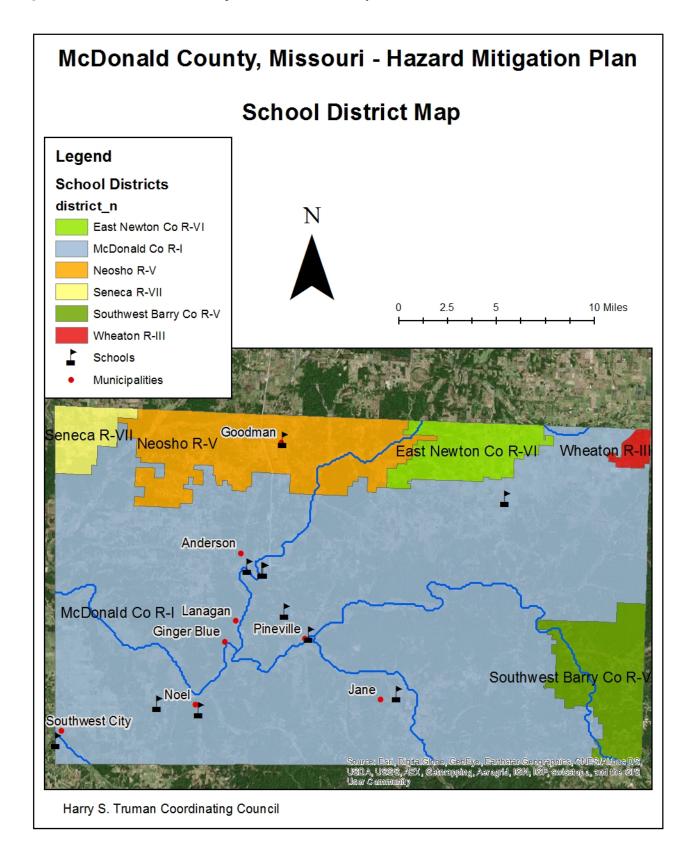


Table 2.13. Summary of Mitigation Capabilities – McDonald County R-1 Schools

Capability	McDonald County R-1
Planning Elements	
Master Plan/ Date	2011
Capital Improvement Plan/Date	03/10/2016
School Emergency Plan / Date	12/2015 ELLP/Safe Plans – State of Missouri System
Weapons Policy/Date	MSBA Policy
Personnel Resources	·
Full-Time Building Official (Principal)	Yes, 1 principal at each campus
Emergency Manager	Security/Director
Grant Writer	Security/Director
Public Information Officer	Assistant Superintendent
Financial Resources	
Capital Improvements Project Funding	Yes
Local Funds	Yes
General Obligation Bonds	Yes
Special Tax Bonds	Yes
Private Activities/Donations	Yes
State And Federal Funds/Grants	Yes
Other	
Public Education Programs	
Privately Or Self- Insured?	
Fire Evacuation Training	
Tornado Sheltering Exercises	
Public Address/Emergency Alert System	Yes, all campus have an intercom system, lock-down alert system for intruder & medical, fire alarms, tornado & earthquake integrated into PA systems.
NOAA Weather Radios	Yes
Lock-Down Security Training	Yes,
Mitigation Programs	
Tornado Shelter/Saferoom	
Campus Police	

Source: Data Collection Questionnaires, April 2016