

## CONTRIBUTORS

### Phelps County Hazard Mitigation Planning Committee

The individuals who participated in the Phelps County hazard mitigation planning committee are as follows:

#### Jurisdictional Representatives

Name	Title	Department	Jurisdiction/Agency/Organization
Gary Hicks	Associate Commissioner	County	Phelps County
Mike Kirn	County EMD	Emergency Management	Phelps County
Steve Flowers	Community Development Director	Community Development	City of Rolla
Brad Woods	City EMD	Emergency Management	City of Rolla
Ron Smith	Fire Chief	Fire & Rescue	City of Rolla
William Gallion	Mayor	Admin.	City of Edgar Springs
Lyle Thomas	Public Works Director	Public Works	City of St. James
John Cutsinger	Parks & Rec Director	Parks & Rec	City of St. James
Ron Jones	Police Chief	Police	City of St. James
Chad Davis	Operations Manager	Rolla Municipal Utilities	City of Rolla
Josh Cahill	Emergency Coordinator	Administration	St. James R-I School District
Craig Hounsom	Superintendent	Administration	Rolla R-31 School District
Merlyn Johnson	Superintendent	Administration	St. James R-1 School District

\*Sign in sheets from planning meetings are included in Appendix B.

The individuals who represented stakeholders on the Phelps County hazard mitigation planning committee are as follows:

#### Participating Stakeholder Representatives

Name	Title	Agency/Organization
Cari Restine		Sho-Me Power
Doug Roberts	University Police Chief	Missouri University of Science & Technology
Michelle Bresnahan	Director of Environmental Health and Safety	Missouri University of Science & Technology
Wendy Squires	Emergency Manager	Phelps Health
Melissa Klott		Edgar Springs Rural Fire Protection District
Captain Eddie Blaylock	Troop I Commander	Missouri State Highway Patrol
Steve Davis	Troop I Staff (Lieutenant)	Missouri State Highway Patrol
Wendy Squires	Emergency Management Coord.	Phelps Health
Michelle Bresnahan	Environmental Health & Safety	Missouri University of Science & Technology

**TABLE OF CONTENTS**

**Executive Summary .....vi**

Contributors ..... i

Table of Contents..... ii

Prerequisites ..... vi

**1 Introduction and Planning Process .....1.1**

    1.1 Purpose .....1.1

    1.2 Background and Scope .....1.2

    1.3 Plan Organization .....1.2

    1.4 Planning Process.....1.3

        1.4.1 Multi-Jurisdictional Participation .....1.6

        1.4.2 The Planning Steps.....1.8

**2 Planning Area Profile and Capabilities .....2.1**

    2.1 Phelps County Planning Area Profile .....2.2

        2.1.2 Geography, Geology, and Topography .....2.3

        2.1.3 Climate.....2.6

        2.1.4 Population/Demographics .....2.7

        2.1.5 History.....2.11

        2.1.6 Agriculture.....2.12

        2.1.7 FEMA Hazard Mitigation Assistance Grants in Planning Area .....2.13

        2.1.8 FEMA Public Assistance (PA) Grants in Planning Area .....2.14

    2.2 Jurisdictional Profiles and Mitigation Capabilities .....2.19

        Unincorporated Phelps County .....2.19

        City of Doolittle.....2.22

        City of Edgar Springs .....2.25

        City of Newburg .....2.28

        City of Rolla .....2.31

City of St. James.....	2.35
Public School District Profiles and Mitigation Capabilities .....	2.44
Critical Facilities .....	2.49
<b>3 Risk Assessment .....</b>	<b>3.1</b>
3.1 Hazard Identification .....	3.4
3.1.1 Review of Existing Mitigation Plans .....	3.4
3.1.2 Review Disaster Declaration History .....	3.7
3.1.3 Research Additional Sources .....	3.9
3.1.4 Hazards Identified .....	3.11
3.1.5 Multi-Jurisdictional Risk Assessment.....	3.12
3.2 Assets at Risk.....	3.12
3.2.1 Total Exposure of Population and Structures .....	3.12
3.2.2 Critical and Essential Facilities and Infrastructure .....	3.13
3.2.3 Other Assets .....	3.16
3.3 Future Land Use and Development .....	3.20
3.4 Hazard Profiles, Vulnerability, and Problem Statements.....	3.23
3.4.1 Dam Failure .....	3.26
3.4.2 Drought .....	3.53
3.4.3 Earthquakes.....	3.67
3.4.4 Extreme Temperatures .....	3.82
3.4.5 Wildfires .....	3.98
3.4.6 Flooding (Flash and River) .....	3.110
3.4.7 Land Subsidence/Sinkholes .....	3.135
3.4.8 Severe Thunderstorms Including High Winds, Hail, and Lightning .....	3.146
3.4.9 Tornado .....	3.165
3.4.10 Severe Winter Weather .....	3.178
<b>4 Mitigation Strategy.....</b>	<b>4.1</b>

4.1 Goals.....	4.1
4.2 Identification and Analysis of Mitigation Actions.....	4.2
4.3 Implementation of Mitigation Actions .....	4.6
<b>5 Plan Maintenance Process .....</b>	<b>5.1</b>
5.1 Monitoring, Evaluating, and Updating the Plan .....	5.1
5.1.1 Responsibility for Plan Maintenance .....	5.1
5.1.2 Plan Maintenance Schedule.....	5.2
5.1.3 Plan Maintenance Process.....	5.2
5.2 Incorporation into Existing Planning Mechanisms .....	5.3
5.3 Continued Public Involvement .....	5.8
<b>6 Appendix .....</b>	<b>6.1</b>
A: References.....	6.2
B: Planning Process .....	6.6
C: Public Survey.....	6.41
D: Adoption Resolutions .....	6.58
E: Critical/Essential Facilities.....	6.67
F: MDC Wildfire Data Search .....	6.73

## EXECUTIVE SUMMARY

---

The purpose of hazard mitigation is to reduce or eliminate long-term risk to people and property from hazards. Phelps County and participating cities and school districts developed this multi-jurisdictional local hazard mitigation plan update to reduce future losses to the county and its communities and schools resulting from hazard events. The plan is an update of a plan that was approved on April 1, 2016. The original plan was approved in 2004. The plan was prepared pursuant to the requirements of the Disaster Mitigation Act of 2000 and to achieve eligibility for the Federal Emergency Management Agency (FEMA) Hazard Mitigation Assistance Grant Programs.

The county Multi-Hazard Mitigation Plan is a multi-jurisdictional plan that covers the following 10 jurisdictions that participated in the planning process:

- Phelps County
- City of Doolittle
- City of Edgar Springs
- City of Newburg
- City of Rolla
- City of St. James
- St. James R-I School District
- Newburg R-II School District
- Phelps County R-III School District
- Rolla 31 School District

Phelps County and the jurisdictions listed above have developed a multi-jurisdictional Hazard Mitigation Plan that was originally approved by FEMA in 2005 with an update approved by FEMA on June 25, 2011 and five years later on August 11, 2016. This current planning effort serves as an update (hereafter referred to as the 2021 Hazard Mitigation Plan.)

The plan update process followed a methodology prescribed by FEMA, which began with the formation of a Mitigation Planning Committee (MPC) comprised of representative from Phelps County and participating jurisdictions. The MPC updated the risk assessment that identified and profiled hazards that pose a risk to Phelps County and analyzed the vulnerability to these hazards. The MPC also examined the capabilities in place to mitigate them. 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/lightening/high winds and tornadoes are among the hazards that historically have had a significant impact.

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

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

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

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

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

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

**Goal 6:** Secure resources for investment in hazard mitigation.

To meet 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, responsible agency, timeline, cost estimate, potential funding sources and progress to date.

---

## 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 districts. The documentation of adoptions is included in Appendix D.

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

- Phelps County
- City of Doolittle
- City of Edgar Springs
- City of Newburg
- City of Rolla
- City of St. James
- St. James R-I School District
- Newburg R-II School District
- Phelps County R-III School District
- Rolla 31 School District

# Model Resolution

RESOLUTION NO. \_\_\_\_\_

## A RESOLUTION TO ADOPT THE PHELPS COUNTY MULTI-JURISDICTION NATURAL HAZARDS MITIGATION PLAN

**WHEREAS**, (Government/District) 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

**WHEREAS**, the U.S. Congress passed the Disaster Mitigation Act of 2000 emphasizing the need for pre-disaster mitigation of potential hazards and made available hazard mitigation grants to state and local governments; and

**WHEREAS**, an adopted Multi-Jurisdiction Natural Hazards 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**, (Government/District) fully participated in the FEMA prescribed mitigation planning process to prepare this Mitigation Plan; and

**WHEREAS**, the Missouri State Emergency Management Agency and Federal Emergency Management Agency officials have reviewed the Phelps County Multi-Jurisdictional Natural Hazards Mitigation Plan and approved it contingent upon this official adoption of the participating governing body; and

**WHEREAS**, (Government/District) desires to comply with the requirements of the Disaster Mitigation Act and to augment its emergency planning efforts by formally adopting the Phelps County Multi-Jurisdiction Natural Hazards Mitigation Plan; and

**WHEREAS**, adoption by the governing body of (Government/District) demonstrates the jurisdiction's commitment to fulfilling the mitigation goals and objectives outlined in this Mitigation Plan; and

**WHEREAS**, adoption of this legitimizes the plan and authorizes responsible agencies to carry out their responsibilities under the plan;

**NOW, THEREFORE BE IT RESOLVED**, that (Government/District) adopts the Phelps County Multi-Jurisdictional Natural Hazards Mitigation Plan as an official plan and will submit this Adoption Resolution to the Missouri Emergency Management Agency and the Federal Emergency Management Agency officials to enable the plan's final approval.

\_\_\_\_\_  
Certifying Official

\_\_\_\_\_  
Date

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Date

DRAFT