

TABLE OF CONTENTS

Foreword	i
Executive Summary	1
Prerequisites	P.1
Participating Jurisdictions.....	P.1
Participation Requirements.....	P.2
Record of Participation	P.3
Sample Adoption Resolution	P.6
Section 1: Introduction and Planning Process	1.1
1.1 Purpose.....	1.1
1.2 Background and Scope	1.1
1.3 Planning Process	1.3
1.3.1 Background.....	1.3
1.3.2 Formation of Planning Team	1.4
1.3.3 Plan Section Review and Update Methodology	1.6
1.3.4 Review and Incorporation of Existing Plans	1.7
1.3.5 Public Involvement	1.12
Attachment 1: Hazard Mitigation Planning Committee (HMPC) Members Roles and Responsibilities	1-A-1
Attachment 2: 2010 Participating Jurisdictions’ Responsible Parties	2-A-1
Section 2: Regional Profile and Capabilities	2.1
2.1 Geography and Topography	2.1

2.2 Climate and the Environment	2.6
2.2.1 Geology	2.8
2.2.2 Soils.....	2.8
2.2.3 Waterways and Water Resources.....	2.11
2.2.4 Ecosystems.....	2.16
2.3 Demographics	2.18
2.3.1 Significant Cultural and Social Issues	2.54
2.4 History of Development and Government.....	2.59
2.4.1 Government.....	2.60
2.5 Economy and Industry	2.70
2.5.1 Building Count by Jurisdiction	2.73
2.6 Regional and Local Capabilities	2.75
Section 3: Risk Assessment	3.1
3.1 Identifying Hazards.....	3.2
3.1.1 Hazard Analysis Summary	3.5
3.1.2 Hazards Not Included and Reasons for Elimination.....	3.16
3.2 Hazard Profiles.....	3.16
3.2.1 Tornadoes and Severe Thunderstorms.....	3.16
3.2.1.1 Probable Locations.....	3.18
3.2.1.2 Severity and Magnitude	3.18
3.2.1.3 Probability of Occurrence.....	3.19
3.2.1.4 Historical Occurrences.....	3.20
3.2.2 Riverine and Flash Floods	3.28

3.2.2.1 Probable Locations.....	3.30
3.2.2.2 Severity and Magnitude	3.31
3.2.2.3 Probability of Occurrence	3.31
3.2.2.4 Historical Occurrences.....	3.31
3.2.3 Severe Winter Weather	3.58
3.2.3.1 Probable Locations.....	3.60
3.2.3.2 Severity and Magnitude	3.60
3.2.3.3 Probability of Occurrence	3.63
3.2.1.4 Historical Occurrences.....	3.63
3.2.4 Drought	3.69
3.2.4.1 Probable Locations.....	3.71
3.2.4.2 Severity and Magnitude	3.72
3.2.4.3 Probability of Occurrence	3.72
3.2.4.4 Historical Occurrences.....	3.74
3.2.5 Heat Waves	3.79
3.2.5.1 Probable Locations.....	3.82
3.2.5.2 Severity and Magnitude	3.82
3.2.5.3 Probability of Occurrence	3.84
3.2.5.4 Historical Occurrences.....	3.84
3.2.6 Earthquakes.....	3.87
3.2.6.1 Probable Locations.....	3.88
3.2.6.2 Severity and Magnitude	3.88
3.2.6.3 Probability of Occurrence	3.93

3.2.6.4 Historical Occurrences.....	3.94
3.2.7 Dam Failures.....	3.96
3.2.7.1 Probable Locations.....	3.97
3.2.7.2 Severity and Magnitude	3.113
3.2.7.3 Probability of Occurrence	3.114
3.2.7.4 Historical Occurrences.....	3.114
3.2.8 Wildland Fires.....	3.114
3.2.8.1 Probable Locations.....	3.115
3.2.8.2 Severity and Magnitude	3.117
3.2.8.3 Probability of Occurrence	3.117
3.2.8.4 Historical Occurrences.....	3.118
3.2.9 Hazardous Materials Incidents.....	3.118
3.2.9.1 Probable Locations.....	3.119
3.2.9.2 Severity and Magnitude	3.124
3.2.9.3 Probability of Occurrence	3.129
3.2.9.4 Historical Occurrences.....	3.130
3.2.10 Emerging Infectious Disease	3.223
3.2.10.1 Probable Locations.....	3.226
3.2.10.2 Severity and Magnitude	3.226
3.2.10.3 Probability of Occurrence	3.227
3.2.10.4 Historical Occurrences.....	3.228
3.2.11 Civil Disorder.....	3.232
3.2.11.1 Probable Locations.....	3.234

3.2.11.2 Severity and Magnitude	3.234
3.2.11.3 Probability of Occurrence	3.234
3.2.11.4 Historical Occurrences.....	3.234
3.2.12 Mass Transportation Accidents.....	3.235
3.2.12.1 Probable Locations.....	3.236
3.2.12.2 Severity and Magnitude	3.238
3.2.12.3 Probability of Occurrence	3.240
3.2.12.4 Historical Occurrences.....	3.240
3.3 Vulnerability Assessment	3.241
3.3.1 Overview.....	3.241
3.3.2 Structures and Critical Facilities Identification	3.245
3.3.3 Potential Loss Estimates	3.246
3.3.3.a Potential Loss Estimates by Jurisdiction.....	3.250
3.3.3.1 Tornado Risk Assessment.....	3.252
3.3.3.2 Riverine Flooding Risk Assessment	3.253
3.3.3.3 Severe Winter Weather Risk Assessment.....	3.257
3.3.3.4 Drought Risk Assessment	3.258
3.3.3.5 Heat Wave Risk Assessment	3.267
3.3.3.6 Earthquake Risk Assessment	3.268
3.3.3.7 Dam Failure Risk Assessment	3.271
3.3.3.8 Wildland Fire Risk Assessment	3.272
3.3.3.9 Hazardous Materials Incident Risk Assessment	3.273
3.3.3.10 Emerging Infectious Disease Risk Assessment	3.274

3.3.3.11 Civil Disorder Risk Assessment	3.276
3.3.3.12 Mass Transportation Accidents Risk Assessment	3.276
3.3.4 Repetitive Loss Properties	3.279
3.3.5 Development Trends.....	3.288
Section 4: Mitigation Strategy	4.1
4.1 Mitigation Goals and Actions	4.1
4.1.1 Mitigation Goals and Actions, 2004 Hazard Mitigation Plan.....	4.3
4.1.2 Status of Mitigation Goals and Actions	4.15
4.1.2.1 Oak Grove Additional Completed Mitigation Actions.....	4.15
4.1.2.2 Sni Valley Fire Protection District Additional Completed Mitigation Actions.....	4.17
4.1.2.3 Archie R-V School District Hazard Mitigation Strategy	4.18
4.1.2.4 Fort Osage R-I School District Hazard Mitigation Strategy	4.20
4.1.2.5 Harrisonville School District Hazard Mitigation Strategy	4.22
4.1.2.6 Lone Jack C-6 School District Hazard Mitigation Strategy	4.23
4.1.2.7 Park Hill School District Hazard Mitigation Strategy	4.25
4.1.2.8 Pleasant Hill R-III School District Hazard Mitigation Strategy	4.26
4.1.2.9 Sherwood Cass R-VIII School District Hazard Mitigation Strategy	4.28
4.1.2.10 West Platte R-II School District	

Hazard Mitigation Strategy	4.30
4.1.2.11 Metropolitan Community Colleges Hazard Mitigation Strategy	4.32
4.2 Implementation of National Flood Insurance Program	4.35
4.2.1 Communities Participating in NFIP	4.37
4.2.2 Communities Not Participating in NFIP	4.40
Attachment 1: Participating County/City Hazard Mitigation Strategies	4.1
Section 5: Plan Maintenance	5.1
5.1 Monitoring, Evaluating and Updating the Plan	5.1
5.2 Incorporation into Existing Planning Mechanisms	5.3
5.3 Continued Public Involvement	5.12

APPENDICES

Appendix A: Adoption Resolutions	A-1
Appendix B: Supporting Documents	B-1
Appendix C: Maps and References	C-1
Appendix D: Acronyms	D-1
Appendix E: Glossary	E-1
Appendix F: Storm Shelter Plan	F-1

LIST OF TABLES

Prerequisites

Table P.1: Record of Participation.....	P.3
Table P.2: Mitigation Actions.....	P.4
Table P.3: Record of Participation (School Districts)	P.5

Section 1: Introduction and Planning Process

Table 1.1: Summary of Planning Meetings	1.4
Table 1.2: Review Process Summary	1.7
Table 1.3: Record of Review (Summary)	1.9
Table 1.4: Record of Review (Summary, School Districts)	1.11
Table 1.5: Public Meeting Advertisements and Run Dates	1.12

Section 2: Regional Profile and Capabilities

Table 2.1: Age and Gender	2.19
Table 2.2: Race	2.26
Table 2.3: Income by Household (1999)	2.31
Table 2.4: Number Below Poverty Level	2.41
Table 2.5 Disability Status of the Civilian Non-Institutionalized Population	2.49
Table 2.6: Classification of Counties.....	2.61
Table 2.7: Classification of Cities.....	2.68
Table 2.8: Employment Status.....	2.70
Table 2.9: Industry Establishments (4th Qtr, 2008)	2.71
Table 2.10: Accrued Cost of Living Indicators (2008)	2.72

Table 2.11: Building Count by Type	2.74
Table 2.12: Community Capabilities	2.81
Table 2.13: Building and Fire Codes	2.86

Section 3: Risk Assessment

Table 3.1: Cascading Hazards Resulting from Disasters.....	3.2
Table 3.2: Hazard Identification (Summary)	3.3
Table 3.3: Cass County Hazard Summary	3.6
Table 3.4: Clay County Hazard Summary	3.8
Table 3.5: Jackson County Hazard Summary.....	3.10
Table 3.6: Platte County Hazard Summary	3.12
Table 3.7: Ray County Hazard Summary	3.14
Table 3.8: Enhanced Fujita Scale Comparison	3.17
Table 3.9: Probable Future Tornado Severity by EF-Scale	3.18
Table 3.10: Risk of Future Tornado Occurrence	3.19
Table 3.11: Kansas City Area Tornadoes by EF-Scale (1950 – 2009)	3.20
Table 3.12: Cass County Tornadoes (1950-2009)	3.21
Table 3.13: Clay County Tornadoes (1950-2009)	3.22
Table 3.14: Jackson County Tornadoes (1950-2009)	3.22
Table 3.15: Platte County Tornadoes (1950-2009)	3.23
Table 3.16: Ray County Tornadoes (1950-2009)	3.24
Table 3.17: Kansas City Area Thunderstorms January 1, 1950 to March 31, 2009.....	3.27
Table 3.18: Kansas City Area Lightning Events January 1, 1950 to March 31, 2009	3.28
Table 3.19: Kansas City Area Hail Events January 1, 1950 to March 31, 2009	3.28

Table 3.20: Cass County Floods (1993-2009)	3.31
Table 3.21: Clay County Floods (1993-2009)	3.33
Table 3.22: Jackson County Floods (1993-2009)	3.36
Table 3.23: Platte County Floods (1993-2009)	3.46
Table 3.24: Ray County Floods (1993-2009)	3.51
Table 3.25: Severe Winter Weather (2004-2009)	3.64
Table 3.26: Heat Events (2004-2009)	3.84
Table 3.27: Moderate to Large Earthquakes in the Central U.S.	3.96
Table 3.28: Kansas City Region Dams	3.98
Table 3.29: Hazardous Materials Incidents (1990 – 2009)	3.131
Table 3.30: Pandemic Severity Index by Epidemiologic Characteristics.....	3.224
Table 3.31: Communicable Diseases in the Kansas City Region by Case Count (2003-2008)	3.228
Table 3.32: Vulnerability Assessment (Overview)	3.243
Table 3.33: Building Stock Exposure	3.245
Table 3.34: Sample Maximum Loss Estimation.....	3.249
Table 3.35: Sample Minimum Loss Estimation	3.250
Table 3.36: Maximum Loss Estimation, Tornadoes.....	3.252
Table 3.37: Minimum Loss Estimation, Tornadoes.....	3.253
Table 3.38: Maximum Loss Estimation, Severe Winter Weather	3.257
Table 3.39: Minimum Loss Estimation, Severe Winter Weather.....	3.257
Table 3.40: Drought Impacts	3.257
Table 3.41: Crop Losses Due to Drought (1990-2008)	3.259

Table 3.42: Drought Indemnity Totals.....	3.267
Table 3.43: Maximum Loss Estimation, Heat Wave.....	3.268
Table 3.44: Minimum Loss Estimation, Heat Wave.....	3.268
Table 3.45: HAZUS-MH Earthquake Loss Estimation: Annualized Loss Scenario	3.269
Table 3.46: HAZUS-MH Earthquake Loss Estimation: 2,500 Year Scenario Results Building Impacts by County	3.270
Table 3.47: Social Impact Estimates by County from the 2,500 Year Scenario 2 a.m. time of Occurrence.....	3.270
Table 3.48: Casualty Severity Definitions	3.271
Table 3.49: Maximum Loss Estimation, Dam Failure.....	3.272
Table 3.50: Minimum Loss Estimation, Dam Failure	3.272
Table 3.51: Maximum Loss Estimation, Wildland Fire	3.272
Table 3.52: Minimum Loss Estimation, Wildland Fire	3.273
Table 3.53: Economic Costs Due to Motor Vehicle Crashes (2000)	3.277
Table 3.54: Roadway Fatalities.....	3.278
Table 3.55: Fatalities/ 10,000 People.....	3.278
Table 3.56: Fatalities/ 100 Million VMT.....	3.278
Table 3.57: Kansas City Area Flood Insurance Policies.....	3.279
Table 3.58: Kansas City Area Repetitive Losses.....	3.281
Table 3.58A: Repetitive Loss Properties (Unmitigated)	3.282
Table 3.58B: Repetitive Loss Properties (Mitigated)	3.288
Table 3.59: Annual Estimates of Housing Units for Counties in Missouri: April 1, 2000 to July 1, 2008	3.290
Table 3.60: Non-building Construction Value (\$000's)	3.290
Table 3.61: Population, Percent Change, April 1, 2000 to July 1, 2008.....	3.290

Table 3.62: Direct Economic Losses for Buildings in the Kansas City Area.....	3-A-1
Table 3.63: Building Damage by General Occupancy (Cass County)	3-A-2
Table 3.64: Building Damage by General Occupancy (Clay and Jackson Counties)	3-A-3
Table 3.65: Building Damage by General Occupancy (Platte County)	3-A-4
Table 3.66: Building Damage by General Occupancy (Ray County)	3-A-5
Table 3.67: Building Damage County by General Occupancy (Cass County)	3-A-6
Table 3.68 Building Damage County by General Occupancy (Clay and Jackson Counties)	3-A-8
Table 3.69: Building Damage County by General Occupancy (Platte County)	3-A-9
Table 3.70: Building Damage Count by General Occupancy for Ray County.....	3-A-10
Table 3.71: Jurisdictional Loss Estimates by Building Damage Count and Dollar Loss for Flooding	3-A-11
Table 3.72: Jurisdictional Loss Estimates by Building Damage Count and Dollar Loss for Earthquake	3-A-13
Table 3.73: Jurisdictional Loss Estimates by Building Damage Count and Dollar Loss for Dam Failures.....	3-A-15
Table 3.74: Jurisdictional Loss Estimates by Building Damage Count and Dollar Loss for Wildland Fire	3-A-17

Section 4: Mitigation Strategy

Table 4.1: Communities Participating in the National Flood Insurance Program (NFIP)	4.37
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Section 5: Plan Maintenance

Table 5.1: Data Deficiency Corrective Actions	5.3
Table 5.2: Incorporation Into Hazard Mitigation Planning (Summary)	5.5

LIST OF FIGURES

Section 2: Regional Profile and Capabilities

Figure 2.1: The Missouri Counties of the Kansas City Metropolitan Area	2.1
Figure 2.2: Cass County Topography	2.2
Figure 2.3: Clay County Topography	2.3
Figure 2.4: Jackson County Topography	2.4
Figure 2.5: Platte County Topography.....	2.5
Figure 2.6: Ray County Topography	2.6
Figure 2.7: Cass County Lakes, Rivers, Streams and Creeks.....	2.12
Figure 2.8: Clay County Lakes, Rivers, Streams and Creeks.....	2.13
Figure 2.9: Jackson County Lakes, Rivers, Streams and Creeks.....	2.14
Figure 2.10: Platte County Lakes, Rivers, Streams and Creeks	2.15
Figure 2.11: Ray County Lakes, Rivers, Streams and Creeks	2.16
Figure 2.12: Kansas City Metropolitan Area Population Over 65.....	2.55
Figure 2.13: Kansas City Metropolitan Area Nursing Homes.....	2.56
Figure 2.14: Kansas City Metropolitan Area Physically Disabled Population.....	2.57
Figure 2.15: Non/limited English Speaking Population in the Kansas City.....	2.58
Figure 2.16: Kansas City Metropolitan Area Population Below the Poverty Level.....	2.59
Figure 2.17: Organizational Structure of Cass County Government.....	2.62
Figure 2.18: Organizational Structure of Clay County Government.....	2.63
Figure 2.19: Organizational Structure of Jackson County Government.....	2.64
Figure 2.20: Organizational Structure of Platte County Government	2.65
Figure 2.21: Organizational Structure of Ray County Government	2.66

Section 3: Risk Assessment

Figure 3.1: Overall Risk.....	3.3
Figure 3.2: Tornado Annual Cycle	3.20
Figure 3.3: Path and Magnitude of May 4, 2003 Tornado Outbreak.....	3.26
Figure 3.4: 1903 Postcard of the old Hannibal Bridge Across the Missouri River	3.54
Figure 3.5: 1951 Flood in the West Bottoms of Kansas City, Missouri.....	3.55
Figure 3.6: Flooding of the Country Club Plaza in Kansas City, September 1977	3.56
Figure 3.7: 2001 NWS Wind Chill Index	3.61
Figure 3.8: Missouri’s Drought Susceptibility Regions	3.71
Figure 3.9: Drought Status of Missouri Counties as of July 7, 2009.....	3.73
Figure 3.10: U.S. Seasonal Drought Outlook	3.74
Figure 3.11: Periods of Extreme Drought and Precipitation, 1900-2000	3.75
Figure 3.12: Areas Affected by Drought in 1934 Based on PDSI Data	3.75
Figure 3.13: Percent of Time in Severe and Extreme Drought from 1934-1939	3.76
Figure 3.14: Percent of Time in Severe and Extreme Drought from 1954-1956	3.77
Figure 3.15: Percent of Time in Severe and Extreme Drought in 1988	3.78
Figure 3.16: Percent of Time in Severe and Extreme Drought in 1989	3.78
Figure 3.17: Heat Index Table	3.80
Figure 3.18: Heat Index/Heat Disorders.....	3.81
Figure 3.19: Population Over age 65 in the Kansas City Metropolitan Area.....	3.83
Figure 3.20: Population in Poverty in the Kansas City Metropolitan Area.....	3.83
Figure 3.21: Projected Modified Mercalli Intensities from a 7.6 Magnitude Earthquake Along the New Madrid Seismic Zone	3.90
Figure 3.22: Missouri Dams in MARC Region.....	3.112

Figure 3.23: USACE Main Stem Dams on the Upper Missouri River Basin.....	3.113
Figure 3.24: Greater Kansas City Wildland-Urban Interface Areas.....	3.116
Figure 3.25: U.S. Fire Danger Class Areas.....	3.117
Figure 3.26: Hazardous Materials Transportation Routes	3.120
Figure 3.27: Map of Missouri Registry Site Maps	3.124
Figure 3.28: HazMat Facilities and Sensitive Populations (Cass County)	3.125
Figure 3.29: HazMat Facilities and Sensitive Populations (Clay County)	3.126
Figure 3.30: HazMat Facilities and Sensitive Populations (Jackson County)	3.127
Figure 3.31: HazMat Facilities and Sensitive Populations (Platte County).....	3.128
Figure 3.32: HazMat Facilities and Sensitive Populations (Ray County)	3.129
Figure 3.33: Sources of Hazardous Materials Incidents in Kansas City.....	3.130
Figure 3.34: Projected Mortality of a Modern Influenza Pandemic Compared with That of 20th Century Pandemics (1918, 1957, 1968)	3.225
Figure 3.35: Pandemic Severity Categories As Determined by Differences in Case Fatality Ratio.....	3.225
Figure 3.36: Pandemic Severity Index.....	3.226
Figure 3.37: Death Rates for Infectious Disease 1900 -1996.....	3.227
Figure 3.38: Seasonal Flu Activity	3.228
Figure 3.39: Kansas City Metropolitan Area Transportation Routes	3.238
Figure 3.40: Kansas City Region Public Transit Accident Involvement.....	3.239
Figure 3.41: Kansas City Region School Bus Accident Involvement	3.239
Figure 3.42: Community Facilities in the Kansas City Region	3.245
Figure 3.43: Critical Facilities in the Kansas City Region	3.246
Figure 3.44: Social Vulnerability to Environmental Hazards,	

County Comparison within the State, 2000	3.248
Figure 3.45: Deaths Due to Influenza Pandemic in the Kansas City Region	3.275
Figure 3.46: Hospitalizations Due to Influenza Pandemic in the Kansas City Region	3.275
Figure 3.47: Outpatient Visits Due to Influenza Pandemic in the Kansas City Region	3.276
Figure 3.48: Existing Land Use Map for Cass County	3.291
Figure 3.49: Existing Land Use Map for Clay County	3.292
Figure 3.50: Existing Land Use Map for Jackson County	3.293
Figure 3.51 Existing Land Use Map for Platte County	3.294
Figure 3.52: Planned Land Use Map for Cass County	3.295
Figure 3.53: Planned Land Use Map for Clay County	3.296
Figure 3.54: Planned Land Use Map for Jackson County	3.297
Figure 3.55: Planned Land Use Map for Platte County	3.298

CHANGE NUMBER	DATE OF CHANGE	DESCRIPTION OF CHANGE
1	10/20/07	Executive Summary: Addition of Recommendations Tornado #6
2	10/20/07	Part I: page 1-4, description of Storm Shelter Plan
3	10/20/07	Part III: Risk Assessment – Description of Storm Shelter Plan
4	10/20/07	Part IV: All Hazard Mitigation Actions Addition of Tornado-specific actions
5	10/20/07	Part IV: Evaluation of All Hazard Mitigation Actions
6	10/20/07	Appendix F: Storm Shelter Plan Addition of Storm Shelter Plan and Ordinance Guide as supportive information and mitigation recommendations
7	01/31/10	Complete Plan Update

FOREWORD

To the Citizens of the Kansas City Region:

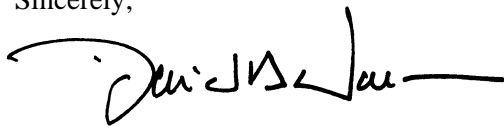
Since its beginnings in the early 1800s, the Kansas City metropolitan area has experienced the adverse affects of natural disasters. Historical records indicate that natural hazards, particularly floods and tornadoes, have had a profound affect on the region. Unfortunately, there is no way to prevent disasters from occurring. The impact of disasters, however, can be mitigated. Their effects can be lessened and losses reduced through the development and application of prudent hazard mitigation strategies and actions. In doing so, the Kansas City metropolitan area can be made to be a safer place to live, work and play.

As of November 1, 2004, all local governments must have an approved hazard mitigation plan to be eligible to apply for and receive certain funds under this program. This FEMA program provides funds to communities to mitigate the impact of natural disasters, such as floods and tornadoes. MARC, at the request of SEMA and in partnership with the Missouri Association of Councils of Government (MACOG), has developed this *Regional Multi-Hazard Mitigation Plan* to assist the local governments, school districts, businesses, community groups and citizens of Cass, Clay, Jackson, Platte and Ray counties with hazard mitigation planning, implementation and evaluation. This plan addresses both the natural and technological hazards that may affect the Kansas City region, including tornadoes, floods, severe winter weather, drought, heat waves, earthquakes, dam failures, wildland fires, hazardous materials incidents, emerging infectious disease, civil disord and mass transportation accidents.

Hazard mitigation is a dynamic and ongoing process. This plan is a continuation of the mitigation planning work begun in 2003; it provides a framework for hazard mitigation planning, both regionally and locally. This plan will be reviewed and updated at least annually to determine the effectiveness of mitigation actions; reflect changes in laws, regulations and/or policies; re-prioritize mitigation actions, if necessary; and consider other issues affecting hazard mitigation in the Kansas City metropolitan area.

MARC, as the facilitator of this mitigation planning effort, welcomes your comments and suggestions for improving this plan. Please direct your comments and suggestions to the Mid-America Regional Council, 600 Broadway, Suite 200, Kansas City, MO 64105.

Sincerely,



David A. Warm
Executive Director

Executive Summary

The purpose of hazard mitigation is to reduce loss of life and property by lessening the impact of natural, man-made and technological disasters. Hazard mitigation plans form the foundation for a community's long-term strategy to reduce disaster losses and break the cycle of disaster damage and reconstruction. Cass, Clay, Jackson, Platte and Ray counties and participating jurisdictions developed a *Regional Multi-Hazard Mitigation Plan* that was initially approved by the Federal Emergency Management Agency (FEMA) in March of 2005. The plan was prepared pursuant to the requirements of the Disaster Mitigation Act of 2000 (DMA 2000). In accordance with DMA 2000 requirements, Cass, Clay, Jackson, Platte and Ray counties and participating jurisdictions must update the plan every five years. In 2010, the *Regional Multi-Hazard Mitigation Plan* was updated, ensuring the continuity of federal mitigation project grant funding through 2015.

The *Regional Multi-Hazard Mitigation Plan* is a multi-jurisdictional plan that represents a number of local governments within the Kansas City region. The following local governments and school districts participated in plan development and are represented by the plan through formal adoption:

Cass County

Garden City
Loch Lloyd
Peculiar
Pleasant Hill
Raymore
Strasburg
Archie R-V School District
Harrisonville School District
Pleasant Hill School District
Sherwood Cass R-VIII School District

Clay County

Gladstone
Kearney
Liberty
North Kansas City
Smithville

Jackson County

Blue Springs
Grandview

Independence

Kansas City, Mo
Oak Grove
Raytown
Sni Valley Fire Protection District
Fort Osage School District
Lone Jack C-6 School District
Metropolitan Community Colleges

Platte County

Houston Lake
Northmoor
Parkville
Platte City
Riverside
Tracy
Weatherby Lake
Weston
Park Hill School District
West Platte R-II School District

Ray County

The planning process followed the methodology prescribed in FEMA publications *Local Multi-Hazard Mitigation Planning Guidance* (July 2008) and *Multi-Jurisdictional Mitigation Planning* (August 2006), beginning with the formation of a Regional Multi-Hazard Mitigation Plan Review Subcommittee (HMPC) comprised of key stakeholders from Cass, Clay, Jackson, Platte and Ray counties and participating jurisdictions. The HMPC reviewed each section of the plan, including the planning process, risk assessment, mitigation strategy and plan maintenance. Revisions were made as appropriate to ensure the plan reflects current vulnerability within each jurisdiction.

The goals of the *Regional Multi-Hazard Mitigation Plan* are:

Prevention:

- Develop, implement and improve hazard assessment information to prevent hazards from impacting the community where possible.

Protection of Life and Property:

- Implement activities that help to protect lives and property by making homes, businesses, public and private buildings, and other structures more resistant to the effects of hazards.

Natural Resources Protection:

- Preserve, rehabilitate and restore wetlands and other natural areas to serve hazard mitigation purposes. Minimize negative effects of disasters on the environment.

Integration with Emergency Services:

- Enhance local and regional emergency planning, operations and training through collaboration and coordination among local, state and federal government agencies, business and industry, and community groups. Integrate and coordinate hazard mitigation activities with emergency operations plans and procedures.

Increasing Public Awareness:

- Develop and conduct public education and outreach programs to increase awareness of the risks associated with hazards in the Kansas City area.
- Provide local governments, community groups, businesses and citizens with information on opportunities for partnerships, funding, tools and related mechanisms to help communities implement mitigation activities.

To meet plan goals, several mitigation actions have been identified and are discussed in Section 4: Mitigation Strategy. Social, technical, administrative, political, legal, economic and environmental factors were considered when identifying and prioritizing mitigation actions.

The *Regional Multi-Hazard Mitigation Plan* will be updated again in 2015.

Prerequisites

Requirement § 201.6(c)(5): *For multi-jurisdictional plans, each jurisdiction requesting approval of the plan must document that it has been formally adopted*

*** Note to Reviewers: When this plan has been reviewed and approved “pending adoption” by FEMA Region VII, the adoption resolutions will be signed by participating jurisdictions and added to Appendix A. A model resolution is provided on the following page. ***

Cass, Clay, Jackson, Platte and Ray counties’ *Regional Multi-Hazard Mitigation Plan* has been formally adopted by the following participating jurisdictions. Adoption Resolutions are included in Appendix A.

Cass County*

Garden City*
Loch Lloyd**
Peculiar*
Pleasant Hill*
Raymore*
Strasburg*
Archie R-V School District**
Harrisonville School District**
Pleasant Hill School District**
Sherwood Cass R-VIII School District**

Clay County*

Gladstone *
Kearney*
Liberty*
North Kansas City*
Smithville*

Jackson County*

Blue Springs*
Grandview*

Independence*

Kansas City, Mo*
Oak Grove*
Raytown*
Sni Valley Fire Protection District*
Fort Osage School District**
Lone Jack C-6 School District**
Metropolitan Community Colleges*

Platte County*

Houston Lake*
Northmoor*
Parkville*
Platte City*
Riverside*
Tracy*
Weatherby Lake*
Weston*
Park Hill School District**
West Platte R-II School District*

Ray County*

*Continuing Participant

**New participant

The following jurisdictions participated in the 2004 Plan, but have not participated in this update:

Belton ¹	Grain Valley	Platte Woods
Buckner	Greenwood	Randolph
Cleveland	Harrisonville	Richmond
Drexel	Lee’s Summit ¹	Ridgely
Edgerton	Lake Annette	Sibley
Excelsior Springs	Lake Lotawana	Sugar Creek
Farley	Lake Tapawingo	Wood Heights
Ferrelview	Levasy	
Fleming	Lone Jack	
Freeman	Orrick	

¹Partial completion of participation requirements

Requirement §201.6(c)(5): *Multi-jurisdictional plans may be accepted, as appropriate, and as long as each jurisdiction has participated in the process*

The Mid-America Regional Council (MARC), on behalf of Cass, Clay, Jackson, Platte and Ray counties, invited county governments, cities, school districts and area colleges in each county to participate in the *Regional Multi-Hazard Mitigation Plan* update. As detailed in the Memorandum of Agreement for Professional Planning Services (DR-MO-1676) between the Missouri State Emergency Management Agency (SEMA) and MARC, FEMA, through SEMA, allowed the counties of Cass, Clay, Jackson, Platte and Ray to provide written authorization for MARC to act as Plan Author and develop the updated plan on their and their incorporated cities' and schools' behalf. These were in lieu of formal resolutions authorizing MARC to act as Plan Author on behalf of each participant. Appendix B contains a copy of Exhibit D to DR-MO-1676, which describe the preceding authorization process, as well as copies of each county's authorization letter.

DMA 2000 requires that jurisdictions represented by a multi-jurisdictional plan participate in the planning process and formally adopt the plan. Each participating jurisdiction was required to meet nine participation requirements as defined by the Planning Team at the beginning of the planning process. Due to the large geographic area, large number of participants and varying staffing levels of each participating jurisdiction, the Planning Team determined that utilization of the Combination Model would serve best to complete the planning process. In order to obtain information necessary for the update process, nine participation requirements were developed. The Planning Team determined that these nine participation requirements could be satisfactorily accomplished through a three-step process: first, through participation at county meetings. ****Note: if a jurisdiction was not able to attend the county meetings, this participation component could be met by working directly with MARC staff and their county planning team representative. In these cases, MARC staff met separately with the jurisdictions in person or via teleconference to gather the required information. Jurisdictions opting for this course of action are noted in Table P.1;* second, by completing a MARC-developed survey on land use, development and hazards; and finally, through utilization of the MARC-created, Web-based data warehouse to review and update hazard mitigation actions. This step applied only to those jurisdictions who participated in the 2004 hazard mitigation plan. Those jurisdictions who did not participate in the 2004 plan were required to develop a narrative for their mitigation goals and actions. Table P.2 is a sample page from the database. Completion of these three steps fulfilled the nine participation requirements defined as follows:

- 1.) Attended meetings or separate work sessions (see above ****Note*)
- 2.) Submitted inventory of existing plans relevant to hazard mitigation.
- 3.) Submitted list of hazards that affect the jurisdiction.
- 4.) Submitted description of what is at risk (including local critical facilities, if different than regional profile.)
- 5.) Developed goals for the community.
- 6.) Developed mitigation actions with an analysis/explanation of why those actions were selected.
- 7.) Prioritized actions emphasizing relative cost-effectiveness.
- 8.) Reviewed and commented on draft plan.

- 9.) Hosted opportunities for public involvement (e.g., linking local Internet presence to a plan Web site).

All of the jurisdictions listed as participants in the plan update met the minimum participation requirements as indicated in Table P.1 below. Participation requirements shown in the table correspond to the nine above-numbered requirements. An “X” indicates the jurisdiction has completed the requirement.

TABLE P.1: RECORD OF PARTICIPATION									
Jurisdiction	Participation Requirements								
	1	2	3	4	5	6	7	8	9
Clay County	X	X	X	X	X	X	X	X	X
Cass County	X	X	X	X	X	X	X	X	X
Jackson County	X	X	X	X	X	X	X	X	X
Platte County	X	X	X	X	X	X	X	X	X
Ray County	X	X	X	X	X	X	X	X	X
Belton	X							X	X
Blue Springs	X	X	X	X	X	X	X	X	X
Garden City	X	X	X	X	X	X	X	X	X
Gladstone	X	X	X	X	X	X	X	X	X
Grandview	X	X	X	X	X	X	X	X	X
Houston Lake	X	X	X	X	X	X	X	X	X
Independence	X	X	X	X	X	X	X	X	X
Kansas City, MO	X	X	X	X	X	X	X	X	X
Kearney	X	X	X	X	X	X	X	X	X
Lee's Summit	X	X	X	X				X	X
Liberty	X	X	X	X	X	X	X	X	X
Loch Lloyd	X	X	X	X	X	X	X	X	X
North Kansas City	X	X	X	X	X	X	X	X	X
Northmoor	***X	X	X	X	X	X	X	X	X
Oak Grove	X	X	X	X	X	X	X	X	X
Parkville	X	X	X	X	X	X	X	X	X
Peculiar	***X	X	X	X	X	X	X	X	X
Platte City	X	X	X	X	X	X	X	X	X
Pleasant Hill	***X	X	X	X	X	X	X	X	X
Raytown	X	X	X	X	X	X	X	X	X
Raymore	X	X	X	X	X	X	X	X	X
Riverside	X	X	X	X	X	X	X	X	X
Sni Valley FPD	X	X	X	X	X	X	X	X	X

TABLE P.1: RECORD OF PARTICIPATION									
Jurisdiction	Participation Requirements								
	1	2	3	4	5	6	7	8	9
Smithville	X	X	X	X	X	X	X	X	X
Strasburg	X	X	X	X	X	X	X	X	X
Tracy	X	X	X	X	X	X	X	X	X
Weatherby Lake	X	X	X	X	X	X	X	X	X
Weston	***X	X	X	X	X	X	X	X	X

***Note: Attended separate work session as described above

TABLE P.2: MITIGATION ACTIONS								
Flooding Mitigation Goals (numbered) Mitigation Actions (lettered)	Status of project	Priority	Applies to community assets (existing/ new)	Existing local planning mechanism through which the action was/will be implemented	Primary agency responsible for implementation/administration	Date for completion	Estimated cost (\$)	Funding source
1. Examine repetitive flood loss properties in each county and determine feasible and practical mitigation options.								
a. Work with owners of repetitive flood loss properties to identify feasible mitigation strategies and potential opportunities; determine property owners' interest in specific mitigation options.	Complete/Ongoing/Deleted/Deferred (if deleted or deferred, provide explanation)	Low/Med/High	New/Existing					

Participation for School Districts, Colleges and Universities

In addition to cities and villages, school districts, colleges and universities were invited to participate in the plan update. Since the fundamental capabilities and mission of educational institutions differ greatly from cities and villages, the Planning Team determined that school districts, colleges and universities

would have separate participation requirements. The team identified eight participation requirements that could be accomplished through the same general three-step process used for cities and villages. These were: 1) Participation at county meetings. ****Note: if a school district was not able to attend the county meetings, this participation component could be met by working directly with MARC staff and their county planning team representative. In these cases, MARC staff met separately with the districts in person or via teleconference to gather the required information. School districts opting for this course of action are noted in Table P.3.* 2) Completion of a MARC-developed survey of hazards and capabilities. 3) Development of mitigation goals and actions. No school districts participated in the 2004 Plan; therefore, completion of the Web-based mitigation actions data warehouse was not required. Table P.3 below is a record of participation for education institutions. Listed below are the eight corresponding participation requirements:

- 1.) Attended meetings or separate work sessions (see above ****Note*)
- 2.) Submitted inventory of existing plans relevant to hazard mitigation.
- 3.) Submitted list of hazards that affect the jurisdiction.
- 4.) Developed goals.
- 5.) Developed mitigation actions with an analysis/explanation of why those actions were selected.
- 6.) Prioritized actions, emphasizing relative cost-effectiveness.
- 7.) Reviewed and commented on draft plan.
- 8.) Hosted opportunities for public involvement (e.g., linking local Internet presence to a plan Web site).

District	Participation Requirements							
	1	2	3	4	5	6	7	8
Archie R-V	X	X	X	X	X	X	X	X
Lone Jack C-6	X	X	X	X	X	X	X	X
Fort Osage R-I	X	X	X	X	X	X	X	X
Harrisonville	X	X	X	X	X	X	X	X
Park Hill	X	X	X	X	X	X	X	X
Pleasant Hill	X	X	X	X	X	X	X	X
Sherwood Cass R-VIII	X	X	X	X	X	X	X	X
West Platte R-II	X	X	X	X	X	X	X	X
Metropolitan Community Colleges	X	X	X	X	X	X	X	X

Following FEMA's approval to this update "pending adoption", participating jurisdictions were provided with the below sample resolution to formally adopt the *Regional Multi-Hazard Mitigation Plan*.

Sample Adoption Resolution

(Name of Jurisdiction) _____

(Governing Body) _____

(Address) _____

RESOLUTION TO ADOPT THE *REGIONAL MULTI-HAZARD MITIGATION PLAN*

WHEREAS, *(Insert name of Jurisdiction)*, with the assistance from the Mid-America Regional Council, has gathered information and prepared the *Regional Multi-Hazard Mitigation Plan*; and,

WHEREAS, the *Regional Multi-Hazard Mitigation Plan* has been prepared in accordance with FEMA requirements at 44 C.F.R. 201.6; and,

WHEREAS, *(Insert name of Jurisdiction)* is a local unit of government that has afforded the citizens an opportunity to comment and provide input in the Plan and the actions in the Plan; and

WHEREAS, *(Insert the name of the governing body)* has reviewed the Plan and affirms that the Plan will be updated no less than every five years;

NOW THEREFORE, BE IT RESOLVED by *(Insert the name of the governing body)* that *(Insert name of Jurisdiction)* adopts the *Regional Multi-Hazard Mitigation Plan* as this jurisdiction's Multi-Hazard Mitigation Plan, and resolves to execute the actions in the Plan.

ADOPTED this _____ day of _____, 200__ at the meeting of the *(Insert the name of the governing body)*.

Insert appropriate signature lines and dates

(Mayor, Village Clerk, County Board Chair, etc.)