

# Taney County Hazard Mitigation Plan Update Kick-Off Meeting

July 11, 2017

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Southwest Missouri Council of Governments



Southwest Missouri  
Council of Governments

# Outline

- ▶ Introduction to Hazard Mitigation
- ▶ The Planning Process
- ▶ Participation Requirements
- ▶ Future Meeting Dates

# What is Hazard Mitigation and why is it important?

- ▶ Mitigation - taking action now to reduce or eliminate long-term risk to human life and property from hazard events.
  - ▶ Examples - FEMA tornado shelters, low water crossing improvements, policies limiting construction in flood plain areas, river bank improvements
- ▶ Mitigation Planning - process for communities to...
  - ▶ Identify hazards to which they are at risk
  - ▶ Assess the potential impact
  - ▶ Develop goals, objectives, and actions to reduce impacts; and
  - ▶ Prioritize and implement mitigation actions

# What is Hazard Mitigation and why is it important?

- ▶ Costs rising from natural disasters
  - ▶ Increased development - more exposure
  - ▶ Increased cost to the federal government
  - ▶ Increased frequency of natural disasters:
    - ▶ 1980s - 286
    - ▶ 1990s - 737
    - ▶ 2000s - 1,265
    - ▶ 2010-Present - 872

# Taney County Disaster Declarations 1990-Present

Disaster Number	Description	Declaration Date	Individual Assistance (IA) Public Assistance (PA)
4317	Severe Storms, Straight-line Winds, Flooding, Tornadoes	June 2, 2017	Individual & Public Assistance
4250	Severe Storms, Straight-line Winds, Flooding, Tornadoes	January 21, 2016	Individual & Public Assistance
4238	Severe Storms, Straight-line Winds, Flooding, Tornadoes	August 07, 2015	Public Assistance
4144	Severe Storms, Straight-line Winds, Flooding	September 06, 2013	Public Assistance
1980	Severe Storms, Tornadoes, Flooding	May 09, 2011	Individual & Public Assistance
1822	Severe Winter Storm	February 17, 2009	Public Assistance
1809	Severe Storms, Flooding, Tornado	November 13, 2008	Individual & Public Assistance
1773	Severe Storms, Flooding	June 25, 2008	Individual & Public Assistance
1749	Severe Storms, Flooding	March 19, 2008	Individual & Public Assistance
1631	Severe Storms, Tornadoes, Flooding	March 16, 2006	Individual Assistance
1463	Severe Storms, Tornadoes, Flooding	May 06, 2003	Individual Assistance
1412	Severe Storms, Tornadoes	May 06, 2002	Individual & Public Assistance
955	Flooding, Severe Storm	July 09, 1993	Individual Assistance

# The Disaster Mitigation Act of 2000

- ▶ Required by law for local governments to develop a hazard mitigation plan in order to receive funding for mitigation projects.
  - ▶ Funds available - 75/25
    - ▶ **Hazard Mitigation Grant Program (HMGP)** - assists in funding of mitigation projects during the reconstruction period after the declaration of a presidential disaster.
    - ▶ **Pre-Disaster Mitigation (PDM)**- provides funds on an annual basis for mitigation planning and the implementation of mitigation projects.
    - ▶ **Flood Mitigation Assistance (FMA)**- provides funds on an annual basis to reduce or eliminate risk of flood damage to buildings insured under the NFIP; repetitive and severe repetitive loss.
- ▶ Mitigation plans must be updated every five years to be eligible for mitigation funding

# The Planning Process



# 9 Tasks in the Planning Process

- ▶ Task 1: Determine the Planning Area and Resources → Completed
- ▶ Task 2: Build the Planning Team- Completed → YOU ARE THE TEAM!
- ▶ Task 3: Create an Outreach Strategy→ Today
- ▶ Task 4: Review Community Capabilities→ Questionnaire
- ▶ Task 5: Conduct a Risk Assessment → Meeting #2
- ▶ Task 6: Develop a Mitigation Strategy→ Meetings #3 and #4
- ▶ Task 7: Review and Adopt the Plan → Meeting #5 and on your own
- ▶ Task 8: Keep the Plan Current → That's YOU!
- ▶ Task 9: Create a Safe and Resilient Community→ That's YOU!



# Risk Assessment

## Natural Hazards

- ▶ Drought
- ▶ Dam Failure
- ▶ Earthquake
- ▶ Flood
- ▶ Heatwave
- ▶ Severe Land Subsidence (Sinkholes)
- ▶ Severe Thunderstorm
- ▶ Severe Winter Weather
- ▶ Wildfire
- ▶ Tornado

## Hazard Profile

- ▶ Hazard Description
- ▶ Geographic Location
- ▶ Severity/Magnitude/Extent
- ▶ Previous Occurrences
- ▶ Probability of Future Occurrences

## Vulnerability Assessment

- ▶ Vulnerability Overview
- ▶ Potential Losses to Existing Development
- ▶ Impact of Previous and Future Development
- ▶ Hazard Summary by Jurisdiction

## Problem Statement

# Risk Assessment

## Example: Flooding

<b>Taney County NCDC Flood Events by Location, 1997-2016</b>	<b># of Events</b>
<b>Unincorporated Taney County</b>	<b>15</b>
Highway J closed near Kirbyville (12/16/2001)	
Low water crossings, bridges, and low-lying areas (4/8/2002), (5/13/2002), (1/13/2005), (3/22/2008)	
Stockstill Park severely damaged and annual county fair cancelled due to flooding of Bull Shoals Lake (5/8/2002)	
Rivers and streams flooded (5/17/2002)	
Highway H, Columbus Road, and Fall Creek Road (3/4/2004)	
Columbus road at Bull Creek Bridge, intersection of Highway 176 and Molly Lane, and intersection of 176 and 160 near Rockaway Beach all flooded. Numerous low water crossings also inundated (4/23/2004)	
A section of Columbus Road near its intersection with Highway H flooded for several hours (3/4/2008)	
Lake Taneycomo and Turkey Creek flooded lowlands near streams (3/31/2008)	
Little Beaver Creek near Old Cheese Plant Road flooded from runoff of melting winter precipitation (3/21/2010)	
Route J closed in both directions near of Trigger Creek (12/21/2013)	
Highway 125 closed due to flooding at Brush Creek (11/17/2015)	
Numerous homes and businesses in the county damaged (12/27/2015)	
<b>City of Branson</b>	<b>1</b>
Retaining wall collapsed due to saturated ground. 8 cars damaged by falling wall (7/2/2015)	
<b>Village of Bull Creek</b>	<b>1</b>
30 homes evacuated (5/8/2002)	

Source: National Climatic Data Center

<b>Taney County NCDC Flash Flood Events by Location, 1997-2017*</b>	<b># of Events</b>
<b>Unincorporated Taney County</b>	<b>33</b>
Countywide/Unspecified (1/4/1998), (3/19/1998), (2/6/1999), (6/17/2000), (5/12/2002), (3/18/2008), (3/31/2008), (4/10/2008), (6/28/2008), (9/14/2008), (6/4/2016)	
Highway 125 north of Protem (7/9/1999)	
Low water crossings (7/28/2000), (5/24/2000), (4/7/2002)	
Northern Taney County, low water crossing and one washed out street (6/28/2001)	
Bull Creek basin low water crossing (5/9/2006)	
Multiple road flooding (5/10/2005), (2/16/2008), (8/7/2008), (4/25/2011), (8/5/2016)	
Highway 160 eas east of Kissee Mills (5/10/2007)	
Old Cheese Plant Road near Little Beaver Creek (10/29/2009)	
Highway 125 (4/23/2011), (7/7/2015), (8/30/2015)	
Houseman Creek Bridge at Columbus Road (4/18/2013)	
Route J (8/8/2013)	
Green Mountain Drive (4/3/2015)	
Upstream of Branson Landing (6/18/2015)	
Road, home, tractors, and livestock (8/30/2015)	
Low water crossing at Cross Timbers Road at Cane Creek (3/25/2017)	
<b>City of Branson</b>	<b>11</b>
Roark Road, Shepard of the Hills Expressway, and Fall Creek Road (5/9/1998)	
Multiple Street flooding (8/30/2003), (6/1/2007), (6/20/2007), (7/4/2007), (7/7/2015), (6/4/2016), (6/30/2016)	
Sycamore Church Road (11/1/2004)	
Inundated house north of Branson (9/2/2005)	
Roark Valley Road (7/9/2015)	
<b>City of Forsyth</b>	<b>6</b>
Unspecified (6/30/2007)	
Low-lying areas (7/9/1997)	
Low water crossings (4/24/2004), (1/12/2005)	
Columbus Road (7/7/2015), (7/9/2015)	
<b>City of Hollister</b>	<b>2</b>
Fall Creek Road (10/8/2009)	
Structures, cars, and roads (8/5/2013)	
<b>City of Rockaway Beach</b>	<b>1</b>
Intersection of Honey Lane and Sundown Lane completely washed out (6/23/2008)	
<b>Village of Bull Creek</b>	<b>2</b>
Structures, roads, and bridges (4/25/2011), (7/10/2015)	
<b>Village of Taneyville</b>	<b>2</b>
Middleton Road (8/11/1999)	
Low water crossings (7/11/2010)	

Source: National Climatic Data Center

\* = Through March, 2017

# Risk Assessment (cont.)

NCDC Taney County Flash Flood Events Summary, 1997 to 2016					
Year	# of Events	# of Deaths	# of Injuries	Property Damages	Crop Damages
1997	1	0	0	\$0	\$0
1998	3	0	0	\$0	\$0
1999	3	0	0	\$0	\$0
2000	3	0	0	\$0	\$0
2001	1	0	0	\$0	\$0
2002	2	0	0	\$0	\$0
2003	1	0	0	\$0	\$0
2004	2	0	0	\$0	\$0
2005	2	0	0	\$5,000	\$0
2006	2	0	0	\$0	\$0
2007	5	0	0	\$0	\$0
2008	9	0	0	\$5,640,000	\$0
2009	2	0	0	\$0	\$0
2010	1	0	0	\$0	\$0
2011	7	0	0	\$10,000,000	\$0
2013	4	0	0	\$1,000,000	\$0
2015	2	0	0	\$50,000	\$0
2016	4	0	0	\$100,000	\$0
<b>Total</b>	<b>54</b>	<b>0</b>	<b>0</b>	<b>\$16,795,000</b>	<b>\$0</b>

Source: NCDC, data accessed June, 2017

# Risk Assessment (cont.)

NCDC Taney County Riverine Flood Events Summary, 1997 to 2015					
Year	# of Events	# of Deaths	# of Injuries	Property Damages	Crop Damages
2001	1	0	0	\$0	\$0
2002	4	0	0	\$400,000	\$0
2004	2	0	0	\$0	\$0
2005	1	0	0	\$0	\$0
2008	3	0	0	\$0	\$0
2010	1	0	0	\$0	\$0
2013	1	0	0	\$0	\$0
2015	3	0	0	\$3,050,000	\$0
<b>Total</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>\$3,450,000</b>	<b>\$0</b>

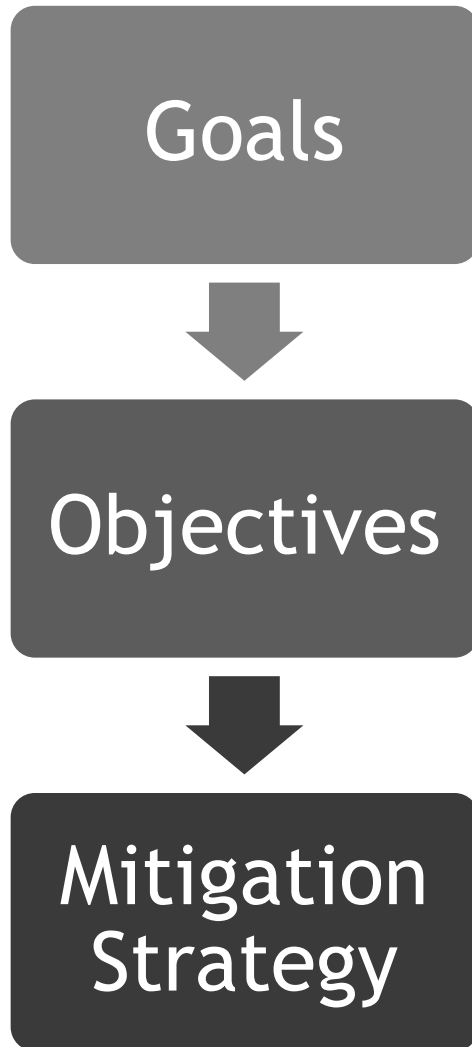
Source: NCDC, data accessed June, 2017

# Risk Assessment (cont.)

Total Flood Exposure and Estimated Losses by Jurisdiction					
Jurisdiction	Residential	Commercial	Agricultural	Estimated Exposure	Estimated Loss
Branson	\$8,883,950	\$7,714,360	\$43,630	\$16,641,940	\$832,097
Forsyth	\$74,430	\$2,530	\$520	\$77,480	\$3,874
Hollister	\$2,770,590	\$2,869,660	\$14,900	\$5,655,150	\$282,758
Merriam Woods	\$22,510	\$1,230	\$0	\$23,740	\$1,187
Rockaway Beach	\$861,560	\$748,380	\$0	\$1,609,940	\$80,497
Bull Creek	\$442,050	\$68,810	\$640	\$511,500	\$25,575
Unincorporated County	\$16,513,000	\$14,099,930	\$266,800	\$30,879,730	\$1,543,987
<b>Taney County Total</b>	<b>\$29,568,090</b>	<b>\$25,504,900</b>	<b>\$326,490</b>	<b>\$55,399,480</b>	<b>\$2,769,974</b>

Source: Taney County Parcel Data; Missouri Structures Data

# Develop Mitigation Strategies



- ▶ Reference completed questionnaires
- ▶ Risk Assessment
- ▶ Current needs of community
- ▶ Identify strengths and weaknesses

# Review & Prioritize Mitigation Strategies

## ▶ STAPLEE score

- ▶ Social
- ▶ Technical
- ▶ Administrative
- ▶ Political
- ▶ Legal
- ▶ Economic Environmental

## ▶ Prioritizes and determines feasibility

**Handout 16-7: STAPLEE Criteria Worksheet**

**Worksheet #4 Evaluate Alternative Mitigation Actions** **step 2**

1. Fill in the goal and its corresponding objective. Use a separate worksheet for each objective. The considerations under each criterion are suggested ones to use; you can revise these to reflect your own considerations (see Table 2-1).

2. Fill in the alternative actions that address the specific objectives the planning team identified in Worksheet #1.

3. **Scoring:** For each consideration, indicate a plus (+) for favorable, and a negative (-) for less favorable.

When you complete the scoring, negatives will indicate gaps or shortcomings in the particular action, which can be noted in the Comments section. For considerations that do not apply, fill in N/A for not applicable. Only leave a blank if you do not know an answer. In this case, make a note in the Comments section of the "expert" or source to consult to help you evaluate the criterion.

Goal: \_\_\_\_\_

Objective: \_\_\_\_\_

STAPLEE Criteria	S (Social)	T (Technical)	A (Administrative)	P (Political)	L (Legal)	E (Economic)	E (Environmental)																
Considerations → for Alternative Actions ↓	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-term Solution	Secondary Impacts	Staffing	Funding Allocated	Administrative/Operational	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefits of Action	Cost of Action	Contributes to Economic Goals	Outside Funding	Impacts on Land/Water	Effect on Endangered Species	Effect on HAZMAT	Consistent with Community Environmental Goals	Consistent with Federal Laws	

Source: Federal Emergency Management Agency. 2003. *State and Local Mitigation Planning How-To Guide: Developing the Mitigation Plan – Identifying Mitigation Actions and Implementation Strategies*. FEMA. [http://www.fema.gov/fima/planning\\_howto3.shtm](http://www.fema.gov/fima/planning_howto3.shtm)



# Adoption of Hazard Mitigation Plan

- ▶ Each participating jurisdiction is required to adopt hazard plan
  - ▶ Signed by a certified official
- ▶ Mail, email, or fax will be acceptable

**Barry County, Missouri**  
Resolution # *91516*

**ADOPTING THE BARRY COUNTY MULTI-JURISDICTIONAL  
NATURAL HAZARD MITIGATION PLAN (UPDATED 2016)**

**Whereas**, The Barry County Commission 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 ("Disaster Mitigation Act") emphasizing the need for pre-disaster mitigation of potential hazards;

**Whereas**, the Disaster Mitigation Act made available hazard mitigation grants to state and local governments; and

**Whereas**, 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**, Barry County fully participated in the hazard mitigation planning process to prepare this Multi-Jurisdictional Local Hazard Mitigation Plan; and

**Whereas**, the Missouri State Emergency Management Agency and the Federal Emergency Management Agency Region VII officials will review the "Barry County Multi-Jurisdictional Local Hazard Mitigation Plan," and approved it as to form and content; and

**Whereas**, the Barry County Commission desires to comply with the requirements of the Disaster Mitigation Act and to augment its emergency planning efforts by formally adopting the Barry County Multi-Jurisdictional Local Hazard Mitigation Plan; and

**Whereas**, adoption by the governing body of Barry County demonstrates the jurisdictions' commitment to fulfilling the mitigation goals outlined in this Multi- Jurisdictional Local Hazard Mitigation Plan; and

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

**Now, therefore, be it resolved**, that the Barry County Commission has adopted the "Barry County Multi-Jurisdictional Local Hazard Mitigation Plan" as an official plan.

Date: 9-15-16

Certifying Official: *Jeffrey Winters*

# Keep the Plan Current & Create Safe Community

- ▶ FEMA requires a formal plan maintenance process to ensure that the mitigation plan remains an active and relevant document
- ▶ Your jurisdiction and County Emergency Management Officials
- ▶ Review plan and strategies annually

# Participation Requirements



# Participation

- ▶ In order to officially “participate” a jurisdiction must:
  - ▶ Complete Capabilities Assessment Questionnaire
  - ▶ A representative must be in attendance at a minimum of two meetings
  - ▶ Record in-kind time and complete timesheets
  - ▶ Adopt the Hazard Mitigation Plan
- ▶ Participation of your jurisdictions gives you access to grant funds provided by FEMA.

# Mitigation Plan Funding

- ▶ SEMA covers 75% of the cost
- ▶ Grants require a 25% non-federal match
  - ▶ Local cash match
  - ▶ In-kind time and effort

# Time and Effort Rates

- ▶ Hourly rate calculation
  - ▶ Annual Salary/2080
- ▶ Hourly rate for volunteer time in Missouri:
  - ▶ \$21.57
- ▶ Federal mileage rate
  - ▶ 54¢ per mile

# Time Sheets

- ▶ Fill out accurately
- ▶ Keep track of hours and mileage
  - ▶ Round up
- ▶ Elected officials **MAY NOT** count their time

**IN-KIND DOCUMENTATION**  
 Barry County Multi-Jurisdictional Hazard Mitigation Plan 2016

Reporting Month:

**LABOR**

Date	Service Performed	Hours	Mileage (Roundtrip)
<b>Total</b>		0	0

Organization:

Employee Name:

Employee Title:

Hourly Rate:       Total Labor Charge:       Total Mileage Charge:

Comments: \_\_\_\_\_  
 \_\_\_\_\_

\_\_\_\_\_  
Employee Signature

\_\_\_\_\_  
Supervisor Signature

# Future Meetings

- ▶ Meeting 2: July 25, 9 a.m.
  - ▶ Facilitated Risk Assessment Discussion
  - ▶ Questions
- ▶ Meeting 3: August 22, 9 a.m.
  - ▶ Review Goals, Objectives & Mitigation Strategies
  - ▶ Questions
- ▶ Meeting 4: September 26, 9 a.m.
  - ▶ STAPLEE Scoring of Mitigation Strategies
  - ▶ Questions
- ▶ Meeting 5: October 24, 9 a.m.
  - ▶ Final Wrap-Up
  - ▶ Plan Maintenance

**Draft Plan Submitted to SEMA: November 1, 2017**  
**Final Plan Approval By: January 17, 2018**



Thank you for your time!

Any questions?

# Contact Information

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For more information, visit our website

[www.smcog.org](http://www.smcog.org)