

# ALABAMA POST-FLOOD RECOVERY GUIDEBOOK



**AMEC Environment & Infrastructure, Inc.**

Cindy Popplewell, PE, CFM

Assisting Local Floodplain Managers



# Overview

- ❑ Background
  - ❑ Goals of the Post-Flood Recovery Guidebook
- ❑ Guidebook Development Process
- ❑ Review of Guidebook
  - ❑ Preparedness
  - ❑ Response
  - ❑ Recovery
  - ❑ Mitigation
- ❑ Implementation / Next Steps



# Background

**Goal** of the Guidebook is to assist communities in:

- Responding to a flood or hurricane event
- Enforcing the National Flood Insurance Program (NFIP) requirements for rebuilding efforts
- Outlining suitable disaster recovery measures that will help reduce future flood damages





# Background

**Goal** of the Guidebook is to also prepare communities to face the challenges of recovery including:

- ❑ Political pressure to rebuild immediately
- ❑ Impacts of improper/ noncompliant rebuilding on flood insurance and NFIP compliance
- ❑ Procedures for assessing the level of damages received from impacted structures
- ❑ Coordination with other local, state, and federal agencies

# Guidebook Development Process



- Planning Team
  - ADECA OWR
  - Alabama EMA
  - Local Floodplain Administrators
- Research / Data Collection
  - Draft Outline of Guidebook
  - Planning Team Meeting
- Draft Versions
  - Review/Comment Period
- Final Version of Guidebook

## Planning Team

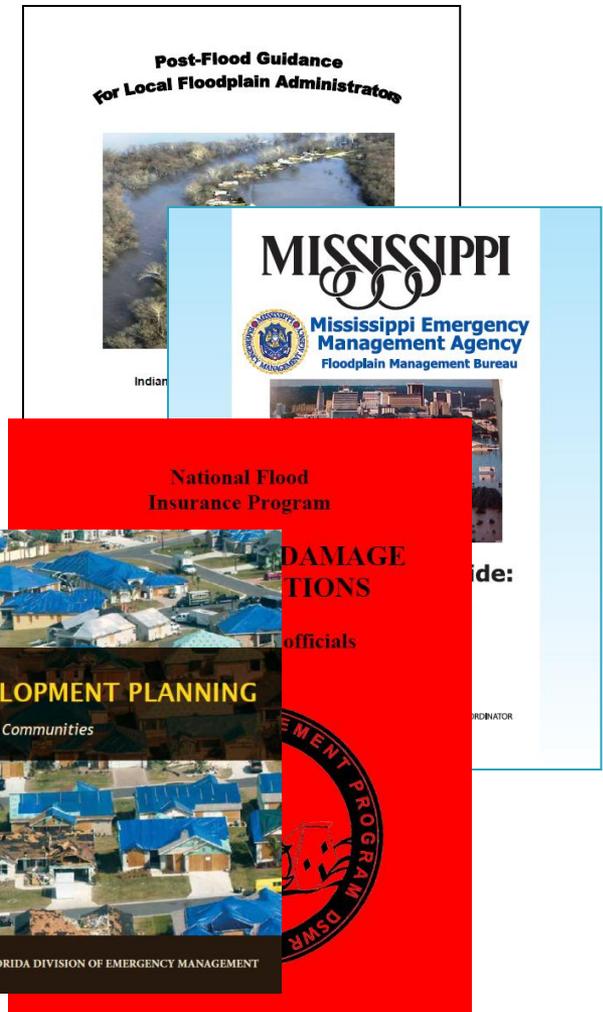
- **ADECA, Office of Water Resources**
  - Corey Garyotis, PE – State NFIP Coordinator
  - Leslie Durham, PE – Floodplain Management Branch Chief
- **Alabama Emergency Management Agency**
  - Linda Egger – Program Coordinator
- **Local Floodplain Administrators**
  - City of Birmingham – Denise Bell
  - City of Mobile – Nick Amberger
  - City of Orange Beach – Lannie Smith
  - City of Prattville – Joel Duke
  - City of Tuscaloosa – Chad Christian
  - Mobile County – Peter Olivero

# Guidebook Development Process



## Research / Data Collection

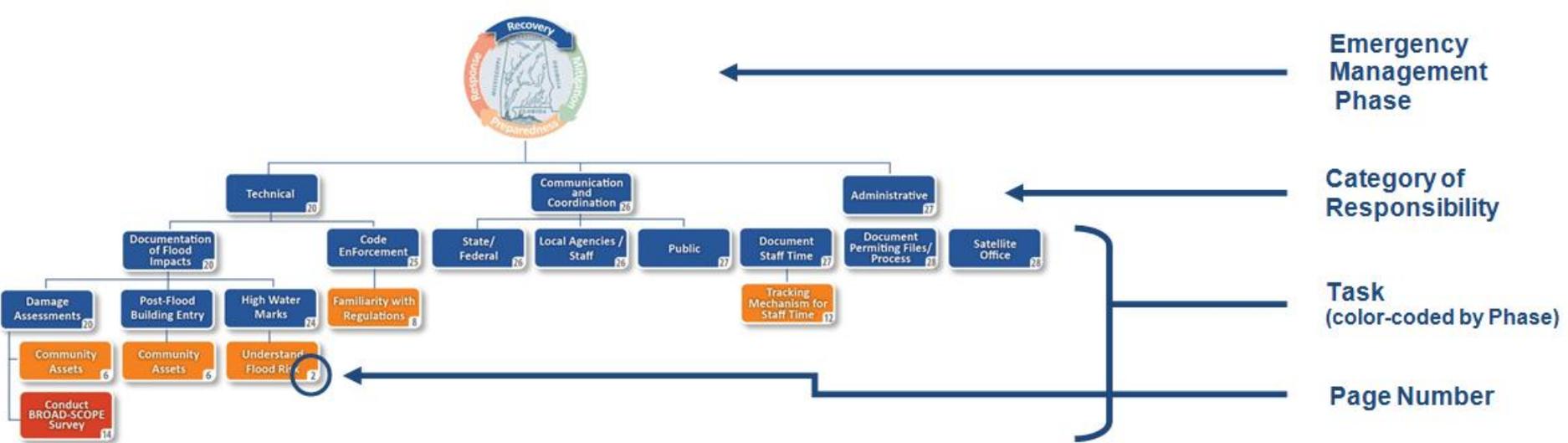
- ❑ Alabama-specific Plans
  - State Emergency Operations Plan
  - Long-Term Recovery (concurrent project)
  - State Hazard Mitigation Plan
- ❑ ASFPM Community Guides
- ❑ FEMA Public Assistance
- ❑ FEMA Long Term Recovery
- ❑ Other State Recovery Plans
  - Indiana
  - Mississippi
  - Ohio
  - Florida



# Review of Guidebook



- Four Phases of Emergency Management
  - Technical Responsibilities
  - Communication and Coordination Responsibilities
  - Administrative Responsibilities
- Implementation Tasks link Phases Together
- Appendices with assistance documents



# Sample Page



Category of Responsibility



Task



Emergency Management Phase



## I. Technical Responsibilities

When a disaster or emergency occurs, it is the responsibility first of the local community and the state or tribe to respond. Your local emergency manager (EM) is responsible for disaster and emergency response activities, such as evacuation and rescue, and coordination with the county, state and federal emergency management agencies. You, as the local floodplain administrator, may also have a role during the emergency in addressing the immediate flood protection needs of your residents.

During a flood event, the local floodplain administrator may be tasked, in coordination with the local EM and local emergency operations plan (EOP), to:

### a. Control Access to Flood Impacted Areas

- Barricade areas of concentrated flooding to control entry;
- Monitor areas that were identified as frequently flooded areas in "Understanding the Risk of Flooding to your Community", See Preparedness Section; and
- Coordinate with the highway department for road and bridge closures.

### b. Conduct Preliminary BROAD-SCOPE Impact Assessments

- Conduct a "windshield survey" to view the flood-impacted area and make general notes on the extent, height/depth, and velocity of floodwaters;
- Take photographs of the flood conditions;
- Make individual structure notes and take photographs (if possible) for damage documentation; and
- Use this information to assist in your flood recovery efforts.

## c. Assist the Joint Preliminary Damage Assessment (PDA) Team

- Assist in the tour of damaged sites with the joint federal/state damage assessment team. Be sure to bring to their attention any environmental or historic issues that may be present. Provide information for any known flood insurance coverage of locally owned structures.
- You should also explain what immediate expenditures might be associated with any emergency work you have identified. This information may be used to provide you some expedited funding, if a declaration is obtained for your area.



Police and public works employees place barricades to block traffic from flooded roads. (The Huntsville Times/Dave Dieter)



## State/Federal Contact Information:

### AEMA PUBLIC ASSISTANCE CONTACTS

**Benjie Abbott** - Recovery Division Chief  
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**Matthew Malone** - Debris Operations Section Chief  
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**Craig Bolling** - Public Assistance Specialist  
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### AEMA HAZARD MITIGATION CONTACTS

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**Valerie Wallace** - Financial Specialist  
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### ADECA OFFICE OF WATER RESOURCES

**Leslie Durham, P.E.** - Floodplain Management Branch Chief  
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**Corey Garyotis, P.E.** - NFIP Coordinator  
[Corey.Garyotis@adeca.alabama.gov](mailto:Corey.Garyotis@adeca.alabama.gov)  
334-353-0853 Office

### FEDERAL CONTACTS

**FEMA Region IV - Mitigation Division**  
<http://www.fema.gov/region-iv-mitigation-division>  
Roy McClure, CFM - Floodplain Management  
[Roy.McClure@fema.dhs.gov](mailto:Roy.McClure@fema.dhs.gov)

**FEMA Region IV - Recovery Division**  
<http://www.fema.gov/region-iv-recovery-division>  
Valerie Rhoads, Public Assistance Branch Chief  
Jackie Reginello, Individual Assistance Branch Chief

**USGS - Alabama Water Science Center**  
Athena P. Clark, Director, P.E.  
(334) 395-4141  
[athclark@usgs.gov](mailto:athclark@usgs.gov)

**NWS - Senior Service Hydrologist, Birmingham**  
Roger McNeil  
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Understand  
Flood Risk 2

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Flood  
Hazard 2

Community  
Assets 6

Administrative 11

Staff  
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Tracking  
Mechanism for  
Staff Time 12

# Response



KOHX -- Nashville, TN/Old Hickory

21:59:11 UTC Mon 13 October 2014

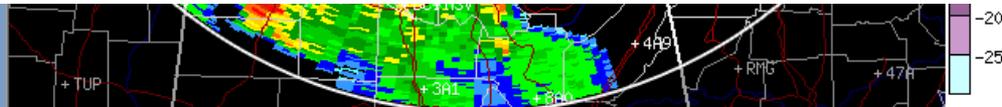
Base Reflectivity: 0.5 degrees, Precip Mode

(c) UCAR <http://www.rap.ucar.edu/weather/radar/>



Precipitation in inches during the previous

Station Number	Station name	Date/Time	1 hour	2 hours	4 hours	6 hours	12 hours	24 hours	7 days
<b>● Bedford County</b>									
<a href="#">03597860</a>	DUCK RIVER AT SHELBYVILLE, TN	08/05 09:30 CDT	--	--	--	--	--	--	--
<b>● Cheatham County</b>									
<a href="#">03434500</a>	HARPETH RIVER NEAR KINGSTON SPRINGS, TN	10/14 13:30 CDT	0	0	0.01	0.01	0.48	2.99	4.86
<b>● Clay County</b>									
<a href="#">03417500</a>	CUMBERLAND RIVER AT CELINA, TN	10/14 13:30 CDT	0	0	0.14	0.8	1.23	2.26	6.24
<b>● Coffee County</b>									
<a href="#">03578500</a>	BRADLEY CREEK NR PRAIRIE PLAINS, TENN.	10/14 13:30 CDT	0	0	0	0.2	0.67	1.67	5.86
<a href="#">352515086011702</a>	Cf:G-028 AEDC-177	10/14 13:00 CDT	0	0	0.03	0.45	1.13	2.19	5.5
<b>● Davidson County</b>									
<a href="#">03426387</a>	MANSKER CREEK AT HWY 41 NEAR MILLERSVILLE, TN	10/14 13:45 CDT	0	0	0	0	0.59	3.04	6.39
<a href="#">03430550</a>	MILL CREEK NEAR NOLENSVILLE, TN	10/14 13:45 CDT	0	0	0	0	0.46	2.24	4.56
<a href="#">03431000</a>	MILL CREEK NEAR ANTIOCH, TN	10/14 13:00 CDT	0	0	0	0.05	0.42	1.86	5.26
<a href="#">03431040</a>	SEVENMILE CREEK AT BLACKMAN RD,NR NASHVILLE TN	10/14 13:45 CDT	0	0.01	0.01	0.01	0.35	1.99	5.45
<a href="#">03431100</a>	W F BROWNS C AT GLENDALE LANE AT NASHVILLE, TN	10/09 13:30 CDT	Mnt	Mnt	Mnt	Mnt	Mnt	Mnt	Mnt
<a href="#">03431530</a>	WHITES C AT OLD HICKORY BLVD AT WHITES CREEK, TN	10/14 13:45 CDT	0	0	0	0	0.46	2.92	5.57
<a href="#">03431655</a>	RICHLAND CREEK AT HARDING PLACE AT BELLE MEADE, TN	10/14 13:45 CDT	0	0.01	0.01	0.01	0.37	2.32	5.45
<a href="#">03433500</a>	HARPETH RIVER AT BELLEVUE, TN	10/14 13:30 CDT	0	0.02	0.02	0.02	0.45	2.59	5.23
<b>● Shelby County</b>									
<a href="#">07030240</a>	LOOSAHATCHIE RIVER NEAR ARLINGTON, TN	10/14 13:00 CDT	0	0	0	0	0.05	0.98	1.42
<a href="#">070303505</a>	BIG CREEK AT SLEDGE ROAD NEAR MILLINGTON, TN	10/14 13:45 CDT	0	0	0	0	0.06	1.19	--
<a href="#">07030600</a>	WOLF RIVER NEAR COLLIERVILLE	10/14 13:45 CDT	0	0	0	0	0.02	0.73	1.12
<a href="#">07031650</a>	WOLF RIVER AT GERMANTOWN, TN	10/14 12:45 CDT	0	0	0	0	0.09	1.51	1.9
<a href="#">07031692</a>	FLETCHER CREEK AT SYCAMORE VIEW ROAD AT MEMPHIS	10/14 13:30 CDT	0	0	0	0	0.11	1.49	1.76
<a href="#">07032200</a>	NONCONNAH CREEK NEAR GERMANTOWN, TN	10/14 13:45 CDT	0.01	0.01	0.01	0.01	0.03	1.4	2.07
<a href="#">070322435</a>	NONCONNAH CREEK AT FARRISVIEW RD AT MEMPHIS, TN	10/14 13:45 CDT	0	0	0	0	0.07	1.58	1.98
<a href="#">07032252</a>	NONCONNAH CREEK AT RIVERPORT RD AT MEMPHIS, TN	10/14 13:45 CDT	0	0	0	0	0.03	1.22	1.93



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# Documentation of Flood Impacts

- Damage Assessments
  - Defining the Area for Assessments
  - Selecting Method
    - FEMA's SDE
    - Rapid Depth Damage Estimate
  - Preparing for Field Deployment
- Post-Flood Building Entry
  - ATC-45 Method
  - Green, Yellow, Red Placards
- Collect High Water Marks



Depth in feet to LAG	ONE STORY		TWO OR MORE		SPLIT LEVEL		Y
	Yes	No	Yes	No	Yes	No	
16	81.1%	80.7%	76.4%	69.2%	69.3%	84.4%	S
15	81.1%	80.2%	76.4%	67.7%	69.3%	83.8%	S
14	81.1%	79.5%	75.4%	65.9%	69.3%	81.7%	S
13	81.1%	78.5%	73.7%	63.8%	69.3%	78.4%	S
12	81.1%	77.2%	71.4%	61.4%	68.8%	73.9%	S
11	81.1%	75.4%	68.4%	58.7%	67.2%	68.6%	S
10	80.1%	73.2%	64.8%	55.7%	64.8%	62.6%	S
9	77.7%	70.5%	60.8%	52.4%	61.6%	56.1%	S
8	74.2%	67.2%	56.4%	48.8%	57.8%	49.2%	S
7	69.8%	63.2%	51.8%	44.9%	53.5%	42.3%	S
6	64.5%	58.6%	46.9%	40.7%	48.6%	35.5%	S
5	58.6%	53.2%	41.9%	36.2%	43.8%	28.9%	S
4	52.2%	47.1%	36.9%	31.4%	38.6%	22.8%	S
3	45.5%	40.1%	31.9%	26.3%	33.4%	17.4%	S
2	38.7%	32.1%	27.0%	20.9%	28.2%	12.9%	S
1	32.0%	23.3%	22.3%	15.2%	23.2%	9.4%	S
0	25.5%	13.4%	17.9%	9.3%	18.5%	7.2%	S
-1	19.4%	2.5%	13.9%	3.0%	14.2%	6.4%	S



# Code Enforcement

## □ Triage Process

- Damaged structures outside SFHA
- Structures <40% clearly NOT substantially damaged
- Structures 40-60%
- Structures >60% clearly substantially damaged

## □ Permitting Process

- Fair Market Value
- Cost to Restore Structure to Pre-Damaged Conditions
- Permit Fees
- Building Protection Requirements
- Moratorium on Construction

# Mitiga

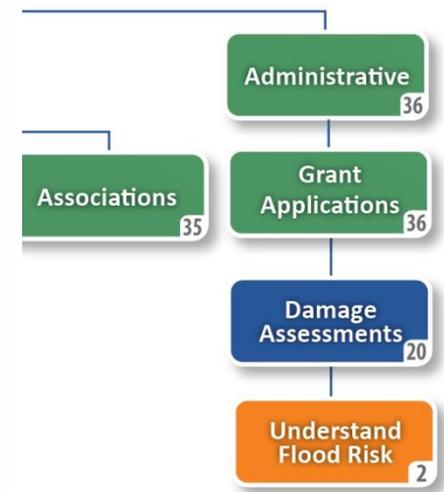
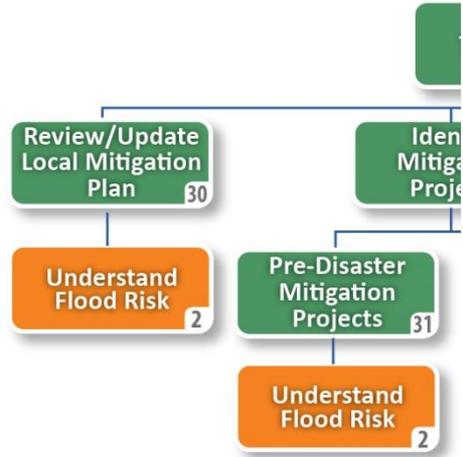
## Alabama Association of Floodplain Managers



AAF<sup>FM</sup> was organized and is operated to promote education, policies and activities that prevent and/or mitigate future flood losses, costs and human suffering caused by flooding in the State of Alabama and to protect the natural and beneficial functions of Alabama floodplains.

Membership is open to local and state officials, engineers, land surveyors, planners, building officials, engineering contractors and individual citizens interested or engaged in the management of floodplains in Alabama. AAF<sup>FM</sup> sponsored conferences and seminars provide up-to-date educational programs and network opportunities with others interested and experienced in floodplain management.

For more information, visit [www.aafmfloods.org](http://www.aafmfloods.org)





# Appendices

- Preparedness
  - Recommended Training Courses for each phase
- Recovery
  - SDE – Condensed Procedural Guide
  - Rapid Depth-Damage Estimate – Condensed Procedural Guide
  - Sample Door Tag
  - ATC-45 Placard Information
  - Recommended Public Outreach Information
    - FloodSmart Outreach Toolkit and FEMA SDE Desk Reference
  - Post-Flood Recovery Guide for Elected Officials
- Mitigation
  - HMGP Letter of Intent
  - HMGP Main Application
- References

# Implementation / Next Steps



- ❑ Incorporate Final Comments
- ❑ Publish / Distribute
- ❑ Prepare Training Course for Local Floodplain Managers
- ❑ Track Use in Post-Disaster Environment

# ALABAMA POST-FLOOD RECOVERY GUIDEBOOK



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Thank You!