Disasters & The Disaster Response Inspector

Presenter: William Bracken

Tuesday, September 12, 2017

8:00 AM - 9:30 AM
Disaster Planning and the Disaster Response Inspector
Disaster Planning and the Disaster Response Inspector

Course Objectives

Review disaster planning basics

Review the contribution and qualifications of Disaster Response Inspectors

Review the National Disaster Response Network
No Community is Immune

In 2016 more than 100 million people within the US (1/3 of it's population) were adversely impacted by a natural disaster.

<table>
<thead>
<tr>
<th>Date (2016)</th>
<th>Event</th>
<th>Area</th>
<th>Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>Blizzard</td>
<td>Southeast, Mid Atlantic &amp; Northeast (11 States)</td>
<td>103 M people &amp; 10,000's Buildings</td>
</tr>
<tr>
<td>June</td>
<td>Flood</td>
<td>Appellation Mountains (2 States)</td>
<td>Infrastructure &amp; 1000's of buildings</td>
</tr>
<tr>
<td>August</td>
<td>Flood</td>
<td>Louisiana</td>
<td>Infrastructure &amp; 1000's of buildings</td>
</tr>
<tr>
<td>August / September</td>
<td>Tropical Storm &amp; Flood</td>
<td>Southeast (3 States)</td>
<td>Infrastructure &amp; 1000's of buildings</td>
</tr>
</tbody>
</table>

What Is Recovery?

The task of restoring infrastructure and returning a community to normal operation.

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Outline

- Event Phases
  - Disaster Planning
  - Post-Disaster Assessments
  - Disaster Response Inspectors

Disaster Planning: Event Phases

[Diagram showing the phases of disaster planning: Preparedness, Response, Mitigation, Recovery]
## Event Phases: Response

- Begins at the time of the event
- Activities taken during or directly after an emergency occurs based on the unique conditions set by the disaster
- Involves 1st and 2nd responders

## Event Phases: Recovery

- Begins after the initial response but before the response concludes
- Coordinated through or in conjunction with Emergency Management
- Involves 2nd responders and normal operations
Event Phases: Mitigation

- Begins within the recovery phase
- Preventive actions taken to minimize the long-term effects of a disaster on persons, property and the community
- Includes the development of disaster plans

Event Phases: Preparedness

- Begins within the mitigation phase
- Actions taken in advance of an emergency to build and maintain a local jurisdiction’s capability to manage a disaster
- Includes training and implementation of the disaster plan
When Does Recovery Begin?

Immediately after the event during the Response phase

Outline

- Event Phases
- Disaster Planning
- Post-Disaster Assessments
- Disaster Response Inspectors
Disaster Planning

Our Disaster Recovery Plan Goes Something Like This...

Disaster Planning: Disaster Plan Development

The Disaster Plan

- Coordinated with the jurisdiction
- Prepares department to assist community
- Prepares department to work with outside support
Disaster Plan Development: 5 Basic Rules

1) Keep it simple

*Keeping a plan simple increases its longevity*

2) Based the plan on an org chart not personalities

*Attrition is the greatest enemy of a disaster response plan*
Disaster Plan Development: 5 Basic Rules

3) Based the plan on incidents most likely to occur

*Regional and seasonal factors need to be considered*

Disaster Plan Development: 5 Basic Rules

4) Publish the plan

- **Staff**
- **Management**
- **Emergency Management**
- **other departments**
- **elected official**
Disaster Plan Development: 5 Basic Rules

5) Update and review the plan regularly

*Update the plan with basic information monthly*

*Review the plan annually*
Disaster Planning: Disaster Plan Development

Plan Basics

- Internal information
- External information
- Event preplanning

Disaster Plan Development: Internal Information

Questions to Answer

- Who will be in charge?
- Where will they meet?
- How will they communicate?
- How will they keep track of what is going on?
- Who is tracking the money?
Disaster Plan Development: Internal Information

- Department Org chart with positions and responsibilities

- Detailed contact information for department personnel

<table>
<thead>
<tr>
<th>Current Staff Name</th>
<th>Position</th>
<th>Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ken Jenkins</td>
<td>Director</td>
<td>Direction and control</td>
</tr>
<tr>
<td>Mary Rodriguez</td>
<td>Support Staff</td>
<td>Maintain disaster information</td>
</tr>
<tr>
<td>Lisa Highland</td>
<td>Building Inspector</td>
<td>Damage Assessment Team 1</td>
</tr>
<tr>
<td>Rich Becker</td>
<td>Mechanical Inspector</td>
<td>Damage Assessment Team 1</td>
</tr>
<tr>
<td>Mike Carroll</td>
<td>Building Inspector</td>
<td>Damage Assessment Team 2</td>
</tr>
<tr>
<td>Jack Jones</td>
<td>Electrical Inspector</td>
<td>Damage Assessment Team 2</td>
</tr>
<tr>
<td>Paul Rice</td>
<td>Plumbing Inspector</td>
<td>Coordinate field information system</td>
</tr>
</tbody>
</table>

- Cell phone
- Office phone
- Home Address
- Vehicle
- Equipment Issued
Disaster Plan Development: Internal Information

- Identify how will you keep track of what you spent above and beyond your normal operating costs
  - Equipment purchases
  - Staff overtime
  - Temp help
  - Food budget for mutual aid workers

Disaster Plan Development: Internal Information

- Be sure to stay within the parameters of the emergency authorities provided under law
- Be sure to comply with appropriate federal and state laws
- Identify how to manage day-to-day operations while dealing with the event
Disaster Plan Development: External Information

Questions to Answer

- Who will your department answer to / work with?
- What information is essential to be communicated?
- How will you communicate your need for volunteers?

Disaster Plan Development: External Information

- Emergency Management Org chart with positions and responsibilities
- Mutual Aid agreements and MOUs

Emergency Manager

Building Official
Disaster Plan Development: External Information

- Establish a relationship with your jurisdiction’s PIO
- Identify your “best” department spokesperson
- Identify how your department will use and coordinate volunteers

Disaster Plan Development: Event Planning

Questions to Answer

- What are the major threats and vulnerability?
- What are the major tasks?
- What must be completed within 24-hours? Within 72-hours?
Disaster Plan Development: Event Preplanning

- Identify the greatest threats that your community faces
- Identify the areas most vulnerable to the threats identified
- Identify scope of response and needs
- Identify appropriate forms and record keeping

Disaster Planning: Available Planning Materials

- Vulnerability Data
- Wind Data
- Flood Data
- Seismic Data
Available Planning Materials:
Vulnerability Data

Critical Infrastructure & Hazards Map

Available Planning Materials:
Vulnerability Data

Property Appraiser
Available Planning Materials:
Wind Data

Topography Maps

Available Planning Materials:
Wind Data

Wind Speed Maps
Available Planning Materials:
Flood Data

Flood Maps

Available Planning Materials:
Flood Data

NOAA Surge
Available Planning Materials: Seismic Data

USGS Seismic Maps

Disaster Planning: Training

Trained and knowledgeable personnel are essential for the prompt and effective execution of the emergency management plan.
Disaster Planning: Training

Education and certification along with exercising the plan make up the preparedness phase of the event cycle

Training: Exercising the Plan

Methods

- Orientation seminar
- Drill
- Tabletop exercise
- Functional exercise
- Full-scale exercise
Training: Exercising the Plan

Benefits
- Reveals plan weakness
- Reveals gaps in resources
- Improves coordination
- Clarifies roles and responsibilities
- Improves individual performance

Outline
- Event Phases
- Disaster Planning
- Post-Disaster Assessments
- Disaster Response Inspectors
How Does Recovery Begin?

By utilizing 2nd Responders to determine whether structures are suitable for re-habitation

Post-Disaster Assessments

- ATC 20 & 45 Assessments
- Earthquake Evaluations
- Wind & Flood Evaluations
- Practice Examples
Post-Disaster Assessments: ATC 20 & 45

Using the ATC procedures used to classify buildings

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Post-Disaster Assessments: ATC 20 & 45

Re-Habitation is based on
Life Safety (egress) and
Structural Safety (load path)

Life safety is based on
adequate egress
Disasters and the Disaster Response Inspector

Post-Disaster Assessments:
ATC 20 & 45

Structural safety is based on an adequate load path within the structural system

Post-Disaster Assessments:

Post-Earthquake Safety Evaluation of Buildings
- Earthquake Damage

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Post-Disaster Assessments: Earthquake (ATC 20)

Rapid Evaluation

Detailed Evaluation

Engineering Evaluation

Post-Disaster Assessments:
Safety Evaluation of Buildings after Wind-Storms and Floods

- Tornado
- Hurricane
- Flooding
**Post-Disaster Assessments:**
**Wind & Flood (ATC 45)**

- **Structure Identified for Evaluation**
  - Rapid Evaluation (Chapter 3)
  - Apparently OK
    - Post Inspected
  - Questionable/Impaired
    - Post Restricted Use
  - Obviously Unsafe
    - Post Unsafe
- **Detailed Evaluation** (Chapters 4-6)
  - Safe, but may need repairs
    - Post Inspected
  - Questionable/Impaired
    - Post Restricted Use
  - Unsafe, must be repaired or removed
    - Post Unsafe
- **Engineering Evaluation** (By owner's engineer or consultant)
  - Safe, but needs repairs
    - Post Inspected
  - Safe, but some restrictions apply
    - Post Restricted Use
  - Unsafe, must be repaired or removed
    - Post Unsafe

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**Practice Examples:**

- **ATC 45 Detailed**

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Practice Examples:

**ATC 45 Detailed**

Field manual: safety evaluation of buildings after wind, storm and floods.

**Posting**

Choose a posting based on the evaluation and team judgment. Severe conditions endangering the overall building are grounds for an Evacuee posting. Localized Severe and overall Moderate conditions may allow a Restricted Use posting. Post INSPECTED placard at main entrance. Post RESTRICTED USE and UNSAFE placards at all entrances.

- INSPECTED (Green placard)
- RESTRICTED USE (Yellow placard)
- UNSAFE (Red placard)

Record any use and entry restrictions exactly as written on placard.

SUBJECT TO COLLAPSE
Practice Examples:

ATC 45
Detailed

Outline

- Event Phases
- Disaster Planning
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- Disaster Response Inspectors
What is a Disaster Response Inspector?

A trained and qualified individual (resource) capable of performing post-disaster damage assessments

<table>
<thead>
<tr>
<th>Disaster Response Inspector: Basic Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Structure Condition Evaluator</td>
</tr>
<tr>
<td>▪ ICC Disaster Response Inspector</td>
</tr>
<tr>
<td>▪ CalOES SAP Assessor</td>
</tr>
<tr>
<td>▪ ATC Damage Assessor</td>
</tr>
</tbody>
</table>
Disaster Response Inspector: Basic Types

<table>
<thead>
<tr>
<th>Activity</th>
<th>Title</th>
<th>Certification Required</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Responder</strong></td>
<td><strong>Structures Specialist (FEMA / USACE)</strong></td>
<td>Yes (I)</td>
</tr>
<tr>
<td><strong>2nd Responder</strong></td>
<td><strong>Structure Condition Evaluator SCE – Type 1</strong></td>
<td>Yes (I)</td>
</tr>
<tr>
<td><strong>2nd Responder</strong></td>
<td><strong>Structure Condition Evaluator SCE – Type 2</strong></td>
<td>Yes (I)</td>
</tr>
<tr>
<td><strong>2nd Responder</strong></td>
<td><strong>Structure Condition Evaluator SCE – Type 3</strong></td>
<td>Yes (I)</td>
</tr>
<tr>
<td><strong>Mutual Aid / EMAC Resource</strong></td>
<td><strong>ICC: Disaster Response Inspector DR Inspector</strong></td>
<td>Yes (I)</td>
</tr>
<tr>
<td><strong>2nd Responder</strong></td>
<td><strong>CalOES: Safety Assessment Program SAP Assessor</strong></td>
<td>Yes (I)</td>
</tr>
<tr>
<td><strong>Non-Affiliate</strong></td>
<td><strong>ATC Damage Assessor</strong></td>
<td>No</td>
</tr>
</tbody>
</table>

**Disaster Response Inspector: ICC’s DR Inspector**

A trained and qualified individual (resource) capable of performing post-disaster damage assessments of structures

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Disaster Response Network

A listing of building safety professionals who have volunteered to help affected jurisdictions with building damage assessment, building inspections and other code-related functions.

2nd Responder Roster

A database of trained and certified 2nd responders who are willing to assist with post-disaster condition assessments of structures at a local, State or national level.
This system exists and is supported by NCSEA

http://www.ncsea-seer.com/

Volunteers are able to login and update contact, licensure & certification information
2nd Responder Roster

Licensure Upload & Experience

- SE (Engineer)
- PE (Engineer)
- RA (Architect)
- BO (Building Official)
- CO (Code Official: Plans/Inspection/Compliance)
- FM (Fire Marshal)

Volunteers check licenses held and upload PDF copies of licenses

Previous Deployment Experience *
- No
- Yes

Formal Disaster Inspection Training *
- None
- FEMA/USACE Structures Specialist
- FEMA/USACE Structures Specialist
- NIMS/ICS IS-100
- NIMS/ICS IS-200
- NIMS/ICS IS-700
- NIMS/ICS IS-800
- NIMS/ICS IS-803
- NIMS/ICS IS-809
- ICC Disaster Response Inspector (DRI)
- Cal/OS Safety Assessment Program (SAP)
- Building Safety Assessment Leader
- Building Safety Assessment Engineer
- GPS Familiarization
- CPR Certification
- ATC 20
- ATC 45

Volunteers check certifications held and upload PDF copies of certificates

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Locating 2nd Responders

Roster Reports

Admin Users are able to locate volunteers by specifying:
- Desired Licensure
- Responder Classification
- Deployment Experience
- Distance from Incident
Locating 2nd Responders

Roster Reports

Currently the roster includes 625 volunteers

<table>
<thead>
<tr>
<th>Distance</th>
<th>Name</th>
<th>City</th>
<th>State</th>
<th>Postal Code</th>
<th>Cell Phone</th>
<th>Member Organization</th>
<th>Disaster Response Classifications</th>
<th>Deployment Experience</th>
<th>Where Deployed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>David Compton</td>
<td>Tampa</td>
<td>Florida</td>
<td>33618</td>
<td>813-477-7539</td>
<td>PE</td>
<td>FSCE Florida</td>
<td>ATC 20, ATC 45</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Geoffrey Chambers</td>
<td>Tampa</td>
<td>Florida</td>
<td>33618</td>
<td>940-432-215</td>
<td>PE, Other</td>
<td>FSCE Florida</td>
<td>ATC 20, ATC 45</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>William Bracken</td>
<td>Tampa</td>
<td>Florida</td>
<td>33618</td>
<td>813-927-7056</td>
<td>SE, PE</td>
<td>FSCE Florida</td>
<td>SIS, SCE-R, DIR, CALDES</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Contacting 2nd Responders

The Roster can also be used to communicate with volunteers:
- Newsletters & Updates
- Deployment Notices
- Training Notices

Roster Reports
Disaster Response Inspector: Methods of Activation

There are 4 methods of activating 2nd Responders:

- Federal Resource *(Request Through EM)*
- State Resource *(Request Through EM or BOA)*
- Mutual Aid Resource *(Request Through BOA)*
- Volunteer *(Direct Request)*

Disaster Response Inspector: Getting Involved

- **ICC Disaster Network**
  
  http://iccsafe.org/about-icc/safety/
  icc-disaster-response-network

- **2nd Responder Roster**
  
  http://ncsea-seer.com