## Damage Assessment



### Course Objectives

At the end of this course, participants will be able to:

- ✓ Understand the difference between rapid (initial) assessment, preliminary assessment, and combined verification.
- ✓ Distinguish between public and private damage.
- ✓ Assign public damage categories.
- **✓** Determine degrees of damage to private structures.
- **✓ Complete MEMA Form 7.**

Local Damage Assessment

## How to Classify

- We must have a common way to call each classification
- Remember we are doing the first assessment to ID

What is wrong

Where the problems are (LOCATION)

How bad is it

# Assessment is Accomplished in 3 Phases

- 1. Rapid (Initial) Assessment Takes place within hours after an incident and focuses on <a href="Iifesaving needs">Iifesaving needs</a>, <a href="Imminent hazards">Imminent hazards</a>, and <a href="Icritical lifelines">Iritical lifelines</a>.
- 2. Preliminary Damage Assessment (PDA) identifies and affixes a dollar amount to damages.
- 3. Combined Verification includes a detailed inspection of damages to individual sites.

### Why Do Damage Assessment?

Conducting a local damage assessment enables local officials to:

- Determine the severity and magnitude of the event.
- Quantify homes and businesses impacted by the disaster.
- Determines whether local resources will be sufficient to effectively respond and recover from the event.

# Why Do Damage Assessment? Cont'd

- Provides local departments and agencies with information
- Helps to make decisions on how to apply response resources
- Provides state agencies and volunteer organizations with information
- Media wants to know the impact and cost

# Why Do Damage Assessment? Cont'd

- Document hazard mitigation needs
- Measure the economic impact of a disaster
- Respond to media and congressional needs

# Local Damage Assessment Must Be Rapid, Detailed and Accurate!

- MEMA Form 7 should be completed and submitted to Knox EMA within 24 hours of the event.
- The data collected and dollar figures will be will be consolidated at the county level and sent to MEMA.
- If necessary, State will request a joint preliminary damage assessment with the FEMA and/or the SBA.
- Delay in completing the assessment may delay supplemental disaster assistance to those most in need.

### Threshold Formula — FFY 2019

**County** 

\$3.78 x 2010 census data (\$150,202)\*

State

\$1.50 x 2010 census data (\$1,992,542)

\* Minimum "Project Cost" (per town damages must be \$3,200 or higher)

### "Windshield Survey"

Where appropriate, windshield surveys are used to expedite and verify the extent and impact of damage immediately following or during a disaster and collect damage information to determine disaster.

### "Windshield Survey"

- The initial (rapid) assessment conducted should focus on the people's needs..
- The primary focus is on the number of structures that sustained damage. The Teams evaluated extent of damage earmarks a structure in one of following levels of damage: Destroyed, Major, Minor, Affected but Habitable, and Inaccessible.

#### Do's

- Conduct visual inspection.
- Look for waterline or debris lines to determine depth of water verify damages.
- Focus on degrees of damages and habitability. Do not become preoccupied with property value.
- Be sensitive when discussing damages with property owner.
- Only report disaster-related damages.

#### Don'ts

- Do not go into building.
- Do not drive past downed power lines.
- Do not drive in deep (1' or more) or moving water.
- Give Aid Only to level of your capability.
   Call 911.
- Discuss possibilities with property owners.

### MEMA Form 7

## Public Damage

### Public Damage

- Government owned facilities and properties
- Estimated cost to bring to pre-disaster condition
- Also incudes out-of-pocket costs incurred
- Private non-profit may be included with approval

### Categories of Public Damage

Category A – DEBRIS REMOVAL

(Trees, building wreckage, sand, mud, silt, gravel, vehicles, and other disaster related materials. Time limitations apply!)

## Category B – EMERGENCY PROTECTIVE MEASURES

(Sandbagging, barricades, signs, extra police/fire, and emergency health measures. Limited to first 70 hrs. after disaster. Overtime only.)

### Categories of Public Damage

Category C – ROADS AND BRIDGES

(Roads, culverts, bridges, and associated facilities)

Category D – WATER CONTROL FACILITIES

(Dams, reservoirs, shore protective devices, pumping and irrigation facilities, drainage channels, and levees)

### Categories of Public Damage

Category E- BUILDINGS AND EQUIPMENT (Municipal owned buildings, supplies, inventory, vehicles, and equipment)

Category F - UTILITIES

(Water treatment plants and delivery systems, power generation and distribution systems)

Category G- PARKS, RECREATION, AND OTHERS

(Playground equip swimming pools, bath houses, tennis courts, boat docks, piers, picnic tables, cemeteries, golf courses)

# Private Non-profit Damage

- Education
- Medical
- Custodial Care
- Emergency
- Utility

- Others
  - Museums
  - Community Centers
  - Libraries
  - Homeless Shelters
  - Senior Citizen Centers
  - Health and SafetyServices

## Individual Damage

Note: Maximum federal assistance possible directly from FEMA for IA is \$33,000 (2015). Other assistance may be available through the SBA or the USDA.

# Four Degrees of Individual Damage

- Affected
- Minor
- Major
- Destroyed

## Affected

Includes dwellings with minimal damage to structure and/or contents and the home is habitable without repairs.

## Minor Damage

Encompasses a wide range of damage and is generally the most common type of damage. Minor damage exists when the home is damaged and uninhabitable, but may be made habitable in a short period of time with home repairs. Some of the items that determine minor damage are listed below:

- Windows or doors blown in.
- One foot or more of water/sewer backup in basement (i.e., furnace, water heater damage).
- Has less than 50% damage to structure.

## Major Damage

Exists when the home has sustained structural or significant damages, is uninhabitable and requires extensive repairs.

- Substantial failure of structural elements of the residence (walls, roof, floors, foundation, etc.).
- Has more than 50% damage to structure.
- One foot or more of water on the first floor (of a home with basement).

## Destroyed

The structure is a total loss or damaged to such an extent that repairs are not economically feasible.

- Structure is not economically feasible to repair.
- Structure is permanently uninhabitable.
- Complete failure of major structural components ( collapse of basement walls/foundation, walls, or roof).
- Only foundation remains.
- Two or more walls destroyed and roof substantially damaged.
- House pushed off foundation.

#### **Examples:**

- Some shingle damage
- Few broken windows
- Cosmetic damage to siding
- Repairable



#### **AFFECTED**

#### **Examples:**

- One (1) wall damaged
- Section of roof missing or damaged
- Repairable



#### **MINOR**

#### **Examples:**

- Substantial structural damage to walls, roof, etc.
- Repairable



#### **MAJOR**

#### **Examples:**

- Total Loss
- Structure is compromised
- Not repairable



#### DESTROYED

#### **Examples:**

Minor dents to roof or siding



#### **AFFECTED**

#### **Examples:**

- Utility connections broken
- Slight movement on piers/foundation



#### **MINOR**

#### **Examples:**

- Wall and roof damage
- Shifted on piers/foundation



#### **MAJOR**

#### **Examples:**

- Total Loss
- Bent Frame
- Buckled walls, roof



#### **DESTROYED**

### FLOOD DAMAGE: SINGLE FAMILY DWELLING

#### **Examples:**

- Without basement: less than 12 inches on 1st floor.
- With basement: less than 12 inches.
- No structure damage



#### **AFFECTED**

### FLOOD DAMAGE: SINGLE FAMILY DWELLING

#### **Examples:**

- Without basement: 1-2 feet of water on 1st floor.
- With basement: 1-8 feet

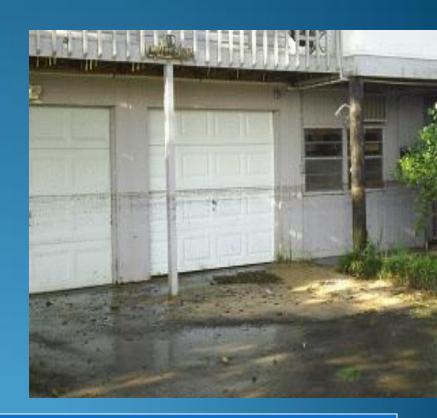


#### **MINOR**

# FLOOD DAMAGE: SINGLE FAMILY DWELLING

#### **Examples:**

- Without basement: 2-5 feet of water on 1st floor.
- With basement: over 8 feet
- Collapsed basement wall(s)

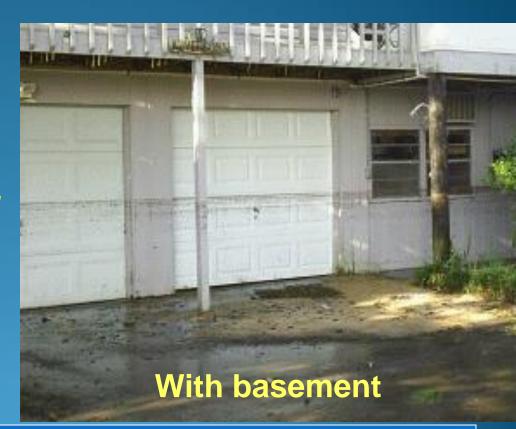


#### **MAJOR**

### FLOOD DAMAGE: SINGLE FAMILY DWELLING

#### **Examples:**

- Over 5 feet of water on1st floor
- Basement full and over
   2 feet of water on 1st
   floor.



#### **DESTROYED**

#### **Examples:**

- Water standing under or around mobile home, but not touching the bottom board.
- Indication of water being around a mobile home, but not touching the bottom board following a flash flood.



#### **AFFECTED**

#### **Examples:**

- Utilities flooded
- Piers/foundation shifted
- Water touched or soaked at the bottom board, but did not enter the primary living area.



#### MINOR

#### **Examples:**

- Water soaked bottom board and the primary living area.
- Piers/foundation washed out or away.



#### **MAJOR**

#### **Examples:**

- Washed off piers/foundation
- Frame bent or twisted.
- Mobile home has turned over on its side/top.
- 4 feet + water above floor level.

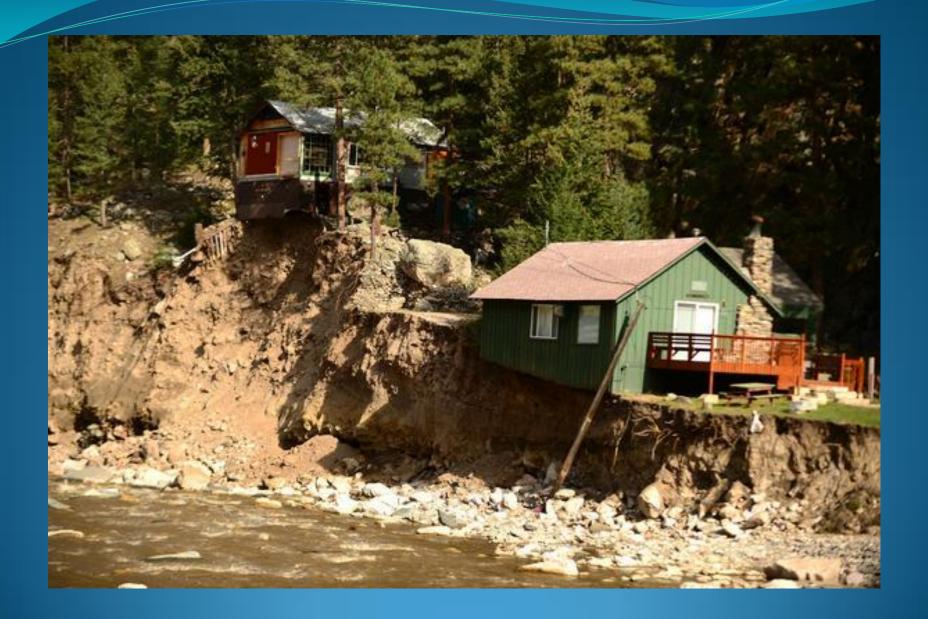


#### **DESTROYED**

# Let's Do a Windshield Survey

# How would you rate these properties?



































# Questions?