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G0556

Local Damage Assessment

Student Manual

FEDERAL EMERGENCY MANAGEMENT AGENCY
EMERGENCY MANAGEMENT INSTITUTE

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1 Introduction to Local Damage Assessment

Unit Objectives

This unit provides an overview of the course and the importance of local damage assessment. Information gathered during damage assessment identifies needs, helps set priorities, and drives response and recovery actions. This snapshot of the extent and location of damage provides information for the public as well as documentation necessary for the pursuit of additional resources from contracts and mutual aid and/or from state and Federal agencies. The thoroughness and efficiency of the damage assessment process sets the tone for the entire response/recovery operation because it provides information about the impact of the event on the entire community.

By the end of this unit, you will be able to:

- Define the purpose of damage assessment.
- Define the basic terms related to damage assessment.
- List critical infrastructure and key resources in a community.

Content Outline

Unit Topics	Estimated Time
Course Overview	20 Minutes
Unit Overview	5 Minutes
Introduction to Local Damage Assessment*	5 Minutes
Activity: Damage Assessment Terminology	25 Minutes
Core Capabilities	15 Minutes
Critical Infrastructure and Key Resources*	5 Minutes
Activity: Types of Critical Infrastructure and Key Resources	20 Minutes
Unit Summary	5 Minutes
TOTAL	**1 Hour, 40 Minutes**

**The time estimate for this topic does not include the activity, which is listed separately.*

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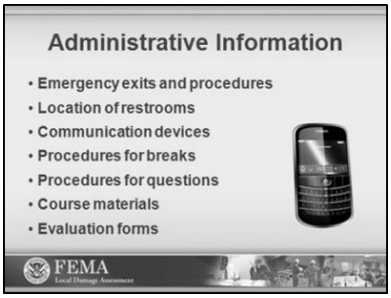
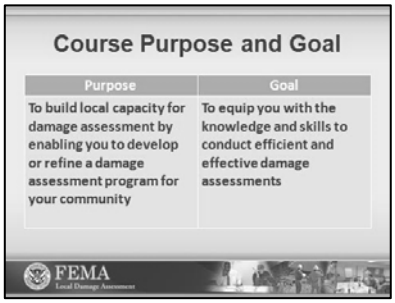
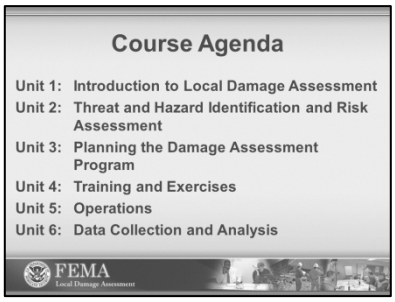
Notes	Content
Visual 1-1 	**Welcome**
Visual 1-2 	**Administrative Information** • Emergency exits and procedures • Location of restrooms • Communication devices • Procedures for breaks • Procedures for questions • Course materials • Evaluation forms
Visual 1-3 	**Course Purpose and Goal** When a disaster or major emergency occurs, damage assessment must be done quickly and accurately, to reduce the impact on people and identify resource needs. This information enables the direction of emergency response personnel and resources to the most appropriate areas and helps identify the need for additional resources. The purpose of this course is to build local capacity for damage assessment by enabling you to develop or refine a damage assessment program for your community. In this course, you will acquire the knowledge and skills needed to be able to conduct efficient and effective damage assessments in order to save lives, protect property and the environment, and to begin the process of recovery and mitigation.

Notes	Content
Visual 1-4  	**Course Agenda and Objectives** There are six units in this course. Each unit has specific objectives that will be covered. ***Unit 1: Introduction to Local Damage Assessment*** • Define the purpose of damage assessment. • Define basic terms related to damage assessment. • List critical infrastructure and key resources in a community. ***Unit 2: Threat and Hazard Identification and Risk Assessment*** • Identify the four steps of the THIRA process. ***Unit 3: Planning the Damage Assessment Program*** • Identify potential members of the local Damage Assessment Planning Team. • List common steps for planning a damage assessment program. • List planning assumptions to be included in a damage assessment plan. • Describe guidelines for establishing local standards for damage assessment. ***Unit 4: Training and Exercises*** • Explain the value of training and exercises to a local damage assessment program. • Define types of training and exercises. • Identify resources for developing a training program for local damage assessment. • List basic principles for effective training and exercises. • Determine training needs for local damage assessment teams. • Explain how training and exercises can be used to improve the damage assessment program.

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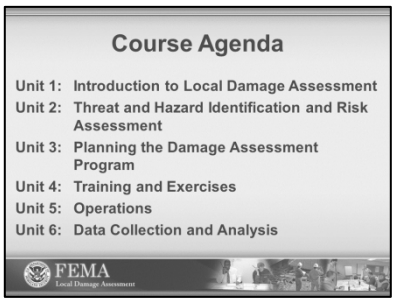
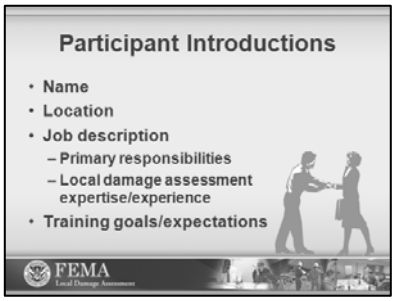
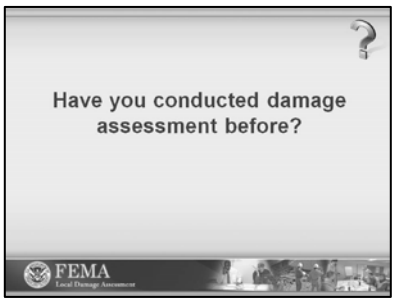
Visual 1-4 (Continued) 	***Unit 5: Operations*** • Identify potential members of the local Damage Assessment Response Team. • List types of information that should be included in pre-deployment briefings. • Describe basic procedures for damage assessment. • Assign damage level ratings based on visual inspection. • Describe special considerations regarding the human impact of disasters. ***Unit 6: Data Collection and Analysis*** • Explain how damage assessment information is used after the event. • Explain documentation and record-keeping methods for effective damage assessments.
Visual 1-5 	**Participant Introductions** Introduce yourself briefly to the class by stating: • Your name • Where you are from • Your job description, including: - Primary responsibilities - Local damage assessment expertise/experience • What you hope to gain from the course
Visual 1-6 	**How many of you have conducted damage assessment before?**

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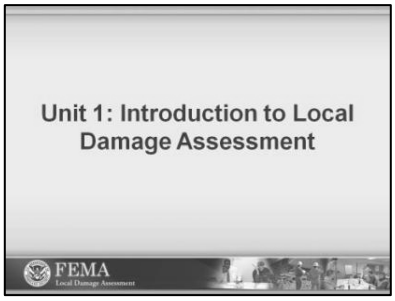
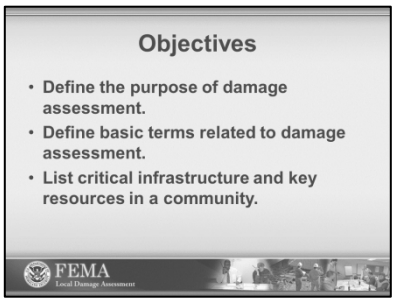
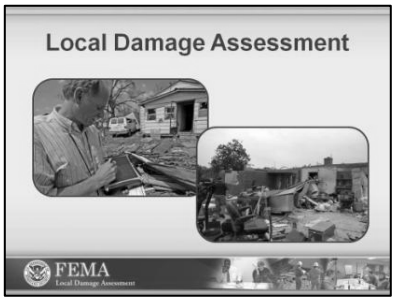
Visual 1-7  	In this unit, you will learn about the importance of local damage assessment. Information gathered during damage assessment identifies needs, helps set priorities, and drives response and recovery actions. This snapshot of the extent and location of damage provides information for the public as well as documentation necessary for the pursuit of additional resources from contracts and mutual aid and/or from state and Federal agencies. The thoroughness and efficiency of the damage assessment process sets the tone for the entire response/recovery operation because it provides information about the impact of the event on the entire community.
Visual 1-8  	**Unit Objectives** This unit will enable you to: • Define the purpose of damage assessment. • Define basic terms related to damage assessment. • List critical infrastructure and key resources in a community.
Visual 1-9  	**Local Damage Assessment** This course will focus on local damage assessment, in which Damage Assessment Response Teams from the affected community evaluate and document physical damage caused by a disaster. This assessment is initially conducted as soon after a disaster as it is safe to do so and may be redone many times in the weeks and months to come. Simply put, damage assessment is a process to determine the severity and magnitude of a hazard event on the public and private sectors in the community.

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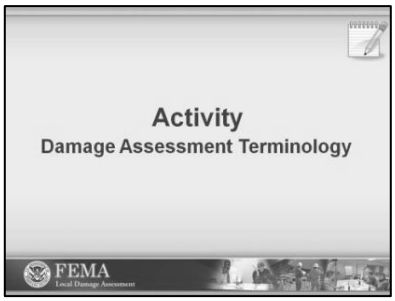
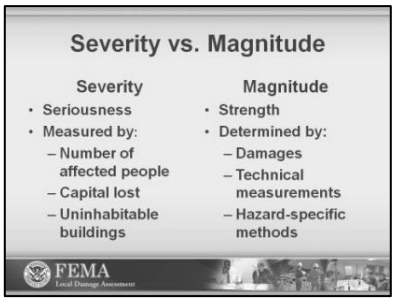
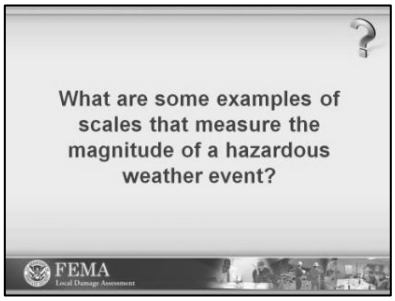
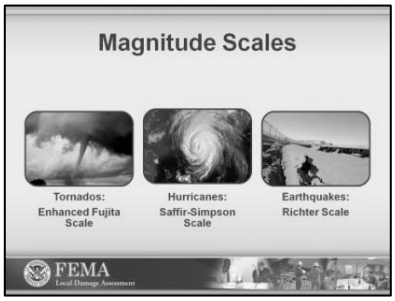
Visual 1-10  	**Group Activity: Damage Assessment Terminology**

Damage Assessment Terminology

Instructions:

Your group will be assigned two vocabulary words related to damage assessment to define, using your prior experience. If necessary, you may refer to the glossary found in the appendix of your Student Manual.

Term	Definition
Severity	
Magnitude	
Natural Hazards	
Adversarial/ Human-caused Hazards	
Risk	
Vulnerability	
Individual Assistance	
Public Assistance	

Notes	Content
Visual 1-11 	**Severity and Magnitude** Severity is a measure of the seriousness of the effects of a hazard event. It can be measured by factors such as the number of people affected, amount of capital lost, number of buildings uninhabitable, or impact to critical infrastructure and key resources. Magnitude is a measure of the strength of a hazard event. The magnitude of a hazard is usually determined using technical measures specific to the hazard.
Visual 1-12 	**What are some examples of scales that measure the magnitude of a hazardous weather event?**
Visual 1-13 	**Magnitude Scales** The Enhanced Fujita Scale is used to measure the magnitude of tornadoes so that there is a common language, such as when someone refers to a tornado as EF-3. The magnitude of hurricanes is measured by the Saffir-Simpson Hurricane Wind Scale which provides consistency; thus, a Category 3 hurricane is the same regardless of location. Earthquake magnitude is measured with the Richter Scale. Earthquake intensity is measured with the Mercalli Modified Intensity scale (MMI).

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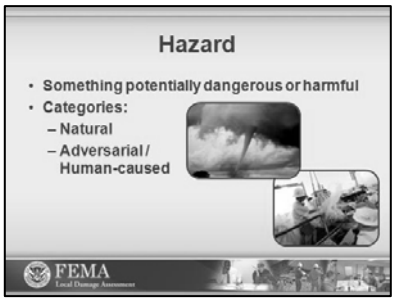
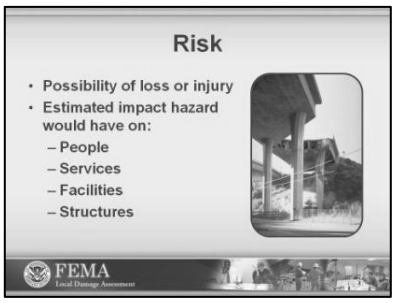
Visual 1-14 	**Hazard** A hazard is something that is potentially dangerous or harmful. It is often the root cause of an unwanted outcome. Hazards may be categorized as natural or as adversarial/human-caused. • Natural hazards are caused by natural events that pose a threat to lives, property, and other assets. Examples include hurricanes, earthquakes, and tornadoes. • Adversarial and/or human-caused hazards include technological hazards (caused by the tools, machines, and substances used in everyday life) and intentional acts (caused by people attacking or damaging what is valuable in a society). Examples include hazardous materials releases, major computer system failures (e.g., 911 system), terrorist attacks, and riots.
Visual 1-15 	**Risk** Risk is the possibility of loss or injury. More specifically, it is an estimated impact that a hazard would have on people, services, facilities, and structures in a community. It is the likelihood of a hazard event resulting in an adverse condition that causes injury or damage. Risk is often expressed in relative terms such as a high, moderate, or low likelihood of sustaining damage above a particular threshold due to a specific type of hazard event. It also can be expressed in terms of potential monetary losses associated with the intensity of the hazard.

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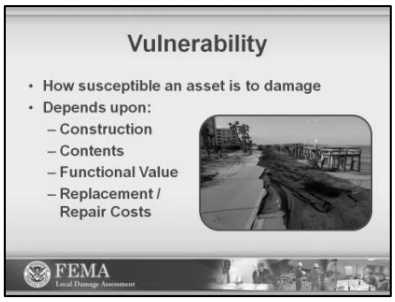
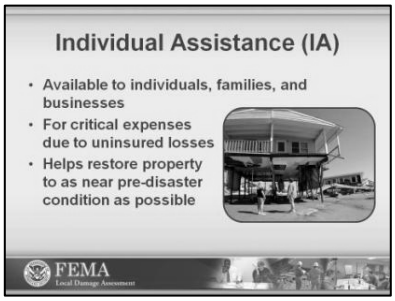
Visual 1-16  	**Vulnerability** Vulnerability is a description of how exposed or susceptible an asset is to damage. Vulnerability depends on an asset's construction, contents, the economic value of its functions or services, and replacement/repair costs. The vulnerability of one element of the community is often related to the vulnerability of another, and a hazard may cause indirect damages in addition to the damages that are caused by the direct impact. For example, many businesses depend on uninterrupted electrical power. If an electric substation is flooded, it will affect not only the substation itself, but a number of businesses as well. A refrigerated warehouse may lose its entire inventory and suffer severe economic losses as a result of the power failure. Often, indirect effects can be much more widespread and damaging than direct ones.
Visual 1-17  	**Individual Assistance (IA)** Individual Assistance (IA) is funding or direct assistance to individuals, families, and businesses in an area whose property has been damaged or destroyed and whose losses are not covered by insurance. It is meant to help with critical expenses that cannot be covered in other ways. This assistance is intended to assist a community in restoring damaged property to as near its condition before the disaster as possible. Whenever feasible, efforts should be made to rebuild in a way that makes the community more disaster resistant, through mitigation activities. While some housing assistance funds are available through FEMA's Individuals and Households Program (IHP), most disaster assistance to individuals from the Federal government is in the form of loans administered by the Small Business Administration (SBA).

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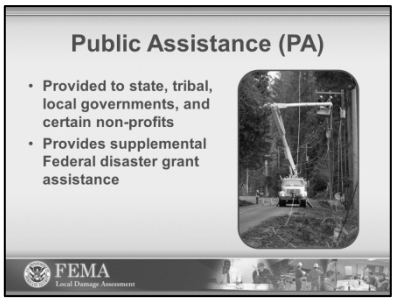
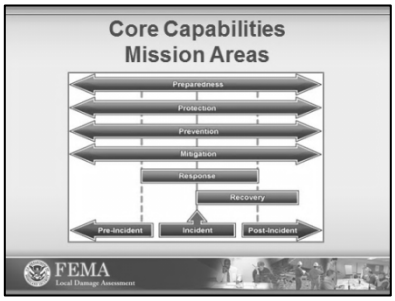
Visual 1-18 	**FEMA Public Assistance (PA)** FEMA Public Assistance (PA) is reimbursement and emergency assistance provided to state, tribal, and local governments and certain types of private non-profit (PNP) entities from the Federal government. Through the PA Program, FEMA provides supplemental Federal disaster grant assistance for debris removal, emergency protective measures, and the repair, replacement, or restoration of disaster-damaged, publicly owned facilities and the facilities of certain PNP organizations.
Visual 1-19 	**Core Capabilities Mission Areas** Core capabilities are essential for the execution of each of the five mission areas: Prevention, Protection, Mitigation, Response, and Recovery. To assess both our capacity and our gaps, each core capability includes capability targets for which measures will be developed. The core capabilities and capability targets are not exclusive to any single level of government or organization, but rather require the combined efforts of the whole community. The purpose behind Mission Areas is quite simple: assure the Continuity of Government (COG) and Continuity of Operations (COOP). Government and community services need to function uninterrupted as much as possible. This should be a priority for restoration during and after an event. It is also important for those involved in damage assessment to understand the continuous process of emergency management. While the process outlined is quite generic, the actions taken are specific to the threats and vulnerabilities identified in each community.

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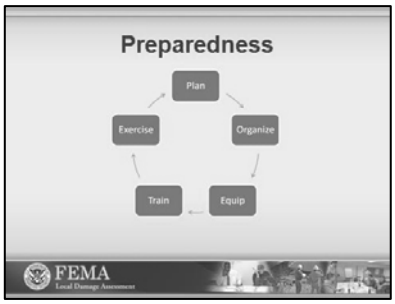
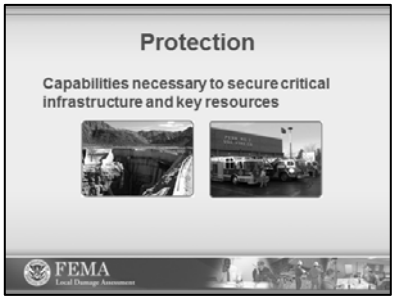
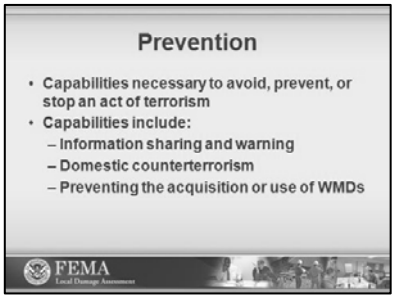
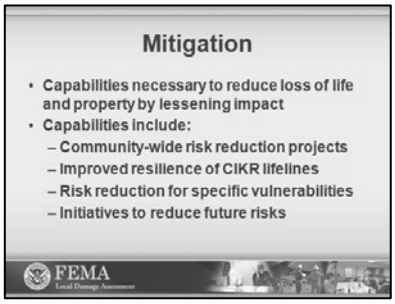
Visual 1-20 	**Preparedness** Preparedness refers to the actions taken to plan, organize, equip, train, and exercise to build and sustain the capabilities necessary to prevent, protect against, mitigate the effects of, respond to, and recover from those threats that pose the greatest risk to the security of your community. Preparedness is a continuous process. Preparedness activity includes developing a comprehensive damage assessment plan and training based on the predetermined priorities identified in the risk assessment and/or vulnerability assessment. For example: If there is flooding in your community, how will this affect bridges in low-lying areas? As part of your community's preparedness, you need to determine what actions need to be taken to be prepared for this event.
Visual 1-21 	**Protection** Protection refers to capabilities necessary to secure Critical Infrastructure and Key Resources (CIKR) against acts of terrorism and manmade or natural disasters. It requires coordinated action on the part of Federal, state, and local governments, the private sector, and concerned citizens across the country. Protection capabilities include: • Critical infrastructure protection • Defense against Weapons of Mass Destruction (WMD) threats • Defense of agriculture and food • Protection of key leadership and events • Border security • Maritime security • Transportation security • Immigration security • Cybersecurity

Notes	Content
Visual 1-21 (Continued) 	Protection is an elevation of awareness and understanding of threats and vulnerabilities to your community's critical infrastructure and key resources. Damage assessment planning contributes to the protection of the community and its assets, particularly through effective coordination among multiple agencies and jurisdictions.
Visual 1-22 	**Prevention** Prevention refers to those capabilities necessary to avoid, prevent, or stop a threatened or actual act of terrorism. Some protection activities also contribute to prevention. For example, effective border protection could prevent a terrorist attack. Prevention capabilities include: • Information sharing and warning • Domestic counterterrorism • Preventing the acquisition or use of WMDs An example of prevention activity that the damage assessment planning team will be involved in is identifying vulnerabilities in the community, such as an unsecured water treatment facility.
Visual 1-23 	**Mitigation** Mitigation refers to those capabilities necessary to reduce loss of life and property by lessening the impact of disasters. Mitigation capabilities include: • Community-wide risk reduction projects • Efforts to improve the resilience of critical infrastructure and key resource lifelines • Risk reduction for specific vulnerabilities from natural hazards or acts of terrorism • Initiatives to reduce future risks after a disaster has occurred

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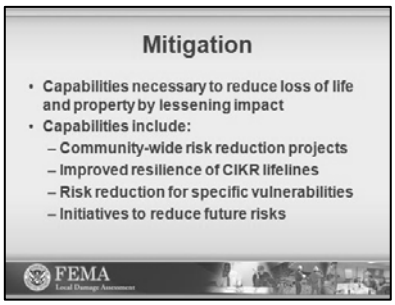
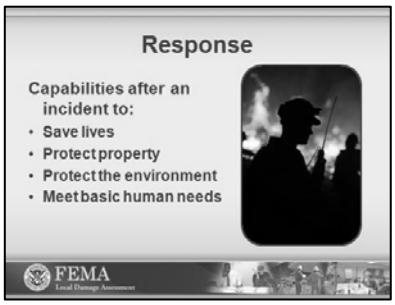
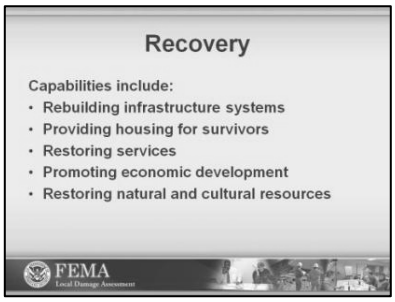
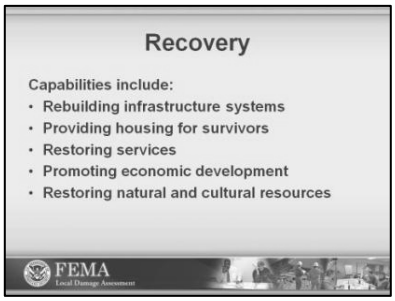
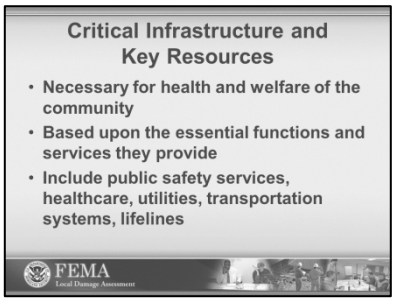
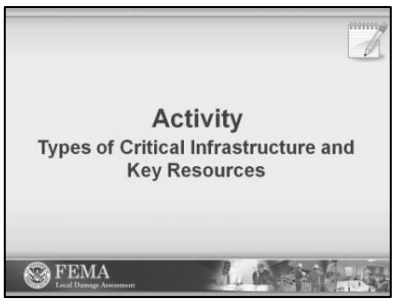
Visual 1-23 (Continued) 	Although you should continually be evaluating ways to make your community more disaster-resistant, the period after a hazard event provides opportunities for mitigation actions to be implemented. Funding may become available, and it may be easier during this time to get buy-in from decision-makers to conduct mitigation activities. The Damage Assessment Response Team can identify opportunities for mitigation following a hazard event. When you're conducting damage assessment, consider what your community can do to make vulnerable critical infrastructure and key resources more damage-resistant. For example, power lines can be buried or the height of bridges can be raised.
Visual 1-24 	**Response** Response refers to those capabilities necessary to save lives, protect property and the environment, and meet basic human needs after an incident has occurred. Generally speaking, effective planning (including practice through training and exercise) leads to an effective response. Throughout the response activity, even after the initial damage assessment, identification and determination of additional damages, costs of those damages, and opportunities for mitigation will continue. Keep in mind that some response activity continues as recovery begins.
Visual 1-25 	**Recovery** Recovery refers to those capabilities necessary to assist communities affected by an event to recover effectively, including: • Rebuilding infrastructure systems • Providing adequate interim and long-term housing for survivors • Restoring health, social, and community services • Promoting economic development • Restoring natural and cultural resources

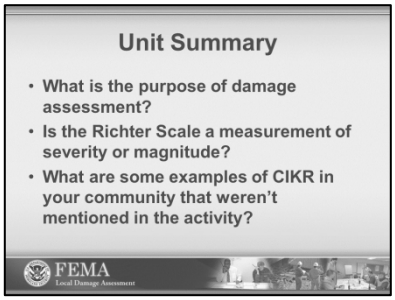
Notes	Content
Visual 1-25 **(Continued)**  	The community actually begins the recovery process simultaneously with response efforts. In addition, the ongoing activities of preparedness, protection, prevention, and mitigation also occur during the recovery period. Keep in mind that this can be an ideal time to identify mitigation opportunities because of grant funding that can become available following a hazard event. During recovery activities, you should evaluate repairs and estimate reconstruction costs. Then update plans based on improvements to infrastructure or other facilities.
Visual 1-26  	**Critical Infrastructure and Key Resources** Critical Infrastructure and Key Resources (CIKR) are those components that are necessary for the health and welfare of the population of your community. CIKR include public safety services, healthcare, utilities, transportation systems, lifelines, and facilities that, if impacted by a hazard event, could result in high potential loss or release of hazardous materials. These essential functions and services enable agencies to exercise civil authorities, maintain the safety and well-being of the general populace, provide vital services, and sustain the industrial/economic base in an emergency.
Visual 1-27  	**Group Activity: Types of Critical Infrastructure and Key Resources**

Critical Infrastructure and Key Resources

Instructions:

Your group will be assigned a category of critical infrastructure and key resources. Working with your group, record as many examples as you can think of in 5 minutes for the category you have been assigned. Be prepared to share your responses with the rest of the class.

Critical Infrastructure and Key Resource	Examples
Public Services	
Transportation Systems	
Lifeline Systems	
High-Risk Facilities	

Notes	Content
Visual 1-28 	***Public Services*** ***Transportation Systems*** ***Lifeline Systems*** ***High-Risk Facilities***
Visual 1-29 	**Unit Summary** In this lesson, you learned some basic terminology that is used for damage assessment. In addition, you learned how important it is for a community to conduct a thorough and accurate local damage assessment, not only as part of the Presidential Disaster Declaration process, but also to identify needs, determine priorities, and set the tone for the entire response and recovery. Remember, before developing a plan for your jurisdiction, consult any damage assessment plans or guidelines that your state or other governing bodies may have already developed.

2 Threat and Hazard Identification and Risk Assessment

Unit Objectives

In this unit, we will discuss why the THIRA is important and how it came about.

We will also discuss what the CPG 201 process is, how it relates to other preparedness efforts like the Hazard Identification and Risk Assessment (HIRA) and Hazard Vulnerability Assessment, mitigation planning, capability assessment, etc.

By the end of this unit, you will be able to:

- Identify the four steps of the THIRA process.

References:

- Developing and Maintaining Emergency Operations Plans CPG 101. Second Edition.
- Threat and Hazard Identification and Risk Assessment Guide CPG 201. Second Edition.

Content Outline

Unit Topics	Estimated Time
Unit Overview	5 Minutes
Threat and Hazard Identification and Risk Assessment	1 Hour, 55 Minutes
TOTAL	**2 Hours**

*The time estimate for this topic does not include the activities, which are listed separately.

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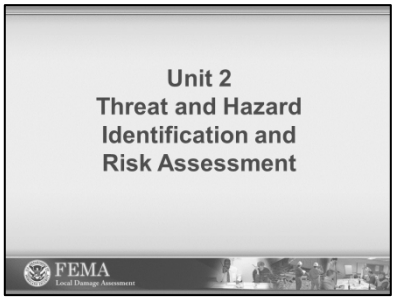
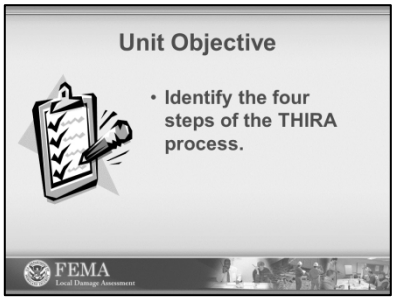
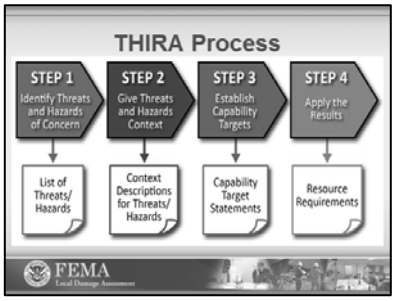
Notes	Content
Visual 2-1 	In this unit, we will discuss why the THIRA is important and how it came about. We will also discuss what the CPG 201 process is, how it relates to other preparedness efforts like the Hazard Identification and Risk Assessment (HIRA), mitigation planning, capability assessment, etc. The THIRA process is flexible and scalable. Communities can adapt these four steps to meet their specific needs and resources.
Visual 2-2 	**Objective** This unit will enable you to do the following: • Identify the four steps of the THIRA process.
Visual 2-3 	**Step 1: Identify the Threats and Hazards of Concern:** Based on a combination of past experience, forecasting, expert judgment, and other available resources, communities identify a list of the threats and hazards of primary concern to the community. **Step 2: Give the Threats and Hazards Context:** Communities describe the threats and hazards of concern, showing how they may affect the community. **Step 3: Establish Capability Targets:** Communities assess each threat and hazard in context to develop a specific capability target for each relevant core capability. The capability target defines success for the capability. **Step 4: Apply the Results:** Communities estimate the resources required per core capability to meet the capability targets for each threat and hazard. Communities also plan to deliver the targeted level of capability with either community assets or through mutual aid, identify mitigation opportunities, and drive preparedness activities.

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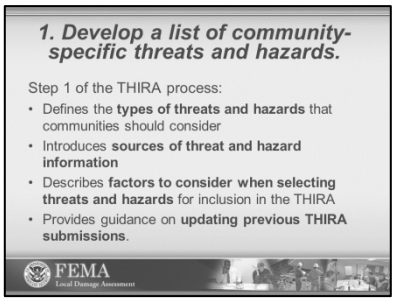
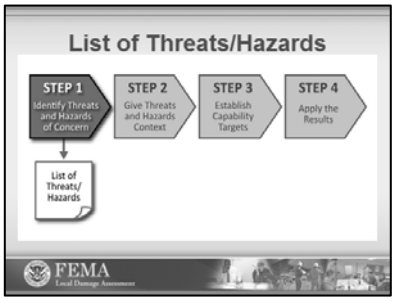
Visual 2-4  	**Threat and Hazard Identification and Risk Assessment CPG 201 (Version 2)** A THIRA is a similar process to the Hazard Vulnerability Assessment or Analysis. The THIRA process consists of four basic steps: In Step 1 of the THIRA process, communities develop a list of community-specific threats and hazards. This section: • Defines the **types of threats and hazards** that communities should consider • Introduces **sources of threat and hazard information** • Describes **factors to consider when selecting threats and hazards** for inclusion in the THIRA • Provides guidance on **updating previous THIRA submissions.** Communities face a variety of threats and hazards. The three types of threats and hazards are: • **Natural hazards,** which result from acts of nature, such as hurricanes, earthquakes, tornadoes, animal disease outbreak, pandemics, or epidemics. • **Technological hazards,** which result from accidents or the failures of systems and structures, such as hazardous materials spills or dam failures. • **Human-caused incidents,** which result from the intentional actions of an adversary, such as a threatened or actual chemical attack, biological attack, or cyber incident. The focus in this step is on deciding what should or should not be on the list. For example, a coastal jurisdiction in Oregon might include a tsunami while an inland jurisdiction that would not be directly impacted may not.
Visual 2-5  	**Identify the Threats and Hazards of Concern:** Based on past experience, forecasting, expert judgment, and available resources, identify a list of the threats and hazards of concern to a community. **Developing Step 1:** Identify a list of threats and hazards of concern based on past experience, forecasting, expert judgment, and available resources.

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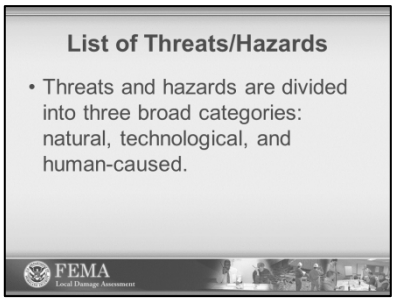
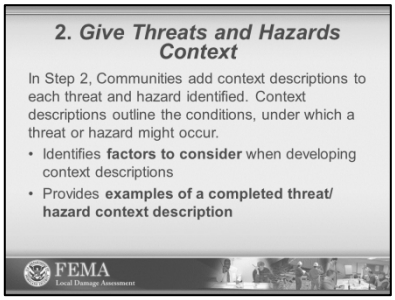
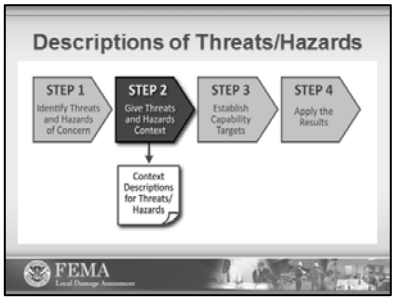
Visual 2-6 	**Step 1 Output:** A list of threats and hazards of concern sorted by type: natural, technological, or human-caused incidents.
Visual 2-7 	In Step 2 of the THIRA, communities add context descriptions to each threat and hazard identified in Step 1. Context descriptions outline the conditions, including time and location, under which a threat or hazard might occur. This section: • Identifies **factors to consider** when developing context descriptions • Provides **examples of a completed threat/hazard context description** To develop threat and hazard context descriptions, communities should take into account the **time, place,** and **conditions** in which threats or hazards might occur. Communities can use expert judgment or analysis of probability and statistics to inform the descriptions of the different threat and hazard conditions.
Visual 2-8 	Communities should recognize that past experience with threats and hazards may differ from the future threat and hazard environment. Factors such as **demographics, climate,** and the **built environment** are subject to change. Communities should consider these factors when developing threat and hazard context descriptions.

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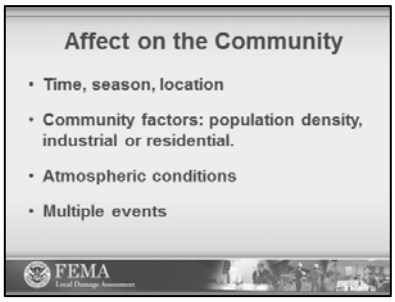
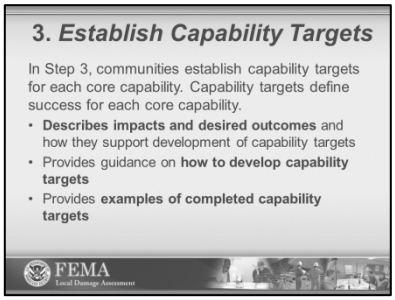
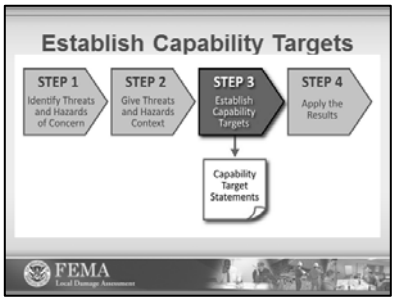
Visual 2-9 	Using the list of threats and hazards, develop context that shows how those threats and hazards may affect a community in terms of time, season, location, and community factors. Inherent to this step is an understanding of the likelihood or probability of a threat or hazard affecting a community. This understanding can be determined through a variety of means, including expert judgment and advanced statistical analysis.
Visual 2-10 	In Step 3, communities establish capability targets for each core capability. Capability targets define success for each core capability based on the threat and hazard contexts developed in Step 2. Communities apply the capability targets from Step 3 to generate resource requirements and consider preparedness activities, including opportunities for mitigation in Step 4. This step: • **Describes impacts and desired outcomes** and how they support development of capability targets • Provides guidance on **how to develop capability targets** • Provides **examples of completed capability targets**
Visual 2-11 	Capability targets should be specific and measurable. To develop specific and measurable targets, communities should consider **impacts** and **desired outcomes** for each threat and hazard. **Impacts describe how a threat or hazard might affect a core capability.** Impacts are linked to the size and complexity of threats and hazards. Larger, more complex threats and hazards might cause larger, more complex impacts. **Desired outcomes describe the timeframe or level of effort needed to successfully deliver core capabilities.** Capabilities are only useful if communities can deliver them in a timely and effective manner.

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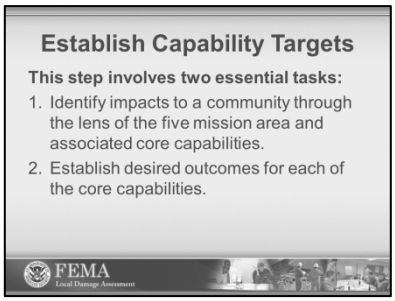
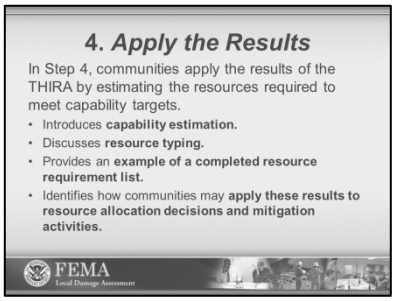
Visual 2-12  	In Step 3, communities establish capability targets for each core capability. Capability targets define success for each core capability based on the threat and hazard contexts developed in Step 2. Communities will use the capability targets from Step 3 to apply the results of the THIRA by generating resource requirements and considering mitigation activities in Step 4. Describes impacts and desired outcomes and how they support the development of capability targets.
Visual 2-13  	In Step 4, communities apply the results of the THIRA by estimating the resources required to meet capability targets. Communities express resource requirements as a list of resources needed to successfully manage their threats and hazards. Communities can also use resource requirements to support resource allocation decisions, operations planning, and mitigation activities. This step: • Introduces **capability estimation.** • Discusses **resource typing, including National Incident Management System (NIMS)-typed resources and other standardized resource types.** • Provides an **example of a completed resource requirement list.** • Identifies how communities may **apply these results to resource allocation decisions and mitigation activities.** Communities should consider the resources needed to achieve the capability targets. As a first step, communities can identify the major actions needed to achieve their capability targets. Communities should strive to identify mission-critical activities. Communities can draw mission-critical activities from current community-level plans, as well as from the National Planning Frameworks.

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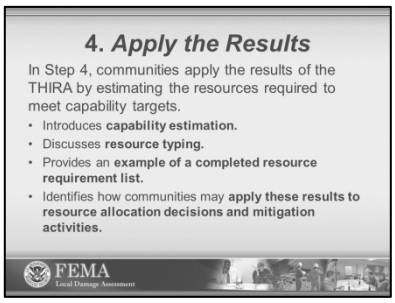
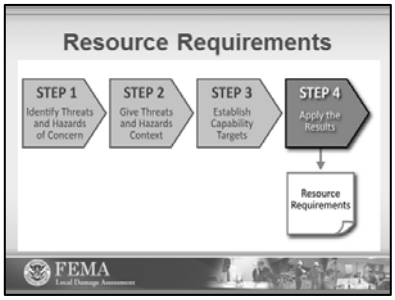
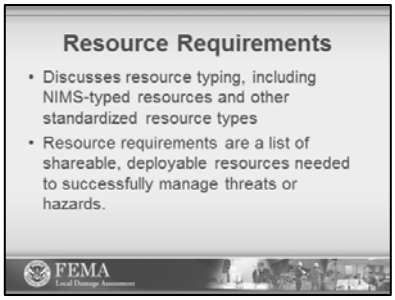
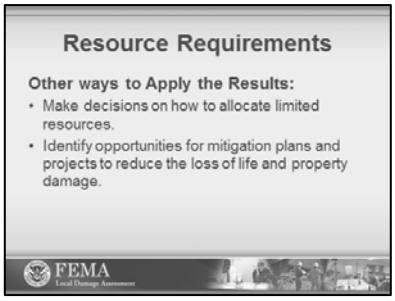
Visual 2-13 (Continued) 	Communities should consider the quantity and types of resources needed to complete each mission-critical activity in support of the capability targets. To identify quantity and types of resources, communities can use existing tools and information sources, such as: • Strategic, operational, and/or tactical plans • Resource typing data, including standardized resource characteristics • Existing capacity analysis and capability calculators
Visual 2-14 	Resource typing is categorizing, by capability, the resources requested, deployed, and used in incidents. Resource typing helps communities request and deploy needed resources through the use of common terminology. Communities should develop resource requirements expressed as a list of **NIMS-typed resources or other standardized resources.** A community can use its THIRA results to make decisions about how to allocate limited resources. By establishing resource requirements, a community determines the resources needed to achieve capability targets.
Visual 2-15 	Through the THIRA process, communities can identify opportunities to employ mitigation plans, projects, and insurance to reduce the loss of life and damage to property. In this way, communities can reduce the impacts they need to manage, and hence reduce the resources needed to achieve capability targets.
Visual 2-16 	Using THIRA results to inform mitigation activities aligns with the traditional mitigation planning process of identifying hazards, assessing losses to the community, and setting mitigation priorities and goals for the community.

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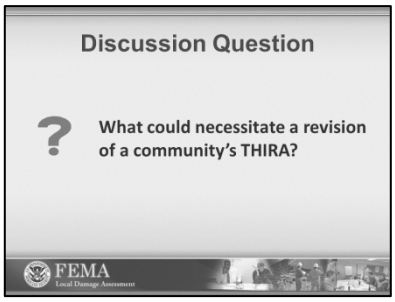
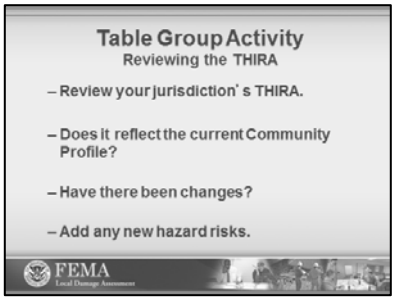
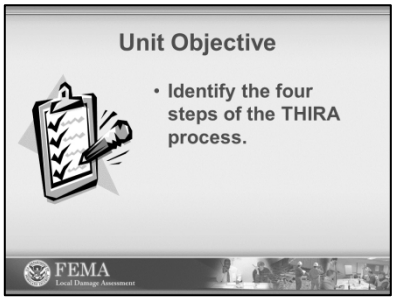
Visual 2-17 	**Discussion Question** **What could necessitate a revision of a community's THIRA?**
Visual 2-18 	**Table Group Activity** Review the copy of your jurisdiction's THIRA that you brought along. • Does it reflect the current Community Profile? • Have there been changes?
Visual 2-19 	**Objective** Review the Unit Objective.

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3 Planning the Damage Assessment Program

Unit Objectives

Effective damage assessment begins with effective planning. Planning for incidents will allow participants to respond efficiently with a thorough and accurate damage assessment. It is imperative that the damage assessment be done well. Poor damage assessment may weaken or delay the response effort, create inaccurate loss reporting, establish inappropriate priorities, have a negative environmental impact, delay the Presidential disaster declaration process, or result in denial of Federal recovery funds.

By the end of this unit, you will be able to:

- Identify potential members of the local Damage Assessment Planning Team.
- List common steps for planning a damage assessment program.
- List planning assumptions to be included in a damage assessment plan.
- Describe guidelines for establishing local standards for damage assessment.

Content Outline

Unit Topics	Estimated Time
Unit Overview	5 Minutes
Damage Assessment Plans	10 Minutes
Damage Assessment Planning Process*	35 Minutes
Individual Activity: The Planning Team	15 Minutes
Group Activity: Planning Assumptions	25 Minutes
Unit Summary	5 Minutes
TOTAL	**1 Hour, 35 Minutes**

*The time estimate for this topic does not include the activities, which are listed separately.

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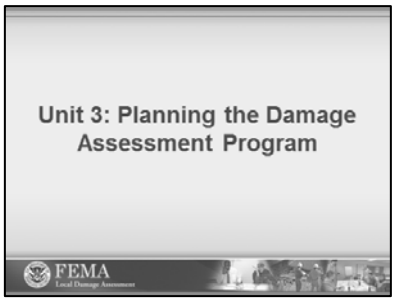
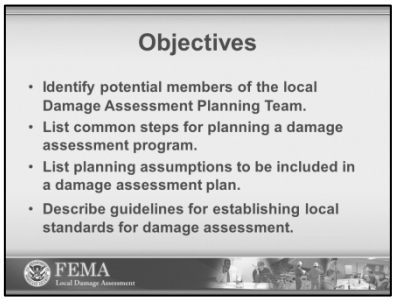
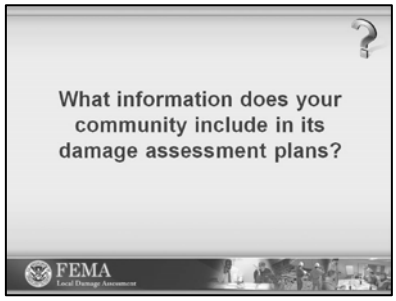
Visual 3-1 	**Unit Overview** Effective damage assessment begins with effective planning. Planning for incidents will allow you to respond efficiently with a thorough and accurate damage assessment. It is imperative that the damage assessment be done well. Poor damage assessment may weaken or delay the response effort, create inaccurate loss reporting, establish inappropriate priorities, have a negative environmental impact, delay the Presidential disaster declaration process, or result in denial of Federal recovery funds.
Visual 3-2 	**Unit Objectives** This unit will enable you to: • Identify potential members of the local Damage Assessment Planning Team. • List common steps for planning a damage assessment program. • List planning assumptions to be included in a damage assessment plan. • Describe guidelines for establishing local standards for damage assessment.
Visual 3-3 	**What information does your community include in its damage assessment plans?**

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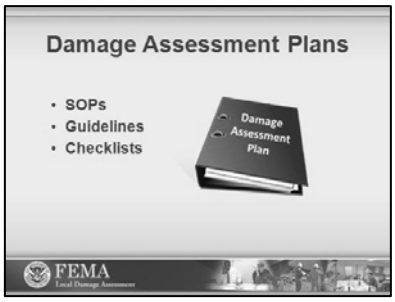
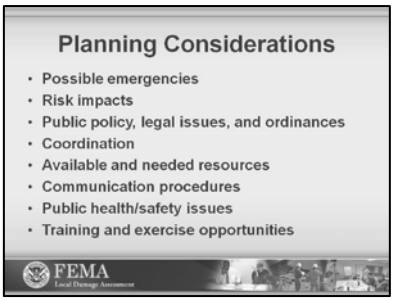
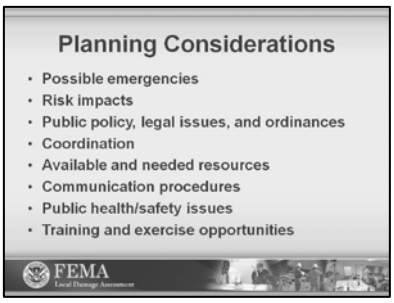
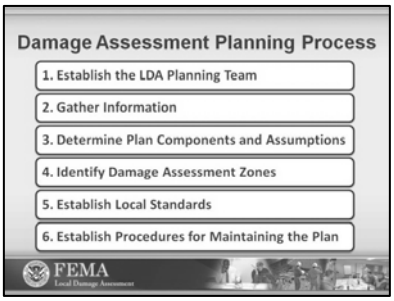
Visual 3-4  	**Damage Assessment Plans** It is important for those preparing the damage assessment plan to understand what a plan is and what it is not. The plan should contain checklists and some basic Standard Operating Procedures (SOPs), but it is not intended to prescribe specific details of exact reactions, because all events are different. The plan should contain methods for conducting damage assessment, but it is not intended to be followed like a script. Rather, managers and responders need to be able to make decisions based on the plan guidance and the situation assessment. The plan should specify the roles and responsibilities of the Damage Assessment Response Team members, as well as the assigned zones for those individuals. However, in a large event, team members may be asked to perform beyond those specifications. A checklist is often found to be more useful than a comprehensive script or all-inclusive instructions in paragraph form. The damage assessment plan is a starting point, providing the necessary guidance with the flexibility to react based on the event specifics and the result of assessment information rather than assumptions used in the planning process.
Visual 3-5  	**Planning Considerations** The basic elements that should be considered prior to an event include: • Identification of all possible emergencies through risk assessment • Evaluation of the impact of all risks to the community through a hazard vulnerability assessment • Identification of public policy, legal issues, and ordinances • Coordination of effort with all stakeholders participating • Evaluation of available and needed resources, based on risk and hazard vulnerability assessments • Evaluation of communication and public information procedures

Notes	Content
Visual 3-5 (Continued) 	• Understanding of public health and public safety issues • Identification of training and exercise opportunities Keep in mind that every community is different; therefore, the particular needs and vulnerabilities of the community must be considered when planning for damage assessment.
Visual 3-6 	**Damage Assessment Planning Process** The process of developing the damage assessment plan is as important as having the plan on the shelf. The research involved is invaluable, as are the relationships that are formed during the creation of the document. Although there is not a standard process you must use, some common steps for planning a damage assessment program are: 1. Establish the Local Damage Assessment Planning Team 2. Gather Information 3. Determine Plan Components and Assumptions 4. Identify Damage Assessment Zones 5. Establish Local Standards 6. Establish Procedures for Maintaining the Plan

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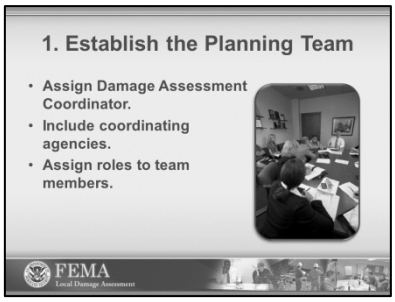
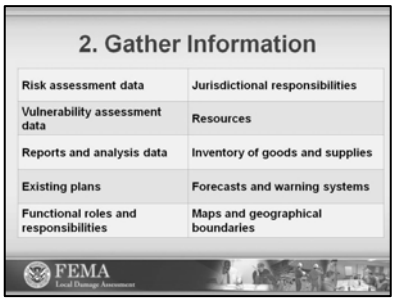
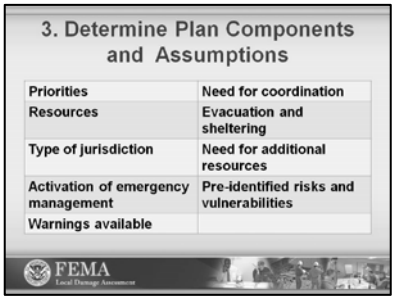
Visual 3-7  	***Step 1: Establish the Local Damage Assessment Planning Team*** The first step in the damage assessment planning process is to identify the team responsible for planning efforts, including the coordinating agency or department that will be responsible for ensuring that the plan is created (and maintained). This responsibility could fall to the emergency management agency, the building inspection agency, or another agency. Next, the local Damage Assessment Planning Team members need to be identified and assigned their roles. The first role to be determined should be the Damage Assessment Coordinator, who oversees the entire damage assessment program.
Visual 3-8  	**Individual Activity: The Planning Team**

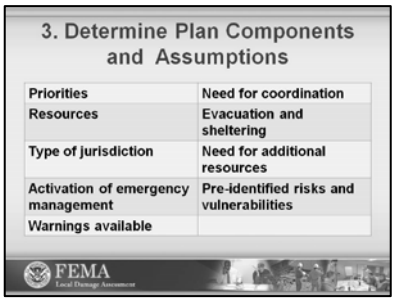
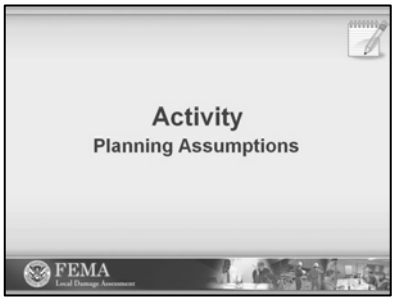
The Planning Team

Instructions:

Working independently, check the boxes beside any individuals or organizations that you believe should be included on your Damage Assessment Planning Team.

Potential Planning Team Members	
Local/Tribal	**Special Districts and Authorities**
☐ Administrator/Manager's Office	☐ Airport and Seaport Authorities
☐ Budget/Finance Office	☐ Business Improvement District(s)
☐ Building Code Enforcement Office	☐ Fire Control District
☐ City/County Attorney's Office	☐ Flood Control District
☐ Economic Development Office	☐ Redevelopment Agencies
☐ Emergency Preparedness Office	☐ Regional/Metropolitan Planning
☐ Fire and Rescue Department	☐ School District(s)
☐ Hospital Management	☐ Transit/Transportation Agencies
☐ Local Emergency Planning Committee	**Non-Governmental Organizations (NGOs)**
☐ Planning and Zoning Office	☐ American Red Cross
☐ Police/Sheriff's Department	☐ Chamber of Commerce
☐ Public Works Department	☐ Community/Faith-Based Organizations
☐ Sanitation Department	☐ Environmental Organizations
☐ School Board	☐ Homeowners Associations
☐ Transportation Department	☐ Neighborhood Organizations
☐ Tribal Leaders	☐ Private Development Agencies
State	☐ Utility Companies
☐ Adjutant General's Office (National Guard)	☐ Other Appropriate NGOs
☐ Board of Education	
☐ Building Code Office	**Others**
☐ Climatologist	☐ Architectural/Engineering/Planning Firms
☐ Earthquake Program Manager	☐ Citizen Corps
☐ Economic Development Office	☐ Colleges/Universities
☐ Emergency Management Office/SHMO	☐ Land Developers
☐ Environmental Protection Office	☐ Major Employers/Businesses
☐ Fire Marshal's Office	☐ Professional Associations
☐ Geologist	☐ Retired Professionals
☐ Homeland Security Coordinator's Office	
☐ Housing Office	
☐ Hurricane Program Manager	
☐ Insurance Commissioner's Office	
☐ NFIP Coordinator	
☐ Natural Resources Office	
☐ Planning Agencies	
☐ Police	
☐ Public Health Office	This worksheet is adapted from FEMA's how-to guide 386-1, "Getting Started: Building Support for Mitigation Planning" (September 2002).
☐ Public Information Office	
☐ Tourism Department	

Notes	Content
Visual 3-9  	***Step 2: Gather Information*** After the Planning Team has been established, the members must gather a great deal of information in order to prepare for the rest of the damage assessment planning process. The team must gather a great deal of information to consider when developing the plan such as: • Risk and vulnerability assessment data • Reports and analysis data • Other existing plans • Functional roles and responsibilities • Jurisdictional responsibilities • Resources • Inventory of goods and supplies • Forecasts and warning systems • Maps and geographical boundaries The success of the planning process will partly depend on the accuracy and amount of information obtained and readily used by local planners. While the information-gathering process may seem tedious, it is a critical step for a successful planning process.
Visual 3-10  	***Step 3: Determine Plan Components and Assumptions*** Using information gathered during the previous step, you need to consider certain planning assumptions to be included in the damage assessment plan: • Priorities: life, property, and the environment • Resources: people, equipment, and tools • Type of jurisdiction • Need for additional resources or technical expertise (e.g., mutual aid, Memoranda of Understanding (MOUs), private resources, state/Federal resources) • Warnings available • Need for coordination between local agencies, neighboring jurisdictions, and tribal governments (if applicable)

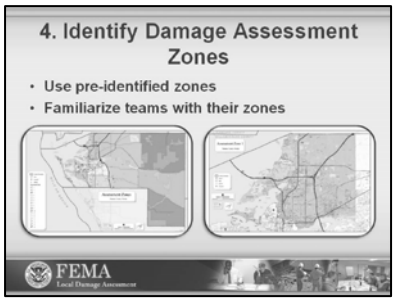
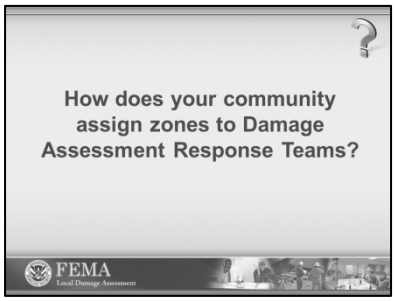
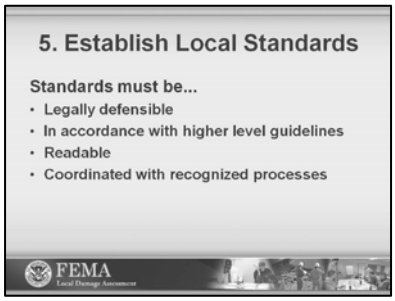
Notes	Content
Visual 3-10  	• Evacuation and sheltering (procedures and facilities) or other support • Activation of emergency management • Pre-identified risks and vulnerabilities (from the hazard analysis) Planning assumptions can range from "The prompt and accurate assessment of damage is vital" to "County resources will be available as indicated in this plan." By including these and other assumptions as a part of your damage assessment plan, you document the starting point from which the plan is developed.
Visual 3-11  	**Group Activity: Planning Assumptions**

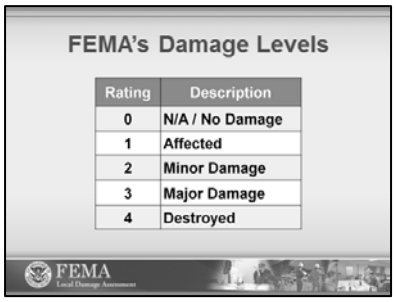
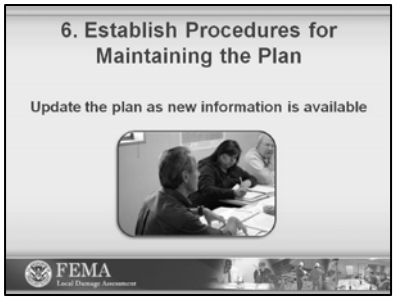
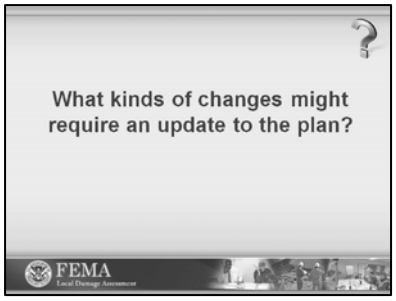
Planning Assumptions

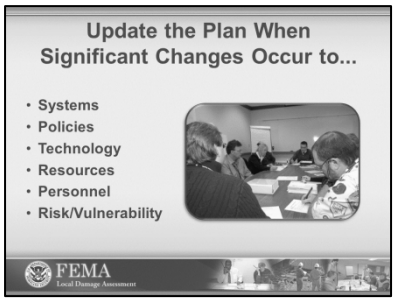
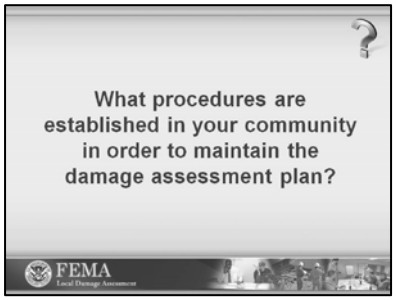
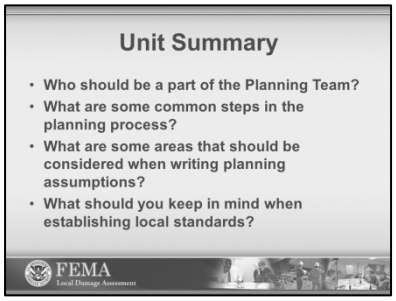
Instructions:

Your instructor will assign your group two types of planning considerations. With your group members, write a planning assumption for each of your assigned categories that could be included in the damage assessment plan for your community. Be prepared to discuss your responses with the rest of the class.

Planning Considerations	Assumptions to Include in the Damage Assessment Plan
Priorities	
Resources and Technical Expertise	
Type of Jurisdiction	
Warnings Available	
Coordination with Other Agencies and Jurisdictions	
Evacuation and Sheltering or Other Support	
Activation of Emergency Management	
Pre-Identified Risks and Vulnerabilities	

Notes	Content
Visual 3-12 	***Step 4: Identify Damage Assessment Zones*** It's important to identify, in the planning process, the zones that Damage Assessment Response Team members will inspect after a hazard event, so these teams will already be familiar with their zones and can rapidly deploy or be pre-positioned to conduct damage assessment. In identifying zones for the damage assessment program, use the zones that already exist in your community and that are also used for vulnerability assessments. Remember to take into consideration that some of these zones may cross jurisdictional lines.
Visual 3-13 	**How does your community assign zones to Damage Assessment Response Teams?**
Visual 3-14 	***Step 5: Establish Local Standards*** The plan should establish local, defined standards for damage assessment. These standards must be legally defensible and in accordance with any higher level guidelines and/or state requirements. They should also be in a readable format and be developed in accordance with recognized processes established by coordinating agencies and oversight agencies.

Notes	Content
Visual 3-15 	For example, FEMA uses a 4-point system for evaluating damage assessment, as shown in the table on the visual. If your community would like to use a more detailed system, be sure to provide a correlation to the 4-point system. The 4-point damage rating scale will be covered in more detail in Unit 5. When establishing the local standards, be sure to design data collection procedures according to resources available. The team should decide as a part of the planning process whether the forms should be in electronic or paper form. Make sure all team members have the most recent most accurate forms when you go out to do the damage assessment.
Visual 3-16 	**What standards has your community established for damage assessment?**
Visual 3-17 	***Step 6: Establish Procedures for Maintaining the Plan*** The damage assessment program may need to be modified from time to time, as new information becomes available, new infrastructure becomes a part of the community, new hazards are identified, and lessons are learned. So, part of the planning process is establishing procedures for maintaining the plan.
Visual 3-18 	**What kinds of changes might require an update to the plan?**

Notes	Content
Visual 3-19 	It is important to modify training and exercises so they suit current risk and vulnerability assessment data. There should built-in specific opportunities for periodic review (recommended at least annually) to ensure that the plan is always current. This will allow the team to respond in the most effective and efficient ways possible.
Visual 3-20 	**What procedures are established in your community in order to maintain the damage assessment plan?**
	Unit Summary
Visual 3-21 	In this unit, you learned about the steps for planning a damage assessment program. First, the local Damage Assessment Planning Team must be identified, including identification of the primary agency responsible for creating and maintaining the plan. This step also includes identification of a Damage Assessment Coordinator to oversee the program. Second, members of the local Damage Assessment Planning Team gather information to be used in the development of the plan. Third, you should determine plan components and assumptions such as priorities, resources (including the need for acquiring more resources), and the need for multi-agency or multi-jurisdictional coordination. Next, you should identify damage assessment zones, using the same zones as are used for vulnerability assessments. Then, you will establish local standards for damage assessment that are legally defensible and in accordance with any higher level guidelines and/or state requirements. Finally, you must establish procedures for maintaining the plan as changes occur and lessons are learned.

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4 Training and Exercises

Unit Objectives

After the damage assessment plan is developed, it will need to be exercised for verification that it works and so all who perform damage assessment will be familiar with the processes, methods, forms, and responsibilities in the plan. If the plan sits on the shelf and no one uses it until an actual hazard event, chances are high that no one will remember what the plan contains or understand how to work together effectively during the response.

By the end of this unit, you will be able to:

- Explain the value of training and exercises to a local damage assessment program.
- Define types of training and exercises.
- Identify resources for developing a training program for local damage assessment.
- List basic principles for effective training and exercises.
- Determine training needs for local Damage Assessment Response Teams.
- Explain how training and exercises can be used to improve the damage assessment program.

Content Outline

Unit Topics	Estimated Time
Unit Overview	5 Minutes
Types of Training and Exercises	20 Minutes
Basic Principles for Effective Training and Exercises*	20 Minutes
Activity: Hazard Event Trainings	20 Minutes
Using Training and Exercises to Improve the Program*	5 Minutes
Activity: After-Action Report	15 Minutes
Unit Summary	5 Minutes
TOTAL	**1 Hour, 30 Minutes**

**The time estimate for this topic does not include the activity, which is listed separately.*

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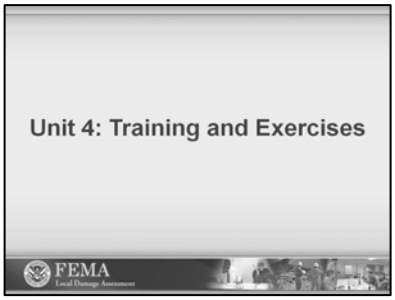
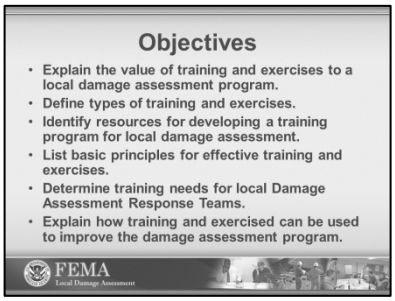
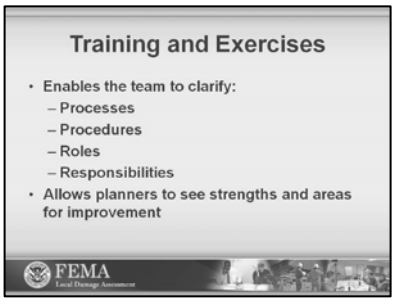
Visual 4-1 	**Unit Overview** After the damage assessment plan is developed, it will need to be exercised for verification that it works and so all who perform damage assessment will be familiar with the processes, methods, forms, and responsibilities in the plan. If the plan sits on the shelf and no one uses it until an actual hazard event, chances are high that no one will remember what the plan contains or understand how to work together effectively during the response.
Visual 4-2 	**Unit Objectives** This unit will enable you to: • Explain the value of training and exercises to a local damage assessment program. • Define types of training and exercises. • Identify resources for developing a training program for local damage assessment. • List basic principles for effective training and exercises. • Determine training needs for local Damage Assessment Response Teams. • Explain how training and exercised can be used to improve the damage assessment program.
Visual 4-3 	**Types of Training and Exercises** Training and exercises allow the Damage Assessment Response Team to clarify the processes, procedures, roles, and responsibilities that will be required of them following a hazard. Training and exercises also help team members develop their individual performance while learning to work together as part of a multi-agency (and perhaps multi-jurisdictional) team. The feedback and observations gleaned during the training and exercises will allow planners to see strengths of and areas for improvement to the program. This information can be used to find resource gaps and to improve the program. In addition to practicing processes, procedures, roles, and responsibilities, training provides occasion for team building which enhances inter- and intra-agency coordination.

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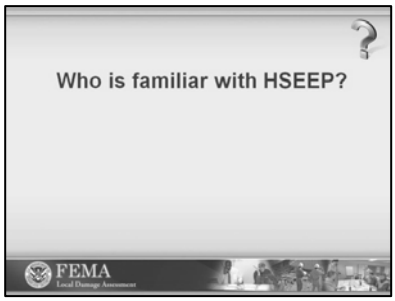
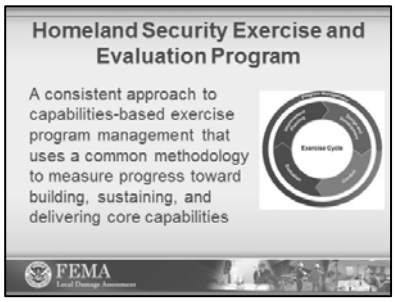
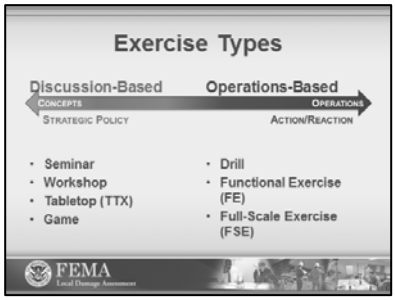
Visual 4-4 	**Who is familiar with the Homeland Security Exercise and Evaluation Program (HSEEP)?**
	HSEEP Overview
Visual 4-5 	HSEEP is a consistent approach to capabilities-based exercise program management that uses a common methodology for designing, developing, conducting, and evaluating exercises to measure progress toward building, sustaining, and delivering core capabilities. The program is designed to encourage the use of national best practices and is adaptable to the needs of each jurisdiction regardless of size. As a key component of national preparedness—exercises provide elected and appointed officials and stakeholders from across the Whole Community with the opportunity to shape planning, assess and validate capabilities, and address areas for improvement.
Visual 4-6 	**Exercise Types** The exercise type is selected based on the purpose of the exercise. If the intent is to review and discuss a new policy, plan, or set of procedures, a discussion-based exercise may be appropriate. If the intent is to assess the responders' knowledge, skills, and abilities in implementing a plan, policy, or set of procedures, an FE or FSE may be appropriate. Exercise planners select the exercise type that is appropriate to the capabilities and risks that will be the focus of the exercise. A comprehensive, integrated exercise program will use a progression of exercise types chosen so that when done in series they address program priorities by assessing the full range of preparedness activities for each mission area—from underlying procedural concepts through full mobilization of stakeholder organizations.

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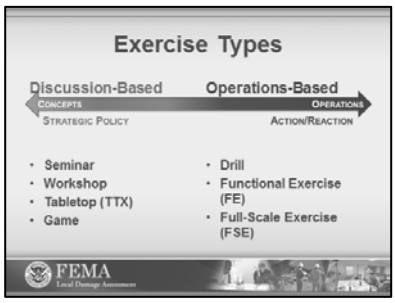
Visual 4-6 (Continued) 	**Discussion-based exercises** focus on strategic, policy-oriented issues and include seminars, workshops, tabletop exercises (TTXs), and games. These types of exercises are used to familiarize players with current plans, policies, agreements, and procedures or to develop new plans, policies, agreements, and procedures. Facilitators/presenters usually lead the discussion, and are critical for keeping participants on track toward meeting exercise objectives. **Operations-based exercises** are characterized by actual reaction to an exercise scenario designed to simulate a real-world event and may involve actual mobilization of personnel and resources. Operations-based exercises include drills, functional exercises (FEs), and full-scale exercises (FSEs). These are used to validate functional response actions where plans, policies, agreements, and procedures are implemented "as if" responding to actual incident. They are used to validate appropriateness of player actions based on assigned roles and responsibilities and are used to identify resource gaps across the scope of response—including the policy and planning basis that sets forth standard operating procedures followed during response activities. As you may expect, due to their scope and complexity, the level of support and time needed to plan, design, develop, and conduct operations-based exercises is considerably greater than those required for discussion-based exercises.

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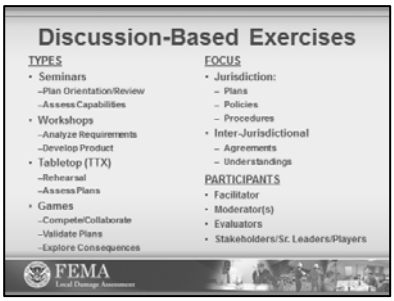
Visual 4-7  	**Discussion-Based Exercises** The first level of exercises is discussion-based exercises. Discussion-based exercises include seminars, workshops, tabletop exercises (TTXs), and games. These types of exercises can be used to familiarize players with current plans, policies, agreements, and procedures or to develop new plans, policies, agreements, and procedures. Discussion-based exercises focus on strategic, policy-oriented issues. Seminars generally orient participants to, or provide an overview of, authorities, strategies, plans, policies, procedures, protocols, resources, concepts, and ideas. As a discussion-based exercise, seminars can be valuable for entities that are developing or making major changes to existing plans or procedures. Seminars can be similarly helpful when attempting to gain awareness of, or assess, the capabilities of interagency or inter-jurisdictional operations. Similar to seminars, workshops differ in two important aspects: participant interaction is increased, and the focus is placed on achieving or building a product. Effective workshops entail the broadest attendance by relevant stakeholders. Products include new Standard Operating Procedures (SOPs), Emergency Operations Plans, Continuity of Operations Plans, and Mutual Aid Agreements. The workshop format is open and adaptable to different purposes. They can be done in a tabletop format with scenario and presentation visuals but be designed to have players actually develop a procedure or procedural step, or design a plan or plan element. While they can be conducted in many different ways, to be effective, workshops should focus on a specific issue, focused objective, product, or goal that is clearly defined.

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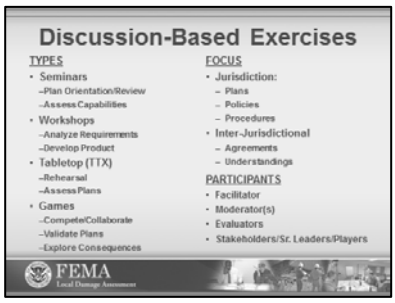
Visual 4-7 (Continued)  	Tabletop exercises which are commonly referred to by their acronym—TTXs—are aimed at facilitating conceptual understanding, identifying strengths and areas for improvement, and/or achieving changes in perceptions. Players are encouraged to discuss issues in depth, collaboratively examining areas of concern and solving problems. The effectiveness of a TTX is derived from the energetic involvement of participants and their assessment of recommended revisions to current policies, procedures, and plans; therefore facilitation is critical to keeping participants focused on exercise objectives. They come in a variety of *flavors* that fall into two types—the traditional basic or advanced TTX. Basically, an advanced TTX provides more complex exercise play that can combine certain disciplines, with small teams or task-level or functional area players working on games in coordination with senior-level players using a scenario that improves or moves forward over time in a series of moves over several modules. The idea is to use TTXs as a way to look at traditional functional and task-level policies and procedures, and especially where these involve coordination across multiple jurisdictions or organizations in order to identify potential improvements. A game is a simulation of operations that often involves two or more teams, usually in a competitive environment, using rules, data, and procedures designed to depict an actual or hypothetical situation. Depending on the game's design, the consequences of player actions can be either pre-scripted or decided dynamically. Identifying critical decision-making points is a major factor in the success of games because players make their evaluated moves at these crucial points.

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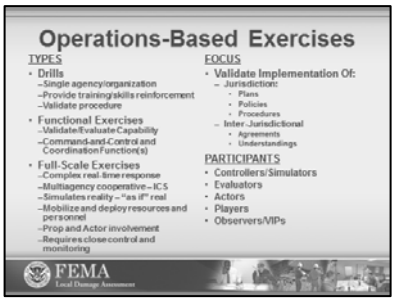
Visual 4-8  	**Operations-Based Exercises** Operations-based exercises are more complex and include *drills, functional exercises (FEs*), and *full-scale exercises (FSEs)*. These exercises are used to validate plans, policies, agreements, and procedures; clarify roles and responsibilities; and identify resource gaps. Operations-based exercises are characterized by actual *implementation of response activities* in reaction to an exercise scenario. A drill is a coordinated, supervised activity usually employed to validate a specific function or capability in a single agency or organization. Drills are commonly used to provide training on tasks specific to new equipment or procedures, to introduce or validate procedures, or to practice and maintain current skills. Drills can also be used to determine if plans can be executed as designed, to assess whether more training is required, or to reinforce best practices. During drills, the command and control or coordination of agency or organizational elements are simulated or not in play. A drill is useful as a stand-alone tool when implementing the use of new equipment or procedures within a single agency or organization, but a series of drills can also be used to prepare several agencies and organizations to collaborate in a Full-Scale Exercise or FSE.

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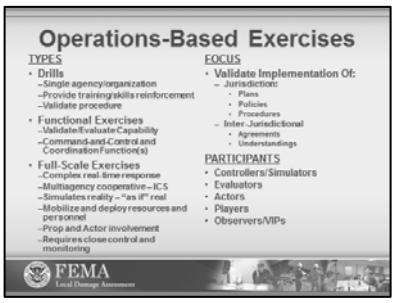
Visual 4-8 (Continued)  	Functional Exercises or FEs are traditionally used to evaluation coordination of management-level command and control functions and are designed to validate and evaluate capabilities, multiple functions and/or sub-functions, or interdependent groups of functions. As they are traditionally used, FEs focus on exercising plans, policies, procedures, and staff members involved in management, direction, command, and control branches of the Incident Command System (ICS) and Unified Command, or multiagency coordination centers (e.g., Emergency Operations Centers [EOCs]) where movement of personnel and equipment and task-level activities are usually simulated. FSEs are typically the most complex and resource-intensive type of exercise and include command-and-control, functional, and task-level components. They are conducted in a real-time, stressful environment intended to mirror a real incident where many activities occur simultaneously throughout the duration of the exercise. In an FSE, events are projected through an exercise scenario with event updates that drive activity at the operational level. They involve multiple agencies, organizations, and jurisdictions and validate many facets of preparedness operating under the Incident Command System (ICS) and Unified Command, or multiagency coordination centers (e.g., Emergency Operations Centers [EOCs]). Personnel and resources may be mobilized and deployed to the scene where actions would be conducted as if a real incident had occurred. The FSE simulates reality by presenting complex and realistic problems that require critical thinking, rapid problem-solving, and effective responses by trained personnel. The level of support needed to conduct an FSE is greater than that needed for other types of exercises. Safety issues, particularly regarding the use of props and special effects, must be monitored and the exercise site or venue is usually large, therefore site logistics require careful planning and close monitoring. Not every exercise you can do will neatly fit into these seven exercise types. This is especially true as you move towards the use of games as operational exercises that may have elements of one or more exercise types.

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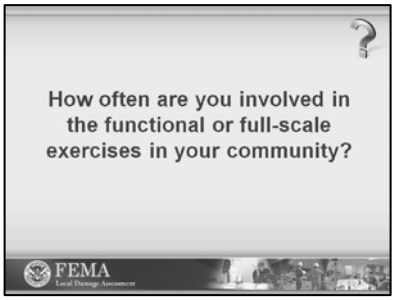
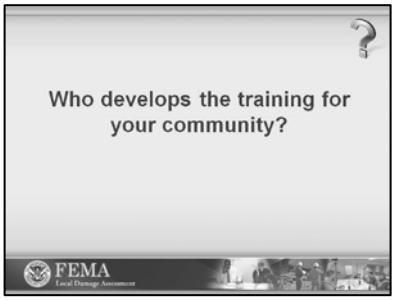
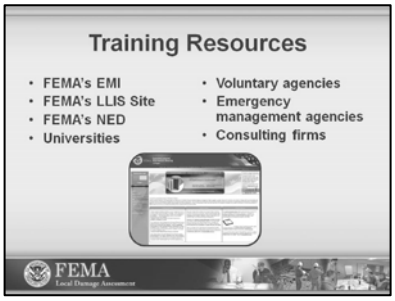
Visual 4-9 	**How often are you involved in the functional or full-scale exercises in your community?**
Visual 4-10 	**Who develops the training for your community?**
Visual 4-11 	**Training Resources** Although the most effective training experiences you can provide are those that consider the community's specific hazards and vulnerabilities, it may not be necessary to develop all-new training. When determining that new, community-specific training is necessary, you don't have to create it alone. There are several potential resources available for training. ***EMI Training Opportunities*** The following courses, available from EMI, are recommended for those involved in developing exercises: • IS-0120a, *An Introduction to Exercises* • IS-0139, *Exercise Design* • L0146, *HSEEP Training Course* • Master Exercise Practitioner Program (MEPP)

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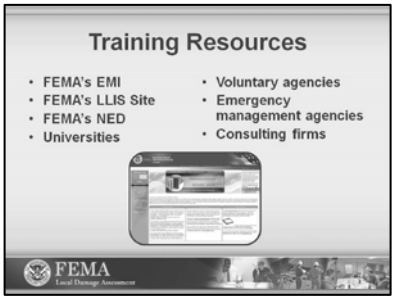
Visual 4-11 (Continued)  	***Lessons Learned Information Sharing (LLIS)*** Lessons Learned Information Sharing (LLIS.gov) is a Department of Homeland Security/Federal Emergency Management Agency program. LLIS.gov serves as the national, online network of lessons learned, best practices, and innovative ideas for the emergency management and homeland security communities. This information and collaboration resource helps emergency response providers and homeland security officials prevent, protect against, respond to, and recover from terrorist attacks, natural disasters, and other emergencies. LLIS.gov provides Federal, state, and local responders and emergency managers with a wealth of information and front-line expertise on effective planning, training, and operational practices across homeland security functional areas. Additional resources for training include: • FEMA's National Exercise Division (NED) • Universities • Voluntary agencies • State and local emergency management agencies and training offices • Consulting firms

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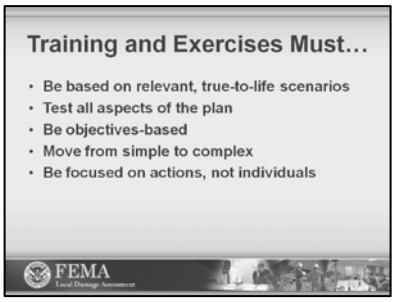
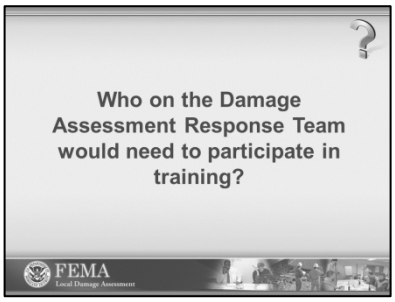
Visual 4-12 	**Basic Principles for Effective Training and Exercises** Exercises must be capability/objectives-based, well-designed, and planned if they are to be effective. Be sure to design training and exercises to test your existing plans, policies, and procedures. The following characteristics are key to successful training and exercises: • They must be based on relevant, true-to-life scenarios. • They test all aspects of the plan. • The questions and problems must be objectives-based and move from simple to complex. • Evaluation should be focused on actions, not on individuals. In other words, the exercises should challenge participants with real-life situations in a no-failure environment. It is important that the focus of after-action analysis is on what went wrong, and not who is to blame, because many of the best lessons are learned from failed attempts. Remember to include damage assessment in broader, multi-agency full-scale disaster exercises as well, so that all team members can work together efficiently. Another useful practice is to encourage like training across multiple jurisdictions and agencies. Having similar training programs can help teams work together more efficiently following a disaster.
Visual 4-13 	**Who on the Damage Assessment Response Team would need to participate in training?**

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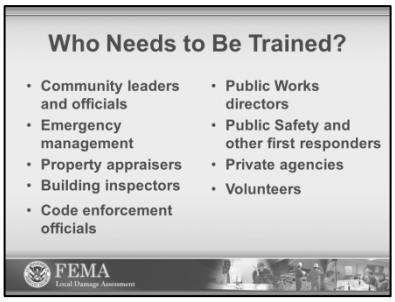
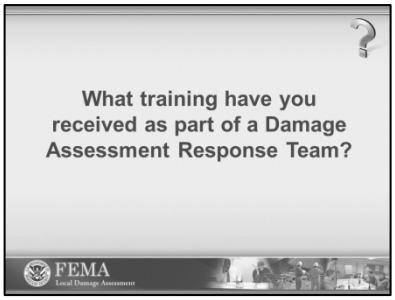
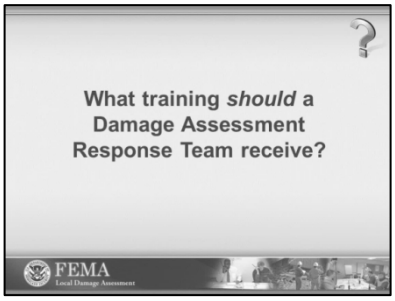
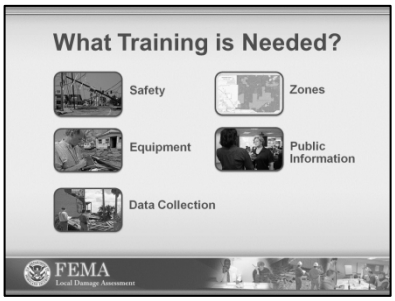
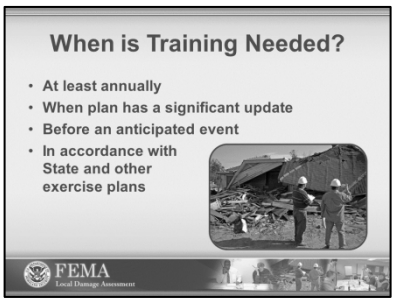
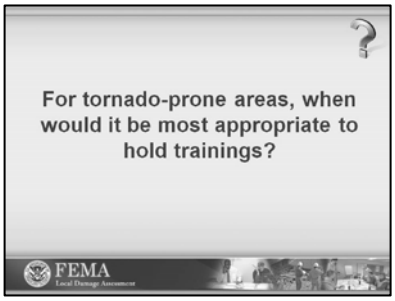
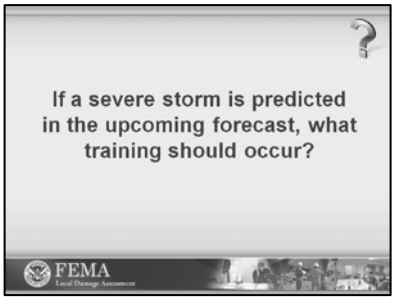
Visual 4-14  	**Who Needs to Be Trained?** Anyone involved in damage assessment needs to participate in the training and exercise program. These individuals may include: • Community leaders and officials • Emergency management • Property appraisers • Building inspectors • Code enforcement officials • Public Works directors • Public Safety and other first responders • Private agencies • Volunteers In addition, you should provide training to any other individuals with specific damage assessment roles and responsibilities. Training should also be provided to anyone who could be called in as a "backup" to help your community with damage assessment.
Visual 4-15  	**What training have you received as a part of a Damage Assessment Response Team?**
Visual 4-16  	**What training should a Damage Assessment Response Team receive?**

Notes	Content
Visual 4-17  	**What Training is Needed?** ***Safety*** One of the most important areas in which teams should be trained is safety. Keeping team members safe during damage assessment is critical. They should be trained to report life safety issues immediately and know what to do to keep themselves and their fellow team members safe from harm. If Personal Protective Equipment (PPE) is required, they must be trained on its proper use and maintenance. ***Data Collection*** Another significant area for training is the collection of data. Teams must know where to find the appropriate damage assessment forms, how to complete forms correctly, and what to do with the forms once they have been completed. If electronic forms are to be submitted, teams must be trained on the use of the equipment, and paper backups must be available. ***Equipment*** If electronic forms are to be submitted, teams must be trained on the use of the equipment. Other equipment used by Damage Assessment Response Teams, such as communication tools and other technology, may also require training to ensure that it is used properly and that all members of the team know how to use it. During response and recovery, things are too hectic for team members not to know how something works. ***Zones*** Teams need to be aware of their designated zones and assignments prior to a hazard. Zone familiarization is important so that teams are aware of what their assigned zones look like prior to a hazard in order to be able to effectively identify damages. They should also be aware of all vulnerabilities that exist within their assigned area, including location of power lines, the type of construction used for the buildings in those zones, and the presence of any hazardous material. To some degree, inspectors should know what's in other zones, because they may need to fill in for someone else. Some zones may be so damaged that they require additional inspectors. For these reasons, cross-training on damage assessment zones is important.

Notes	Content
Visual 4-17 **(Continued)** 	***Public Information*** Damage Assessment Response Teams need to be trained for dealing with the public as well as the media. Each community will need to set its own policies and train the teams accordingly.
Visual 4-18 	**When is Training Needed?** So that all Damage Assessment Response Team members are prepared for a hazard event, training should occur at least annually and in accordance with state and other exercise plans. Refresher training should be conducted prior to any anticipated event. Training should occur when assignments change and when new employees come on board. Training should also be scheduled any time there is a significant update to the plan or when significant changes or expansions occur to systems or infrastructure. Training should also be scheduled any time there is a significant update to the plan. Just-in-time briefings for the leadership should be held prior to teams being sent out so that they have the most recent information available when they need it most. When scheduling annual training, consider the hazard for which the team is preparing.
Visual 4-19 	**For tornado-prone areas, when would it be most appropriate to hold trainings?**

Notes	Content
Visual 4-20 	**If a severe storm is predicted in the upcoming forecast, what training should occur?**
Visual 4-21 	**Group Activity: Hazard Event Trainings**

Hazard Event Trainings

Instructions:

Read the following scenario, and then answer the questions below in the space provided.

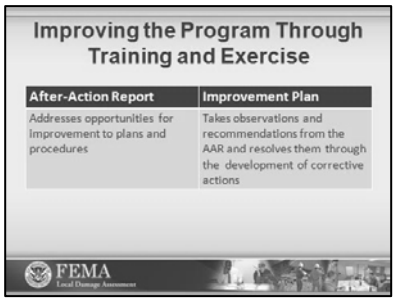
A winter storm has rolled in, and your community has received 8 inches of snow on top of freezing rain. The first-in team has cleared the main roads and reported areas with downed power lines, and public works is currently working with the local utility companies to repair the lines. The first-in team has provided a list of safe areas to enter for beginning damage assessment.

1. When would it be most appropriate to hold trainings for this event?

2. What information should be provided to Damage Assessment Response Teams prior to being deployed to their zones?

3. What possible cascading emergencies could occur during the storm and immediately after the storm?

4. How would the team need to prepare for the severity and magnitude of these events?

Notes	Content
Visual 4-22 	**Using Training and Exercises to Improve the Program** Through conducting training and exercises and evaluating the results, you can improve your damage assessment program. Two documents generated by the exercise team that will help are: • The After-Action Report (AAR) – The AAR addresses opportunities for improvement of plans and procedures. The AAR can also be used in the development of exercise scenarios. • The Improvement Plan (IP) – The IP takes the observations and recommendations from the draft AAR and resolves them through the development of concrete corrective actions. It is important that the focus of after-action analysis is on *what* went wrong, and not *who* is to blame, because many of the best lessons are learned from failed attempts. The Damage Assessment Planning Team should not merely take these documents and file them away. Instead, After-Action Review Meetings should be held with the team to go over the results. When conducting After-Action Reviews, remember not to place blame or point fingers. The focus of these meetings should be to celebrate successes and identify needs for improvement to the plan. This critical evaluation step leads to better preparedness of your program.
Visual 4-23 	**Group Activity: Reviewing an After-Action Report**

After-Action Report

Instructions:

Read the following excerpt from a real After-Action Report. Then record your group's responses to the questions in the space provided.

Within hours after the response to the fire, it became apparent that the services of a structural engineer would be required prior to emergency responders entering the fire scene.

Within an hour of the request, a structural engineer was located that was willing and qualified to enter the fire zone to evaluate the strength of the facility for purposes of the safety of fire and rescue personnel.

Fortunately, sufficient fire turnout apparel and equipment was available to outfit the engineers whose services were to be required for days to come.

Source: After-Action Report, Imperial Sugar Dixie Crystal Plant, February 7, 2008
Chatham Emergency Management Agency.

Based on the information from the After-Action Report, what recommendations would you make to improve response actions in future similar situations?

Explain your rationale behind those recommendations.

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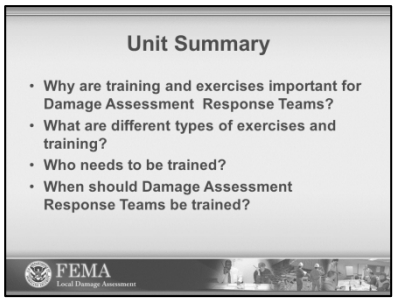
Visual 4-24  	**Unit Summary** In this lesson, you learned about the importance of training and exercising your damage assessment plan. You learned about different types of exercises that can be used to practice the plan, facilitate effective inter- and intra-agency coordination, and clarify processes and procedures. You also learned who needs training, what training they need, and when they need it. Resources were provided for developing training and exercises. In addition, you learned that after-action review is critical to identifying areas for improvement and enhancing the readiness of your community.

5 Operations

Unit Objectives

This unit discusses the operations of local damage assessment. It recommends potential members and responsibilities for first-in teams. It also outlines the process for local workers responding to an event as part of the Damage Assessment Response Team. Finally, reminders are included about how Response Team members have considerations beyond damage assessment.

By the end of this unit, you will be able to:

- Identify potential members of the local Damage Assessment Response Team.
- List types of information that should be included in pre-deployment briefings.
- Describe basic procedures for damage assessment.
- Assign damage level ratings based on visual inspection.
- Describe special considerations regarding the human impact of disasters.

Content Outline

Unit Topics	Estimated Time
Unit Overview	5 Minutes
Response Teams	25 Minutes
Basic Procedures*	20 Minutes
Activity: Damage Assessment Practice	15 Minutes
Recording and Reporting	10 Minutes
The Human Impact of Disasters	10 Minutes
Unit Summary	5 Minutes
TOTAL	**1 Hour, 30 Minutes**

**The time estimate for this topic does not include the activity, which is listed separately.*

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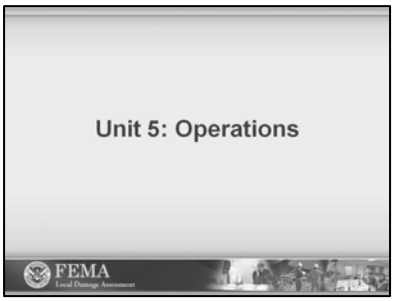
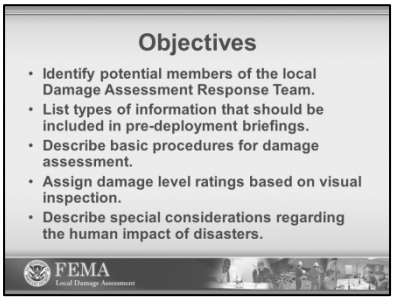
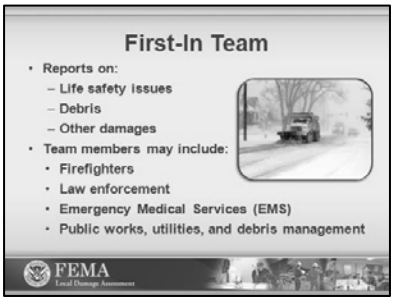
Visual 5-1 	**Unit Overview** In this lesson, you will learn the operations of local damage assessment. This lesson recommends potential members and responsibilities for first-in teams. It also outlines the process for local workers responding to an event as part of the Damage Assessment Response Team. Finally, reminders are included about how Response Team members have considerations beyond damage assessment.
Visual 5-2 	**Unit Objectives** This unit will enable you to: • Identify potential members of the local Damage Assessment Response Team. • List types of information that should be included in pre-deployment briefings. • Describe basic procedures for damage assessment. • Assign damage level ratings based on visual inspection. • Describe special considerations regarding the human impact of disasters.
Visual 5-3 	**Response Teams** **First-In Team** When a disaster or other emergency strikes a community, first responders are generally deployed to address life safety issues such as conducting search and rescue, clearing entrance and egress routes, extinguishing fires, and providing medical services. The “first-in team” can be a valuable asset to your community’s damage assessment program by conducting preliminary impact assessments and reporting on life safety issues, debris, and other damages observed out in the community. While a first-in team is not a required part of a damage assessment program, it can be a valuable source of field intelligence for damage assessment and is therefore a recommended resource. Those individuals are already out in the community, so it makes sense to use them to help gather information.

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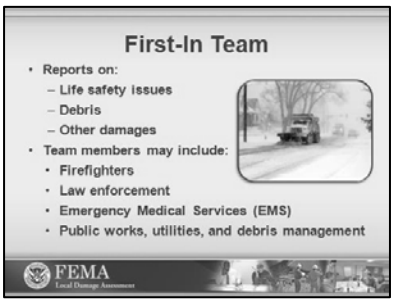
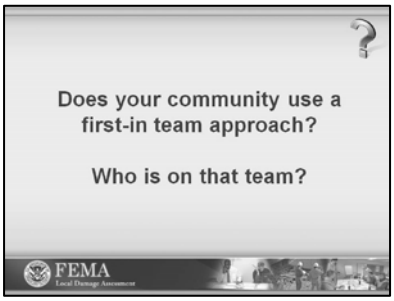
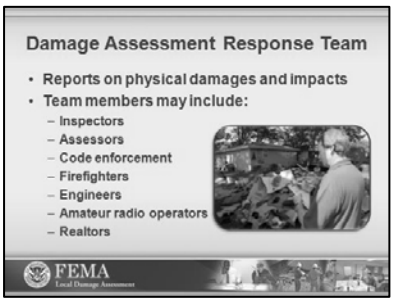
Visual 5-3 (Continued) 	Some potential members of the first-in team include: • Firefighters • Law enforcement • Emergency Medical Services (EMS) • Public works, utilities, and waste management Even if the community does not have a formal first-in team, local agencies and certain members of the community can still be excellent sources of information. These sources of information can be a great start for the damage assessment process. This information can be invaluable to other local response or recovery agencies. Keep in mind that these teams will need to be trained in a manner that is consistent with the training provided to the Damage Assessment Response Teams, including participation in drills and exercises.
Visual 5-4 	**Does your community use a first-in team approach? Who is on that team?**
Visual 5-5 	**Damage Assessment Response Team** The Damage Assessment Response Team evaluates and documents the physical damage caused by an event and its potential impact on the community. Because input from varying perspectives allows for a more thorough assessment of the damage in a community, the Damage Assessment Response Team should be composed of members from various groups and functional areas within the community. Frequently, there is overlap with those who helped develop the community's emergency management and damage assessment plans.

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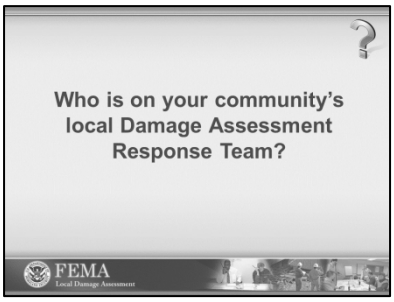
Visual 5-6  	**Who is on your community's local Damage Assessment Response Team?**
	Damage Assessment Coordinator Responsibilities should be clearly designated so that efforts are not duplicated. To effectively coordinate efforts and compile information, a Damage Assessment Coordinator should be designated as the facilitator/leader of the process. The individual selected to chair the Damage Assessment Response Team should be an individual who is familiar with the community as a whole and who would have the time and initiative to thoroughly complete the assessment. Keep in mind that it will likely be a full-time job for some period of time. The Coordinator role should also be filled by someone who has the ability to work well with the numerous individuals involved as a part of the Damage Assessment Response Team.

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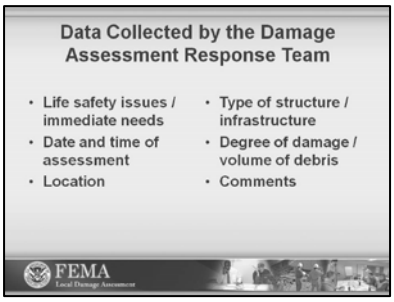
Visual 5-7  	**Data Collected by the Damage Assessment Response Team** When the Damage Assessment Response Team is out in the community, members will be recording a great deal of information, using the standards and procedures defined in the community's damage assessment plan. ***Life Safety Issues/Immediate Needs*** Reporting life safety issues is paramount, not only to maintain the safety of the Damage Assessment Response Team members, but also that of individuals in the community. A life safety issue is any issue that presents an immediate hazard. Examples are power lines, leaking chemicals, gas leaks, and wild animals. Follow the community's designated procedures for reporting life safety issues as soon as they are identified. Any immediate needs issues should also be identified and reported. Examples of immediate needs include food, water, sanitation, shelter, and the need for Critical Incident Stress Management (CISM). ***Date and Time of Assessment*** It is important to note the date and time when the assessment is conducted. Multiple assessments may need to be conducted following an event, and certain conditions, such as continued hazardous weather, may contribute to further damage. Documenting dates and times on assessment forms helps document the timeline of damage. ***Location*** Details about the location of the assessment need to be included. This information helps determine the perimeter of damage and helps locate the areas which received the most damage. That information can be useful later when planning distribution of resources. ***Type of Structure/Infrastructure*** Categories of structures can include single-family dwellings, mobile homes, multi-family dwellings such as apartments or condominiums, public buildings, and commercial buildings. Infrastructure includes lifeline systems such as utilities, roads, bridges, and public services.

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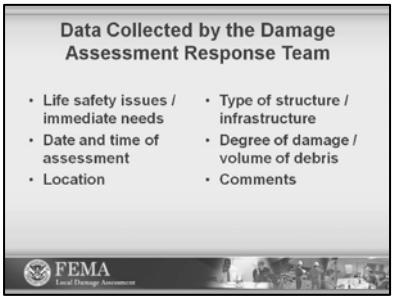
Visual 5-7 (Continued)  	***Degree of Damage/Volume of Debris*** The degree of damage a structure has sustained should be assigned a category based on the standards established in your community. The goal at this phase is not merely assigning a dollar amount to the damage, but rather getting an accurate description of the scope and magnitude of the damage. In addition to providing an estimated repair cost, information about the impact on the community should be included. Describe how the damage will impede, threaten, or prevent the community from functioning as it normally would. The estimated duration of the disruption and assistance required for recovery should be included as well. The volume of debris is a necessary measurement, as it is an integral part of the declaration process. It will also help determine the community's ability to manage the event or disaster and help evaluate if managing the event or disaster is beyond the means of the community. ***Comments*** The team should also include any other observations that do not fit into any other category. For example: • How damages will affect the provision of essential services such as potable water, sewer disposal, etc. • How damages will affect the business community • The potential economic impact of the damage • The potential environmental impact of the damage

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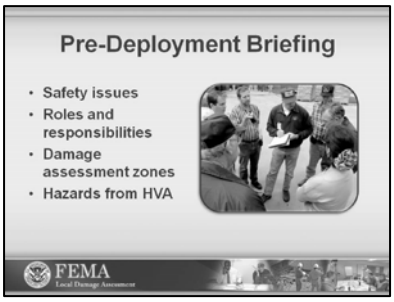
Visual 5-8  	**Basic Procedures** **Pre-Deployment Briefing** Prior to Damage Assessment Response Teams going out into the community, they should be briefed about the current situation and what they might expect in the field, based on available information. If teams have been pre-positioned, a briefing could be conducted over the phone, or via a web or video conference. In particular, teams should be briefed about potential safety issues they may encounter. For example, if the power company has confirmed that all power in an area is off, team members need to have this information so that they know that downed power lines in that area are not dangerous. They should also be reminded of their specific roles and responsibilities as well as the reporting procedures. A clear communication of roles and responsibilities will result in smoother relay of information about the extent of damage across the community. Remember, zones should be defined as part of your community's emergency management plan, and teams should already be familiar with their zones. This zone familiarization is important so the teams understand what "normal" is for their assigned zones so they can more readily assess the damage to those areas. In particular, teams should be aware of the hazards in the community and in their zones that have been identified in the THIRA. During the pre-deployment briefings, the Damage Assessment Response Teams will be deployed based on which areas were affected by the event. Giving each team an assigned zone ensures that all areas are assessed and efforts are not duplicated.

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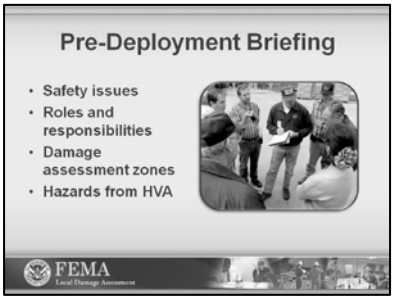
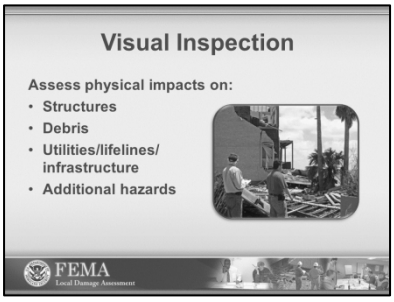
Visual 5-8 (Continued) 	**Safety Issues** All personnel assigned to the Damage Assessment Response Team should receive a safety briefing as part of the pre-deployment briefing. Issues discussed should include: • Weather forecast • Known or expected hazards • Cautionary statements regarding being properly hydrated, using seat belts, etc. • Any personal protective requirements such as use of safety shoes, reflective vests, hats or helmets, sunscreen, layered clothing, etc. • Identification requirements • Use of vehicle lights/warning lights as needed • Communications plan • Any other issues specific to the area
Visual 5-9 	**Visual Inspection** As part of the pre-deployment briefing, teams should understand the hazards they may face and what they should be looking for when conducting damage assessments. It is critical that life safety issues be reported to 911 right away, for the protection of the teams and the community's citizens. Follow-up information should be reported to the EOC. Damage Assessment Response Teams should determine the perimeter of the damaged area, remembering to report only disaster-related damages and life safety issues. Damage that is not disaster-related should not be reported as such. This is one reason it is important for teams to be familiar with their zones prior to a disaster. If teams are not familiar with their zones, damages may be misreported. To some degree, inspectors should know what's in other zones, because they may need to fill in for someone else. Some zones may be so damaged that they require additional inspectors. For these reasons, cross-training on damage assessment zones is important. At this stage, the teams will use a "windshield survey" approach to verify the extent and impact of the damage.

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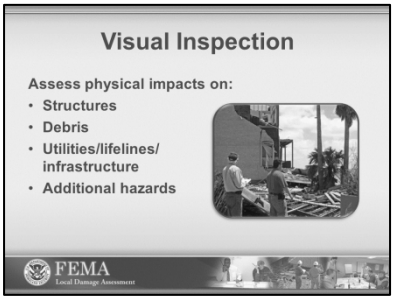
Visual 5-9 (Continued)  	**Structures** It is important to keep members of the community out of potentially unstable structures, so the Damage Assessment Response Team should identify buildings that could pose a potential life safety risk and report them immediately. Your community should have a tagging system in place to identify buildings as safe to enter following an event. A detailed damage assessment can then be done by a qualified team to assess the structural integrity of the structure. An important consideration for the community's recovery and for determining whether or not the affected area will be eligible for state and Federal aid is the need for temporary housing. Thus, it is important for Damage Assessment Response Teams to provide information about the habitability of the homes that have been damaged. When conducting habitability assessments, teams should not focus on property value – only on whether residents can live in the structure. **Debris** Following a hazard event, the community must determine how much waste will need to be managed. In addition to typical household waste, your community could be faced with disposing of additional solid waste, medical or industrial waste, hazardous waste, and construction materials. There may also be abandoned vehicles and damaged appliances that will need to be disposed of properly. Another component of storm debris can include vegetative waste such as tree limbs. While you are out conducting your damage assessment, be sure to note what type of waste/debris is present, where it is located, and approximately how much there is. Estimates of the volume of debris must be included in information that is submitted to the state as part of the declaration process. Information about the location of the debris should be included as well.

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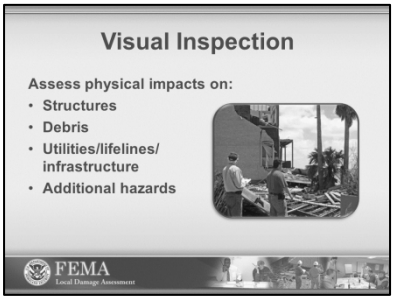
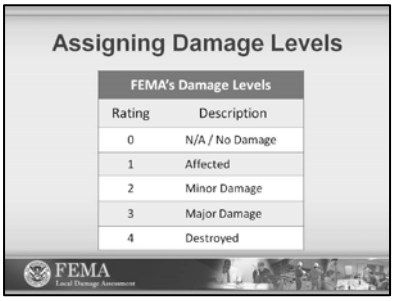
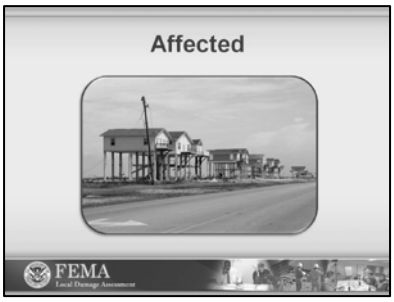
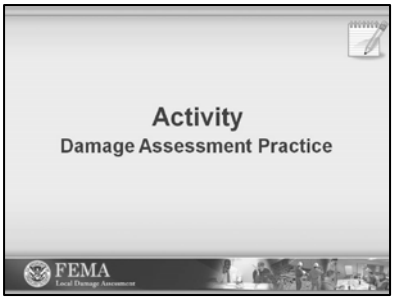
Visual 5-9 (Continued) 	**Utilities/Lifelines/Infrastructure** While out assessing damage, teams should determine areas that need immediate assistance because of damage to utilities and other lifelines (e.g., water, sewer, power). Hazards that pose a serious life safety issue, such as downed power lines, must be reported as soon as they are identified. If the community uses the recommended first-in team approach, you should already be aware of any power-related issues, because utilities crews should be on the first-in team. They can let others know that power is out and inform them when it is safe to enter the area. **Additional Hazards** Damage Assessment Response Teams need to be aware of additional hazards, such as those pre-identified in the THIRA, so that they can report back on the state of those hazards. Other hazards that may be present are dependent on the disaster type and could include water-borne and vector-borne diseases, chemical spills, fires, wild animals, snakes, rodents, and even domestic animals that can become dangerous after they've gone hungry for several days.
Visual 5-10 	**Assigning Damage Ratings** As you learned, FEMA uses a 4-point system for assigning damage levels. We're going to look at some photo examples of what those damage levels look like for residential structures, and then you'll practice assigning damage levels using that system with your groups. Keep in mind that damage assessment is not an exact science. When performing damage assessment, you should refer to the damage level descriptions used by your community (which should be in accordance with FEMA's damage levels) and provide supporting information for why a particular rating was chosen.

Notes	Content
Visual 5-11 	**Affected** Because these homes are elevated, they survived Hurricane Ike's 20-foot storm surge with minimal damage (while homes in the area that were not elevated no longer exist). These homes were affected with minimal damage to their structure and/or contents and are habitable without repairs. This category of damage includes homes that are inaccessible by normal means, due to disaster-related road closures (e.g., bridge out, road flooded or blocked by debris, landslide, mudslide, severe erosion, washed out, etc.). If a home or group of homes is inaccessible due to damage to a road or bridge, the number of affected households should be included. Once accessible, the homes can be evaluated for a more accurate determination of the level of damage.
Visual 5-12 	**Minor Damage** The house shown in this photo was damaged by a tree falling on it. One room was impacted. The home is still habitable. This is minor damage. 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.
Visual 5-13 	**Major Damage** Hurricane Frederick blew a tree down on this home. The difference between this one and the previous home is that more than 50% of the structure is damaged, making the home uninhabitable. This constitutes major damage. Major damage exists when the home has sustained structural or significant damages, is uninhabitable and requires extensive repairs.

Notes	Content
Visual 5-14 	**Destroyed** This is a photo of tornado damage to a townhouse in Birmingham, Alabama. As you can see, the roof is gone, the exterior walls are gone, a stone wall has collapsed, and the floor is cracked. It is not economically feasible to repair this structure. This townhouse was destroyed. Destroyed means the structure is a total loss or damaged to such an extent that repairs are not economically feasible.
Visual 5-15 	**Group Activity: Damage Assessment Practice**

Group Activity: Damage Assessment Practice

Instructions:

Show photos of homes damaged in a disaster. Discuss each photo with your group and determine a damage level rating based on the information below. Be prepared to justify the rating you chose.

Photo 1

Photo 2

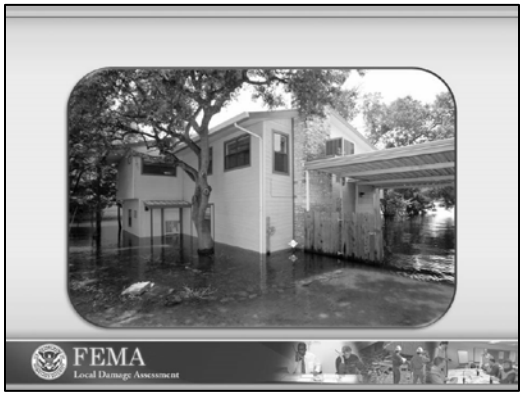


Photo 3

FEMA Damage Levels

There are five degrees of damage levels: No Damage, Affected, Minor Damage, Major Damage, and Destroyed. Each level is described in detail in the following paragraphs.

No Damage

No damage is assigned when a structure has received no damage as a result of the hazard event.

Affected

This category includes dwellings with minimal damage to structure and/or contents and the home is habitable without repairs. This category of damage includes homes that are inaccessible by normal means, due to disaster-related road closures (e.g., bridge out, road flooded or blocked by debris, landslide, mudslide, severe erosion, washed out, etc.).

Minor Damage

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:

- Damages less than the maximum Housing Assistance Repair Grant.
- 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

Major damage exists when the home has sustained structural or significant damages, is uninhabitable and requires extensive repairs. Any one of the following may constitute major damage.

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

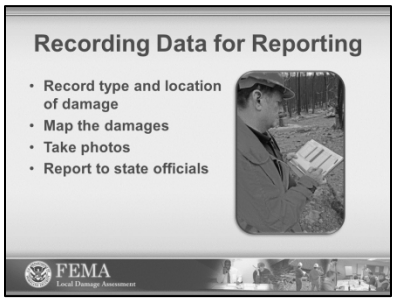
Destroyed

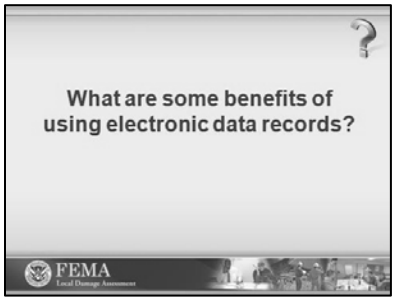
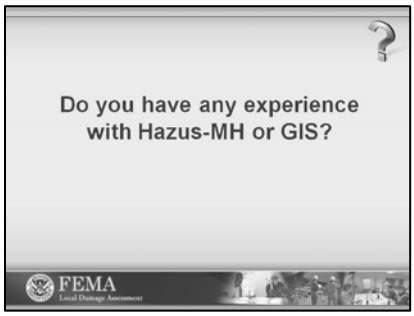
Destroyed means the structure is a total loss or damaged to such an extent that repairs are not economically feasible. Any one of the following may constitute a status of destroyed:

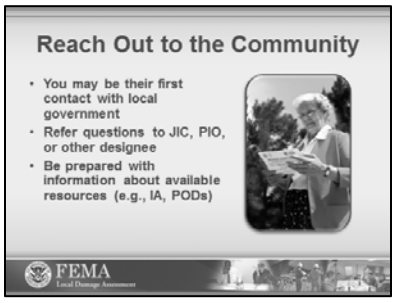
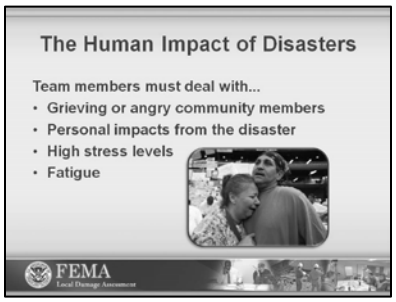
- Structure is not economically feasible to repair.
- Structure is permanently uninhabitable.
- Complete failure of major structural components (e.g., collapse of basement walls/foundation, walls, or roof).
- Only foundation remains.
- Two or more walls destroyed and roof substantially damaged.
- House pushed off foundation.
- An unaffected structure that will require removal or demolition (e.g., homes in imminent danger due to impending landslides, mudslides, or sinkholes; beachfront homes that must be removed due to local ordinance violations as a result of beach erosion).

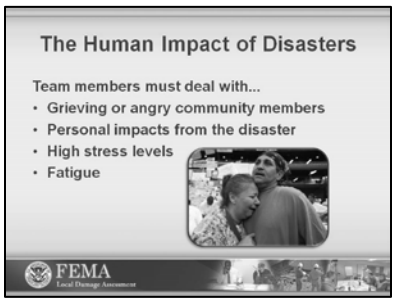
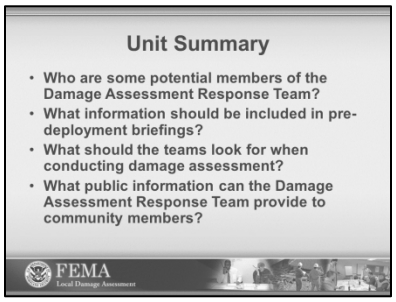
The purpose of differentiating levels of damage is to distinguish between the types of assistance required. Inspectors do not assess damage with the actual cost of the residence in mind but according to whether repairs are extensive or not. The feasibility of repairs and the condition of the unit determine whether or not repairs can be made under the Home Repair limits. The category of damage listed should be based on the type of assistance required.

Being able to accurately identify the level of damage that a structure sustains is important. Recording and reporting that information should be done using the procedures outlined in your damage assessment plan.

Notes	Content
Visual -5-19  	**Recording Data for Reporting** Information about the type and location of damage should be recorded. This includes mapping the damage in addition to providing a description. It should also include videos and/or photographs, when possible. It is important to keep accurate and thorough documentation because inaccurate or incomplete damage assessment information can cause inappropriate distribution of resources due to inaccurate setting of priorities. There could be increased negative environmental impacts. It can even result in a delayed or denied Presidential declaration of disaster.
	Methods for Recording and Reporting Data During the planning phase, the community will have determined what forms will be used as part of its damage assessment procedures. These forms need to be completed correctly and efficiently so that information about the impact of the disaster can be reported in a timely manner. If the community is using an electronic method of recording data, there should be a backup plan in case of technological difficulties. It is advisable to have paper copies of the electronic forms available just in case. The data recorded by local officials is then reported to state officials. The state compiles the local information into a report to be submitted to Federal officials often as part of a request for additional assistance via a declaration of disaster. Damage Assessment Response Team members need to be aware of the policies and procedures defined in your community's plan so that all necessary data can be reported. The key to success is having an up-to-date damage assessment plan, the correct forms, and properly trained team members.

Notes	Content
Visual -5-20 	**What are some benefits of using paper data records?**
Visual 5-21 	**What are some benefits of using electronic data records?**
Visual 5-22 	**Do you have any experience with Hazus-MH or GIS?**

Notes	Content
	The Human Impact of Disasters
Visual 5-23  	***Reach Out to the Community*** Many times following an event, the Damage Assessment Response Team may be the first contact that the community has with any local government representative. Members of the community may have many questions for you. While all questions must be referred to the Joint Information Center (JIC), Public Information Officer (PIO), or other designee, you can provide some answers for the community members by being prepared with any pamphlets, flyers, booklets, or handouts that may help them better understand what to do following this event in regards to Individual Assistance (IA), locations of Points of Distribution (PODs), or even just relevant phone numbers of organizations or help lines that could provide assistance or more information.
Visual 5-24  	***Looking Beyond Physical Impacts*** Because the Damage Assessment Response Team members are on the “front line” of the disaster, you will be exposed firsthand to the human impact of the event. You may encounter community members who are injured, devastated by the loss of their property, or searching for friends, family members, or lost pets. Some may be mourning the death of a loved one. In addition, you or another member of the Disaster Response Team may have been personally affected by the event. The human impact of disasters can be very unsettling and stressful for Disaster Response Team members and may become overwhelming, particularly if you have suffered losses yourself. You need to be educated about recognizing the signs of stress and how to manage it. By managing stress levels and taking time to take care of yourself, you will be better prepared to help others during the deployment.

Notes	Content
Visual 5-24 (Continued) 	When debriefing Disaster Response Teams to gain a better understanding of the physical impact of the disaster, supervisors should also be aware of the mental impact – both to the community and to the responders. Following an event, a community should be prepared for an increased demand for mental health services. The need for Critical Incident Stress Management (CISM) should be acknowledged in emergency plans, and providers of mental health services, such as voluntary agencies, faith-based groups, and private agencies, should be pre-identified with contracts in place for support after a disaster.
Visual 5-25 	**How can your community and the Damage Assessment Response Team in particular be better prepared to deal with the human impact of disaster?**
Visual 5-26 	**Unit Summary** In this lesson, you learned about local damage assessment operations, including the recommended members and responsibilities of first-in teams and Damage Assessment Response Teams, as well as some basic procedures for conducting local damage assessment. You also received reminders about considerations for Damage Assessment Response Team members that extend beyond assessing damage. Remember, because all communities are different, specific procedures for damage assessment should be defined in the community-specific damage assessment plan.

6 Data Collection and Analysis

Unit Objectives

Damage assessment activities drive the rest of the response and recovery actions. It is critical to collect accurate and thorough information and to maintain the appropriate documentation.

This unit describes methods for documentation and record-keeping as a part of your damage assessment program in addition to how that data can be used after the event.

By the end of this unit, participants will be able to:

- Explain how damage assessment information is used after the event.
- Explain documentation and record-keeping methods for effective damage assessments.

Content Outline

Unit Topics	Estimated Time
Unit Overview	5 Minutes
Importance of Data Collection and Analysis*	30 Minutes
Activity: Case Study in Documentation, Part One	20 Minutes
Activity: Case Study in Documentation, Part Two	20 Minutes
Unit Summary*	5 Minutes
Activity: Damage Assessment Lessons Learned	30 Minutes
Course Summary	10 Minutes
TOTAL	**2 Hours**
OPTIONAL EXAM	**30 Minutes**

**The time estimate for this topic does not include the activity, which is listed separately.*

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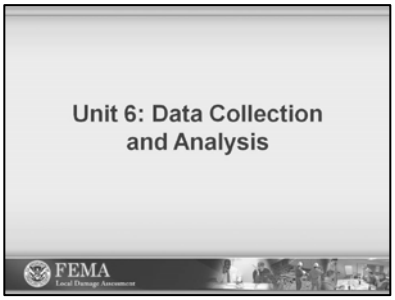
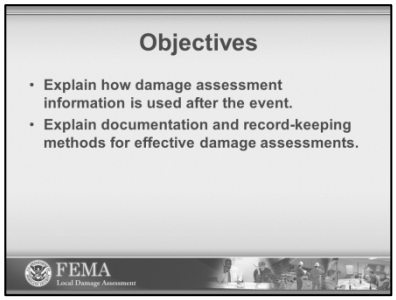
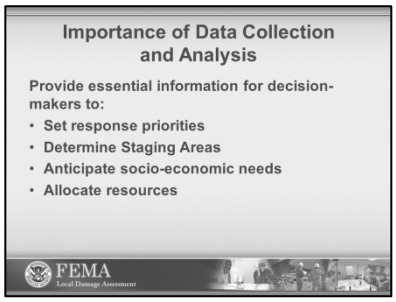
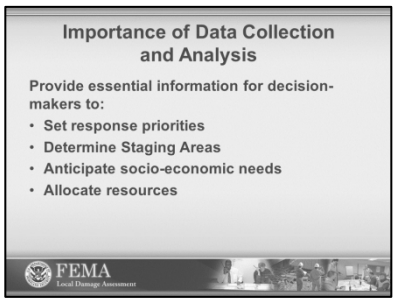
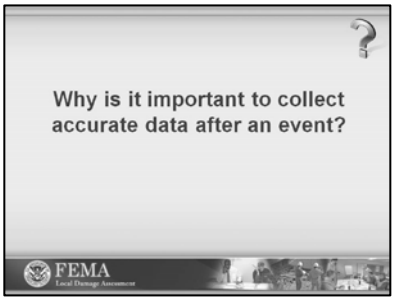
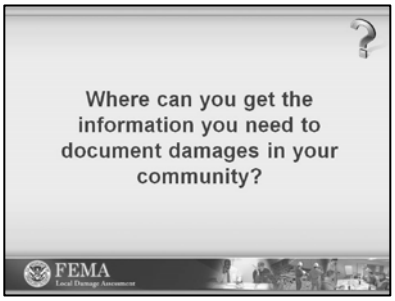
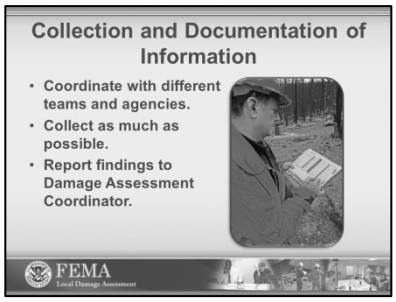
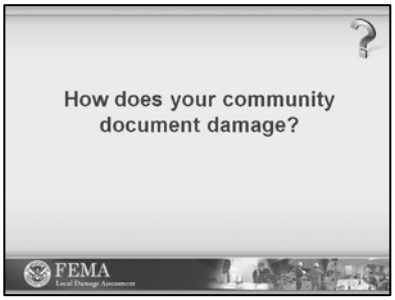
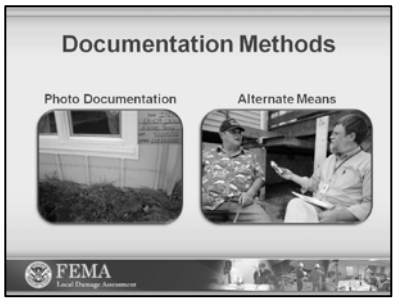
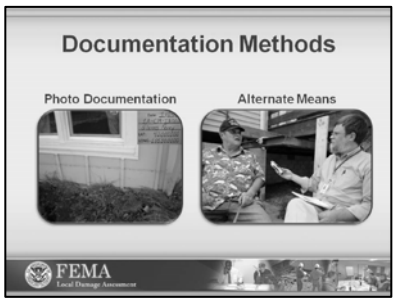
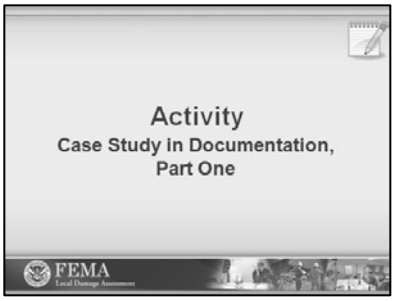
NOTES	CONTENT
Visual 6-1 	**Unit Overview** As you have learned, damage assessment activities drive the rest of the response and recovery actions. It is critical to collect accurate and thorough information and to maintain the appropriate documentation. In this lesson, you will learn about methods for documentation and record-keeping as a part of your damage assessment program. You will also learn how that data can be used after the event.
Visual 6-2 	**Unit Objectives** This unit will enable you to: • Explain how damage assessment information is used after the event. • Explain documentation and record-keeping methods for effective damage assessments.
Visual 6-3 	**Importance of Data Collection and Analysis** The information collected by Damage Assessment Response Teams is used for many purposes. Immediately following an event, data provides essential information for decision-makers, which is used for setting response priorities and determining the need for Staging Areas (e.g., close to the damaged areas), and making other key decisions. Damage assessment informs decision-makers about repair and restoration needs for critical infrastructure and key resources, as well as impacts to response capabilities. This early information also provides information about the socio-economic needs of the community as far as housing, social services, and the like. Information about collection/disposal needs and debris estimates helps allocate resources and helps determine other planning priorities such as landfill life and debris disposal options.

NOTES	CONTENT
Visual 6-3 (Continued) 	All of this information feeds into the Preliminary Damage Assessment (PDA) and is ultimately required as a part of the Presidential Disaster Declaration process. It helps determine if the community has surpassed damage thresholds; is overwhelmed, and in need of additional resources; and the level of aid that may be needed – whether state, Federal, or mutual aid, or contract resources. From a more long-term perspective, the data can be used to determine areas of the damage assessment program that may be in need of improvement. In addition, the information can be used to help identify mitigation planning opportunities in your community, and it feeds into the Post-Disaster Redevelopment Plan.
Visual 6-4 	**Why is it important to collect accurate data after an event?**
Visual 6-5 	**Where can you get the information you need to document damages in your community?**

NOTES	CONTENT
Visual 6-6 	**Data Collection Procedures** Collect as much information as possible to document the damage. All of this information can be reported to the Damage Assessment Coordinator through the reporting system established by your plan, such as radio communication, collection of forms, and/or in-person debriefs.
Visual 6-7 	**How does your community document damage?**
Visual 6-8 	**Documentation Methods** As we discussed, the documentation of damage can be recorded on electronic or paper forms. The collection of information should also include photographs and video whenever possible. ***Photo Documentation*** When photos are taken of damage in the community, it is important to keep accurate records of where the photos were taken. One way to do this is to complete a location form and include it in the photo. Another way is by using a digital camera with built-in GPS that can stamp each photo with the date, time, and precise location where it was taken.

NOTES	CONTENT
Visual 6-8 (Continued) 	***Alternate Means of Data Collection*** Although the community's first-in teams (if used) and the local Damage Assessment Response Teams should be relied upon as the primary resources for gathering damage assessment information, do not overlook the wealth of information that can be provided by local residents. Invite residents to submit damage photos to an e-mail account or post them to your emergency management agency's social media sites. Better yet, provide an electronic form that can be submitted online to provide the degree of detail you need, with contact information so your agency can follow up for more information. Verification of information is crucial. If you use this method, be sure to explain the intended use of the information and make it clear that completing the form does not constitute an application for assistance.
VISUAL 6-9 	**Video: Case Study in Documentation, Part One** This video presents a real-life example of the importance of documentation.
Visual 6-10 	**Individual Activity: Case Study in Documentation, Part One**

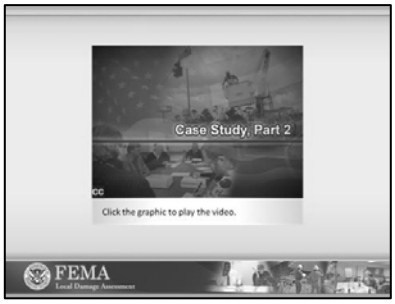
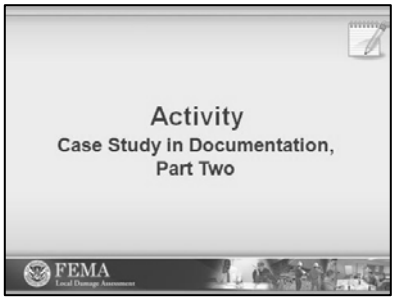
Case Study in Documentation, Part One

Instructions

Consider the documentation of each of the hazard events that impacted the City of Calais (as discussed in the video), and answer the questions that follow.

1. What are some specific ways for a local Damage Assessment Response Team to ensure that state and Federal officials are able to see and understand the full impact of disaster damages in a situation like the storms experienced by Washington County, Maine?

2. How can you plan for challenges that a Damage Assessment Response Team will face in a situation like this, in which multiple storms occur back-to-back?

NOTES	CONTENT
Visual 6-11 	**Video: Case Study in Documentation, Part Two** This video continues with the real-life example of the importance of documentation.
Visual 6-12 	**Individual Activity: Case Study in Documentation, Part Two**

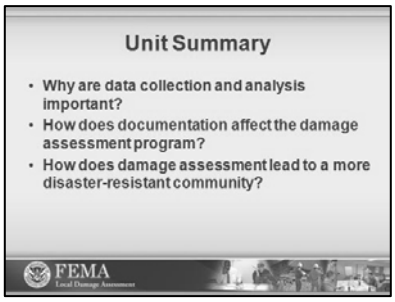
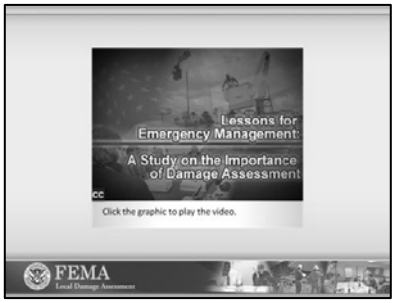
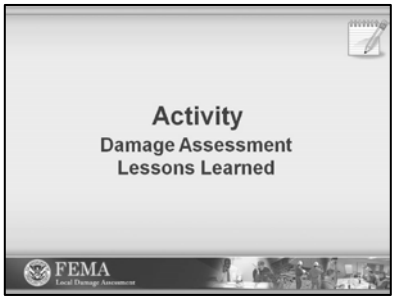
Case Study in Documentation, Part Two

Instructions

Consider the impact of each of the hazard events that impacted the City of Calais (as discussed in the video) and the information learned in this course, and answer the questions that follow.

1. What mitigation measures could you propose to prevent or lessen flood-related damages to roads and bridges in your community?

2. Considering all that you've learned in this course, what are some recommendations you could make to improve the damage assessment program for your community or public works agency?

NOTES	CONTENT
Visual 6-13 	**Unit Summary** In this unit, you learned that damage assessment documentation and record-keeping are critically important for identifying needs, setting priorities, and allocating resources. In addition, accurate documentation is required as part of the Presidential Disaster Declaration process. Damage assessment information is also used to improve the damage assessment program, identify mitigation opportunities, and drive recovery efforts – all of which contribute to a more disaster-resistant community.
Visual 6-14 	**Video: Lessons for Emergency Management, A Study on the Importance of Damage Assessment** This video presents lessons learned by a research team who studied the damage assessment activities following the Paso Robles earthquake in 2003. As you watch, think about how the lessons learned in Paso Robles could apply to your community.
Visual 6-15 	**Individual Activity: Damage Assessment Lessons Learned**

Damage Assessment Lessons Learned

Instructions

Consider each of the lessons learned documented in the report, *Damage Assessment After the Paso Robles (San Simeon, California) Earthquake: Lessons for Emergency Management* (as discussed in the video), and answer the questions that follow.

Lesson One: Damage assessment plays a vital role during the initial minutes and hours of disaster response operations.

1. How can you identify where to pre-position teams (when warning time is available) or where to dispatch teams immediately after a disaster or other emergency? Where can you get this information?

Lesson Two: Damage assessment is crucial to the recovery phase of emergency management and is required before resources can be acquired and utilized for disaster assistance and rebuilding.

2. How does damage assessment information help with identifying resources that are needed?

Lesson Three: Although damage assessment is a dangerous activity, it does promote a safer environment for the public and those involved with repairs, demolition, and reconstruction.

3. How can damage assessment help keep people safe during and after a disaster and prevent cascading emergencies?

Lesson Four: There is an incredible convergence of personnel at the scene of a disaster for the purpose of evaluating the disaster's impacts.

4. What agencies, organizations, and individuals could you expect to be involved in damage assessment in your community?

Lesson Five: There are different types of damage assessments and diverse methods to conduct them.

5. What types of damage assessment do you know of?

Lesson Six: Damage assessment is not a one-time occurrence, but a repetitive process.

6. How can you plan for effective coordination among all those involved with damage assessment?

Lesson Seven: Accuracy of initial and even later damage assessments may be questionable.

7. What factors may affect the accuracy of damage assessment information?

Lesson Eight: Damage assessment is a politically salient activity after a disaster occurs.

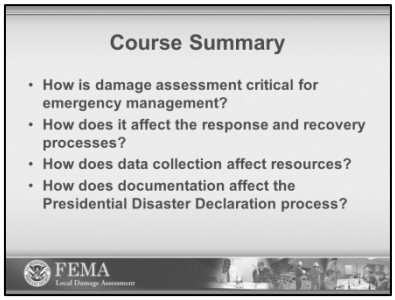
8. How can you involve political appointees and other key stakeholders in the damage assessment process?

Lesson Nine: There are several challenges confronting damage assessment personnel.

9. List some of the challenges facing damage assessment personnel in your community.

Lesson Ten: Many steps can be taken before and after a disaster to ensure an efficient and effective assessment of damages.

10. How can you overcome the challenges you listed above to ensure more efficient and effective damage assessment?

NOTES	CONTENT
Visual 6-16  	**Course Summary** Throughout this course, you have learned how damage assessment is a critical part of emergency management. It sets the tone for the entire response and recovery periods. The quick and accurate gathering of damage assessment information helps guide people and resources to areas of greatest need. It also helps determine whether additional resources will be needed and is a necessary component of the Presidential Disaster Declaration process. By using the information in this course and the resources provided in the Toolkit, you should now be equipped to develop or refine your community's damage assessment programs.

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Glossary

Term	Definition
Access - Functional Needs Populations	Individuals who may be more vulnerable because of immobility or their inability to take protective action. These individuals can include children, the elderly, tourists, inmates, and people with disabilities. Other populations that you should be aware of when planning include non-English speakers, mobile home residents, and the transportation-disadvantaged.
Adversarial/Human-Caused Hazards	Include technological hazards (caused by the tools, machines, and substances used in everyday life) and intentional acts (caused by people attacking or damaging what is valuable in a society). Examples include hazardous materials release, major computer system failures (e.g., 911 system), terrorist attacks, and riots.
After-Action Report (AAR)	Completed following training and exercise, this document addresses opportunities for improvement of plans and procedures.
Asset	Any manmade or natural feature that has value, including, but not limited to people; buildings; infrastructure like bridges, roads, and sewer and water systems; lifelines like electricity and communication resources; or environmental, cultural, or recreational features like parks, dunes, wetlands, or landmarks.
Building	Any structure that encloses a space used for sheltering and occupancy; including a gas or liquid storage tank that is principally above grade; and shall include manufactured homes.
Cascading Emergencies	Series of incidents triggered by an event.
Community Emergency Response Team (CERT)	A group of people organized as a neighborhood-based team that receives special training to enhance its ability to recognize, respond to, and recover from a major emergency or disaster situation.
Community Exposure Profile	Process during which a list is created of which assets in a community could be affected by hazards that may occur.
Comprehensive Emergency Management Plan (CEMP)	Document that establishes uniform policy and procedures for the effective coordination of response to a wide variety of natural and technological disasters.

Term	Definition
Continuity of Government Plan (COG)	Document that establishes policy and guidance to support the continuation and line of succession for governmental functions.
Continuity of Operations Planning (COOP)	Document that establishes the policy and guidance to support the execution of an organization's mission essential functions in any event that requires the relocation of selected personnel and functions to an alternate facility.
Critical Incident Stress Management (CISM)	An opportunity for individuals to talk about the stress of an incident when it happens.
Critical Infrastructure and Key Resources (CIKR)	Components necessary for the health and welfare of the population of your community. Critical infrastructure includes public safety services, healthcare, utilities, transportation systems, lifelines, and facilities that, if impacted by a hazard event, could result in high potential loss or release of hazardous materials.
Damage Assessment	Process for determining the severity and magnitude of a hazard event on the public and private sectors of a community.
Damage Assessment Coordinator	Individual who oversees that entire damage assessment program.
Damage Assessment Planning Process	The steps for planning a damage assessment program include establishing the local Damage Assessment Planning Team, gathering information, determining plan components and assumptions, identifying damage assessment zones, establishing local standards, and establishing procedures for maintaining the plan.
Damage Assessment Response Team	Individuals who go into a community following an incident or an event (as soon as it is safe to do so) to evaluate and document the physical damage caused and its potential impact on the community. The Damage Assessment Response Team should be composed of members from various groups and functional areas within the community.
Debris	Scattered remains of assets broken or destroyed in a hazard event. Debris caused by a wind or water hazard event can cause additional damage to other assets.

Term	Definition
Disaster	Dangerous event that causes significant human and economic loss and demands a crisis response beyond the scope of any single agency or service, such as the fire or police department. Disasters are distinguished from emergencies by the greater level of response required. Disasters require resources beyond those available locally.
Drill	A coordinated, supervised exercise activity normally used to test a single specific operation or function.
Earthquake	Sudden motion or trembling that is caused by a release of strain accumulated within or along the edge of earth's tectonic plates.
Emergency	Absent a Presidentially declared emergency, any incident(s), human-caused or natural, that requires responsive action to protect life or property. Under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, an emergency is "any occasion or instance for which, in the determination of the President, Federal assistance is needed to supplement state and local efforts and capabilities to save lives and to protect property and public health and safety, or to lessen or avert the threat of a catastrophe in any part of the United States."
Emergency Management Institute (EMI)	One of several FEMA training facilities. EMI is located in Emmitsburg, Maryland.
Emergency Management Process	The purpose behind emergency management is quite simple: the Continuity of Government (COG) and Continuity of Operations (COOP). Government and community services need to function uninterrupted as much as possible. While the process is quite generic, the actions taken are specific to the threats and vulnerabilities identified in each community.
Enhanced Fujita Scale of Tornado Intensity	Rating of tornadoes with numeric values from EF-0 to EF-5 based on tornado wind speed and damage sustained. An EF-0 indicates minimal damage such as broken tree limbs or signs, while an EF-5 indicates severe damage sustained.
Essential Functions and Services	Functions that enable agencies to provide vital service, exercise civil authorities, maintain the safety and well-being of the general populace, and sustain the industrial/economic base in an emergency.

Term	Definition
Event	Planned, non-emergency activity.
Extent	The size of an area affected by an incident.
Federal Emergency Management Agency (FEMA)	Agency created in 1978 to provide a single point of accountability for all Federal activities related to disaster mitigation and emergency preparedness, protection, prevention, response, and recovery.
First-In Teams	First responders are generally deployed to address life safety issues such as conducting search and rescue, clearing entrance and egress routes, extinguishing fires, and providing medical services.
Frequency	A measure of how often events of a particular magnitude are expected to occur.
Full-Scale Exercises (FSE)	Simulates a real event as closely as possible. It is multi-agency, multi-jurisdictional, multi-discipline exercise designed to evaluate the operational capability of emergency management systems in a highly stressful environment that simulates actual response conditions. To accomplish this realism, it requires the mobilization and actual movement of emergency personnel, equipment, and resources.
Functional Exercise (FE)	A fully simulated interactive exercise that tests the capability of an organization to respond to a simulated event. It is similar to a full-scale exercise, but does not include equipment. It simulates an incident in the most realistic manner possible short of moving resources to an actual site.
Geographic Information Systems (GIS)	The computer software application that relates physical features on the earth to a database to be used for mapping and analysis.

Term	Definition
Hazard	Something that is potentially dangerous or harmful, often the root cause of an unwanted outcome. Hazards may be categorized as natural or as adversarial/human-caused. ▪ Natural hazards are caused by natural events that pose a threat to lives, property, and other assets. Examples include hurricanes, earthquakes, and tornadoes. ▪ Adversarial /human-caused hazards include technological hazards (caused by the tools, machines, and substances used in everyday life) and intentional acts (caused by people attacking or damaging what is valuable in a society). Examples include hazardous materials release, major computer system failures (e.g., 911 system), terrorist attacks, and riots.
Hazard Analysis Process	Basic steps that need to be performed to effectively assess risks and vulnerabilities for the community. These steps include: identify hazards, profile hazards, inventory assets, and estimate losses.
Hazard Event	A specific occurrence of a particular type of hazard.
Hazard Identification	The process of identifying hazards that threaten an area.
Hazard Profile	Description of the physical characteristics of hazards and a determination of various descriptors including magnitude, duration, frequency, probability, and extent. In most cases, a community can most easily use these descriptors when they are recorded and displayed as maps.
Hazard Vulnerability Assessment (HVA)	Process of collecting information about how often each hazard is likely to occur, the area likely to be impacted, and how severe the impact may be. The HVA answers the question, “How badly could it affect the community?”
Hazardous Material Release	Incident in which hazardous materials are not contained as they should be.
Hazus-MH (Hazards U.S. - Multi-Hazard)	GIS-based nationally standardized, loss estimation tool developed by FEMA.
Homeland Security Exercise and Evaluation Program (HSEEP)	Provides a national standard for all exercises. It is a capabilities- and performance-based exercise program. For exercise design, development, conduct, evaluation and improvement planning, this program provides standardized policy, methodology, and terminology.

Term	Definition
Improvement Plan (IP)	Takes the observations and recommendations from the draft After-Action Report (AAR) and resolves them through the development of concrete corrective actions.
Incident	Occurrence, natural or manmade, that requires a response to protect life or property. Incidents can, for example, include major disasters, emergencies, terrorist attacks, terrorist threats, civil unrest, wildland and urban fires, floods, hazardous materials spills, nuclear accidents, aircraft accidents, earthquakes, hurricanes, tornadoes, tropical storms, tsunamis, war-related disasters, public health and medical emergencies, and other occurrences requiring an emergency response.
Individual Assistance (IA)	Funding or direct assistance to individuals, families, and businesses in an area whose property has been damaged or destroyed and whose losses are not covered by insurance. It is meant to help with critical expenses that cannot be covered in other ways. This assistance is not intended to restore damaged property to its condition prior to the disaster.
Infrastructure	Public services of a community that have a direct impact on the quality of life. Infrastructure includes communication technology such as phone lines or Internet access, vital services such as public water supplies and sewer treatment facilities, and includes an area's transportation system such as airports, heliports, highways, bridges, tunnels, roadbeds, overpasses, railways, bridges, rail yards, depots; and waterways, canals, locks, seaports, ferries, harbors, drydocks, piers, and regional dams.
Intensity	Measure of effects of a hazard event at a particular place.
Joint Information Center (JIC)	A center established to coordinate the Federal public information activities on-scene. It is the central point of contact for all news media at the scene of the incident.
Jurisdiction	Range or sphere of authority. Public agencies have jurisdiction at an incident related to their legal responsibilities and authority. Jurisdictional authority at an incident can be political or geographical (e.g., city, county, tribal, state, or Federal boundary lines) or functional (e.g., law enforcement, public health).

Term	Definition
Lessons Learned Information Sharing (LLIS)	*Lessons Learned Information Sharing* (*LLIS.gov*) is a Department of Homeland Security/Federal Emergency Management Agency program. *LLIS.gov* serves as the national, online network of lessons learned, best practices, and innovative ideas for the emergency management and homeland security communities.
Life Safety Issue	Any issue that presents an immediate hazard. Examples are live power lines, leaking chemicals, gas leaks, and wild animals.
Lifelines	Systems that provide for health and safety such as water, sewer, and electric.
Local Government	Any county, municipality, city, town, township, public authority, school district, special district, intrastate district, council of governments (regardless of whether the council of governments is incorporated as a non-profit corporation under state law), regional or interstate government entity, or agency or instrumentality of a local government; any Indian tribe or authorized tribal organization, or Alaska native village or organization; and any rural community, unincorporated town or village, or other public entity.
Magnitude	Measure of the strength of a hazard event. The magnitude of a given hazard event is usually determined using technical measures specific to the hazard.
Mitigation	Activities designed to lessen the impact of disasters to reduce loss of life and property.
Multi-Jurisdictional Incident	An incident requiring action from multiple agencies that each have jurisdiction to manage certain aspects of an incident. In ICS, these incidents will be managed under Unified Command.
Mutual Aid Agreement	A written agreement between agencies and/or jurisdictions to assist one another upon request, by furnishing personnel, equipment, and/or expertise in a specified manner.
National Elevation Datasheet (NED)	An inventory of topographic information collected by the United States Geological Survey (USGS).
Natural Disasters	Naturally occurring incidents such as earthquakes, tornadoes, hurricanes, and flooding that have occurred in the past or are likely to occur.

Term	Definition
Natural Hazards	Natural hazards are caused by natural events that pose a threat to lives, property, and other assets. Examples include hurricanes, earthquakes, and tornadoes.
Points of Distribution (PODs)	Points of Distribution (PODs) are centralized locations where those in need can obtain life-sustaining commodities following a declared emergency or disaster.
Post-Disaster Redevelopment Plan	Identifies policies, operational strategies, and roles and responsibilities for implementation that will guide decisions that affect long-term recovery and redevelopment of the community after a disaster. It emphasizes seizing opportunities for hazard mitigation and community improvement consistent with the goals of the local comprehensive plan and with full participation of the citizens.
Pre-Deployment Briefing	Information about the current situation provided to the Damage Assessment Response Team members prior to their being deployed into the community following an event or incident.
Preparedness	Actions taken to plan, organize, equip, train, and exercise to build and sustain the capabilities necessary to prevent, protect against, mitigate the effects of, respond to, and recover from those threats that pose the greatest risk to the security of your community. Preparedness is a continuous process.
Prevention	Refers to preventing imminent threats and involves actions to avoid, prevent, or stop a threatened or actual act of terrorism.
Probability	Statistical measure of the likelihood that a hazard event will occur.
Protection	Capabilities necessary to secure critical infrastructure or key resources against acts of terrorism and manmade or natural disasters.
Public Assistance (PA)	Reimbursement and emergency assistance provided to state and local governments and certain types of private non-profit (PNP) entities from the Federal government.
Recovery	Capabilities necessary to assist communities affected by an incident to recover effectively.

Term	Definition
Response	Capabilities necessary to save lives, protect property and the environment, and meet basic human needs after an incident has occurred.
Richter Scale	Numerical scale of earthquake magnitude devised by seismologist C.F. Richter in 1935.
Risk	The possibility of loss or injury. More specifically, it is an estimated impact that a hazard would have on people, services, facilities, and structures in a community. It is the likelihood of a hazard event resulting in an adverse condition that causes injury or damage.
Risk Assessment	Process of identifying and characterizing all hazards that are likely to occur in your community. Risk assessment answers the question, “What could happen to adversely impact the community?”
Saffir/Simpson Hurricane Scale	Scale used by the National Hurricane Center to provide a continuing assessment of the potential for wind and storm surge damage.
Seminars	Discussion-based exercises designed to orient participants to new or updated plans, policies, or procedures in a structured training environment.
Severity	Measure of the seriousness of the effects of a disaster.
Stakeholders	Individuals or groups that will be affected in any way by an action or policy including businesses, private organizations, and citizens. They can provide input into the development, review, and implementation of the damage assessment plan, based on their participation in all aspects of a disaster.
State	When capitalized, refers to any state of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, The Commonwealth of Northern Mariana Islands, and any possession of the United States. See Section 2 (14), Homeland Security Act of 2002, Pub. L. 107-296, 116 Stat. 2135 (2002).
Structure	Any combination of materials used to form a construction for use, occupancy, or ornamentation whether installed on, above, or below the surface of land or water.

Term	Definition
Tabletop Exercise (TTX)	Activity that facilitates analysis of an emergency situation in an informal, stress-free environment.
Threat	Indication of possible violence, harm, or danger.
THIRA	Threat and Hazard Identification and Risk Assessment (THIRA) provides a comprehensive approach for identifying and assessing risks and associated impacts. It expands on existing local, tribal, territorial, and state Hazard Identification and Risk Assessments and other risk methodologies by broadening the factors considered in the process, incorporating the whole community throughout the entire process, and by accounting for important community-specific factors.
Vulnerability	Description of how exposed or susceptible to damage an asset is. Vulnerability depends on an asset's construction, contents, and the economic value of its functions.
Windshield Survey	Teams record damage in their assigned zones while driving through affected areas. The magnitude and impact of the incident is recorded based on benchmarks. This process is repeated street by street.
Workshops	Discussion-based exercises used as a means of developing specific products, such as a draft plan or policy.
Zone Familiarization	Knowledge about an assigned area of the community that each member of the Damage Assessment Response Team should have in order to be able to identify damage to that assigned area following an event or incident.