Unit 2: Who is at Risk

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Visual 2.0

WHO IS AT RISK?

G0358
Evacuation and Re-entry
Planning Course

Unit 2
Who is at Risk?

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Suggested schedule for this unit follows:

Unit Introduction	5 Minutes
Identifying Risk Areas	55 Minutes
Identifying Populations at Risk	1 Hour
Total Time	2.0 Hours

Unit Introduction

Unit Introduction

Unit One included a discussion about the hazards that threaten your jurisdiction, and specifically the hazards that could require an evacuation of some portion of the population.

Once the need for evacuation planning is acknowledged, the goals for evacuation must be identified.

An evacuation plan must identify who is at risk for any or all of these hazards in order to develop contingencies for moving risk population to safety when necessary.

References

Developing and Maintaining Emergency Operations Plans–CPG 101, Second Edition.

Threat and Hazard Identification and Risk Assessment Guide–CPG 201, Second edition.

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Visual 2.1

Objectives

This unit will enable participants to do the following:

- Identify the Four Steps of the THIRA Process.
- Identify the population that may need to evacuate.
- Describe groups that are considered at risk populations.
- Identify populations at risk for a known hazard.

Are there any questions about the Unit Two objectives?

Visual 2.2

The THIRA process is flexible and scalable and will work for communities of all sizes. Communities can adapt these four steps to meet their specific needs and resources.

Identifying Risk Areas

Visual 2.3

Identifying Risk Areas

Threat and Hazard Identification and Risk Assessment CPG 201 (version 2)

A THIRA is 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
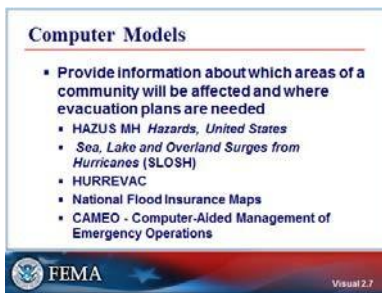- Introduces sources of threat and hazard information

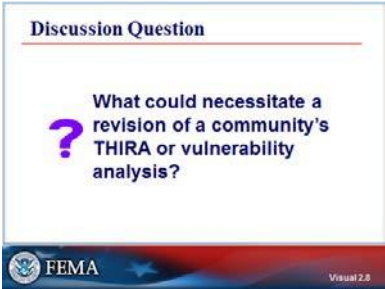| Notes	Content
	• Describes factors to consider when selecting threats and hazards for inclusion in the THIRA • Provides guidance on updating previous THIRA submissions. Communities face a variety of threats and hazards. The three types of threats and hazards are: • **Natural hazards**, which result 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 2.4 2. *Give Threats and Hazards Context* In Step 2, Communities add context descriptions to each threat and hazard identified. Context descriptions outline the conditions, under which a threat or hazard might occur. • Identifies **factors to consider** when developing context descriptions • Provides **examples of a completed threat/hazard context description.** FEMA Visual 2.4	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.

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	Threats and hazards can have different impacts depending on the time, place, and conditions in which they occur. As such, communities may need to develop more than one context description for a threat or hazard. For example, a hurricane-prone community may need multiple context descriptions to account for varying storm intensities, landfall locations, and landfall times.

For any given community, there are countless combinations of threat and hazard conditions that lead to slightly different contexts. Communities need not consider every combination; rather they should include those details that affect what the community needs to be prepared for.

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.

Visual 2.5

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.

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.

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Visual 2.6 4. *Apply the Results* In Step 4, Communities apply the results of the THIRA by estimating the resources required to meet capability targets. • Introduces **capability estimation**. • Discusses **resource typing**. • Provides an **example of a completed resource requirement list**. • Identifies how communities may **apply these results to resource allocation decisions and mitigation activities**. FEMA Visual 2.6	**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. 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. 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

Notes	Content
	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. 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. 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.

Visual 2.7
 	
Computer Models
 	
▪ Provide information about which areas of a community will be affected and where evacuation plans are needed
  ▪ HAZUS MH *Hazards, United States*
  ▪ *Sea, Lake and Overland Surges from Hurricanes* (SLOSH)
  ▪ HURREVAC
  ▪ National Flood Insurance Maps
  ▪ CAMEO - Computer-Aided Management of Emergency Operations
 	
FEMA   Visual 2.7
	Computer Models
	
	Planners may use mathematical models that provide information about which areas of a community will be affected and where evacuation plans are needed.
	
	• HAZUS is a nationally applicable standardized methodology that contains models for estimating potential losses from earthquakes, floods, and hurricanes. HAZUS uses Geographic Information Systems (GIS) technology to estimate physical, economic, and social impacts of disasters. It graphically illustrates the limits of identified high-risk locations due to earthquake, hurricane, and floods. (http://www.fema.gov/hazus)

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	• Another computer model called *Sea, Lake and Overland Surges from Hurricanes* (SLOSH) provides information on hurricane storm surge by geographic sector. (http://www.nhc.noaa.gov/ssurge/ssurge_slosh.shtml) • HURREVAC is the decision support tool of the National Hurricane Program, administered by FEMA, the USACE, and the NOAA National Hurricane Center. (http://www.hurrevac.com)/ • National Flood Insurance Maps identify flood hazard areas. • Computer-Aided Management of Emergency Operations (CAMEO) - The CAMEO software suite initially was developed because NOAA recognized the need to assist first responders with easily accessible and accurate response information. Since 1988, EPA and NOAA have collaborated to augment CAMEO to assist both emergency responders and planners. CAMEO has been enhanced to provide emergency planners with a tool to enter local information and develop incident scenarios to better prepare for chemical emergencies. With this type of information the planner can designate areas that must be evacuated in any threat, and those that may sustain moderate damage that would not necessitate a full evacuation.
Visual 2.8 	**Discussion Question** **What could necessitate a revision of a community's THIRA or vulnerability analysis?** It is very important that the THIRA or vulnerability analysis be reviewed frequently and updated as needed.

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Visual 2.9

Table Group Activity

Take a few minutes to review the THIRA or vulnerability analysis brought from your jurisdiction.

- Does it reflect the current Community Profile?
- Have there been changes such as those listed above?
- Note any hazard risks that have been created since the analysis was initially completed or was most recently revised.

Identifying Populations at Risk

Visual 2.10

Identifying Populations at Risk

A THIRA or vulnerability analysis is the first step toward determining the people at risk and making plans to ensure that they are removed from harm's way in the event of a hazard event.

This step has been accomplished in most communities and the information is included in the Emergency Operations Plan.

In planning for evacuation, the information on risk area population must be specific and current.

Consider where people live, work, play and worship.

Visual 2.11

Discussion Question

What current source materials would you use to ensure that the risk area population has been accurately defined?

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Visual 2.12

At Risk Populations

One of the most important aspects of evacuation and re-entry planning is identifying the Whole Community and in particular the access and functional needs populations that require assistance in an evacuation.

Visual 2.13

Access and Functional Needs Populations

Take a look at the population list in the Student Manual. Have you considered your whole community?

- Children in school and in daycare centers
- Nursing home residents
- People who are deaf or hard of hearing, blind, or have low vision, have an intellectual or cognitive disability or a mobility disability
- Limited English Proficiency

Visual 2.14

Access and Functional Needs Populations (Continued)

- Hospital patients
- Mental health institution patients
- Incarcerated persons in jails, juvenile facilities and drug treatment centers
- Business travelers and tourists

Visual 2.15

Access and Functional Needs Populations (Continued)

- Seasonal workers
- Homeless people
- People without transportation, including "latch-key kids" (children home alone)
- Other Groups

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Visual 2.16

Who Is Responsible?

Evacuation planners must consider all special population groups.

Some of these groups are overseen by organizations that are responsible for their own emergency planning.

Organizations responsible for evacuation of their own populations:

- Schools and daycare centers
- Nursing homes
- Hospitals and hospices
- Mental health institutions
- Jails, juvenile facilities and drug treatment centers.

Emergency management evacuation planners need to identify the appropriate contacts within these organizations and establish working relationships to enhance planning and operational cooperation.
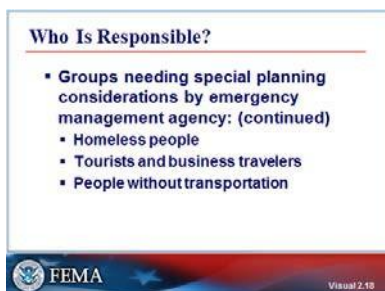
Visual 2.17

Groups needing special planning considerations by the emergency management agency.

- People who are deaf or hard of hearing, blind, or have low vision, have an intellectual or cognitive disability or a mobility disability
- Limited English Proficiency people
- Seasonal workers

Visual 2.18

Groups needing special planning considerations by the emergency management agency. (Continued)

- Homeless people
- Tourists and business travelers
- People without transportation.

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Visual 2.19

Table Group Activity
Access and Functional Needs Populations
- Review the Access and Functional Needs populations for which emergency management must develop evacuation plans.
- What factors make these groups "at risk"?
- How can the factors be addressed to ensure that these groups can be evacuated safely?

FEMA   Visual 2.19

Table Group Activity

Let's take a closer look at special populations for which emergency management must develop evacuation plans.

What factors make these groups "at risk"?

How can the factors be addressed to ensure that these groups can be evacuated safely when necessary?
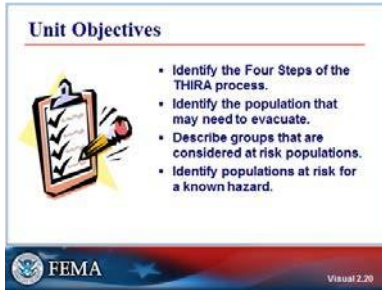
Notes:

Homeless people
- Locating homeless people to provide information
- Lack of resources for shelter
- Possible lack of transportation

Tourists and business travelers
- Lodging establishment may or may not have evacuation plan
- Lack of resources for shelter
- Lack of knowledge about area
- Communication issues
- Possible lack of transportation

People without transportation
- Transportation requirements

Notes	**Content**
Visual 2.20	**Unit Objectives** • For a known hazard, determine the area at risk. • Identify the population that may need to evacuate. • Describe groups that are considered at risk populations. • Identify populations at risk for a known hazard. Notes: