Unit 3: Community Behavior in Evacuation

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Visual 3.0

G0358
Evacuation and Re-entry Planning Course

Unit 3
Community Behavior in Evacuation

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Introduction

Community Behavior in Evacuation

Effective planning for evacuation and re-entry requires some knowledge of how people are likely to behave when they:

- Perceive that an evacuation order is likely.

- Receive an evacuation order.

- Are involved in an evacuation.

- Wish to re-enter the evacuated area.

- Receive permission to re-enter the evacuated area.

Research has shown that many emergency managers and other officials responsible for evacuation and re-entry believe myths about evacuation and shelter behavior.

Emergency managers must base evacuation and Re-Entry Plans on fact, not myth.

Unit Three describes how various groups have behaved during actual evacuation operations.

A suggested schedule for this unit follows:

Introduction	5 Minutes
Warning Behavior	25 Minutes
Evacuation Destinations and Transportation	15 Minutes
Evacuation Behavior of Owners of Domestic Animal	15 Minutes
Crowd Behavior and Looting	15 Minutes
Table Group Activity	30 Minutes
Total Time	1.75 Hours

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References

The following sources will provide information used in this unit:

Buffalo Creek, WV Flash Flood
http://www.wvculture.org/history/buffcreek/bctitle.html

Disaster Realities in the Aftermath of Hurricane Katrina: Revisiting the Looting Myth, Lauren Barsky, Joseph Trainor, Manuel Torre**s** Disaster Research Center University of Delaware, 2006
http://www.colorado.edu/hazards/research/qr/qr184/qr184.html

Visual 3.1

Unit Objectives

At the conclusion of the unit you should be able to discuss social factors that affect the following evacuation and re-entry issues:

• How long it typically takes to warn a community

• When people leave a community after a warning is issued

• Where people seek shelter after a warning is issued
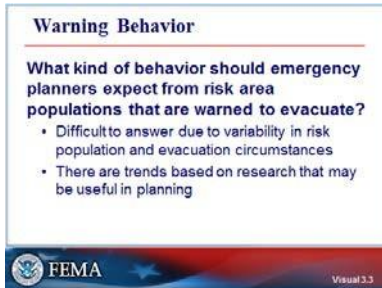
Visual 3.2

Unit Objectives (Continued)

• Evacuation behavior of owners of domestic animals at risk

• Modes of transportation used by evacuees

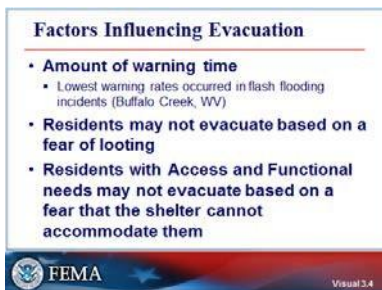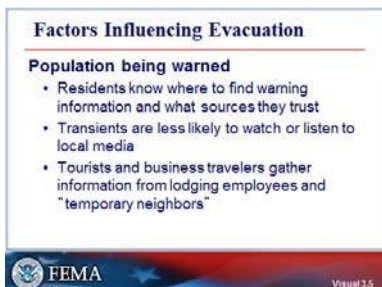• Probability of looting behavior during disaster.

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Warning Behavior

Visual 3.3

Warning Behavior

What kind of behavior should emergency planners expect from risk area populations that are warned to evacuate?

- Research has shown that this is a difficult question to answer, because each risk population is different, and the circumstances of every evacuation are different.

- However there are some trends that have been consistent enough in the research to be useful in your evacuation and re-entry planning efforts.

Visual 3.4

Factors Influencing Evacuation

What factors influence <u>when</u> people evacuate?

- Amount of warning time (disaster type)
    - Low warning rates occurred in incidents of flash flooding such as the 1972 Buffalo Creek, West Virginia Flood, where 125 people died, 1,100 were injured and 4000 were homeless.
- Residents may not evacuate based on a fear of looting
- Residents with Access and Functional needs may not evacuate based on the fear that shelters cannot accommodate them

Visual 3.5

Factors Influencing Evacuation

Population being warned

- Residents know where to find warning information and what sources they trust.

- Transients are less likely to watch or listen to the local media.

- Tourists and business travelers often gather information from lodging employees and "temporary neighbors."

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Visual 3.6

Factors Influencing Evacuation

Sense of urgency

- Individuals consider home construction and location, family safety and needs, and data from the Media on storm tracks, storm strength and probabilities.

- Decisions to evacuate are determined by perceived risk as defined by the factors listed above, rather than on the experience in the last evacuation.

- People evacuate when they believe it is dangerous to stay.

Visual 3.7

Discussion Question

How do these findings compare to your evacuation experience?

Notes:

Visual 3.8

Table Group Activity

What are the main sources of evacuation warning information in your jurisdiction?

Do the government agencies and media identified in the warning plan know their roles and responsibilities in evacuation warning?

If tourists or transients may be involved, what method of warning will be used?
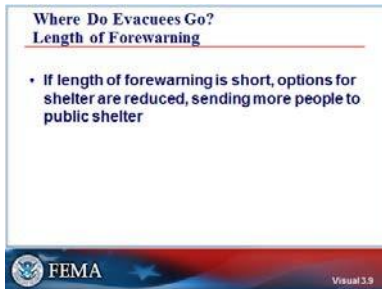
Do the managers of hotels, resorts and other tourist attractions know their role in evacuation warning?

Do the agencies responsible for warning homeless people and migrant workers know their responsibilities?
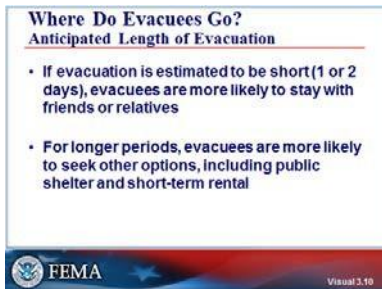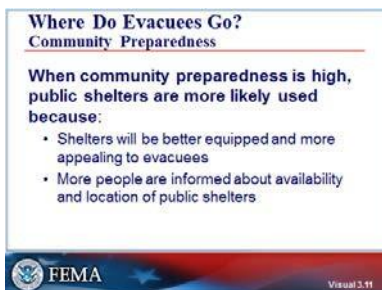
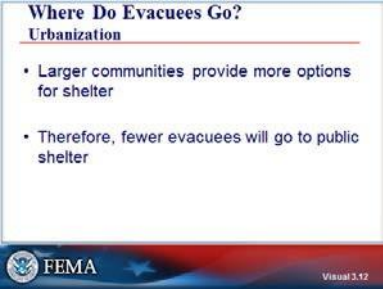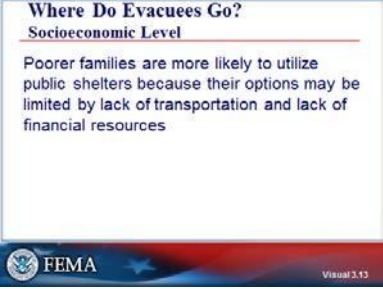| Notes	Content
	Evacuation Destinations and Transportation
	Where do Evacuees Go?
Visual 3.9	Prior evacuation research indicates that the destinations reported likely reflect connections to family and friends, previous homes, or areas with a high perception of safety Length of forewarning
	Length of forewarning
	• If the length of forewarning is short, the options for shelter are reduced, sending more people to public shelter
	QR229 Explaining Hurricane Evacuation Failure: The Role of Social Factors as Modifiers. Jennifer A. Horney and Kristen Ricchetti- Masterson. 2012. **(As Submitted)**
Visual 3.10	**Anticipated length of evacuation**
	• If the evacuation is estimated to be short (one or two days), evacuees are more likely to stay with friends or relatives.
	• For longer periods, evacuees are more likely to seek other options for their families, including public shelter and short-term rental.
Visual 3.11	**Community preparedness**
	When community preparedness is high, public shelters are more likely to be used because:
	• Shelters will be better equipped and more appealing to evacuees.
	• Information is likely to be more readily available so that more people are informed about availability and location of public shelters.
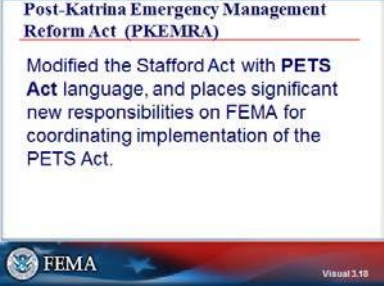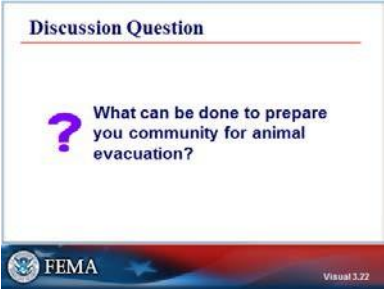
Notes	Content

Visual 3.12

Where Do Evacuees Go?
Urbanization

• Larger communities provide more options for shelter

• Therefore, fewer evacuees will go to public shelter

FEMA   Visual 3.12

Urbanization

- Larger communities provide more options for shelter.

- Therefore, fewer evacuees will go to public shelter.

Visual 3.13

Where Do Evacuees Go?
Socioeconomic Level

Poorer families are more likely to utilize public shelters because their options may be limited by lack of transportation and lack of financial resources
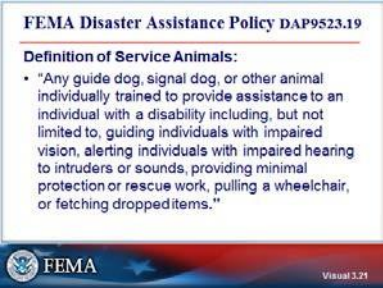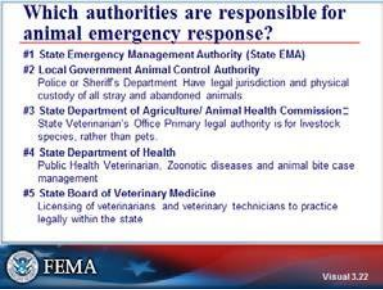
FEMA   Visual 3.13

Socioeconomic Level

Poorer families are more likely to utilize public shelters because their options may be limited by lack of transportation and lack of financial resources.

Visual 3.14

Discussion Question

? How do these findings compare to your evacuation experience?

FEMA   Visual 3.14

Discussion Question

How do these findings compare to your evacuation experience?

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	Evacuation Behavior of Owners of Domestic Animal
Visual 3.15	**Domestic Animals and Evacuation**
	There are approximately 70 million pet dogs in the U.S. and 74.1 million pet cats. The average veterinary expenditure per household for all pets was $375 in 2011. https://www.avma.org/KB/Resources/Statistics/Pages/Market-research-statistics-US-Pet-Ownership-Demographics-Sourcebook.aspx
Visual 3.16	**Domestic Animals and Evacuation**
	In 2011, six-out-of-ten pet owners, or 63.2%, considered their pets to be family members. How will this affect evacuee behavior?
Visual 3.17	**"The P.E.T.S. Act" (10/06/06)**
	Pet Evacuation and Transportation Standards Act of 2006 Amends Section 403 of the Stafford Disaster and Relief Emergency Assistance Act "to ensure that State and local emergency preparedness operational plans address the needs of individuals with household pets and service animals following a major disaster or emergency."

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Visual 3.18 Post-Katrina Emergency Management Reform Act (PKEMRA) Modified the Stafford Act with **PETS Act** language, and places significant new responsibilities on FEMA for coordinating implementation of the PETS Act. FEMA — Visual 3.18	**H.R.5441, Post-Katrina Emergency Management Reform Act (PKEMRA)** Modifies the Stafford Act with PETS Act language, and places significant new responsibilities on DHS/FEMA for coordinating implementation of the PETS Act
Visual 3.19 FEMA Disaster Assistance Policy DAP9523.19 DAP9523.19 "Eligible Costs Related to Pet Evacuation and Sheltering" • Defines Household Pet • Defines a Service Animal (based on ADA language) • Defines Congregate Pet Shelters and eligible expenses • Defines Eligible Parties for reimbursement FEMA — Visual 3.19	**FEMA Disaster Assistance Policy DAP9523.19** **DAP9523.19 "Eligible Costs Related to Pet Evacuation and Sheltering"** Identifies expenses related to State and local governments' emergency pet evacuation and sheltering activities that may be eligible for reimbursement following a major disaster or emergency declaration". • Defines Household Pet • Defines a Service Animal (based on ADA language) • Defines Congregate Pet Shelters and eligible expenses • Defines Eligible Parties for reimbursement; State and Local Governments are the only eligible applicants Contractors or Private Non-Profit (PNP; NGO) organizations cannot be directly reimbursed/ cannot be applicants. Must work through written agreements (MOAs) with state/local partnerships

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Visual 3.20 	**FEMA Disaster Assistance Policy DAP9523.19 Definition of Household Pets:** What they are: "A domesticated animal, such as a dog, cat, bird, rodent, or turtle that is traditionally kept in the home for pleasure rather than for commercial purposes and that can travel in commercial carriers and be housed in temporary facilities." What they are not: "Household pets do not include reptiles, amphibians, fish, insects/arachnids, farm animals (including horses), and animals kept for racing purposes."
Visual 3.21 	**FEMA Disaster Assistance Policy DAP9523.19 Definition of Service Animal** "Any guide dog, signal dog, or other animal individually trained to provide assistance to an individual with a disability including, but not limited to, guiding individuals with impaired vision, alerting individuals with impaired hearing to intruders or sounds, providing minimal protection or rescue work, pulling a wheelchair, or fetching dropped items."
Visual 3.22 	Which state, local, tribal, and territorial animal regulatory authorities now are responsible for animal emergency response? **#1 State Emergency Management Authority (State EMA)** **#2 Local Government Animal Control Authority** Police or Sheriff's Department, Have legal jurisdiction and physical custody of all stray and abandoned animals **#3 State Department of Agriculture/ Animal Health Commission** State Veterinarian's Office, Primary legal authority is for livestock species, rather than pets. **#4 State Department of Health** Public Health Veterinarian, Zoonotic diseases and animal bite case management

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	#5 State Board of Veterinary Medicine
	    Licensing of veterinarians and veterinary technicians
	    to practice legally within the state

Visual 3.23 	**Discussion Question** **What can be done to prepare your community for animal evacuation?**
	# Crowd Behavior and Looting
Visual 3.24 	**Discussion Question** **What is looting?**
Visual 3.25 	**Looting—Civil Disturbances vs Natural Disasters** In civil disorders, looting is widespread. • In the few cases where looting has occurred following a disaster event, it was inconsistent with the patterns of civil disturbance looting. • In civil disturbances looters tend to work in pairs or small groups; in natural disasters looting has been carried out by individuals. • In civil disturbances looting is very public; in natural disasters looting is covert and secret

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Visual 3.26

Looting: Social Factors

The likelihood of looting is affected by three social factors:

1. In highly stratified society where there is a sense of powerlessness among the low socioeconomic population, the likelihood of looting after a disaster increases.

2. If theft occurs on a day-to-day basis, it is likely to continue after a disaster.

3. Looting is more likely to occur when there is a temporary loss of social control by legitimate authority.

Disaster Realities in the Aftermath of Hurricane Katrina: Revisiting the Looting Myth, Lauren Barsky, Joseph Trainor, Manuel Torre**s** Disaster Research Center University of Delaware, 2006
http://www.colorado.edu/hazards/research/qr/qr184/qr184.html

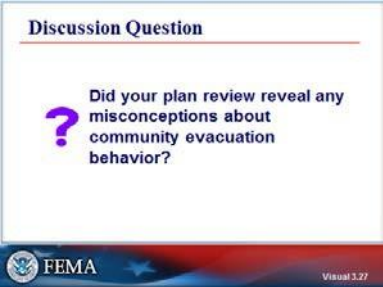# Table Group Activity

Visual 3.27
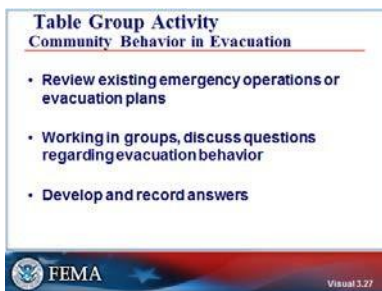
Community Behavior in Evacuation

This unit has provided the opportunity to discuss how people can be expected to behave during evacuation and re-entry operations.

The remainder of this session will be devoted to reviewing existing emergency operations or evacuation plans and deciding if the assumptions about community behavior are consistent with the information presented in this unit.

Consider the following:

- Do the hazards that threaten your community allow for enough warning to evacuate prior to the event?

- How many and what types of transients are in your community at any given time? (Consider tourists, business travelers, migrant workers and homeless people.) What are peak times for the transient population? How are they likely to receive evacuation warnings?

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	• How often have evacuation warnings been issued in your community over the past five years? How have residents and transients responded?
	• Where are evacuees from your jurisdiction likely to go, given the estimated amount of warning and the other social factors that affect evacuation destination?
	• How are evacuees from your jurisdiction likely to get to evacuation destinations?
	• What are the everyday law enforcement issues in your community?
	• What law enforcement issues can be expected in your community during and after a natural or technological disaster?
Visual 3.28	**Discussion Question** **Did your plan review reveal any misconceptions about community evacuation behavior?**
Visual 3.29	**Unit Objectives Review** **Discuss social factors affecting the following evacuation and re-entry issues:** • How long it typically takes to warn a community • When people leave a community after a warning is issued • Where people seek shelter after a warning is issued

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Visual 3.30

Unit Objectives Review (Continued)
Discuss social factors affecting the following evacuation and re-entry issues:

- Evacuation behavior of owners of domestic animals at risk

- Modes of transportation used by evacuees

- Probability of looting behavior during disaster.