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# Community Behavior in Evacuation

Unit Three

# Unit Objectives



- 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.

# Unit Objectives, 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

# Warning Behavior

- What kind of behavior should emergency planners expect from risk area populations that are warned to evacuate?
  - Difficult to answer due to variability in risk population and evacuation circumstances
  - There are trends based on research that may be useful in planning

# Factors Influencing Evacuation

- Amount of warning time
  - Lowest warning rates occurred in flash flooding incidents
  - With 3-4 hours, 90-100% can be warned without highly specialized warning systems
    - Even with automatic call-downs, there can be a tremendous number of affected persons that are not contacted.

# 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 local media
  - Tourists and business travelers gather information from lodging employees and “temporary neighbors”
  - Elderly residents react to evacuation warning about the same as the general population

# Factors Influencing Evacuation

- Sense of urgency
  - Individuals consider home, family safety and needs, and Weather Channel storm data
  - Decisions to evacuate are determined by perceived risk, rather than last evacuation
  - People evacuate when they believe it is dangerous to stay (Mississauga incident).

# Discussion Question



How do these findings compare to your evacuation experience?

# Table Group Activity

## Evacuation Warning

- Refer to the Student Manual worksheets.
- Working in groups, discuss questions regarding evacuation warning in your jurisdiction.
- Develop and record answers.

# PANIC

- Panic is RARE
- Disbelief is the most common response, followed by denial, and reinterpretation

Three conditions lead to panic

1. Individuals must have a perception of possible entrapment
2. Individuals must sense powerlessness; there is nothing they can do to escape
3. Individuals must have a feeling of social isolation or sole dependency on themselves in the crisis

# Where Do Evacuees Go?

## Population Characteristics

- 6% - 36% of residents went to public shelter
  - Most sought shelter in homes of friends and relatives
- 22% of migrant workers went to public shelter
  - 41% went to homes of nearby relatives
  - 12% stayed with friends out of the area

# Where Do Evacuees Go?

## Population Characteristics

- 29% of homeless into “makeshift” locations; 49% went to public shelter
- 45% of business travelers to safer areas within their lodging establishments
  - 11% went to public shelter
  - 11% went home
  - Remainder to another commercial lodging location

# 1974 Xenia Tornado

- Only 1.8% of the population affected used public shelters

# Where Do Evacuees Go?

## Length of Forewarning

- If length of forewarning is short, options for shelter are reduced, sending more people to public shelter.

# Where Do Evacuees Go?

## Anticipated Length of Evacuation

- If evacuation is estimated to be short (1 or 2 days), evacuees are more likely to stay with friends or relatives.
- For longer periods, evacuees are more likely to seek other options, including public shelter and short-term rental.

# Where Do Evacuees Go?

## Community Preparedness

- When community preparedness is high, public shelters are more likely used because:
  - Shelters will be better equipped and more appealing to evacuees
  - More people are informed about availability and location of public shelters

# Where Do Evacuees Go? Urbanization

- Larger communities provide more options for shelter.
- Therefore, fewer evacuees will go to public shelter.

# 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.

# Pathways to Evacuation

**IMPORTANT:** Families move as units.

- Evacuation by Default
  - Stopped from reentering the area
- Evacuation by Invitation
  - Called, Asked,
- Evacuation by Compromise
  - Within the family
- Evacuation by Decision
  - Right away upon warning

# Discussion Question



How do these findings compare to your evacuation experience?

# How Do Evacuees Get There?

- Most residents of the risk area use their own vehicles when evacuating.
- Official transportation was the second most likely form of evacuation transportation.

# How Do Evacuees Get There?

- Tourists and business travelers used their own vehicles to evacuate.
- Rental cars were the second most frequent choice of evacuation transportation for tourists and business travelers.

# How Do Evacuees Get There?

- The transportation aspect of evacuation tends to be controlled and rational.
- The rate of traffic accidents has not been shown to increase.

# How Do Evacuees Get There?

- Summer, 1999: thousands fleeing Hurricane Bret and Hurricane Floyd.
  - Evacuation routes became heavily congested, but traffic accidents were not a major problem.
  - Some Floyd evacuees chose to return home, but did so in an orderly manner.

# Discussion Question



How do these findings compare to your evacuation experience?

# Evacuation Behavior Owners of Domestic Animals

- FEMA's Independent Study Course, *Animals in Disaster*
  - *Awareness and Preparedness* (Module A, IS-10)
  - *Community Planning* (Module B, IS-11)
- FEMA Independent Study Office
  - Fax: (301) 447-1201
  - E-Mail: [Independent.Study@FEMA.gov](mailto:Independent.Study@FEMA.gov)

# Evacuation Behavior

## Owners of Domestic Animals

- 1979 Three Mile Island nuclear accident - misinformed owners left animals to stray
- 1984 Dayton, Ohio, white phosphorus and liquid sulphur spill - pet owners created traffic jams by driving in opposite direction to evacuating traffic

# Evacuation Behavior

## Owners of Domestic Animals

- 1991 Oakland, California, firestorm - hundreds of cats and dogs were never reunited with their owners because the owners could not be found.
- 1992 Hurricane Andrew (S. Florida) - many victims were distressed when they discovered they could not stay at public shelters if they brought pets with them.

# Evacuation Behavior

## Owners of Domestic Animals

- 1994 Georgia floods - some pet owners refused to evacuate in a timely, safe manner because they could not take their pets with them.

# Discussion Question



What can be done to prevent the occurrence of similar events?

# Discussion Question



What is *looting*?

# Looting

## Civil Disturbances vs Natural Disasters

- In civil disorders looting is widespread; in disaster areas looting is rare.
- 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.

# Looting

## Social Factors

- Looting after disasters is more likely to occur when:
  - There is a sense of powerlessness among the low socioeconomic population
  - If theft occurs on a day-to-day basis
  - There is a temporary loss of social control by legitimate authority

# Discussion Question



What are some examples of looting during or after a disaster?

# Get Folks to Evacuate

- Encourage Family Planning for Evacuation.
- Get Media Consistency.
- Forceful, but not Mandatory.
- Allay Looting Fears.
- Facilitate Transportation
- Establish Family Message Centers

# Discussion Question



Did your plan review reveal any misconceptions about community evacuation behavior?