
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.

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

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?

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

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?