

Unit Four

Emergency Management in the United States

Overview

This unit describes emergency management in the United States. It defines the four phases of emergency management, as well as other important terms used by emergency managers. In addition, it describes the contributions of individuals and community, state, and federal agencies in making emergency management successful.

Objectives

Upon completion of this unit, you should be able to:

- Define the four phases of emergency management and describe activities associated with each phase
- Define basic emergency management terminology
- Describe the responsibilities of individuals and agencies at the community, state, and federal levels

What Are Disasters?

The most common disasters result from meteorological (weather-related) and geological events and can affect any area of the U.S. Their impact can be localized or widespread, predictable or unpredictable. Damage can range from minimal to major. Depending on the severity of the incident, they can have a long-term impact on the infrastructure (roads, bridges, and utilities) of any location.

Threats involving natural forces include thunderstorm, flood, tornado, hurricane, winter storm, drought, wildfire, landslide, earthquake, tsunami (tidal wave), volcano, and dam failure. Technological (man-made) hazards include hazardous material releases and spills, acts of terrorism, and nuclear accidents. Natural hazards are usually, but not always, more predictable than any other type of hazard. Other threats include animal health emergencies, such as outbreaks of a Foreign Animal Disease.

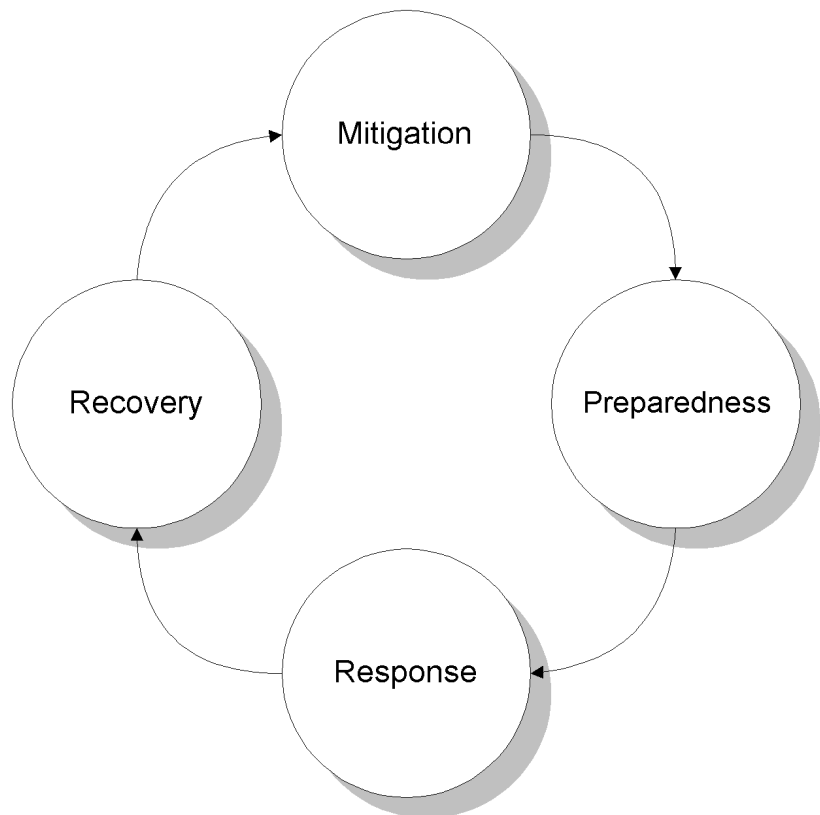
Although we cannot know exactly when or where disasters will strike, or how severe they will be, we recognize from past experience which geographical areas are most vulnerable to

certain types of natural hazards. This knowledge helps us better prepare for and respond to natural hazards. When you read through Units 5 – 15 on natural hazards, remember that each type of hazard has unique characteristics, yet common elements. These common elements allow you to prepare for and protect yourself and your animals from disaster.

Four Phases of Emergency Management

Emergency managers think of disasters as recurring events with four phases: Mitigation, Preparedness, Response, and Recovery.

The following diagram illustrates the relationship of the four phases of emergency management.



The significance of the emergency management cycle is that all communities are in at least one phase of emergency management at any time.

Mitigation

This phase includes actions taken to prevent or reduce the cause, impact, and consequences of disasters. Examples of hazard mitigation include:

- Tying down homes or barns with ground anchors to withstand wind damage
- Digging water channels to redirect water and planting vegetation to absorb water
- Constructing levees or permanent barriers to control flooding
- Reinforcing fencing to prevent animal escapes
- Buying insurance policies

Preparedness

This phase includes planning, training, and educational activities for events that cannot be mitigated. Examples include:

- Developing disaster preparedness plans for what to do, where to go, or who to call for help in a disaster
- Exercising plans through drills, tabletop exercises, and full-scale exercises
- Creating a supply list of items that are useful in a disaster
- Walking around a farm and identifying possible vulnerabilities to high winds

Response

The response phase occurs in the immediate aftermath of a disaster. During the response phase, business and other operations do not function normally. Personal safety and well-being in an emergency and the duration of the response phase depend on the level of preparedness.

Examples of response activities include:

- Implementing disaster response plans
- Conducting search and rescue missions
- Taking actions to protect yourself, your family, your animals, and others
- Addressing public perceptions about food safety

Recovery

During the recovery period, restoration efforts occur concurrently with regular operations and activities. The recovery period from a disaster can be prolonged. Examples of recovery activities include:

- Preventing or reducing stress-related illnesses and excessive financial burdens
- Rebuilding damaged structures based on advanced knowledge obtained from the preceding disaster
- Reducing vulnerability to future disasters

Definitions of Emergency and Disaster

The terms *emergency* and *disaster* often are used interchangeably. This common use of terms can be confusing.

It is easiest to understand the terms *emergency* and *disaster* as being at two ends of a scale, in which the size of an incident and the resources to deal with the incident are matched to varying degrees.

Emergency

At one end of the spectrum, emergencies are usually small-scale, localized incidents which are resolved quickly using local resources. However, small-scale emergencies can escalate into disasters when there has been inadequate planning and wasteful use of resources.

Disaster

At the other end of the spectrum, disasters are typically large-scale and cross geographic, political, and academic boundaries. Disasters require a level of response and recovery greater than local communities can provide.

Emergencies and disasters and the livestock industry

Emergencies and disasters involving livestock also vary in degree, depending on the amount and availability of needed resources. The degree to which an incident results in a disaster depends on the size of the event and local response and recovery capabilities. In many cases, levels of preparedness, response, and recovery capabilities go hand-in-hand.

For example, in the 1998 ice storm in the northeastern U.S., the most critical agricultural need was for electrical generators. Dairy farms suffering power outages depended on electricity to milk their cows.

Farmers who had adequate-sized generators and who knew how to operate them faced an emergency because they were only temporarily prevented from milking their cows.

In contrast, farmers without generators, or with generators that failed due to lack of adequate maintenance or fuel, were faced with disastrous consequences. They could not milk their cows and suffered great production losses. Their cows became ill and, in some cases, died.

Foreign animal disease

Foreign Animal Disease outbreaks, such as Foot and Mouth Disease or Classical Swine Fever (Hog Cholera), could have a negative impact on the national food supply and pose a major threat to production and international trade. Coordination among local, state, and federal agencies is key to minimizing the impact of such diseases.

Definitions Used by Emergency Managers

The Federal Emergency Management Agency (FEMA) is the agency that promotes disaster mitigation and readiness and coordinates response and recovery following the declaration of a major disaster. FEMA defines a disaster as:

“an event that results in large numbers of deaths and injuries; causes extensive damage or destruction of facilities that provide and sustain human needs; produces an overwhelming demand on state and local response resources and mechanisms; causes a severe long-term effect on general economic activity; and severely affects state, local, and private sector capabilities to begin and sustain response activities.”

Levels of disasters

Emergency managers further classify emergencies and disasters by size and the type and number of issues that need to be addressed. This classification involves minor emergencies, limited and potential emergencies, and major disasters.

Minor emergencies

➤ Examples:

- Residential fires
- Livestock barn fires
- Localized chemical spills
- Livestock trailer wrecks
- Power outages to animal-related businesses (farms, veterinary practices)
- Storm damage (wind, hail, ice)

➤ Issues:

- Temporary accommodation for people and animals
- Testing, transport, and certification of animals for slaughter

Limited and potential emergencies

- Examples:
 - Localized flooding
 - Hurricane warning
 - Droughts
 - Presumptive diagnosis of foreign animal disease
 - Nuclear reactor failure
 - Tsunami warning

- Issues—same as for minor emergencies, plus:
 - Notice of evacuation of animal owners and animals
 - Isolation of area
 - Disaster intelligence (e.g., mapping of a plume zone)

Major disasters

- Examples:
 - Large-scale flooding
 - Hurricane
 - Earthquake
 - Foreign animal disease outbreak

- Issues—same as for limited and potential emergencies, plus:
 - Disease control interventions
 - Evacuation failures of animal owners
 - Animal rescue attempts
 - Carcass disposal
 - Temporary accommodation for owners of animals

Disaster declarations

Disasters are declared using established guidelines and procedures. Because all disasters are local, they are initially declared at the local level. This declaration is made by the local Chief Elected Official (CEO) (mayor, city manager, commissioner). Only when the CEO determines that local resources capabilities have been or are expected to be exceeded will the CEO of a community request state assistance. If the state chooses to respond to a disaster, the Governor of the state will direct implementation of the state's emergency plan. Again, if the Governor determines that the resource capabilities of the state are exceeded, the Governor can request that the President declare a major disaster in order to make federal resources and assistance available to qualified state and local governments. This ordered sequence is important to ensure appropriate financial assistance.

Financial Assistance in Disasters

Financial assistance is available on a supplemental basis through an application process. The Governor reviews the local government's application, studies the damage estimates and, if appropriate, declares the area a state disaster. This official declaration makes state resources available. However, if damages are so extensive that the combined local and state resources are not sufficient, the Governor applies to the President for federal disaster assistance.

If the need for federal assistance funds is justified, the President issues a major disaster declaration and federal resources become available. This system ensures that state and federal limited resources are used wisely and fairly, and the needs of disaster victims are met.

To see an updated map illustrating the most recent presidential disaster declarations, as well as useful information about the types of disasters that result in declarations, go to <http://www.bakerprojects.com/fema/mapmain>.

State of Emergency

Disaster declarations are different than states of emergency. A state of emergency is declared when public health or the economic stability of a community is threatened and extraordinary measures of control may be needed. Examples include a disease outbreak in people (public health) or animals (economic stability, food security).

Making Emergency Management Work

Individual roles

Emergency management works when individuals, the community, the state, and federal government agencies fulfill their emergency management responsibilities. Following is a discussion of each.

Animal owners, including livestock producers, are individually responsible for animals under their care. In disasters, livestock producers have three concerns: human safety, livestock safety, and protection of their property. To protect against threats, responsible livestock producers prepare themselves by constructing a safe environment and by acquiring adequate resources to ensure their safety. Personal preparedness includes having effective biosecurity measures and early reporting of suspect Foreign Animal diseases to officials.

The goal of local emergency management programs is for the public to be as prepared as possible. Prepared livestock producers need less outside help and can expect fewer losses. Personal preparedness is the most effective level of preparedness to minimize losses in disasters.

Throughout this course, you will learn how to develop your own emergency contingency plans.

Community agencies' roles

Community (local) governments make plans and provide resources to protect their citizens from the hazards that threaten their communities. Mitigation activities, preparedness plans, responses to emergencies, and recovery operations are examples of this effort. Wherever you live within the U.S., a county or municipal agency is designated as your local emergency management agency.

The local government level is the most important at which to integrate emergency management plans because local governments serve as the link between you and the state and federal agencies in the emergency management network.

Local law specifies a chain of command in emergencies. It spells out who reports to whom. The chief executive officer or jurisdiction manager creates effective emergency services.

State agencies' roles

The state emergency management office is responsible for protecting communities and citizens within the state. The state office carries out statewide emergency management activities, helps coordinate emergency management activities involving more than one community, or assists individual communities when they need help. If any community lacks the resources needed to protect itself or to recover from a disaster, the state may help with money, personnel, or other resources.

Federal agencies' roles

FEMA

At the federal level of government, FEMA is involved in mitigation, preparedness, response, and recovery activities.

FEMA also helps the states by providing the following programs:

- Training programs and research information on the latest mitigation measures
- Review and coordination of state emergency plans
- Financial assistance
- Flood insurance to individuals and businesses in communities that join the National Flood Insurance Program (NFIP)
- Subsidies to state and local offices of emergency management for maintaining emergency management programs
- Guidance and coordination for plans to warn and protect the nation in national security emergencies
- Coordination of services for disaster response and recovery activities. In addition, FEMA may provide supplemental resources when communities and states do not have sufficient resources to protect or assist their citizens, restore essential services that can get the local economy going again, and meet the disaster-related needs of individuals.

FEMA is your principal source of federal assistance for education in disaster management. It provides a variety of training opportunities, including this course. Many of FEMA's courses are taught through your state emergency management agency. FEMA also provides classroom instruction and operates the National Emergency Training Center, which offers higher-level courses in emergency management.

USDA

While FEMA coordinates assistance to businesses and individuals during disasters, the U.S. Department of Agriculture (USDA) has various programs and authorities to provide assistance to livestock producers and farmers after a major disaster.

Other federal agencies involved in disasters include the Environmental Protection Agency (EPA), the Department of Health and Human Services (DHHS), and the Small Business Administration (SBA). Their roles are discussed in detail in Unit 17, in the Appendix for Unit 10, and throughout the course. In addition, the federal government supports the collection of information in databases such as the National Weather Service (www.nws.gov) and the United States Geological Survey (www.usgs.gov), which are important to disaster management.



Learning Check

Directions: Determine if the following statements are true or false based on the material presented in the unit. When you have finished, check your answers on page 4-15.

1. A farmer purchases a snowmobile to allow him to get water and feed to his cattle in case of a major winter storm. This is a preparedness activity.
True or False?

2. A farmer builds a new horse barn with materials designed to withstand the effects of wind, flying debris, and pouring rains. This is a mitigation activity.
True or False?

3. A group of farmers plan for a hurricane by dividing up responsibilities for communication, evacuation, and feed supplies among themselves. This is a preparedness activity.
True or False?

4. A farmer invites a local fire inspector to his property to advise on fire safety and hazardous materials storage. This is a response activity.
True or False?

5. After a severe summer storm, there is concern that the water tanks for horses have been contaminated. To prevent illness, the owners thoroughly clean the tanks before they let their horses drink from them. This is a mitigation activity.
True or False?

**Learning Check**

6. After an avalanche, several horses and riders are missing. A search team is dispatched. This is a response activity.
True or False?

7. Months after a flood, farmers begin creating lists of things they could do to lessen the impact of future disasters. This is a preparedness activity.
True or False?

8. Several weeks after a flood, there is concern that a well supplying drinking water to beef cattle has become contaminated. To minimize the risk to the cows, the owner tests the water quality weekly for bacterial contamination. This is a recovery activity.
True or False?

9. Emergencies that are large-scale can always be dealt with using existing resources.
True or False?

10. Disasters are usually large-scale events in which there are inadequate resources to meet the needs of the affected community.
True or False?



Learning Check

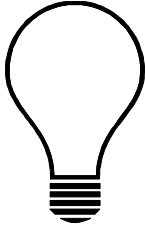
11. Personal preparedness is the most effective level at which the losses from disasters can be minimized.
True or False?

12. Most natural disasters affect local communities first.
True or False?

13. Disasters are declared starting at the federal, then state, then local level.
True or False?

14. An important role of FEMA in disasters is coordination of preparedness and mitigation activities in declared major disasters.
True or False?

15. The U.S. Department of Agriculture (USDA) has various programs and authorities to provide assistance to livestock producers after a major disaster.
True or False?



Answers

For every question that you answered incorrectly, review the page listed next to the answer to find out why your answer was incorrect.

1. True.....4-3
2. True.....4-3
3. True.....4-3
4. False.....4-3
5. False.....4-4
6. True.....4-4
7. False.....4-4
8. True.....4-4
9. False.....4-5
10. True.....4-5
11. True.....4-9
12. True.....4-8
13. False.....4-8
14. False.....4-10
15. True.....4-11

Summary

This unit defined the four phases of emergency management and described activities associated with each phase. It also distinguished between the terms emergency and disaster, explained how each one relates to livestock producers, and how preparedness can reduce losses in disasters. Finally, this unit described the roles of community, state, and federal agencies concerning emergency management.