
DECISION MAKING AND PROBLEM SOLVING

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Course Overview

Purpose

Being able to make decisions and solve problems effectively is a necessary and vital part of the job for every emergency manager, planner, and responder. This course is designed to improve your decision-making skills. It addresses:

- How we make decisions.
- Group decision making.
- Crisis decision making.
- Ethical decision making.

Course Objective

The course objective is to enable participants to improve their decision-making skills.

Training Content

The training is comprised of the following lessons:

- Lesson 1: Course Introduction
- Lesson 2: The Decision-Making Process
- Lesson 3: Group Decision Making
- Lesson 4: Crisis Decision Making
- Lesson 5: Ethical Decision Making
- Lesson 6: Course Summary

The table below presents the recommended agenda.

Morning Session	Lesson 1: Course Introduction	60 minutes
	Lesson 2: The Decision-Making Process	60 minutes
	Lesson 3: Group Decision Making	45 minutes
Afternoon Session	Lesson 4: Crisis Decision Making	45 minutes
	Lesson 5: Ethical Decision Making	60 minutes
	Lesson 6: Course Summary	15 minutes
	Exam	45 minutes

Course Logistics Overview

Course Materials

Listed below are the materials that you will need in order to conduct this course:

- **Instructor Guide and PowerPoint files:** Obtain one copy of the Instructor Guide and the PowerPoint files for each trainer
- **Student Manual:** Secure one copy of the Student Manual for each person attending the session.
- **Course Evaluation Forms:** Make sure that you have one copy of the course evaluation form for each person attending the training. Course evaluations are typically provided by the organization sponsoring the course.

Course Equipment

The following equipment is required for conducting this course:

- **Computer and Projection Device:** Make arrangements to have a computer with a PowerPoint slide projector. Be sure to try out the projector in advance of the training, in case you need help getting it to work properly. Make sure all equipment is functioning properly. Test the PowerPoint projector and the lights. If you do not have equipment for projection, plan to refer participants to their Student Manuals. The visuals are reproduced in the Student Manual, but the training is more effective with the projection of the visuals. Arrange for technical assistance to be available during training in the event of equipment malfunction.
- **Speakers or Output to a Sound System:** The speakers built into the typical computer will not be loud enough for the audience to hear the audio elements within the digital video segments.

Copyright

This course makes no use of copyrighted/proprietary material.

LESSON 1. COURSE INTRODUCTION

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Lesson 1. Course Introduction

Lesson Objectives

At the end of this lesson, the participants will be able to:

- Review the main topics that will be covered in this course.
 - Describe the impact of effective decision making in an emergency.
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Scope

- Course Overview and Introduction
 - Decision Making in Emergency Management
 - Case Study 1: Sebring County
 - Case Study 2: Fort Rice
 - Summary and Transition
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Methodology

The instructors will welcome participants to the course, and will use a short video segment to introduce the course and describe the importance of decision making and problem solving to avert tragedy. Instructors and participants will introduce themselves. They will also review the course objectives. After introductions, the instructors will differentiate between decision making and problem solving and facilitate a discussion of when the decision-making process begins in emergency management.

The instructors will use a case study to identify the types of decisions made by emergency managers and another case study to illustrate the potential impacts of decisions made during an emergency. The instructors will then transition to Lesson 2, which provides an overview of the decision-making process.

Materials

- PowerPoint visuals 1.1 – 1.15 and a computer display system
 - Instructor Guide
 - Student Manual
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Lesson 1. Course Introduction

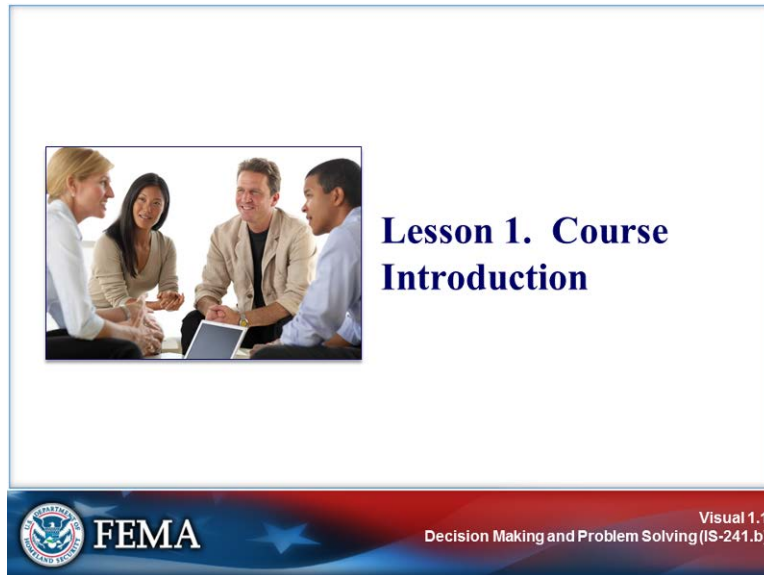
Time Plan

A suggested time plan for this lesson is shown below. More or less time may be required, based on the experience level of the group.

Topic	Time
Course Overview and Introduction	34 minutes
Decision Making in Emergency Management	5 minutes
Case Study 1: Sebring County	10 minutes
Case Study 2: Fort Rice	10 minutes
Summary and Transition	1 minute
Total Time	1 hour

COURSE OVERVIEW

Visual 1.1



Instructor Notes: Present the following key points.

This course is designed to improve your decision-making skills. It addresses:

- The decision-making process.
- Decision-making styles.
- Attributes of an effective decision maker.
- Ethical decision making and problem solving.

COURSE OVERVIEW

Visual 1.2

Introduction



Being able to make decisions and solve problems effectively is a necessary and vital part of the job for every emergency manager, planner, and responder.

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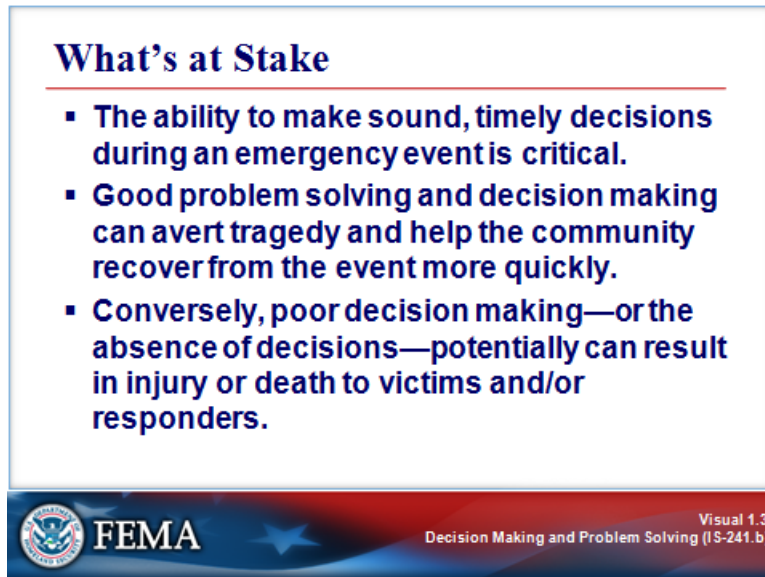
Visual 1.2
Decision Making and Problem Solving (IS-241.b)

Instructor Notes: Present the following key points.

Being able to make decisions and solve problems effectively is a necessary and vital part of the job for every emergency manager, planner, and responder.

COURSE OVERVIEW

Visual 1.3



Instructor Notes: Present the following key points.

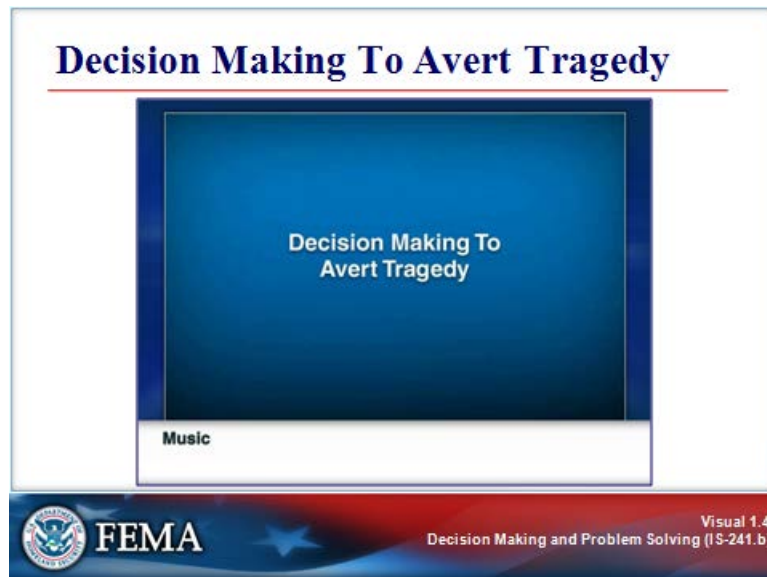
The ability to make sound, timely decisions during an emergency is critical. Effective decision making can:

- Avert tragedy.
- Help manage incidents.
- Build community trust and support.
- Help the community recover from an event more quickly.

Conversely, poor decision making—or the absence of decisions—potentially can result in injury or death to victims and/or responders.

COURSE OVERVIEW

Visual 1.4



Instructor Notes: Present the following key points.

Video Transcript:

When U.S. Senator Dianne Feinstein was Mayor of San Francisco from 1978 to 1988, she held department head meetings once a week. One day, the Director of Public Works told her that if an earthquake occurred, the rim around Candlestick Park would come down. His estimate of the cost for strengthening the stadium was \$6 million.

To come up with the funding for the retrofit, the city made the decision to take money from other projects.

Just as game three of the 1989 World Series baseball championship was set to begin, with a capacity crowd at Candlestick Park, the Loma Prieta earthquake struck the Bay Area.

As Senator Feinstein commented afterwards, "The field rippled. The rim shook. But it held. That was a big learning lesson for me. When you've got information that could save lives and property, you've got to act."

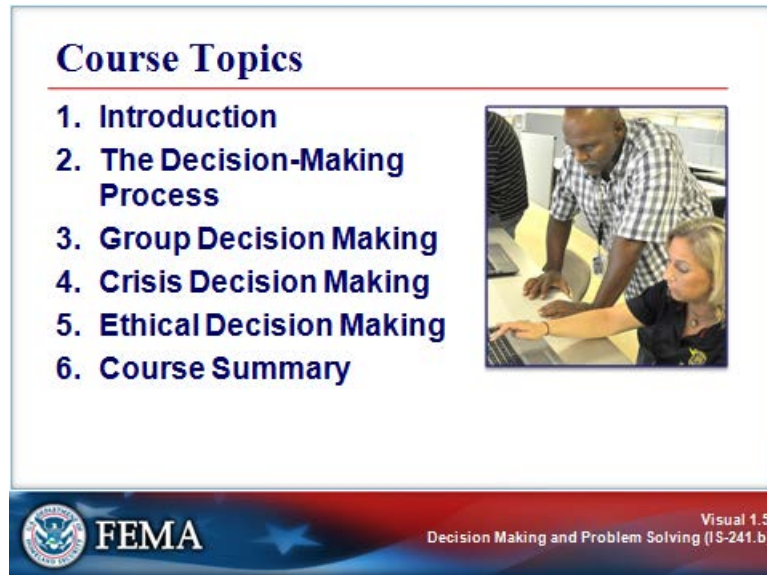
The decision by the Mayor and City to prioritize and fund the seismic protection for Candlestick Park was crucial in saving lives. The decision was most effective because it was made well before an actual emergency.

Instructor Notes:

- Click on the video screen image on the visual to play the video. If the video does not launch properly, use the transcript to relate the story.
- Emphasize the point that decision making takes place prior to an incident, as well during and after the incident.

COURSE OVERVIEW

Visual 1.5



Instructor Notes: Present the following key points.

Decision Making and Problem Solving consists of six lessons. Each lesson is described below.

- **Lesson 1: Course Introduction** provides an overview of the course.
- **Lesson 2: The Decision-Making Process** presents a five-step problem-solving model. The lesson also explores factors that affect decision making.
- **Lesson 3: Group Decision Making** discusses the advantages and limitations of group decision making, as well as ways to make group decision making more effective.
- **Lesson 4: Crisis Decision Making** identifies the challenges associated with, as well as ways to improve, decision making in a crisis.
- **Lesson 5: Ethical Decision Making** focuses on ethical decision making and discusses the components of ethical decision making. The lesson also addresses some common ethical “do’s and don’ts.”
- **Lesson 6: Course Summary** summarizes key concepts from the entire course.

COURSE OVERVIEW

Visual 1.6

Introductions



- Name
- Position/organization
- Past experience related to emergency management or community service



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Visual 1.6
Decision Making and Problem Solving (IS-241.b)

Instructor Notes: Present the following key points.

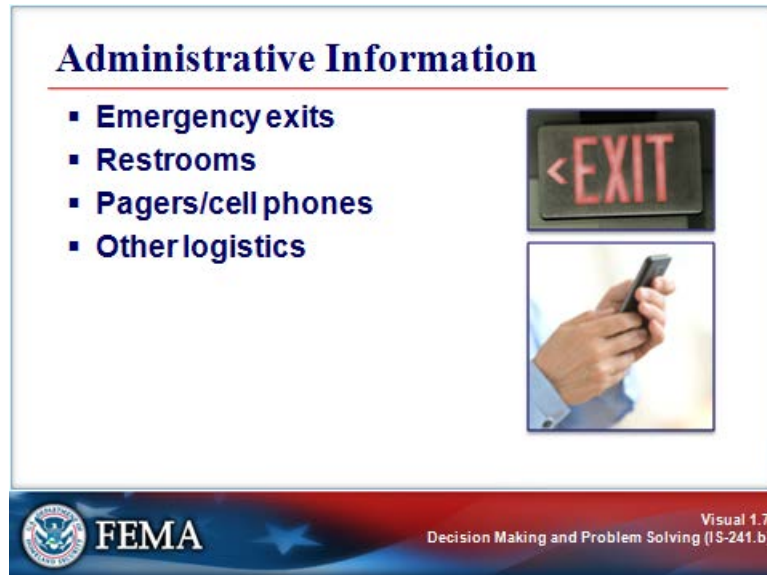
Instructor Note: If you have not introduced yourself at this point, take the time to do so now. Ask participants to introduce themselves and provide the information on the visual.

You will be given an opportunity to introduce yourself. Please include the following information:

- Name
- Position/organization
- Past experience related to emergency management or community service

COURSE OVERVIEW

Visual 1.7



Instructor Notes: Present the following key points.

The ability to make sound, timely decisions during an emergency event is critical. Good problem solving and decision making can avert tragedy and help the community recover from the event more quickly. Conversely, poor decision making—or the absence of decisions—potentially can result in injury or death to victims or responders.

But the repercussions don't stop there. Poor decisions in the early stages of an event can make the responders' job more difficult and more dangerous. In addition, they can give rise to much more critical or complex decisions later on—to say nothing of the effect on community relations.

Good decision-making skills are one of your most critical assets as an emergency management professional. This course will help you develop those skills.

DECISION MAKING IN EMERGENCY MANAGEMENT

Visual 1.8

Lesson 1 Objective

- Describe the impact of effective decision making in an emergency.



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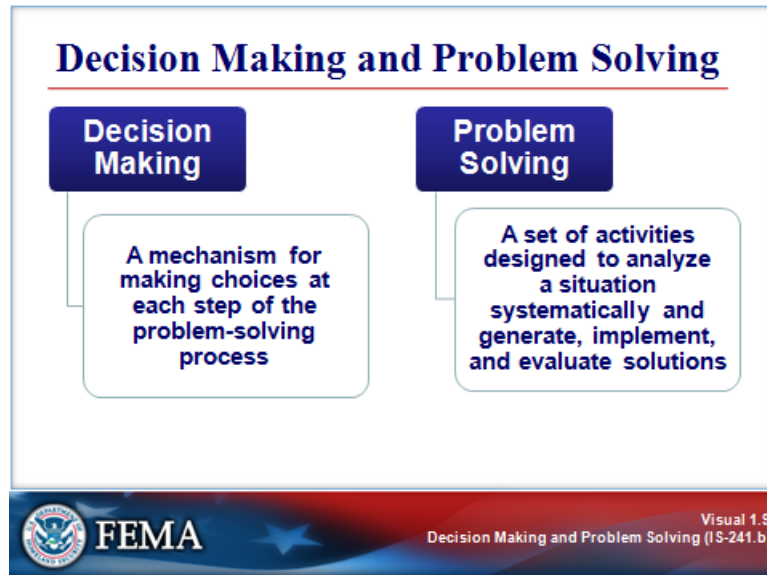
Visual 1.8
Decision Making and Problem Solving (IS-241.b)

Instructor Notes: Present the following key points.

The objective of Lesson 1 is to describe the impact of effective decision making in an emergency.

DECISION MAKING IN EMERGENCY MANAGEMENT

Visual 1.9



Instructor Notes: Present the following key points.

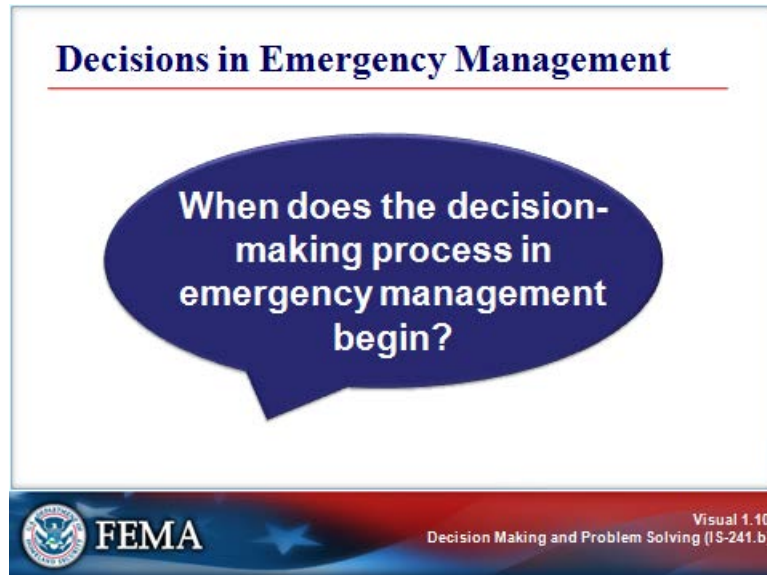
Decision making and problem solving are closely related activities. Very often, if you're doing one you're doing both.

- **Problem solving:** a set of activities designed to analyze a situation systematically and generate, implement, and evaluate solutions.
- **Decision making:** a mechanism for making choices at each step of the problem-solving process.

Decision making is part of problem solving, and decision making occurs at every step of the problem-solving process.

DECISION MAKING IN EMERGENCY MANAGEMENT

Visual 1.10



Instructor Notes: Present the following key points.

Ask participants: When does the decision-making process in emergency management begin? Remind participants that the decision-making process began well before the crisis in the video story concerning Candlestick Park, and helped to avert a catastrophe.

Answer the following discussion question: When does the decision-making process in emergency management begin?

The two case studies provided on the following pages illustrate the importance of decision making during a crisis.

CASE STUDY 1: SEBRING COUNTY**Visual 1.11**

Case Study 1: Sebring County

Instructions:

1. Read the case study in your Student Manual.
2. As you read, try to identify what decisions must be made by the emergency manager or other emergency management officials.
3. Jot down your ideas before continuing.

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Visual 1.11
Decision Making and Problem Solving (IS-241.b)

Instructor Notes: Present the following key points.

Case Study 1: Sebring County

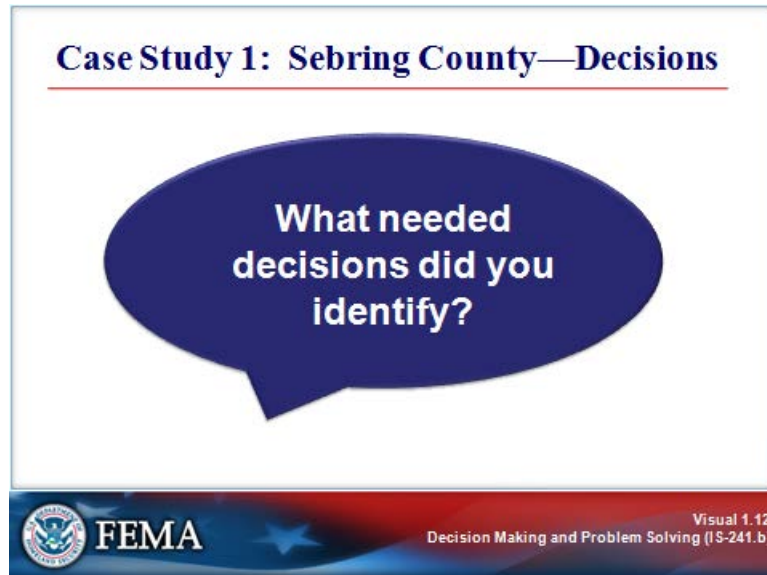
Background: Heavy rainstorms have hit, and counties across the entire State are faced with flash flooding to varying degrees. The town of Westfield, located in Sebring County, one of the hardest hit counties in the State, sits high and well away from the river, so flooding is usually not a concern. Last year, a new spillway was built to increase the capacity of the town reservoir to about 44 million gallons. Two towns downstream, Ambry and Gilson, are less than a 5-minute drive from Westfield. Each town has about 2,400 residents, most of them along U.S. Route 270.

Event Chronology:

Late afternoon	Rain begins, and weather forecasters predict it will be a strong, slow-moving storm that will produce heavy rain.
7:41 p.m.	A flash-flood watch is issued by the National Weather Service.
8:00 p.m.	Heavy rains begin.
9:30 p.m.	The county engineer stations an employee on the dam to watch for and report any problems. The employee sees water pouring a good 2 feet over the spillway. (It was later estimated that the reservoir was holding 65 million gallons during and after the storm.)
11:00 p.m.	Five inches of rain have fallen over the last 3 hours.
12:30 a.m.	The employee sees a section of dirt break away.
1:00 a.m.	When water recedes below the top of the dam, county employees discover that water has eaten around the spillway and is gradually carving away the side of the earthen dam. A first attempt at closing the hole with sandbags fails when the force of the water carries the bags right through.
1:30 a.m.	The Sebring County Emergency Program Manager is now meeting with the mayor of Westfield, the county engineer, the public works director, the fire chief, and the police chief to discuss the situation.

CASE STUDY 1: SEBRING COUNTY

Visual 1.12



Instructor Notes: Present the following key points.

What needed decisions did you identify?

Instructor Notes:

If participants noted that the central problem is that if the dam breaks, the people in the downstream towns will be flooded, they are absolutely correct. Numerous decisions must be made to address this problem.

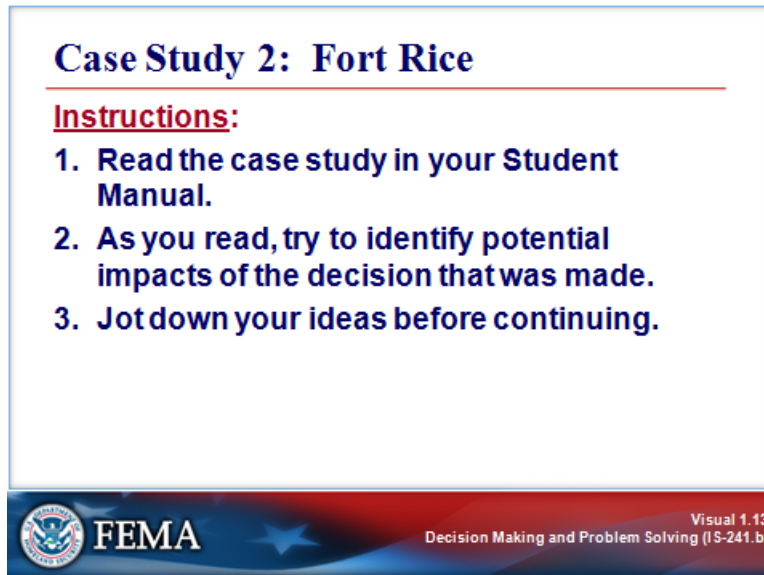
Some of the key decisions that must be made are shown below, and participants probably identified others as well. There is no right or wrong answer.

Decisions needed include:

- Should residents in the two downstream towns be evacuated?
- If the decision is to evacuate, when should the evacuation take place?
- Who will notify the citizens of the evacuation, and how?
- What additional resources will be necessary to accomplish the evacuation and provide any shelter needed?
- What is the most effective way to keep the dam from collapsing, and what resources will be needed to accomplish that goal?

CASE STUDY 2: FORT RICE

Visual 1.13

A presentation slide titled "Case Study 2: Fort Rice" with a red underline. Below the title, the word "Instructions:" is written in red. A numbered list follows: 1. Read the case study in your Student Manual. 2. As you read, try to identify potential impacts of the decision that was made. 3. Jot down your ideas before continuing. The slide has a blue border and a red and blue footer banner. The banner contains the FEMA logo on the left, the text "FEMA" in the center, and "Visual 1.13 Decision Making and Problem Solving (IS-241.b)" on the right.

Case Study 2: Fort Rice

Instructions:

1. Read the case study in your Student Manual.
2. As you read, try to identify potential impacts of the decision that was made.
3. Jot down your ideas before continuing.

 **FEMA** Visual 1.13
Decision Making and Problem Solving (IS-241.b)

Instructor Notes: Present the following key points.

Case Study 2: Mandatory or Voluntary Evacuation Scenario

Background: The town of Fort Rice, North Dakota, is located on the western bank of the Missouri River. A farming and ranching community, Fort Rice's residents are known for their tenacity in fighting the weather—and the river—to earn a living.

It has been raining for 12 hours, and the National Weather Service has forecast severe flooding conditions through most of the upper Midwest. The Missouri River and the rivers and streams that feed it are on the rise and are expected to continue to rise over the next several days as the storm is held in place by a large high-pressure area that is currently stationary over the Ohio Valley. Despite the fact that sandbagging crews have been supporting all local levees, severe flooding is a near certainty.

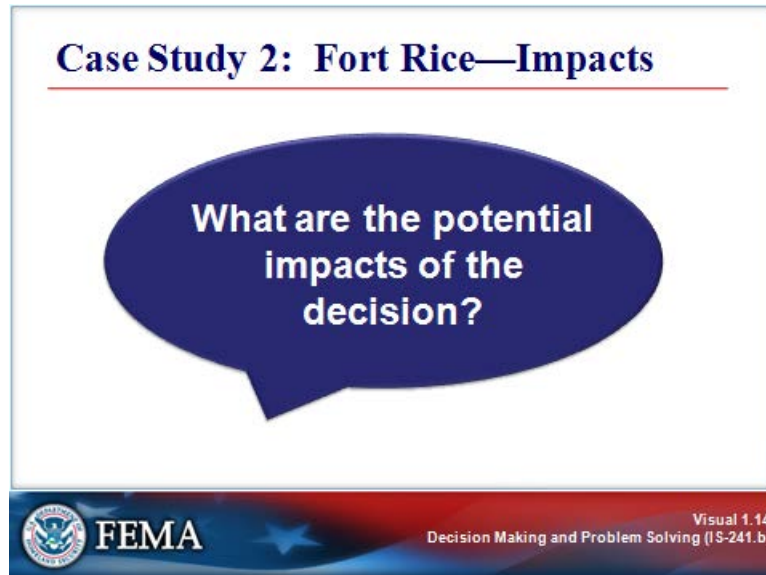
The mayor and all emergency management professionals from Fort Rice have been keeping abreast of the situation since before the rain began. They have been communicating with the local Weather Forecast Office, as well as county and State emergency management personnel. The question on the table at this point is not whether to issue an evacuation order but whether to make the evacuation mandatory.

Historically, farmers and ranchers have been unwilling to evacuate, even when flooding is severe. Most have grown up in the area and are aware of the damage that flooding can cause, but they are also aware of their investment in their land and livestock and will fight to save what they can.

After considerable discussion, the mayor, with the emergency management group's concurrence, makes the decision to activate the Emergency Alert System and issue the evacuation order. But although they decide to word the message strongly, they do not make the evacuation mandatory.

CASE STUDY 2: FORT RICE

Visual 1.14



Instructor Notes: Present the following key points.

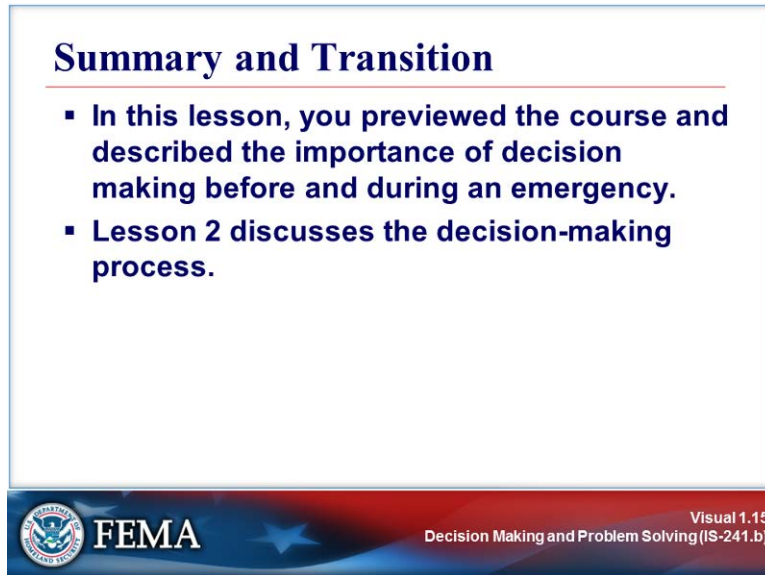
What are the potential impacts of the decision?

Instructor Notes: Participant responses may include:

Potential Consequence	Description
Emergency rescue may be needed.	Farmers and ranchers who choose not to evacuate now may be in a position of needing to evacuate later, when evacuation will be more dangerous or impossible. How will the decision about how and when to affect an emergency rescue be made?
Increased risk for emergency responders.	Emergency responders who may later be required to assist with emergency rescues will potentially be placed at risk. Who will make the decision to send responders into the fast-moving waters? When will that decision be made?
Response resources not available elsewhere.	Response resources deployed for emergency rescues may cause resource shortfalls elsewhere. How does one weigh the overall benefit of deploying resources for emergency rescues vs. the cost of those resources not being available for other purposes (which may also involve life-saving efforts)?
Increased cost of emergency rescue.	The overall cost for the response will increase if response resources must be deployed to assist with emergency rescues. While cost will not be an issue where the potential loss of life is involved, the decision not to require evacuation will affect later decisions about how to cover the overall costs of the emergency.

SUMMARY AND TRANSITION

Visual 1.15



Instructor Notes: Present the following key points.

In this lesson, you previewed the course and described the importance of decision making before and during an emergency.

Lesson 2 discusses the decision-making process.

Notes