Unit 7: Risk Management and Safety

INSTRUCTOR GUIDE

Objectives

By the end of this unit, students will be able to:

- Describe the risk management and safety responsibilities of the Division/Group Supervisor
- Define risk management and risk assessment
- Describe risk management processes
- Describe concepts of hazard mitigation

Methodology

This unit uses lecture, exercises, and discussion.

Content from Unit 7 will be tested during the Final Exam. Instructors will evaluate students' initial understanding of the unit through the facilitation of Exercises 6 and 7.

The purpose of Exercise 6 is to allow trainees to practice identifying hazards and risks. Trainees (in groups) will be presented with five (5) different incident scenarios, asked to identify potential hazards and risks, and report findings to the class for discussion.

The purpose of Exercise 7 is to allow trainees to perform a hazard and risk assessment that identifies potential hazards and risks, and then determine risk controls that would mitigate the risks identified. Trainees will examine the Central City (CC) Train Derailment IAP for risks and hazards. Trainees will then determine ways to mitigate (or eliminate) the risks identified. One person from each group will then present the group's answers to the class for discussion.

Time Plan

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

Topic	Time
Lesson	1 hour, 15 minutes
Exercise 6	30 minutes
Exercise 7	45 minutes
Total Time	**2 hours, 30 minutes**

Reference Materials

- Projector and other equipment necessary for PowerPoint presentation
- Easel pad
- Marking pens
- Blank ICS Forms 211
- Blank ICS Forms 214 for the entire class
- Division/Group Supervisor Position Task Book (PTB)
- ICS Form 420-1 Field Operations Guide (FOG)

Topic Unit Title Slide

Explain the Following Key Points

Announce unit.

Scope Statement

Through this unit, students will gain an understanding of the how to effectively manage risks as a Division/Group Supervisor. Students will learn the terms related to risk management, the steps in the Risk Management Model, pre-emergency risk management techniques, and how the Division/Group Supervisor can demonstrate a personal commitment to safety.

Topic Unit Objectives

Explain the Following Key Points

The purpose of this slide is to introduce the unit objectives.

Explain the Unit Terminal Objective to the class. Remind students that the Final Exam questions are based on the enabling objectives, which are in the Student Guide.

Unit Terminal Objective

Describe the risk management and safety responsibilities of the Division/Group Supervisor.

Unit Enabling Objectives

- Define risk management and risk assessment
- Describe the risk management processes
- Describe concepts of hazard mitigation

Topic Risk Management Responsibility

Explain the Following Key Points

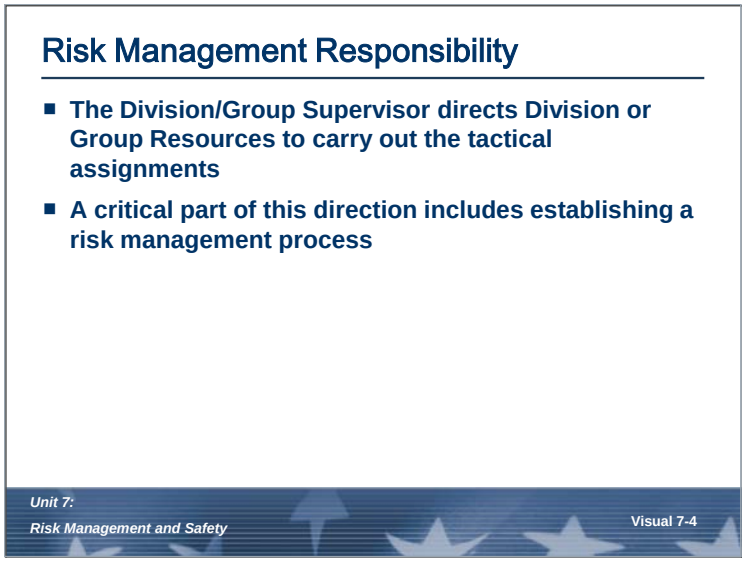
The purpose of this slide is to explain that the Division/Group Supervisor has the responsibility and the authority to implement a risk management process to ensure the safety of the resources it has been assigned.

You are the person primarily responsible for your own safety, as well as the safety of those you supervise. This is one of the fundamental tenets of ICS.

As a Division/Group Supervisor, your primary responsibility is to ensure that everyone who showed up to work leaves in the same shape they arrived in. To be effective, the Division/Group Supervisor must have a strong personal commitment to safety and hazard mitigation. Attention to the established safety guidelines such as fire orders; watch-out situations; lookouts, communications, escape routes, and safety zones (LCES); common denominators; and industry standards is essential.

You have the responsibility and the authority to implement a risk management process to ensure the safety of the resources assigned to you.

Topic Risk Management Responsibility



Explain the Following Key Points

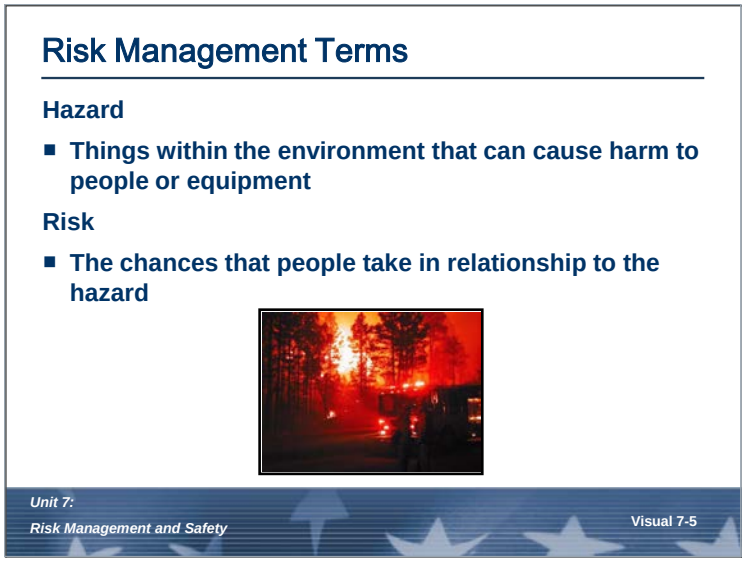
The purpose of this slide is to explain the responsibility of the Division/Group Supervisor to incorporate a risk management process into their assignments.

As a Division/Group Supervisor, you coordinate the activities of a diverse set of emergency resources, each having their own leader.

You translate the strategy outlined in the IAP into tactical assignments for each resource assigned to your Division or Group. Part of this translation of strategy into tactics means a risk management process must be applied to the decision to commit any resource to an assignment in the hazardous environment.

Hazards are addressed in a general sense in the ICS Form 215A and the IAP. But a risk management process cannot truly be planned and implemented until you see the work site and associated emergency environment.

Topic Risk Management Terms



Explain the Following Key Points

The purpose of this slide is to begin defining terms related to risk management.

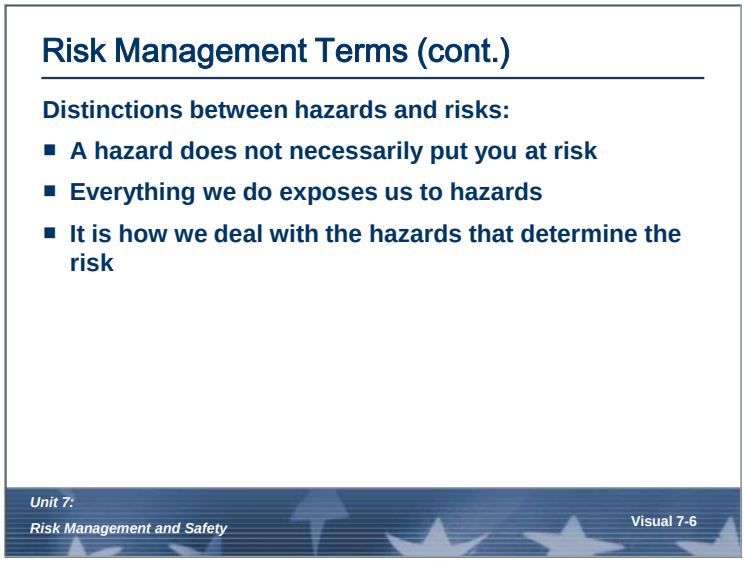
Suggested Question

What are some examples of hazards and risks?

Potential Answers

- **Hazard**: Things within the environment that can cause harm to people or equipment.
  - Hazards are things; they may or may not be modified.
- **Risk**: The chances that people take in relationship to the hazard.
  - Risks are human activities; they can be changed to either reduce or increase the risk.

Topic Risk Management Terms (cont.)



Explain the Following Key Points

The purpose of this slide is to continue defining the distinction between hazards and risks.

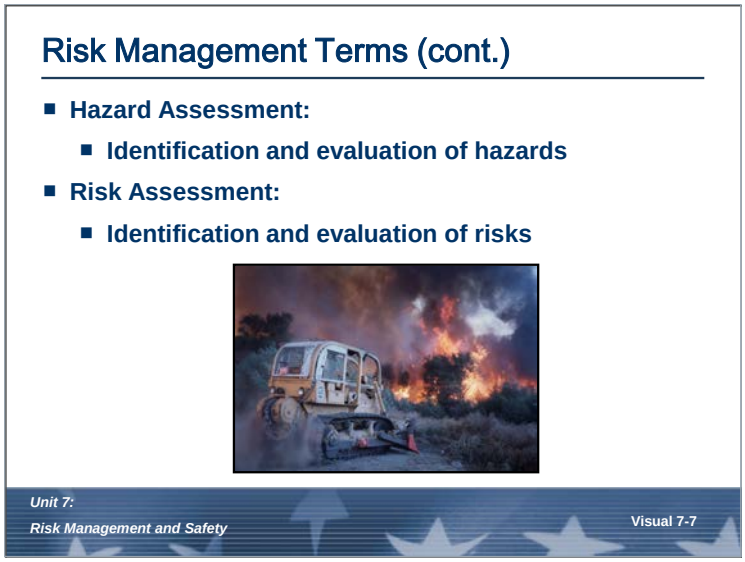
D i s c u s s i o n

Ask students to define hazards and risks they regularly contend with on their job. Ask them to also identify the types of hazards and risks that may affect the people they manage.

Distinctions between **hazards** and **risks**:

- A hazard does not necessarily put you at risk
- Everything we do exposes us to hazards
- It is how we deal with the hazards that determine the risk

Topic Risk Management Terms (cont.)



Explain the Following Key Points

The purpose of this slide is to continue defining terms related to risk management.

Suggested Question

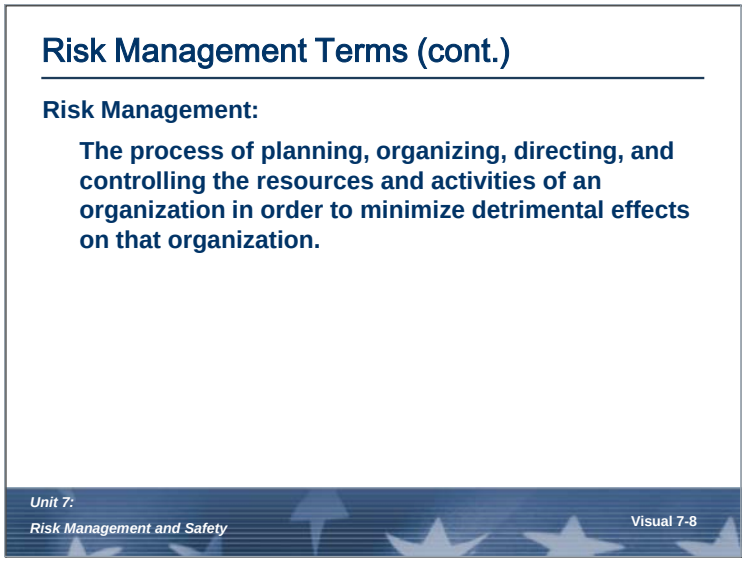
How do you think hazard and risk assessments are normally conducted?

Potential Answer

While the Form 215a is a good source for hazard and risk information, not every potential hazard or risk will be covered. This is another example of where communication is key. There needs to be hazard–risk communication up to the Operations Section Chief, down to your resources, and across to other Divisions and Groups.

- **Hazard assessment**: Identification and evaluation of hazards
  - Identify hazards
  - Evaluate severity
  - Exercise judgment
- **Risk assessment**: Identification and evaluation of risks
  - When a hazard or risk is identified, measures must be implemented to reduce or eliminate the hazard or risk.

Topic Risk Management Terms (cont.)



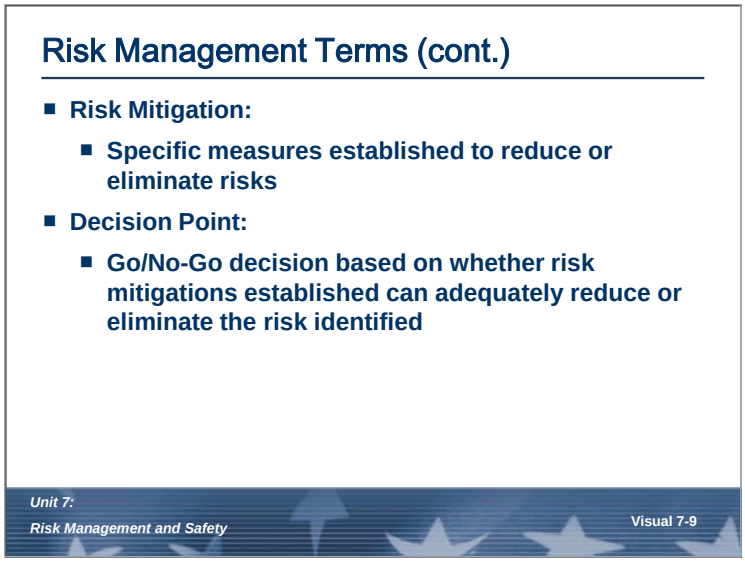
Explain the Following Key Points

The purpose of this slide is to introduce the term risk management.

Risk Management: The process of planning, organizing, directing, and controlling the resources and activities of an organization in order to minimize detrimental effects on that organization.

The primary focus of risk management is the safety and health of the responders.

Topic Risk Management Terms (cont.)



Explain the Following Key Points

The purpose of this slide is to continue defining terms related to risk management.

Discussion

Building off the discussion from the last slides, ask students how they mitigate the risks they identified.

- **Risk Mitigation**: Specific measures established to reduce or eliminate risks
  - Part of risk management process
- **Decision Point**: Go/No-Go decision based on whether risk mitigations established can adequately reduce or eliminate the risk identified
  - Gather information
  - Assess for hazards
  - Determine risk controls
  - Make a decision

Topic Risk Management Model

Explain the Following Key Points

The purpose of this slide is to identify the steps in the Risk Management Model.

The classic risk management model presents a systematic approach for identifying and planning for risk control. This methodical process for making decisions can be used not only for the non-emergency risks that all organizations must address, but also for the risks associated with the response to and mitigation of an emergency incident. The factors at each incident always will vary, but—as we have known for years—continual training in all aspects of the approach will yield the best, most consistent results possible.

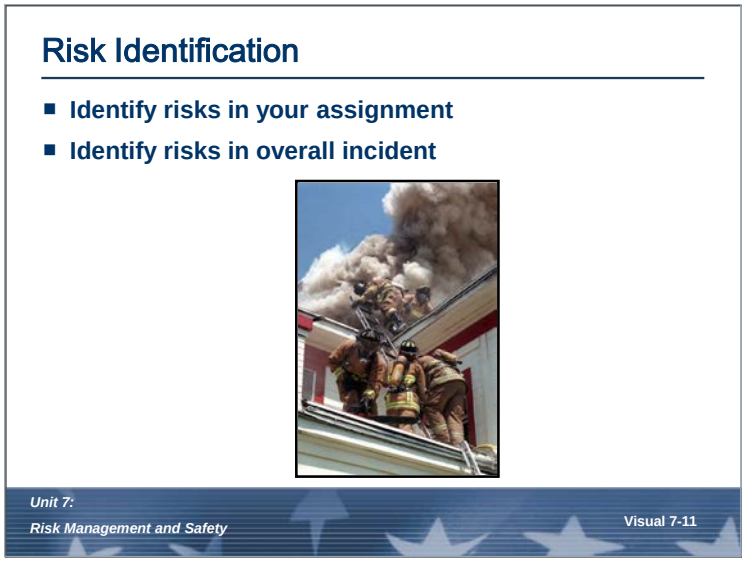
The model has five primary components, or steps, that serve as a foundation for this process. Each one depends upon information generated by the previous step, so it is important to evaluate each one before moving on to the next. These five steps are discussed in detail in the following sections:

1. Risk identification
2. Risk evaluation
3. Risk prioritization
4. Risk control techniques
5. Risk monitoring

For each step in the process, it is important to record performance criteria, suggestions, and recommendations. This data will provide the elements that formulate a written risk management plan. The number of pages in the plan has no impact on effectiveness.

Once created, the plan should be periodically (at least annually) updated. Consider it a dynamic process, not a static event with a single written record. Keep the plan current based on conditions, circumstances, and experience.

Topic Risk Identification



Explain the Following Key Points

The purpose of this slide is to discuss the first step in the Risk Management Model—Risk Identification.

Suggested Question

What risks are inherent to the types of incidents to which you respond?

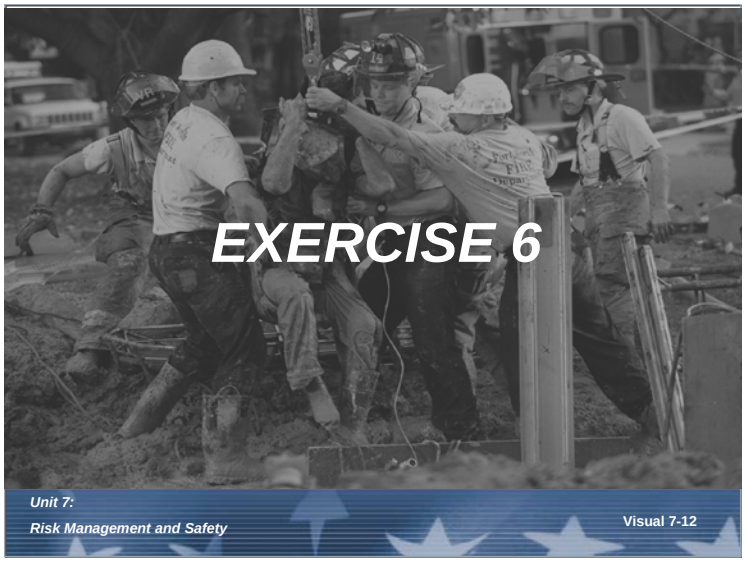
Potential Answer

For this step, students should consider "What might go wrong?" They should compile a list of all emergency and non-emergency operations in which their organization participates. Ideally, plan for the worst, but hope for the best. There are many sources to assist with this identification process. The first, and possibly the most effective, is their organization's loss prevention data. Students should seek input and ideas from personnel, trade journals, professional associations, and other service providers. When using ideas from other organizations, simply consider local circumstances when formulating the list.

Step 1 of Risk Management Model: Risk Identification

- What risks are inherent to the types of incidents to which you respond?
- Remember: A risk is a chance that people take in relationship to a hazard.

Topic Exercise 6



Explain the Following Key Points

Formally introduce Exercise 6 and read the specific exercise objectives and directions from the Exercise 6 handout. Allow 30 minutes for completion of the exercise.

The purpose of Exercise 6 is to allow the trainees to practice identifying hazards and risks. Trainees (in groups) will be presented with five (5) different incident scenarios, asked to identify potential hazards and risks, and then report findings to the class for discussion.

Topic Risk Evaluation

Explain the Following Key Points

The purpose of this slide is to discuss the second step in the Risk Management Model—Risk Evaluation.

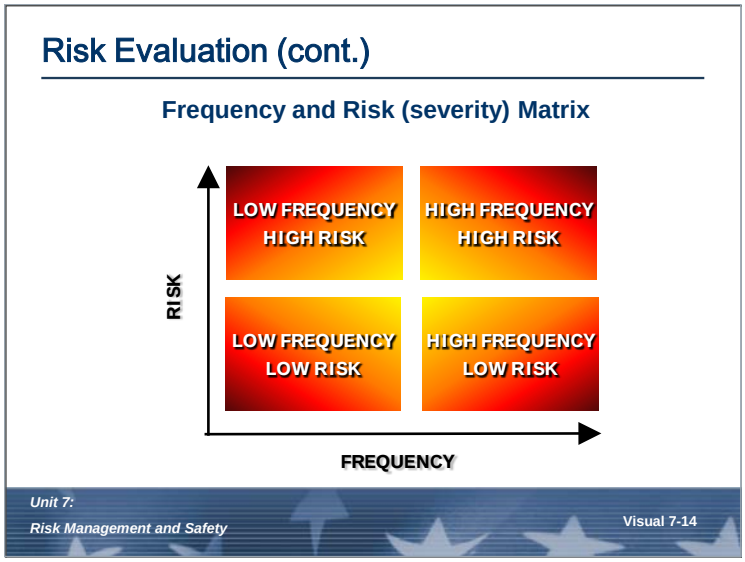
Once the risks are identified, they can be evaluated from the standpoint of both frequency and severity. Frequency addresses the likelihood of occurrence. Typically, if a particular type of incident (like back injuries) has occurred repeatedly, these incidents will continue to occur until effective control measures are implemented.

Severity addresses the degree of seriousness of the incident. This can be measured in a variety of ways such as time away from work, cost of damage, cost of and time for repair or replacement, disruption of service, or legal costs. Using the information gathered in the identification step, the risks can be classified based on severity.

Step 2 of Risk Management Model: Risk Evaluation

Determine which risks will be controlled first.

Topic Risk Evaluation



Explain the Following Key Points

The purpose of this slide is to introduce the Frequency and Risk Matrix as a way to help classify problems.

Discussion

Identify types of incidents that might fall into these quadrants and ask students for examples.

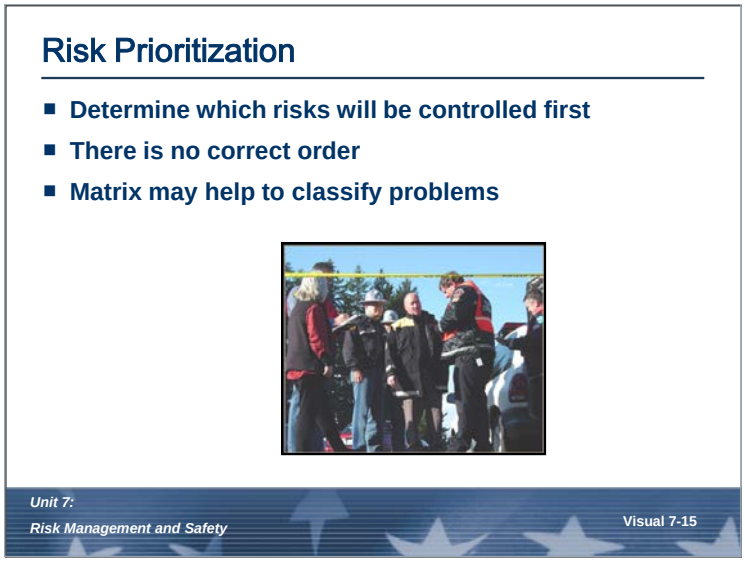
Rarely do the high-frequency events cause problems because of your familiarity with such incidents. The low-frequency areas are the ones that should be of concern, specifically those that are low-frequency and high-risk. This is where your safety and the safety of your resources can be most in peril because of little familiarity with the situation and the high risk.

Note: Gordon Graham has developed informative videos on the purpose and use of this matrix. You may want to refer students to his videos as a resource.

Step 2 of Risk Management Model: Risk Evaluation (cont.)

- Frequency and Risk (severity) Matrix:
  - Frequency: How often does the risk occur?
  - Risk (severity): How severe are the consequences if things go wrong?
- Matrix may help in classifying problems.

Topic Risk Prioritization



Explain the Following Key Points

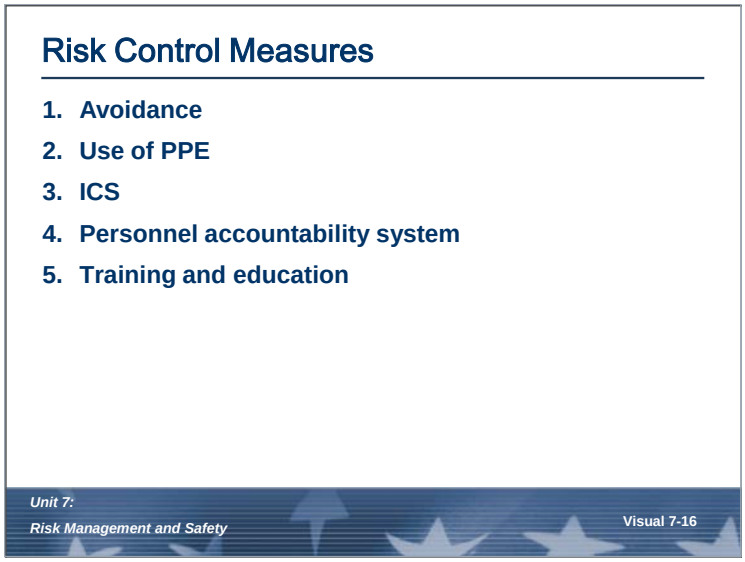
The purpose of this slide is to discuss the third step in the Risk Management Model—Risk Prioritization.

Taken in combination, the results of the frequency and severity determinations will help to establish priorities for determining action. Any risk that has a low probability of occurrence, but will have serious consequences (high risk or severity), deserves immediate action and would be considered a high priority item. Non-serious incidents with a low likelihood of occurrence are a lower priority and can be placed near the bottom of the "action required" list.

Step 3 of Risk Management Model: Risk Prioritization

- Determine which risks will be controlled first:
  - Low-frequency and high-risk items deserve immediate action and should be considered high-priority items
  - Prioritization can require difficult decisions
- There is no absolutely correct order
- Matrix may help to classify problems

Topic Risk Control Measures



Explain the Following Key Points

The purpose of this slide is to discuss the fourth step in the Risk Management Model—Risk Control Measures.

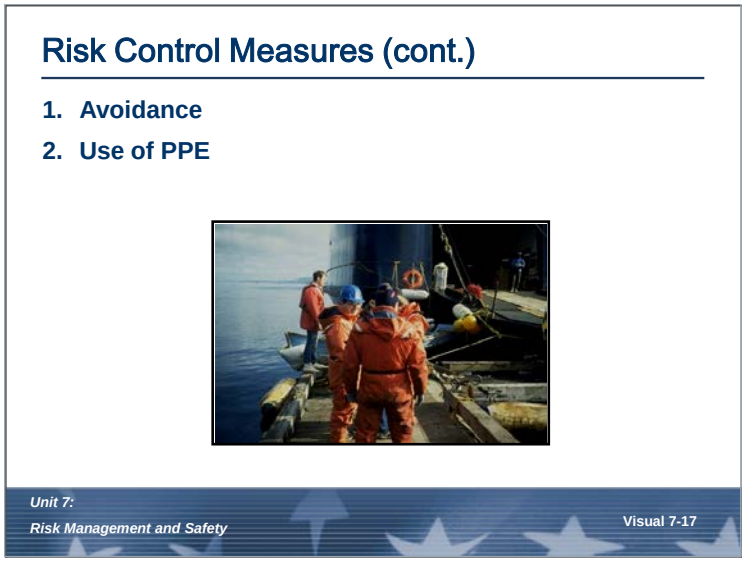
Each of these risk control measures will be discussed in upcoming slides so only briefly introduce them here.

At this point in the process, risks have been identified and evaluated, so it is time to find solutions. The most common method used for the management of risk is the adoption of effective **risk control measures**. While control measures will not eliminate the risk, they can reduce the likelihood of occurrence or mitigate the severity. Safety programs, ongoing training and education programs, and well-defined standard operating procedures (SOPs) are all effective control measures.

Step 4 of Risk Management Model: Risk Control Measures

1. Avoidance
2. Use of PPE
3. Incident Command System (ICS)
4. Personnel accountability system
5. Training and education

Topic Risk Control Measures (cont.)



Explain the Following Key Points

The purpose of this slide is to continue to discuss the fourth step in the Risk Management Model, Risk Control Measures. The discussion will focus on Risk Avoidance and the use of PPE.

Risk Avoidance

In any situation, the best choice for Risk Control Measures is risk avoidance. Simply put, this means avoid the activity that creates the risk. In an emergency services organization, this frequently is impractical. Lifting a stretcher presents a serious back injury risk, but you cannot avoid this risk and still provide effective service.

An example of where avoidance has been very practical is the widespread, hopefully universal, use of sharps containers. The risks associated with recapping needles are well documented; therefore, recapping is no longer an accepted practice. This risky behavior can be avoided through the proper use of a sharps container.

Personal Protective Clothing and Equipment (PPE)

Before participating in any emergency operation, an organization must define the minimum level of protective clothing necessary to conduct business. The organization has the obligation to ensure that the equipment provided is compliant and meets the intent for which it will be used. A key component is that personnel understand the use and limitations of the respective protective clothing. These garments and equipment are tested per certain criteria standards, which means they have a limitation and will fail

once that limitation (such as a defined temperature) is reached. The protective clothing has built-in safety factors, but it will provide protection for a very short period of time.

The maintenance and care of protective clothing is also important to the safety of the wearer. Poorly maintained protective clothing and equipment leads to accidents and injuries. The manufacturer's recommendations should be followed with respect to cleaning and repairing these garments and equipment.

The apparatus and equipment that is used for emergency operations must be properly equipped and properly maintained to maximize the safety of personnel. In order for this process to be productive, at least two components must be in place: a preventive maintenance program and a response SOP for "emergency driving" of apparatus.

The preventive maintenance program will ensure that routine maintenance and repairs are performed on apparatus on a scheduled basis. There will be criteria in place that allow apparatus to be placed out of service if certain conditions exist (for example, poor brakes). Maintenance and repairs performed on the apparatus must be done or completed by certified mechanics.

Step 4 of Risk Management Model: Risk Control Measures (cont.)

1. Avoidance:
    a. The best choice
2. Use of PPE:
    a. Understand limits

Topic Risk Control Measures (cont.)

Explain the Following Key Points

The purpose of this slide is to continue discussing the fourth step in the Risk Management Model—Risk Control Measures. Discussion will focus on ICS, personnel accountability systems, and training and education.

Incident Command System (ICS)

The command and control of an incident is the key to an effective, efficient, and safe operation. The risks are too great to allow the incident to be managed in an aimless and chaotic manner. Through ICS, an organization can provide a system that effectively manages an incident using such elements as essential decision-making, tactical design, plan survey and modification, and command and control.

Personnel Accountability System

Being able to account for the location of each member at an emergency incident is imperative in the event a problem develops that requires the tracking of all personnel on scene. In the past, through the ICS, organizations have tried to control the accountability of personnel, but freelancing still exists. A personnel accountability system will not be successful unless all personnel buy into the program. A written personnel accountability system will not be effective unless personnel are trained in the process, use the procedures, and are held accountable for noncompliance. From a risk management perspective, the personnel accountability system is an excellent control measure.

Training and Education

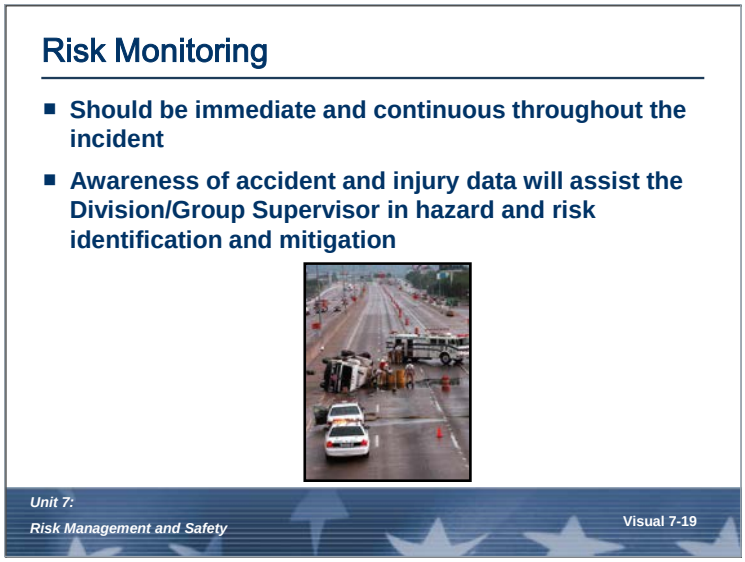
Without an effective training program, an organization would be liable for allowing members to function at an emergency without training and certification. From a pre-emergency risk management standpoint, this component is vital for ensuring consistency, efficiency, and safety. Without training, the incident scene would be nothing more than an out-of-control mess.

The training process is an avenue for testing and evaluating new or revised SOPs or policies. Training is also the approach for instituting and enforcing the safety process in a nonemergency mode or setting.

Step 4 of Risk Management Model: Risk Control Measures (cont.)

3. ICS:
    a. Through ICS, an organization can provide a system that effectively manages an incident using such elements as essential decision-making, tactical design, plan survey and modification, and command and control
4. Personnel accountability system:
    a. Being able to account for the location of each member at an emergency incident is imperative in the event a problem develops that requires the tracking of all personnel on-scene
    b. An excellent control measure
5. Training and education:
    a. Ensures consistency, efficiency, and safety
    b. Without training, the incident scene would be nothing more than an out-of-control mess

Topic Risk Monitoring



Explain the Following Key Points

The purpose of this slide is to discuss the fifth step in the Risk Management Model—Risk Monitoring.

The last step in the process is Risk Management Monitoring. Once control measures have been implemented, they need to be evaluated to measure their effectiveness. Any problems that occur in the process have to be revised or modified. This final step ensures that the system is dynamic and will facilitate periodic reviews of the entire program.

Step 5 of Risk Management Model: Risk Monitoring

- The Risk Monitoring Process should be immediate and continuous throughout the incident
- Awareness of accident and injury data will assist the Division/Group Supervisor in hazard and risk identification and mitigation

Topic Risk Monitoring (cont.)

Explain the Following Key Points

The purpose of this slide is to continue discussing the fifth step in the Risk Management Model—Risk Control Measures.

Step 5 of Risk Management Model: Risk Monitoring (cont.)

- Analysis after significant incidents (After Action Report):
  - Fatality
  - Serious injury
  - Apparatus accident
- Internal analysis
- Review with risk management division
- An independent evaluation every 3 years

Topic Exercise 7

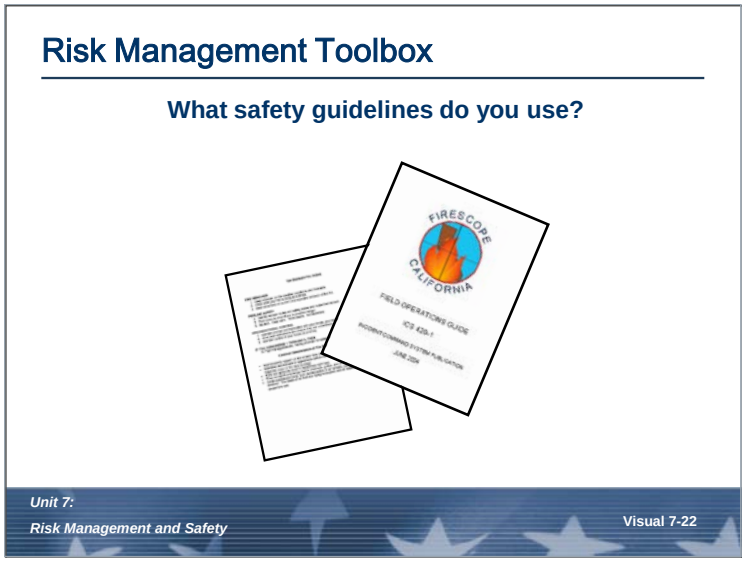
Explain the Following Key Points

Formally introduce Exercise 7 and read the specific exercise objectives and directions from the Exercise 7 handout. Allow 45 minutes for completion of the exercise.

The purpose of Exercise 7 is to allow trainees to perform a hazard and risk assessment that identifies potential hazards and risks, and then determine risk controls that would mitigate the risks identified. Trainees will examine the CC Train Derailment IAP for risks and hazards. Trainees will then determine ways to mitigate (or eliminate) the risks identified. One person from each group will then present their group's answers to the class for discussion.

Note: You may choose to have student groups also evaluate the risks in terms of the Frequency and Risk Matrix if appropriate (for instance, if all students in a group are from the same department or respond to the same types of incidents). Alternatively, you may ask students to individually consider where the scenario would rank for them personally on the matrix, considering their own experience and background.

Topic Risk Management Toolbox



Explain the Following Key Points

The purpose of this slide is to identify some of the resources that the Division/Group Supervisor may utilize to ensure effective risk management, specifically safety guidelines.

D i s c u s s i o n

There are obviously more safety guidelines than the fire-centric ones laid out in the Student Notes. Ask students to identify safety guidelines from their own fields and agencies.

Established safety guidelines include the NFPA 1500, your own jurisdiction's regulations, as well as those of the Occupational Safety & Health Administration (OSHA), and state regulations. If you are deployed out of state, you'll need to know if the state you are working in is a State-OSHA state or a Federal-OSHA state.

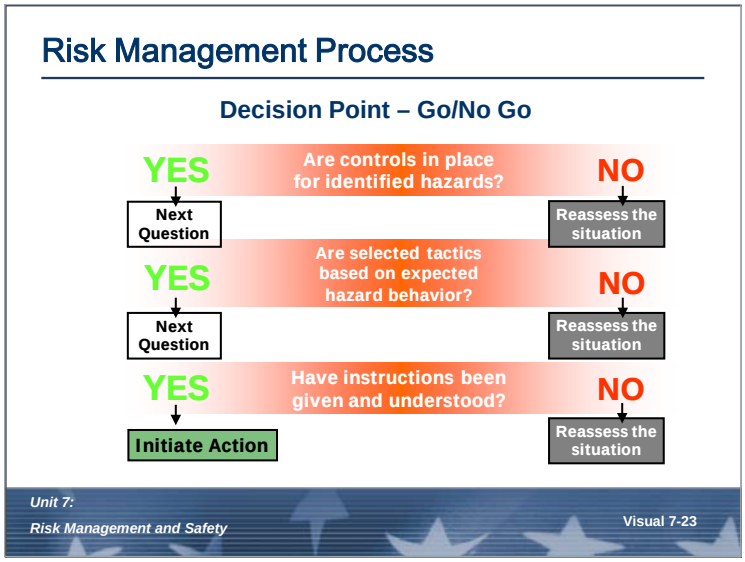
Note: If the FIRESCOPE Field Operations Guides (FOGs) have not been handed out yet, do so at this time.

Utilize safety elements outlined in the FOG and other publications:

- SOPs
- 10 Standard Firefighting Orders

- 18 “Watch Out” Situations
- Common denominators
- Lookouts, communication, escape routes, and safety zones (LCES) to evaluate where you are assigning resources
- Industry standards

Topic Risk Management Process



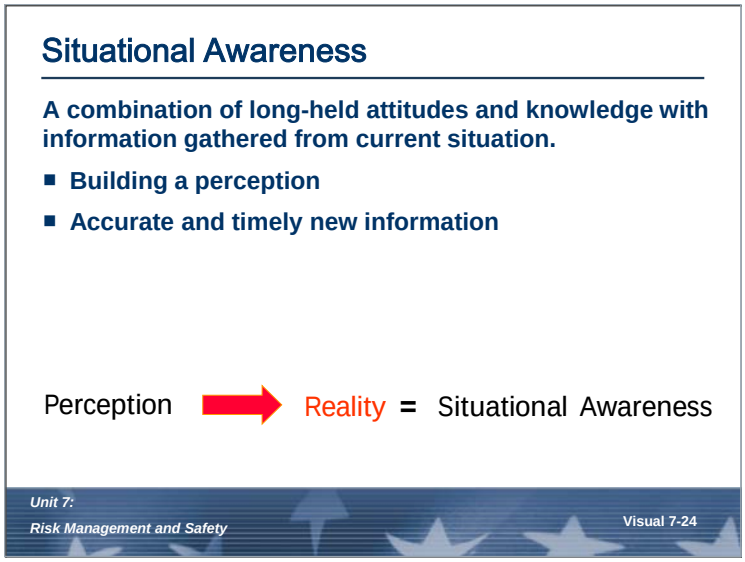
Explain the Following Key Points

The purpose of this slide is to provide a decision tree to help the Division/Group Supervisor make go/no-go decisions.

Suggested Question

Why do people take on assignments when it is obvious the answer to one or more of these questions is “NO?”

Topic Situational Awareness



Explain the Following Key Points

The purpose of this slide is to explain the concept of situational awareness.

Suggested Question

How does situational awareness affect your decision-making abilities?

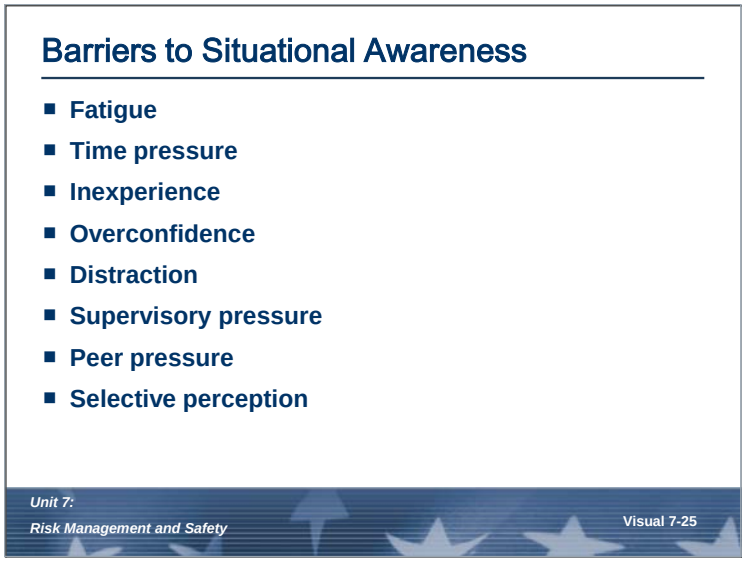
Potential Answer

Situational awareness is a combination of long-held attitudes and knowledge with information gathered from current situation.

Situational awareness concerns building a clear perception based on accurate and timely new information.

Without a clear perception of the current situation, your efforts to manage risk, your personal safety, and the safety of your personnel may be severely compromised or misguided.

Topic Barriers to Situational Awareness



Explain the Following Key Points

The purpose of this slide is to identity barriers that may interfere with accurate information gathering and distort the perception of the current situation.

Suggested Question

Can you identify any other barriers to situational awareness?

Potential Answer

The following barriers interfere with accurate information gathering and distort the perception of the current situation:

- Fatigue
- Time pressure
- Inexperience
- Overconfidence
- Distraction
- Supervisory pressure
- Peer pressure
- Selective perception

Topic Hazardous Attitudes

Explain the Following Key Points

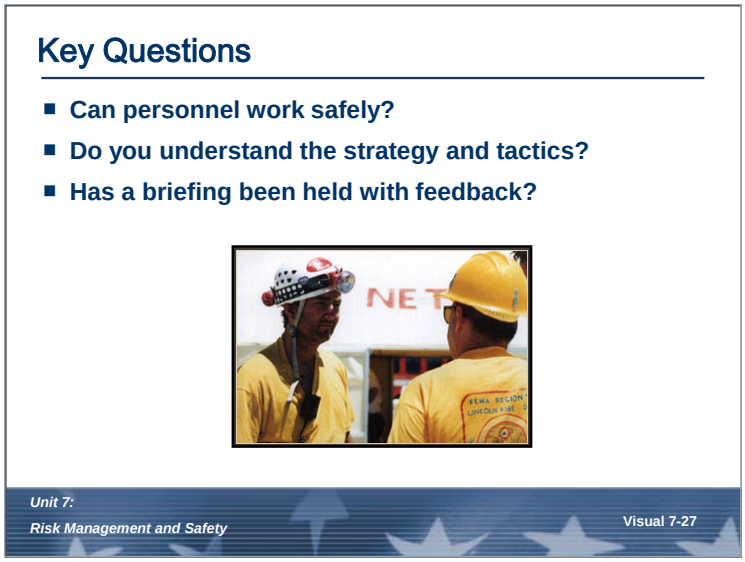
The purpose of this slide is to identify hazardous attitudes that in of themselves may impose risk to the incident management. These are attitudes that Division/Group Supervisors should recognize not only in subordinates but also in themselves.

Suggested Question

How might you manage these attitudes?

- **Anti-authority**: Disregards procedures and directions
- **Impulsive**: Acts without adequate situational awareness
- **Invulnerable**: Does not think about the worst case scenario
- **Macho**: Overconfident, takes on difficult tasks for admiration
- **Resignation**: Lets events occur without taking actions

Topic Key Questions



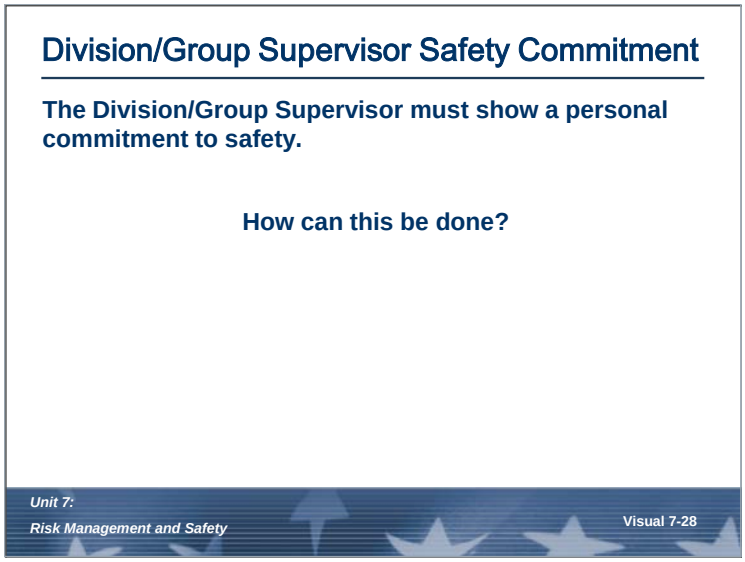
Explain the Following Key Points

The purpose of this slide is to present some of the key questions the Division/Group Supervisor should consider to ensure effective risk management.

Key Questions

- Can personnel work safely?
  - How do you know they are working safely?
- Do you understand the strategy and tactics?
- Has a briefing been held with feedback?

Topic Division/Group Supervisor Safety Commitment



Explain the Following Key Points

Suggested Question

How do you demonstrate a personal commitment to safety?

Answer

Set an example and stress safety in your briefings, not only by telling responders to stay safe, but by telling them how; show that you take safety seriously. When a subordinate raises a safety concern, deal with it or take it immediately and publicly to the Safety Officer.

Show your personal commitment to safety by demonstrating safety protocols in your own behavior and taking safety issues directly and publicly to the Safety Officer.

Topic Division/Group Supervisor Safety Examples

Explain the Following Key Points

The purpose of this slide is to discuss a list of Division/Group Supervisor safety examples.

Do more than repeatedly say, “Be safe out there.” Responders at briefings will tune it out. Instead, listen actively, take the intelligence provided by your subordinates seriously, and demonstrate your seriousness to others.

Know the stakes of action. Do not endanger your life or the life of others if you’re just saving property. Be aware of responders who take rash chances and needlessly endanger themselves and their team.

The law will protect your decisions, even in the absence of supporting regulations, if your decisions are similar to the way a prudent, responsible person would act in the same situation.

Make sure to attend to personnel welfare needs. If people are tired, hungry, angry, frustrated, or psychologically shaken, they’ll be more likely to make rash decisions.

Suggested Question

How do you deal with a breach of safety protocol?

Potential Answer

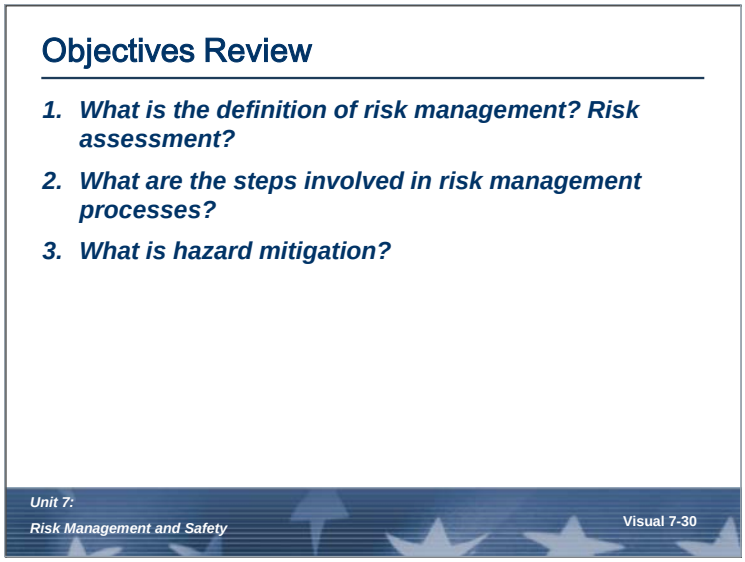
Stop the operation it affects, deal with it, and bring it up in the next Operational Briefing.

If it's a minor violation, counsel them (in other words, tell them: "Put your gloves on."). If it's a company officer leading people in a hazardous way, stop and counsel them. If it's a repeat violation, send them home, and make sure to hold the situation up as an example of what not to do.

For the risk management efforts to be successful, a process must be developed, and all members of the department must understand the concept and philosophy. Problem identification often requires considerable fact-finding and information-gathering activities. The goal of the risk management process is to provide for the safety, health, and welfare of the members of the organization. For the process to be successful, it is important that organizational members understand and feel that they are valuable contributors to the risk management process, as opposed to feeling the process is being forced upon them.

- Listen to and take immediate action to address safety concerns from incident personnel
- Make sure your subordinates understand their responsibility for safety
- Visit all divisions and incident facilities personally
- Set the example by wearing appropriate PPE
- Never take anything for granted; act on anything that feels or appears hazardous
- Consider personnel welfare needs:
  - Food
  - Liquids
  - Rest
  - Critical incident stress debriefing
  - Rehabilitation

Topic Objectives Review



Explain the Following Key Points

The purpose of this slide is to review the Unit Enabling Objectives for this unit to ensure that the class has obtained the knowledge necessary to successfully meet the Unit Terminal Objective.

Pose the Unit Enabling Objectives as questions. Ask the group to give a brief example or short explanation to answer each question. Try to call on a different student for each objective.

This is not intended to be an inclusive discussion of all material covered in Unit 7, but rather a quick and engaging way to wrap up the unit and reconnect the students to the material before moving on to Unit 8.

Ask the students to write down the top three to five things they learned in this unit on their ICS Form 214.

Leave the objective slide up so that students can think about what they learned in relation to the objectives.

At the end of the day, collect their ICS Forms 214. This will help identify what the students have learned and what areas may be especially important to highlight throughout the rest of the course.

This activity should be done at the end of each unit.

Unit Terminal Objective

Describe the risk management and safety responsibilities of the Division/Group Supervisor.

Unit Enabling Objectives

- Define risk management and risk assessment
- Describe the risk management processes
- Describe the concepts of hazard mitigation