Human Factors in the Wildland Fire Service L-180

Situation Awareness

Communication

Experience

Decision Making

Teamwork

Perception v. Reality

Stress

Attitude

Instructor Guide
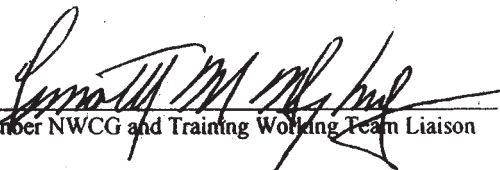
CERTIFICATION STATEMENT

on behalf of the

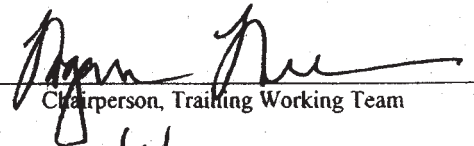## NATIONAL WILDFIRE COORDINATING GROUP

The following training material attains the standards prescribed for courses developed under the interagency curriculum established and coordinated by the National Wildfire Coordinating Group. The instruction is certified for interagency use and is known as:

Human Factors in the Wildland Fire Service, L-180
Certified at Level III

This product is part of an established NWCG curriculum. This couse does not meet the requirements of the NWCG COURSE DEVELOPMENT AND FORMAT STANDARDS – Sixth Edition, 2003 but it has been through a professional evaluation process.

Member NWCG and Training Working Team Liaison

Date _____9- 16- 2008_____

Chairperson, Training Working Team

Date _____9/4/08_____

Human Factors in the Wildland Fire Service

L-180

NWCG TRAINING WORKING TEAM
POSITION ON COURSE PRESENTATION AND MATERIALS

The recommended hours listed in the FMCG are developed by Subject Matter Experts based on their estimation of the time required to present all material needed to adequately teach the unit and course objectives. The hours listed may vary slightly due to factors such as number of students, types and complexity of course activities, and the addition of local materials. NWCG is aware that there have been courses presented in an abbreviated form, varying greatly from the recommended course hours. Instructors and students are cautioned that in order to be recognized as an NWCG certified course, certain guidelines must be followed:

- Lead instructors are encouraged to enhance course materials to reflect the conditions, resources and policies of the local unit and area as long as the objectives of the course and each unit are not compromised.

- Exercises can be modified to reflect local fuel types, resources and conditions where the student will be likely to fill incident assignments. The objectives and intent of the exercises must remain intact.

- Test questions may be added that reflect any local information that may have been added to the course. However, test questions in the certified course materials should not be deleted to ensure the accurate testing of course and unit objectives.

- Test grades, to determine successful completion of the course, shall be based only on the questions in the certified course materials.

If lead instructors feel that any course materials are inaccurate, that information should be submitted by e-mail to NWCG Fire Training at nwcg_standards@nifc.blm.gov. Materials submitted will be evaluated and, where and when appropriate, incorporated into the appropriate courses.

COURSE LENGTH FOR NWCG COURSES

If a course is available through PMS, the recommended course hours and the "NWCG Position on Course Presentation and Materials" will be adhered to by the course instructors.

- Unit times represent the allotted time to teach the unit and complete the exercises, simulations, and tests.

- Recommended course hours are given to help the students and the course coordinator with planning travel, room reservations, and facilities usage. This represents the time estimated to present the NWCG provided materials including time for breaks, lunch periods, set-up for field exercises or simulations, etc.

- Actual times for both the unit and the course may vary based on number of students, types and complexity of course activities, and the addition of local instructional materials.

If the course is not available through PMS, e.g., L-380, and has been developed using NWCG course criteria, minimum course hour requirements have been established and must be adhered to by the course developer and course instructors.

Course hours for all NWCG courses can be found in the Field Manager's Course Guide (http://www.nwcg.gov/pms/training/fmcg.pdf). If the hours are a minimum versus recommended they will be stated as such.

Contents

Introduction

Human Factors in the Wildland Fire Service is a basic human performance skills course. This course is designed as a 4-6 hour classroom experience. Its primary purpose is to establish an awareness of human performance issues and how they can impact fire service job performance. This course addresses human performance content that relates to the individual, including situation awareness, communication, decision making, risk management, and teamwork skills. The desired outcome of this training is improved awareness of human performance issues in the fire service so that individual firefighters can integrate more effectively into teams/crews working in dynamic, high-risk environments.

Course Instructions

This section contains instructions and information essential for making an effective presentation. The instructor must read this section and be thoroughly familiar with all procedures and material prior to presenting the course.

Instructor Prerequisites

The instructor must be a qualified Single Resource Boss and should have had formal instructor training or have demonstrated instructor skills. This course is designed to be taught by one instructor. If the class size exceeds 20 individuals, it is recommended that there be one or two assistant instructors to help facilitate the exercises. It is preferable that instructors be supervisors or managers from the same local work unit as the students.

Student Target Group and Prerequisites

This course is specifically designed for operational personnel at the Firefighter Type 2 to Single Resource Boss level, but has application for all Wildland Fire Service personnel.

Course Goal

Given the basic constructs of human performance concepts, students will demonstrate an understanding of their responsibilities to address human performance issues and develop strategies for improving their future performance so they can integrate more effectively into teams/crews working in dynamic, high-risk environments.

Time Element

This course is designed to be presented in approximately 4 to 6 hours. The course contains several exercises and is designed to be flexible so that the exercises can be adapted and selected according to the specific audience.

Course Coordination and Administration Requirements

The NWCG Course Coordinator's Guide (PMS 907), contains general information necessary for presentation of NWCG courses. The NWCG Training Working Team website (http://training.nwcg.gov/index.htm) has a link to a downloadable version of this guide as well as addition information for course coordinators.

The following materials are necessary for instructing this course:

NFES 2983   *L-180: Human Factors in the Wildland Fire Service Instructor Guide*

NFES 2984   *L-180: Human Factors in the Wildland Fire Service Course Materials CD-ROM*

NFES 2985   *L-180: Human Factors in the Wildland Fire Service* DVD

MTDC Pub 9551-2855   *Findings from the Wildland Firefighters Human Factors Workshop,* which can be downloaded from this Web page:

http://www.fireleadership.gov/toolbox/documents/human_factors.htm

Each student should receive the following:

NFES 2986   *L-180: Human Factors in the Wildland Fire Service Student Workbook*

NFES 1077   *Incident Response Pocket Guide*

You can order materials using the NWCG Publications Management System. This Web page, http://www.nwcg.gov/pms/pubs/pubs.htm, has links to the course catalog and order form.

Course Facilitation Notes

Human Factors in the Wildland Fire Service is designed to be used as an enhancement to basic firefighter training and as an option for use in annual refresher training.

This course is designed with a few short lecture segments, but the primary content is delivered by video and supported with small group exercises. Extensive instructor notes provide guidance regarding the group exercises and facilitation techniques.

It is important that you become very familiar with the exercises by previewing the video and thoroughly reading the instructor guide. It is also recommended that you become familiar with the *Findings from the Wildland Firefighters Human Factors Workshop* publication.

This course addresses foundational concepts and skills. Most firefighters have not been exposed to these human performance concepts through their basic firefighter training.

Following is the intent of this course:

- To expose students to the concepts surrounding human performance in high risk work environments and add these concepts to students' skill set.

- To provide students with opportunities to discuss human performance concepts using a common vocabulary.

- To communicate the professional responsibility to address human performance issues while on the job.

Video and Exercises

Preview the entire course with the video and the Instructor Guide together. Most of the conceptual presentations are delivered by video.

Your primary role as the instructor will be to provide input and direction for the small group exercises. Feel free to change or enhance the exercises to best suit the needs of students—it is your responsibility to adapt any course to fit the target audience.

Remember, the exercises are designed for Firefighter Type 2 through Single Resource Boss experience levels. If you feel that the exercises are not complex enough for the target audience, take the time to adapt the questions to the experience level of students.

View the exercises carefully to determine what adaptations and enhancements are required. View the video scenarios more than once. Make notes so that you can discuss them in class and bring out issues that may be missed by the students.

Instructor Experiences

Although many classes discourage the instructors from storytelling, this program actually improves if instructors share personal experience that relate to the concepts discussed. At various times during the course, you are asked to provide validation for the concepts in the form of a personal experience. This experience can be something that you saw personally, heard about, read about, or in the best case, something you know that some of the class saw as well.

If you are instructing your crewmembers, try to find examples of shared experiences. In some cases, you can ask another crew member to tell the story. In all cases, you are telling someone how the subject matter applies to real life. It helps to dispel attitudes like "it would never happen to me" or "that doesn't apply to us." These attitudes cause barriers to self-discovery and thought. In preparing for this class, identify and think about your audience's experiences and your own experience in order to bring home the course content and make it real.

Short Lectures and Discussion Questions

Short lecture segments, designated as "Key Teaching Points," reinforce concepts presented on the video or set the stage for group exercises. Most often Facilitated Discussions bring out the concepts. The most important goal of this course is to provide a way for students to talk with each other about human performance concepts. Questions and issues should be presented openly, and you should not be overly concerned about "school answers," but rather focus on encouraging discussion among the students.

The following icons in the Instructor Guide denote classroom activities:

Video Segment   Instructor Experience   Exercise

Optional Reading   Facilitated Discussion

Optional Readings

In both the Instructor Guide and Student Workbook, Appendix A includes optional readings. Read through these articles before conducting the class so you have a good grasp of their value to students.

Testing

This course has no instructor-administered final exam. The terminal learning objectives for this course are in the affective domain rather than the cognitive domain.

These affective domain objectives involve the student making the step to assume ownership for human performance responsibilities. The course does use some cognitive domain objectives to further the acceptance of the higher level affective domain objectives. These cognitive domain objectives involve basic knowledge content. They serve to give names and structure to the human factors concepts so that students can discuss them.

Whether the student converts the affective domain objectives into behaviors can only be determined by performance in the work environment. Instructors wishing to test the affective domain objectives should start with observation in the work environment after the course is over. Instructors should evaluate student acceptance of the concepts presented in this course and guide the student towards believing they could and should adopt the behaviors that support those concepts. For this reason, it is ideal that crew leaders teach this material to the crewmembers that work with them.

Classroom Activity Flowchart

Unit 0: Introduction	
Suggested time: 5 minutes	

Length	Media/Technique	Content
5	Lecture	Course Introduction

Unit 1: Working in the Wildland Fire Service		
Suggested time: 45 minutes		

Length	Media/Technique	Content
20	Video Segment 1: "Introduction"	Introduction to Human Factors; Course Goals; Course Overview; Situation Awareness
10	Lecture and discussion	Professional firefighters and high-risk work environments; situation awareness
5	Instructor experience	Lost situation awareness example
5-10	Exercise	Sizing up the situation

Unit 2: Communication		
Suggested time: 90 minutes		
Length	**Media/Technique**	**Content**
6	Video Segment 2: "Communication"	Responsibility to Communicate; Communication Model; Communication Toolbox; Switching Sender and Receiver
5	Lecture and discussion	Communication Errors and Effective Listening
5	Instructor experience	Importance of listening example
3	Video Segment 3: "Direct Communication"	Discussion and example of direct communication
15-20	Exercise	Direct Statements
2	Video Segment 4: "Standard Communication Procedures"	Discussion and example of Standard Communication Procedures
5-10	Exercise	Communication SOP
11	Video Segment 5: "The Five Communication Responsibilities"	Discussion and examples of the Five Communications Responsibilities
10	Lecture and discussion	Brief and Debrief
6	Video Segment 6: "After Action Reviews"	Overview of the importance of AARs and how they benefit the team and organization.
5	Lecture and discussion	Communicate hazards to others; Acknowledge and understand messages; Ask if you don't know
5-10	Exercise	Intent

Unit 3: Barriers to Situation Awareness		
Suggested time: 60 minutes		
Length	**Media/Technique**	**Content**
10	Lecture and discussion	Physical Barriers and Internal Barriers, Hazardous Attitudes
5-10	Exercise	Recognizing Hazardous Attitudes
10-15	Exercise	Much ado about "Can Do"
5	Instructor experience	Hazardous attitude example
N/A	Exercise (self-study)	Hazardous attitude awareness
10	Lecture and discussion	Stress Reactions
5-10	Exercise	Anticipating stressful situations
5	Instructor experience	Stress reaction example
N/A	Exercise (self-study)	Stress reaction awareness

Unit 4: Decision Making		
Suggested time: 60 minutes		
Length	**Media/Technique**	**Content**
17	Video Segment 7: "The Decision Cycle"	A discussion of the decision cycle, step by step
10	Lecture and discussion	Preplanning and Decision Making
10-15	Exercise	Preplanning
15	Lecture and discussion	Risk Management as a Decision Tool

Unit 5: Team Cohesion		
Suggested time: 45 minutes		
Length	**Media/Technique**	**Content**
20	Lecture and discussion	Teamwork; Skills for Team Integration; Guidelines for Followers
15-20	Exercise	Teamwork Top 10
10	Lecture and discussion	Close Out

Total course time	4.5 to 5 hours
Video Segments	65 minutes
Instructor Lecture/Discussion/Experiences	125 minutes
Group Exercises	75-120 minutes

The success of this program is dependent upon your enthusiasm for the subject matter, and the discussions that evolve from the group (peer buy-in). The "buy in" is not prescribed but rather evolves as the students see useful application for the subjects in their own work environment. As the instructor, your job is to help them see the application for the concepts. These types of courses have made great progress with enthusiastic instructors, and they have failed under pessimistic instructors.

If, after viewing the materials, you are not interested in working with this topic, or do not believe that the concepts presented would benefit your audience, DON'T TEACH IT. Find another person in your organization who is interested and ask him or her to present the course.

Unit 0:   Introduction

Suggested Time: 5 minutes

Training Aids: PowerPoint projection setup

Welcome the students to the class.

Take roughly five minutes to introduce instructors and students. Provide students with the course agenda, facility orientation, and cover any administrative concerns.

Distribute Student Workbooks and make sure all students have *Incident Response Pocket Guides*.

Unit 1:   Working in the Wildland Fire Service

Suggested Time: 15 minutes

Training Aids: Television with DVD player

PowerPoint projection setup

Dry erase board and markers or flipchart and markers

Objectives: 1.   Agree that firefighters have a responsibility to reduce errors.

2.   Agree that firefighters have a responsibility to learn and improve their performance.

3.   Describe the relationship between situation awareness, reality, and perception.

4.   Describe the relationship between situation awareness, observation, and communication.

5.   Agree that firefighters have a responsibility to be aware of their situation.

I.   Human Factors

Segment 1: "Introduction"

20 Minutes

Note to the instructor:

During the video presentation, write the following bullets on a flip chart or whiteboard. These are a mental tool set intended to be viewed for the duration of the course.

- **Communication techniques**
- **Situation awareness self-check**
- **Risk management process**
- **Teamwork guidelines**

👥 **Facilitated Discussion**

Keying off the introduction to the video, use the following questions or your own questions as appropriate for a classroom discussion.

What aspects of your job involve "human factors"?

Draw out specific examples from students.

Some of the organizations shown in the video really take error reduction seriously. Is human error a problem for us in the Wildland Fire Service? How so?
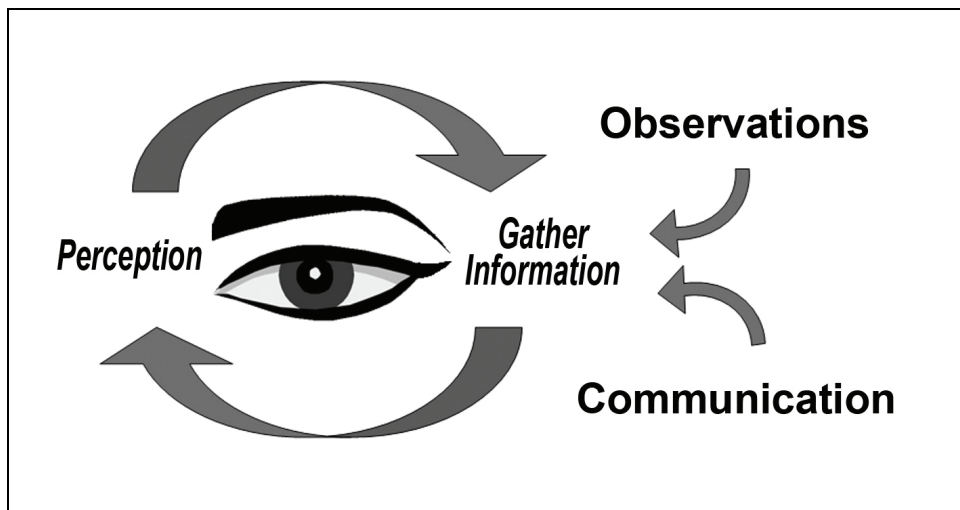
Errors occur in any human undertaking. Most accidents in wildland fire are rooted in human errors. If we do not anticipate that errors will occur, our ability to detect errors early will be compromised.

What steps can we take to plan for error—for when things go wrong?

One of the answers is gaining good situation awareness.

II.   Situation Awareness

Key Teaching Points

Just as you have an anchor point to build a fireline, situation awareness, called SA for short, should be your anchor point for using mental tools to build an accurate perception of your work environment.

Situation awareness is an internal process. The SA Cycle goes on continuously while you are conscious. It is about information gathering, and you must train yourself to constantly update your information. Your perception of reality will not remain accurate if you do not gather new information.

 Facilitated Discussion

Describe why maintaining situation awareness during a fire can be difficult at times.

Make sure the discussion covers issues such as physical barriers, stress, distraction, inexperience, and attitudes.

When the flow of information coming in to you gets disrupted, what happens to your perception of the situation?

A disruption in the flow of information makes you become locked into the context of a static perception while the situation keeps changing. Soon your perception will not accurately reflect the reality of the situation.

The narrator in the video mentioned that experience can help maintain good situation awareness. How?

Experience helps you define what information is important. When you understand the critical information factors, you can filter out and disregard the unimportant things that are distractions. This is called information filtering.

1-6, Discussion

Facilitated Discussion—continued on next slide

What happens when you are distracted?

You become focused on less important things.

What are some distractions that occur in your work environment?

Share a personal experience in which you, or someone else you observed, were distracted from their primary task and lost awareness regarding what was changing in the environment.

Exercise: Sizing Up the Situation

Purpose: To examine influences on situation awareness.

Method: Divide the class into small groups and have the groups discuss answers to this question for five minutes.

What are some of the information sources that you use to build your perception of a fire situation?

Have a group member report responses from their group back to the entire class.

Record the responses on a flipchart or whiteboard.

⮂ **Exercise: Sizing Up the Situation—continued**

Next, working with the entire class, classify the responses into two categories

• Identify information sources that are directly observed and mark them with a symbol (O).

• Identify information sources that involve communication from others and mark them with a different symbol (X).

Observation and communication are the keys to situation awareness.

Looking at the list of information sources, how much of your understanding about what is going on in a fire situation is communicated to you from someone else?

A lot of it! And since much of our information is coming in from others, communication is the focus of the next unit.

📖 **Optional Reading**

| 1-9, Reading |

Inform students that an article entitled "Your SA and Condition White" is included in Appendix A: Optional Readings.

Review Unit 1 Objectives.

| 1-10, Objectives |

Unit 2: Communication

Suggested Time: 90 minutes

Training Aids: Television with DVD player

PowerPoint projection setup

Dry erase board and markers or flipchart and markers

Objectives:
1. Recall common sender-receiver communication errors.

2. Construct a direct statement from an indirect statement.

3. Identify existing standard communication procedures and opportunities to initiate standard communication procedures in the work environment.

4. Describe the Five Communications Responsibilities.

5. Agree that firefighters have a responsibility to communicate.

Segment 2: "Communication"

6 minutes

I. The Communications Toolbox

Key Teaching Points

Effective communication is essential for good situation awareness.

You have a variety of tools that you can use to become an effective communicator:

- Switching sender and receiver roles frequently.

- Using direct statements.

- Following standard communications procedures (SOPs).

- Redeeming the Five Communications Responsibilities.

A. Switching Sender and Receiver

METHOD
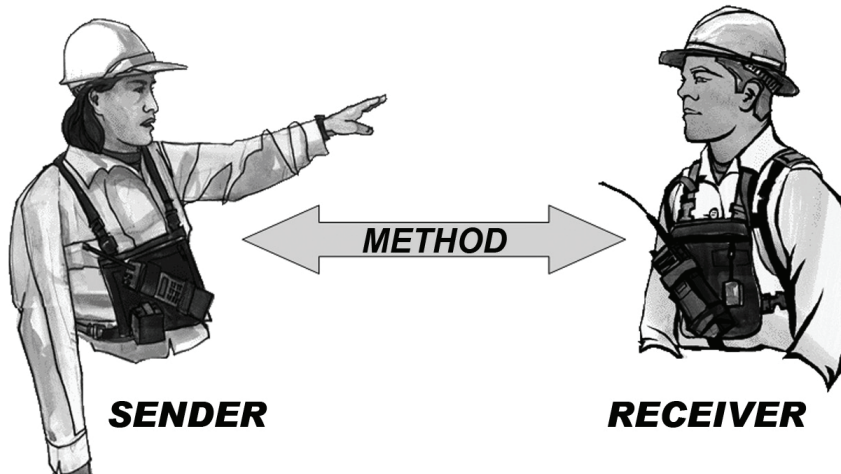
SENDER   *RECEIVER*

Facilitated Discussion

As we saw in the video example, when we communicate in dynamic or high-risk situations we are more likely to take short-cuts in our sender-receiver interactions. These short-cuts usually lead to communication errors.

What are common sender errors?

- Omission of information

- Providing biased or weighted information

- Assuming the message depends only on the words used

- Unwillingness to repeat information

- Disrespectful communication

Facilitated Discussion—continued

What are common receiver errors?

- Being locked into the context of a previous perception

- Not being prepared

- Thinking ahead of the speaker

- Inattention to non-verbal signals

- Not asking for clarification

- Disrespectful communication

What are some of the filters that affect the sender-receiver communication process?

- Defend ourselves against looking foolish or ignorant

- Support our opinion even when we know it may not be totally correct

- Blame others when our message is misunderstood

2-7, Key Points

Key Teaching Points

We all know that frequent switching isn't always possible due to time, noise, and other barriers. In a lot of situations found at a fire, it just isn't practical to switch the sender and receiver frequently.

In these situations you must put forth extra effort to make your listening skills more effective.

The following are important techniques for making sure that you listen effectively:

- Build a mental picture from the message as it is being delivered.

- Make sure that you are listening, not just waiting your turn to talk.

- Recognize that perceptions and filters affect the communication process.

- Be aware of the unstated message, and be willing to resolve inconsistencies between verbal and non-verbal signals.

Share a personal experience illustrating the importance of listening to a briefing or series of instructions where failing to do so put someone at risk.

B. Direct Communication

Segment 3: "Direct Communication"

3 minutes

2-8, Video

Key Teaching Points

2-9, Key Points

Many people use indirect language to communicate—even teams that operate in high-risk work environments—because it is perceived as less aggressive or more polite. However, direct language is appropriate when you need to advocate your position in an assertive manner.

Remember direct language is respectful language. It should be used when

- You are unsure of events.

- You see a problem.

- You have an answer to a question.

- You are not getting your point across to the listener.

⮂ **Exercise: Direct Statements**

Purpose: To formulate and critique direct statements.

Method: Divide the class into small groups. Assign one of the following scenarios to each group. Allow the groups 5 minutes to read their assigned scenario and construct a direct statement. Remind students that a direct statement is respectful.

When the groups are ready, have two groups that worked on the same scenario select a person to role play it. Have a person from one group role play the subordinate, and a person from the other group role play the supervisor.

The supervisor should respond realistically to the situation by verbally supporting their initial decision. The subordinate should press for closure. The other members of the groups can help their group member respond and role play.

The exchange is complete when it appears that the subordinate was able to effectively advocate his or her concerns.

Ask for critiques from other students when the exchange is done. Keep the discussion focused on the components of the direct statement.

⮂ **Exercise: Direct Statements—continued**

Repeat process with the second scenario and two other groups if time allows.

Note to the instructor:

If the following scenarios do not fit the target audience, feel free to develop more appropriate ones.

Scenario 1: You are a Firefighter working on a 10 person crew that had a new Crew Boss assigned to it about a week ago. The new Crew Boss has been red carded for about 12 years, but has only gone to 3 or 4 fires a year during that time. You have been a wildland firefighter for only 4 years, but you have been to 25 or 30 fires each of those four years. The new Crew Boss has shown a tendency to want to make all the decisions for the crew, while hanging close to the crew vehicle. This is the second day for the crew on a local 30 acre fire. While building a piece of underslung fireline, you notice a spot fire below the crew and relay this information to the Crew Boss by radio. The Crew Boss responds by telling you to continue working the fireline while he tries to get another crew to go check out the spot fire. Your Crew Boss adds that it is still early in the day, before the burning period, and that the spot fire shouldn't get too active in the near future. You are uncomfortable with that response because you feel that the weather is a little warmer and drier than it has been on the previous two mornings and you don't see any other crews in sight.

Scenario 2: You are a Crew Boss of a handcrew that has been sent to a drop point on an indirect piece of fireline on a large, active fire in grass fuels. You have been told by your Division Supervisor to stage there with another handcrew in preparation for a firing operation to protect several houses that are adjacent to the indirect fireline. When you arrive at the drop point you observe that the fire is already posing a threat to the structures and that you have no good safety zone to accommodate 40 people and the vehicles. You estimate that you have about 30 minutes to implement a firing operation before the main fire's rate of spread makes that tactic unfeasible. You discuss the situation with Crew Boss of the other handcrew. They have been tasked with carrying fire in the opposite direction from the drop point. After talking with the other Crew Boss you contact the Division Supervisor by radio to relay this information. The Division Supervisor responds by telling you to wait at the drop point, until after he meets with the Operations Chief to discuss the situation, and then returns to your location to meet with you face to face.

C. Standard Communication Procedures

Segment 4: "Standard Communications Procedures"

2 minutes

2-11, Video

Key Teaching Points

2-12, Key Points

A special type of Standard Operating Procedures (SOPs), Standard Communications Procedures establish a common understanding among team members so that tasks can be assigned with instructions that are not necessarily verbalized in every detail. This has specific application to those tasks that are done frequently by a team.

The result is that less time is required to initiate and acknowledge a task assignment. Additionally, SOPs allow an individual to know what another team member will do in a given set of circumstances, adding a dimension of predictability. This concept can be applied to many firefighter communication tasks.

⇄ **Exercise: Standard Communication Procedures**

Purpose: To identify current standard communication procedures and what might be good opportunities to establish as new ones.

Method: Divide the class into small groups. Ask students to think about what the narrator said regarding the use of communication SOP. Have the groups discuss answers to these questions about communications SOPs.

What are some current communication SOPs that firefighters use?

Some possibilities to bring out in discussion:

- helicopter and dozer hand signals

- radio call signs

- dispatch response protocol

- standard radio frequencies for tactical and aircraft use only

What other communication tasks could be done better if they were made into SOPs?

Allow 5 minutes for the groups to work together, then have the groups discuss their responses with the entire class.

2-13, Exercise

D. The Five Communications Responsibilities

Segment 5: "The Five Communications Responsibilities"

11 minutes

Key Teaching Points

The Five Communications Responsibilities are your professional responsibility. If you take only one thing away from this course, make it the Five Communications Responsibilities.

Have students locate the Communication Responsibilities in the *Incident Response Pocket Guide.*

#1 Brief others

Facilitated Discussion

What are some situations requiring that you brief someone?

Possible answers to bring out in discussion:

- Changing a task assignment for a subordinate

- Describing fire behavior to a coworker

- Providing situation updates to a supervisor

- Giving directions to a crew transport driver

- Providing feedback regarding drop effectiveness to a pilot

- Sharing work area information with another crew

#2 *Debrief your actions—After Action Reviews (AARs)*

> **Note to the instructor:**
>
> **AARs are a critical underpinning of a learning organization. This discussion may well be the students' first formal exposure to AARs. It presents an excellent opportunity to discuss the rationale of AARs—to the unit as well as for the organization as a whole.**
>
> **It is important for you to establish a strong foundation for this concept.**
>
> **The intent of this section is to establish AARs as standard operating procedure and to set the expectation that people at all levels—including the follower level—need to contribute to the AAR.**

Key Teaching Points

Refer students to the *Incident Response Pocket Guide* where they can find the ground rules of an AAR, which are copied here.

The climate surrounding an AAR must be one in which the participants openly and honestly discuss what transpired, in sufficient detail and clarity, so everyone understands what did and did not occur and why. Most importantly, participants should leave with a strong desire to improve their proficiency.

- An AAR is performed as immediately after the event as possible by the personnel involved.

- The leader's role is to ensure that the AAR has skilled facilitation.

- Reinforce that respectful disagreement is OK. Keep focused on the *what,* not the *who.*

- Make sure everyone participates.

- End the AAR on a positive note.

Segment 6: "After Action Reviews"

6 minutes

Facilitated Discussion

What would happen if AARs were not a standard operating procedure?

What might be the consequences for an individual, a unit, or for the wider organization?

No one would know if a technique or strategy was effective or if a mission was ever successfully accomplished. People might be doomed to repeat the same mistakes over and over. Individuals, teams, and the larger organization would stop learning.

 Facilitated Discussion—continued on next slide

It is the responsibility of unit leaders to initiate and moderate the AAR, but what about the rest of the team? What is their role in the AAR?

Why is it important to be a good follower during an AAR?

Follow with a discussion about what specific things students—at the level of a follower—can contribute to the AAR.

- A good follower accepts responsibility for personal actions and commits to positive improvement.

- Highlight the "everyone participates" ground rule. Emphasize that everyone—even those who are new— has a responsibility to communicate during the AAR. New people may be reluctant, so stress that they have an obligation to share information. "This is your time to speak up."

- AARs offer a standard and predictable opportunity for followers to redeem the Five Communications Responsibilities: by sharing honest opinions, asking questions, listening, and—most importantly—learning from a diversity of other opinions and perspectives.

- In addition, followers are often the only ones that have eyes on the ground to identify emerging risks or recognize opportunities. AARs present an invaluable opportunity for crew members to share their unique insights from a variety of perspectives.

 Facilitated Discussion—continued on next slide

The Wildland Fire Service is committed to the principle of being a learning organization. How does the AAR help us to learn as an individual, a unit, or as an organization?

For the individual, AARs provide an immediate feedback opportunity and are a fundamental on-the-job training technique.

For the team, AARs improve overall communication, team cooperation, and commitment to accomplishing the mission.

For the wider organization, AARs are a way of sharing best practices with others within and even outside of the Wildland Fire Service.

 Share your personal story of an AAR that resulted in changes for the next day's operation.

 Optional Reading

Inform students that an article entitled "The After Action Review" is included in Appendix A: Optional Readings.

#3 *Communicate hazards to others*

<table>
<tr>
<td>

Facilitated Discussion

What are some methods we use to communicate hazards to others during a fire?

- Flagging dangerous areas

- Standard warning calls such as "Rock"

- Identifying hazards during briefings

- Sound devices such as sirens, whistles, etc.

Do you feel reluctant to point out hazards to a more experienced firefighter?

Emphasize that just because someone is more experienced does not mean that they will know and see all the hazards in the work environment.

</td>
<td>

2-22, Discussion

</td>
</tr>
</table>

#4 Acknowledge messages and understand intent

Key Teaching Points

This communication responsibility is composed of two parts.

- First, when messages are passed from one individual to another it is important to acknowledge receiving the information. Do this all the time, even during your routine communication, so it becomes a habit.

   When time is short, people are stressed, and radio traffic is confusing, it is hard to tell if a message makes it to an intended receiver. This is where the payoff is—acknowledging messages becomes a **standard operating procedure**, not forgotten in critical situations.

- Second, doing a task and understanding why you are doing it are two different things.

   When you are the person receiving an assignment, ask questions to make sure you understand the intent. A fire is a dynamic work environment where events happen quickly and sometimes unpredictably, so a particular tactic can suddenly become unfeasible. But if the leader's intent (desired end result) is understood, other tactics can be initiated if things change in order to maintain safe operations and achieve the desired end result.

   When you are the person giving assignments, be sure to discuss the intent of the task, as well as instructions on what to do. Informed workers are more effective workers. The practice of withholding information to maintain control is a sign of insecure leadership.

#5 Ask If You Don't Know

Key Teaching Points

Questions are important for removing uncertainty, making sure that everyone's situation awareness is based on the same set of facts, and understanding intent.

Fire crews differ a lot in how they bring new firefighters onto the crew. Some use the "buddy system" or have a formal orientation. Other use trial by fire—that is, if they survive the first few weeks then they are considered to be good enough to make it.

Asking questions is difficult for many of us, but it is even more difficult for new crewmembers, who fear that asking questions will make them look "stupid" to the other crewmembers.

 Facilitated Discussion

Do you feel that asking questions is encouraged where you work?

Are there stated or unstated penalties for asking questions where you work?

⇄ **Exercise: Intent**

Purpose: To examine why it is important that the intent of an assignment be provided and understood.

Point out that providing and understanding intent links directly to three of the Five Communications Responsibilities: Briefing; Acknowledge and understand messages; Ask if you don't know.

Note to the instructor: For this exercise, you need to develop an assignment scenario in advance that fits the target audience. An example scenario: Telling your crew to get the tools rehabbed before meal time.

Method: Divide the class into small groups. Advise students to think about what has been discussed regarding the use of intent. Brief the assignment scenario.

Allow the groups five minutes to work together answering the questions. The groups summarize their responses to the entire class.

What information does the person giving the assignment need to provide so that those individuals receiving the assignment will understand the intent?

Possible responses:

- expected fuel type for next assignment

- number of people requiring tools

- level of rehab desired

- other priority duties

- expected timeframe

⇄ **Exercise: Intent—continued**

What possible problems could arise if the intent of the assignment is not understood?

Possible responses:

- wrong type of tools

- defective tools not repaired/replaced

- continuing to sharpen additional unnecessary tools at the expense of other duties

- constant supervision presence

Have students locate "Leader's Intent" in the *Incident Response Pocket Guide.*

Review Unit 2 Objectives.

2-27, Objectives

Unit 3:   Barriers to Situation Awareness

Suggested Time: 60 minutes

Training Aids: PowerPoint projection setup

Dry erase board and markers or flipchart and markers

Objectives: 1.   Identify hazardous attitude barriers and their impacts on situation awareness.

2.   Identify stress reaction barriers and their impacts on situation awareness.

3.   Agree that firefighters have a responsibility to minimize barriers.

I.   Physical Barriers

 Facilitated Discussion

What are some of the barriers we face on the job?

Possible responses: smoke, limited visibility, dense vegetation, terrain, distance, heat, radio equipment problems, lack of information, inexperience, stress and fatigue, or attitudes.

Record responses in a list on a flip chart or whiteboard.

From the list of barriers, identify those listed items that are physical barriers.

What controls do we use to mitigate the impact of the physical barriers that were listed?

- Distance—using hand-held radios and repeaters

- Terrain—posting lookouts

- Heat—increasing water re-supply

- Dense vegetation—changing tactics

II.   Internal Barriers

Key Teaching Points

Internal Barriers are not caused by the physical work environment. It's all about you! We can influence and change internal barriers to much greater extent than we can external barriers.

Internal barriers affect our perceptions, our ability to gather information, and the way we communicate. In other words, barriers degrade our situation awareness and impair our decision making abilities.

Just as we have work to mitigate physical barriers, we have a professional responsibility to mitigate internal barriers.

Internal barriers come in two forms:

- Attitudes

- Stress

A. Attitudes

Key Teaching Points

Attitudes come from your own experiences, and the experiences of others (family, friends, media, school, co-workers, etc.). What happened to someone else can affect your attitude about something or someone.

Attitudes can be very powerful because they cause you to establish a perception prior to gathering more information.

Attitudes tend to filter out or change the relative weight of new information. This weighing isn't right or wrong, just a fact of life.

Facilitated Discussion

Make up a story about a person in which the behaviors and characteristics of the person will cause the students to formulate a negative attitude about that person and tell the story to the class.

An example is provided below. If you use this example, use a storytelling style rather than reading it from the guide.

This guy—John Freeman—he just appeared a newspaper story this week about helping the poor and how he's raising money to help the homeless.

I couldn't believe it! I have a friend that went to one of his fund raising events, and this Freeman guy was a total jerk. He brought this young homeless girl up in front of everyone to get them to give money and to feel sorry for her. Later, after they were done with the presentation, they had a buffet for the guests.

My friend stepped out to go to the restroom and saw this guy show the homeless girl out the back door. He told her "that was all," and that she needed to "leave and go back to the shelter."

He said that the food was for the guests and she couldn't have any. She asked if she could get a ride since it was so far, and he gave her some change and told her to take the bus. What a fake! I can't believe the way the media has hyped this guy up.

As a result of what I have told you, what kind of opinion or attitude have you formed regarding this person?

Facilitated Discussion—continued

Let's go back and review this example in the context of the Situation Awareness Cycle.

• I communicated some information to you.

• You gathered it and formed a perception.

Did that information have anything to do with reality?

Unknown—no other information was provided.

If this person came in here right now and began talking to you, what effect would your opinion and attitude have on how you would treat the information?

Most would view the information differently than if they hadn't heard anything about this person. Most people would filter the information.

Facilitated Discussion—continued on next slide

Do you think that this "filtering" and "weighing" due to attitude happens on the job?

Yes. Most of us weight information heavily based upon the source. For example, accepting information from someone they know and trust versus information from someone they don't know.

Attitudes tend to be contagious, especially among teams that work together closely, such as fire crews.

Are all attitudes bad? What are some examples of healthy attitudes?

- Wanting to improve your skills

- Enjoying difficult challenges

- Being open to new ideas

B. Hazardous Attitudes

Key Teaching Points

"Hazardous Attitudes," a term coined by the aviation community, describes attitudes that often lead to accidents. These are attitudes that are particularly destructive to effective communication and good situation awareness.

- Invulnerability: "That would never happen to us."

- Anti-authority: "Those morons, they don't know anything!"

- Impulsiveness: "What the heck! Let's just do it."

- Macho (competitive): "We'll show them how the pros do it."

- Resignation: "What's the point? It will never happen anyway."

- Complacency (casualness): "We've done this so many times that we could do it our sleep."

- Escalation of commitment—target fixation: "We almost have it whipped; we can't quit now."

- Other attitudes: Sexist, racist, agency bias, and so on.

👥 **Facilitated Discussion**   *Have you witnessed hazardous attitudes that are not listed here? Describe them.*   *What are some examples of the listed hazardous attitudes that you have experienced on assignments or in regular work duties?*

3-11, Discussion

⇄ **Exercise: Recognizing Hazardous Attitudes**

Purpose: To recognize hazardous attitudes by anticipating when they might occur and how they might be controlled.

Method: Divide the class into small groups. Point out how different attitudes tend to crop up at certain times before, during, and after a fire. Assign each of the groups to a time period or phase of a fire such as one of the following:

Over the course of a day; before a dispatch; upon arrival on scene; during firefighting; after returning to station; over the course of a fire; during hot spotting and hotline, firing operations, cold trail line construction, mop-up, or demobilization.

Have the groups answer the following questions:

- *What hazardous attitudes are likely to occur for the group's assigned time period or phase?*

- *What are the indications that the attitudes are showing up?*

- *What control measures could minimize or stop the problem?*

Allow 5 minutes for the groups to work together.

The groups report their responses back to the entire class.

📕 **Optional Reading**

Inform students that an article entitled "Five Hazardous Attitudes—Flight Out of Balance" is included in Appendix A: Optional Readings.

⇄ **Exercise: Much ado about "can do"**

Purpose: To discuss firefighter attitudes.

Method: Divide the class into small groups and frame a discussion with the following points:

Have the groups discuss and reconcile the following statements about the 1994 South Canyon Fire Investigation (which are also printed in the student workbook) and determine what "can do" really means. Is it a healthy or hazardous attitude?

In one of the conclusions, the 1994 South Canyon Fire Investigation report stated that the "can do" attitude of the firefighters was a contributing factor to this fire entrapment and the resulting 14 fatalities.

Following the report, many experienced firefighters came forth to say that the "can do" attitude is a necessary and healthy attitude for successful firefighting crews.

Allow 5 minutes for the groups to work together. Have the groups report their conclusions back to the entire class.

If you find that a group comes to a conclusion that the accident investigation was wrong, ask questions to promote deeper thinking.

Might the investigators have seen a hazardous attitude at work within the incident and confused the issue by calling it a "can-do" attitude?

If a "can-do" attitude was not the real problem, could something else have been occurring? Invulnerability? Escalation of commitment? Other attitudes?

Share a personal experience that illustrates a hazardous attitude. This personal experience shows students what right looks like for when they complete the self-study exercise and answer the same questions.

Of all the situations and attitudes discussed in class, select one or two that you recognize as having experienced personally, or that you might tend to fall into.

Example: When I hear a fire reported on the radio, I can get impulsive.

Describe the indications that you are exhibiting that attitude.

Example: I start moving toward the fire even before I know who is there and what they are doing. I want to just go and hit the fire.

What do you think might work to reduce or remove the attitude? What positive attitude might you be able to substitute for this hazardous attitude?

Example: I make sure that I stay within the local unit dispatch protocol.

⇄ **Self-Study Exercise: Hazardous Attitudes Awareness [in Student Workbook]**

Purpose: To provide an opportunity for students to assess their personal attitudes and identify areas for improvement.

Method: Encourage students to take time after the course to complete this exercise on their own. Point out that self assessment is one of the techniques that can help them learn and improve their own performance.

3-15, Self-Study

## C. Understanding Stress

3-16, Key Points

Key Teaching Points

Stress is the term for an individual's response to demands placed upon them. We respond to these demands in three stages.

- Alarm reaction—in this stage the body recognizes the stressor and prepares for a fight or flight response. Stress causes physical, mental, and behavioral reactions.

  3-17, Key Points

- Resistance—in this stage the body repairs any damage and may adapt to some stressors such as heat, hard work, or worry. During our lifetime we cycle through these first two stages on a daily basis.

- Exhaustion—when a stressor continues for a long duration, it will cause the body to remain in a constant state of readiness. Eventually you will be unable to keep up with the adrenaline and awareness demand, leading to exhaustion.

D. Stress Curve
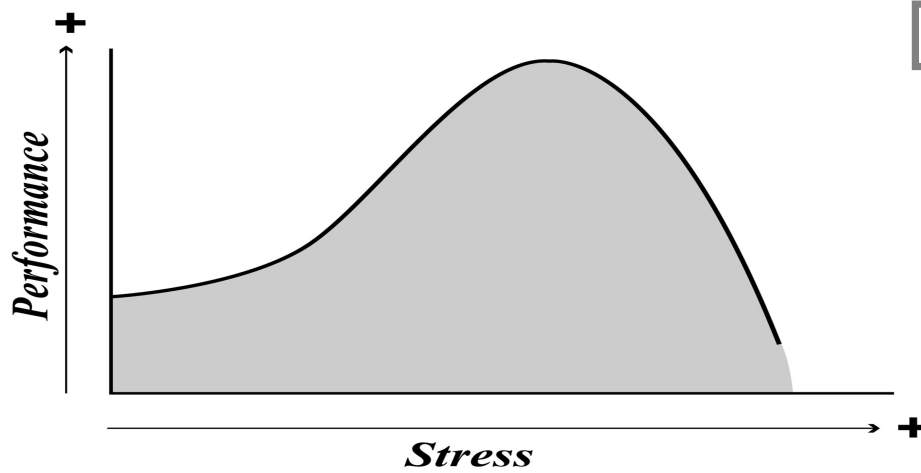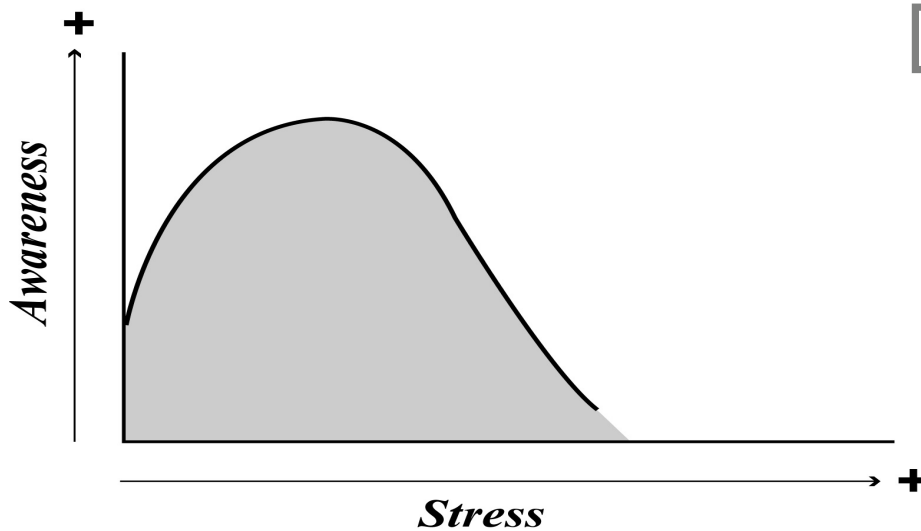
Key Teaching Points

Some stress is good. Performance (graphic on slide 3-18) and awareness (graphic on slide 3-19) improve with moderate amount of stress; however, performance and awareness both decrease rapidly with high amounts of stress.

Facilitated Discussion

What hazardous attitude can show up at the low end of the stress curve?

Complacency

What begins to affect your information gathering ability at the extreme high end of the stress curve?

Information overload or task saturation

Why does awareness drop off at the high end of the stress curve? What is going on there?

You begin to control your task loading by cutting off the flow of information into the SA cycle. This is sometimes referred to as "tunnel vision."

Key Teaching Points

There are two types of stress:

- Background or non-environmental stress that stems from what is happening outside the workplace—at home or in one's personal life.

- Duty or environmental stress that occurs due to task assignment or the work environment.

👥 Facilitated Discussion

What contributes to background stress?

- Family problems

- Financial problems

- Health problems

What are some causes of duty stress?

- Fatigue

- Supervisory or peer pressure

- Time pressure

- Inadequate information

- Poorly defined objectives

- High risk or severe consequences for failure

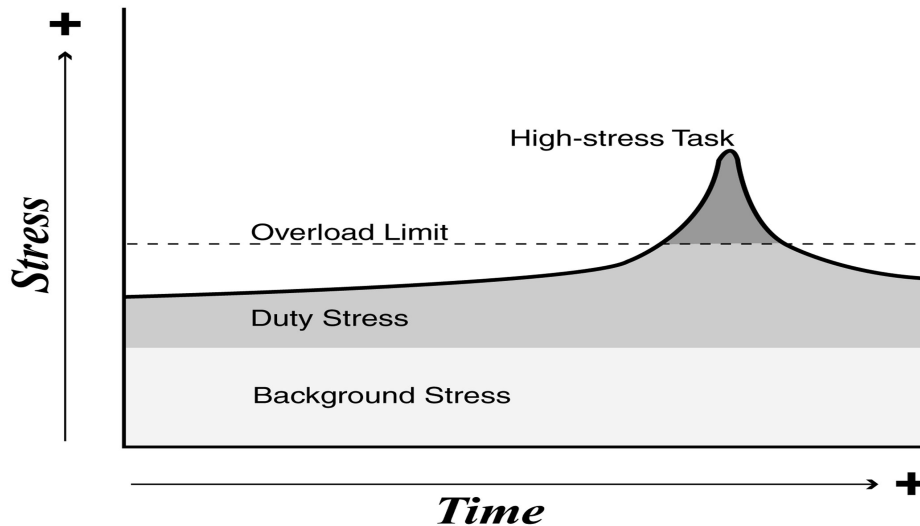- Conflict with other incident personnel

- Environmental conditions

📕 Optional Reading

Fatigue is one of the most prevalent duty stressors firefighters encounter. Inform students that an article titled "Fatigue" is included in Appendix A: Optional Readings.

E. Cumulative Stress

Stress is cumulative—background or non-environmental stress provides an on-going baseline level of stress. Stress overload can occur even with moderate amounts of duty stress if the level of background stress is high.

Key Teaching Points

There are many things that cause stress on the job. Some are within your control; most are not.

The first step toward developing controls to manage stress is to **know the causes of stress**.

The second step is to **know how you react under stress**. You must learn how to deal with your specific stress reaction tendencies.

As a firefighter, it is certain you will encounter stress. It is important that you plan for it. One method to do this is to **pre-identify situations** where you know the stress levels will be high so you can be prepared when encountering those situations.

⇄ **Exercise: Anticipating Stressful Situations**

Purpose: To identify situations that may be the potential causes of stress. This is an important aspect of planning for stress.

Method: Divide class into small groups. Have the groups 1) identify the most stressful operations or situations of their jobs then 2) consider what they can do to prepare for these situations.

Allow 5 minutes for the groups to work together.

Have the groups report their responses to the entire class.

F. Stress Reactions

Key Teaching Points

Everyone reacts to stress differently. These reactions are the root cause of the errors that impact communication and situation awareness. There are physical, mental, and behavioral reactions. Knowing your individual stress reactions is the second step toward being able to operate effectively under stress.

Facilitated Discussion

What are some examples of stress reactions?

Physical

- Heart rate increase
- Respiration rate increase
- Profuse sweating
- Muscle tremors or twitches
- Dehydration
- Nausea

Mental

- Disordered/confused thinking
- Loss of orientation to time and place
- Difficulty in accessing long term memory
- Changing your beliefs to match your actions
- Transformation of detail or expectation error (seeing what you expect or want to see, instead of what is actually happening)
- Tunnel vision (decreased awareness)

Behavioral

- Irritability or emotional outbursts
- Nervousness or erratic movements
- Change in usual communication patterns (excessive use of humor or excessive talking or becoming non-communicative)
- Regression or action tunneling (reverting to minor lower level tasks or freezing up)
- Panic

Record responses from the discussion on a flip chart or whiteboard.

Facilitated Discussion—continued next slide

What might happen to someone's situation awareness if they have a stress reaction of tunnel vision?

Information gathering is reduced because the individual will not be aware of obvious information sources around them. Situation awareness suffers because very little new information is being gathered.

Stress can disorder the thinking process, which is another common stress reaction. Generally speaking, it is easier to become distracted from your primary task if you are under stress? Why?

Stress reduces the ability to identify and focus on a priority task because every task seems to be important at the same time.

Facilitated Discussion—continued next slide

What is the danger when someone has a stress reaction of regression, also called action tunneling?

The individual will become completely engaged in doing a minor task or duty at the expense of their primary task or more important duty.

What kind of effect could the loss of orientation to time have on an individual's information gathering effort?

An unrealistic feeling of time pressure may cause an individual to suspend all information gathering efforts and make an unnecessary and uninformed snap decision. While an unrealistic lack of urgency may cause an individual to seek too much information and miss a critical decision point.

Share a story that depicts your personal stress reactions.

Note to the instructor:

Remember that many people are extremely uncomfortable when discussing with anything that might be perceived as a weakness or a shortcoming.

It's important to lead them through this process by your own example.

⮂ **Self-Study Exercise: Stress Reaction Awareness [in Student Workbook]**

Purpose: To provide an opportunity for students to recognize the early signs of their personal stress reactions.

Method: Encourage students to take time after the course to complete this exercise on their own. This is another self assessment opportunity that can help students learn and improve their own performance.

Have students locate "Human Factors Barriers to Situation Awareness and Decision-Making" in the front white pages of the *Incident Response Pocket Guide.*

Review Unit 3 Objectives.

Unit 4:   Decision Making

Suggested Time: 60 minutes

Training Aids: PowerPoint projection setup

Television with DVD player

Dry erase board and markers or flipchart and markers

Objectives: 1.   Describe the process of preplanning and its role in decision making.

2.   Describe the situation awareness self-check tool and its role in decision making.

3.   Agree that firefighters have a responsibility to minimize risk.
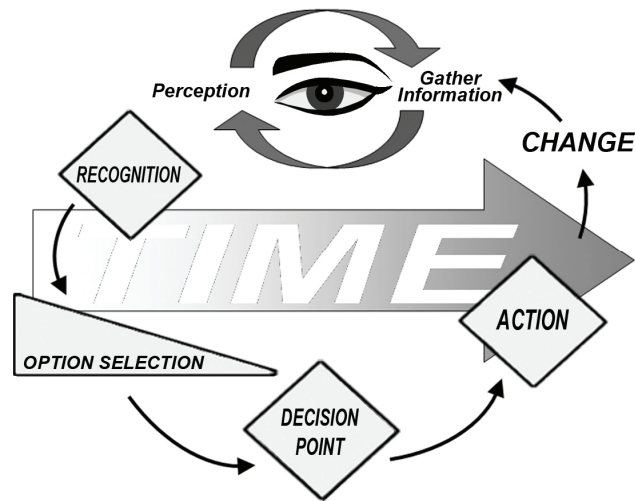

Segment 7: "The Decision Cycle"

17 Minutes

I.   Preplanning and Decision Making

Note to the instructor:

The graphic in the PowerPoint is animated so the Decision Cycle appears component by component to support a discussion of each component.

4-1, Unit Title

4-2, Objectives

4-3, Video

4-4, Section I

The Decision Cycle

Key Teaching Points

- Situation awareness—develop the most accurate picture of reality.

- Recognition—focus on what is important and filter out what is unimportant.

- Option Selection—weigh risks and opportunities and select course of action. The narrowing wedge reflects a narrowing of options due to time compression.

- Decision Point—initiate a course of action.

- Action—make sure the course of action is carried out and assess the changes resulting from those actions in order to update situation awareness.

- Time—The whole cycle runs on a backdrop of time. As time elapses, decision space decreases.

As the video narrator pointed out, we all can make a decision, and we all go through the same basic process to make decisions. Our ability to make good decisions in dynamic, high-risk situations depends on the quality of our information (situation awareness) and our experience level.

One of the most significant reasons to understand the decision making process is so that you can enhance your own experience level more effectively.

As you gain experience you are probably going to be put in more complex decision making roles. It is important to develop a habit of doing some type of preplanning before every assignment, regardless of whether the assignment is big, such as directing a firing operation for an entire Division, or whether the assignment is small, such as falling a snag. By doing preplanning, you develop a framework to organize what you learn from the things you observe and decisions you make.

 Exercise: Preplanning

Purpose: To develop strategies for implementation of preplanning activities.

Method: Divide the class into small groups and have the groups answer the questions below. If pressed for time, assign a different question to each group.

Allow 5 minutes for the groups to work together, groups then report their responses back to entire class.

Using a checklist is a common way to conduct preplanning activities. What are some of the preplanning checklists that are available to us?

Possible responses: Risk Management Process, Watch Out Situations, LCES, Downhill Line Construction Checklist, Fireline Handbook Job Descriptions, etc.)

> **4-5, Exercise**

⇄ **Exercise: Preplanning—continued**

The video narrator mentioned how you could set up recognition trip wires during the preplanning process. What are trip wires or trigger points?

Possible responses: pre-identified indicators of potential problems or changes that signal for a decision to alter the current course of action.

Like any other skill, preplanning can be learned. What are some techniques that would allow all crewmembers to get involved and begin to practice the preplanning process?

Possible responses: asking for feedback during crew briefings; doing "what-if" tactical decision games during slow shifts; using the AAR to evaluate the quality of the preplanning done for each operation; and so on.

📖 **Optional Reading**

Inform students that an article entitled "RPD on the Fireground—How to Avoid the Blank Screen Syndrome" is included in Appendix A: Optional Readings.

> **4-6, Reading**

II.   **Risk Management Process**

Key Teaching Points

The Risk Management Process as a decision tool that can be used to assist in the preplanning stage of decision making.

- The Risk Management Process is a job aid that is designed to help you ask the right questions so that the most important factors in your work environment are considered in order to minimize risk.

- Have students locate the Risk Management Process in the green pages of the *Incident Response Pocket Guide.*

- The five steps of this process support the Decision Cycle that was presented in the video.

Facilitated Discussion

Why should firefighters be concerned about managing risk?

Firefighting is a high risk work environment. All fire assignments will involve hazards and associated risk.

Can you know all the hazards you face in a given situation?

No one can know all the factors involved in dynamic situations such as a wildland fire.

> **Facilitated Discussion—continued**
>
> *Are all hazards of equal importance?*
>
> No, various hazards will pose different levels of risk. Time pressure is always present on a fire and we have limited time and resources for controlling hazards. All known serious hazards must be addressed in order to reduce the overall potential for errors and accidents. This is the purpose of risk management.

Key Teaching Points

Step 1 Situation Awareness

Situation awareness—know what is going on around you.

- Make a decision to stay aware of your situation and continue to do it!

- Establish an ongoing two-way dialog between you and your coworkers about their perception of the situation.

This step obviously correlates to "Situation Awareness" in the Decision Cycle. When you enter a new situation, your previous knowledge and attitudes combine with new information to build your perception of the new situation.

Remember that perceptions and reality are not the same thing, so work to make sure your perception is as close to reality as possible.

Good situation awareness is the basis for good decision making. Good situation awareness allows you to recognize opportunity as well as danger, so that you can use aggressive tactics while following the fire safety guidelines.

| 4-9, Key Points |

Studies of firefighter entrapments have shown that over-focusing on the task at hand is a problem in critical situations.

Facilitated Discussion

What are some techniques you can use to maintain situation awareness?

- Use checklists.

- Establish and confirm communication links.

- Gather information from various sources.

- Continuously scout or observe for visual cues that indicate hazards or opportunities.

- Pay attention to progress toward tactical objectives.

- Pay attention to time and location changes.

Key Teaching Points

Step 2 Hazard Assessment

Hazard Assessment—identify the hazards in your work environment.

This step supports "Recognition" in the Decision Cycle.

On any assignment you will encounter a number of hazards and there will always be a different mix of these hazards. This means you must filter out unimportant information and focus on the important factors in your work environment.

You will need to assess the hazards in order to determine the degree of risk (consequence or effect) they pose. For example a poison oak patch nearby has a low degree of risk while a spot fire in dry grass on a slope below you has a high degree of risk.

Assess potential hazards by doing the following:

- Use the Look Up/Down/Around indicators to estimate potential fire behavior hazards.

- Use the Watch Outs to identify high-risk tactical hazards.

- Identify other work environmental hazards that may exist.

 Facilitated Discussion

Specifically, what do we mean by higher risk tactics?

These are specific tactical situations identified in the Watch Outs:

- Downhill or indirect line construction

- Mid-slope or underslung line construction

- Frontal assault

- No anchor point

- Night operations

- Difficult travel or access

4-12, Discussion

Key Teaching Points

Step 3 Hazard Control

Determine the best way to minimize or control the risk from the hazards you will encounter while getting the job done.

This step supports "Option Selection" in the decision cycle.

Every firefighter has the responsibility to minimize the risk of known fire hazards by doing the following:

- Establish an anchor point before beginning operations on the fireline.

- Establish an L.C.E.S. system before beginning operations on the fireline.

- Establish any other hazard controls that may be necessary.

Facilitated Discussion

Consider any of the Watch Outs just identified. What additional controls besides an anchor point and LCES might be required for one of these?

Example for downhill line construction:

- Use Downhill Line Construction Checklist.

- Provide continuous air support.

- Consider a better time of day for the operation.

Key Teaching Points

Step 4 Decision Point

Decision Point—the "Go, No-Go" point for an individual making a tactical decision involving some degree of risk. This step obviously correlates to "Decision Point" in the Decision Cycle and serves as a last check before you implement your course of action.

Go / No-Go Check

A "no" answer to any of the following questions should cause you to reassess the situation and your options before proceeding. A "yes" answer to all three questions indicates a safe and effective action can be initiated.

- Are controls in place for identified hazards?

- Are selected tactics based on the expected fire behavior?

- Have instructions been given and understood?

> **Facilitated Discussion**
>
> *Is there an accepted method for individuals to communicate to others that they are not comfortable with the degree of risk involved in an assignment that they have been given?*
>
> Reaching consensus on degree of risk can be difficult. Inexperienced firefighters may feel threatened in situations where experienced firefighters know that escape time and safety zones are adequate for the situation.
>
> - Have students locate the section "How to Properly Refuse Risk" in the *Incident Response Pocket Guide.* Consider asking someone to read it out loud.

| 4-15, Key Points |

| 4-16, Discussion |

Facilitated Discussion—continued

The following are examples of discussion points to use when you feel that there is an unnecessary level of risk involved in a given assignment:

- Expected fire behavior based on time of day, predicted relative humidity, alignment of topography features, and predicted winds. Discuss fire behavior in terms of flame length, rate of spread, and spot fire frequency.

- Components of LCES that are not adequate, especially escape times and safety zone sizes that do not address potential worst case fire behavior.

- High risk tactics and other hazards in the work environment that have not been mitigated with appropriate hazard controls.

- Provide alternative suggestions for getting the job done.

Key Teaching Points

<div style="border:1px solid">4-17, Key Points</div>

Step 5 Evaluate

Evaluate—assess changes in your situation. This step completes the Decision Cycle so that you keep your situation awareness current at all times.

Facilitated Discussion

Stress reactions and hazardous attitudes adversely affect the decision making process because they degrade your situation awareness.

Use these questions from the Risk Management Process as a situation awareness self-check tool. Discuss how an individual should be able to respond to those questions:

Do you have a low experience level with the local factors?

You should be able to answer that your training, field experience; and preplanning efforts are adequate for you to complete your assignment.

Are you distracted from the primary task?

You should be able to answer that your attention is not being diverted by other problems that compromise your ability to gather critical information about your work environment.

Facilitated Discussion—continued

Is fatigue, stress, or a hazardous attitude affecting your performance or someone else's performance?

You should be able to answer that these types of barriers have been controlled so that they will not significantly impact your operations:

- extremely low or high stress level

- hazardous attitudes

- confusion or unresolved discrepancy

- lack of communication

- failure to meet planned targets

- degraded operating conditions

- group-think mindset

Point out that the section "Human Factors Barriers to Situation Awareness and Decision-Making" in the IRPG, which students previously referenced, mirrors this discussion.

Review Unit 4 Objectives.   4-19, Objectives

Unit 5:   Team Cohesion

Suggested Time: 45 minutes

Training Aids: PowerPoint projection setup

Dry erase board and markers or flipchart and markers

Objectives: 1.   Describe the relationship between teamwork and the human performance concepts discussed in the previous lessons.

2.   Agree that firefighters have a responsibility to work as a member of a team.

I.   Teamwork

Key Teaching Points

A team is more than individuals working in parallel worlds. Teams derive synergy—defined as the whole being more than a sum of the parts—from **interactions among team members that strengthen team accomplishments** as a whole.

Teams have an intrinsic need for the dynamic exchange of ideas and the voicing of diverse viewpoints to build good situation awareness and develop the best courses of action. In the best teams, **all team members bring something different to the equation**, and the team as a whole relies on the very different contributions that each team member makes.

As long as these diverse points of view focus predominately on achieving team results, instead of individual needs and desires, they build team synergy and result in the best solutions. A workforce with a variety of backgrounds represents **an opportunity to build teamwork and synergy**.

II.   Skills for Team Integration

Key Teaching Points

Early in the course we talked about improving individual skills in order to contribute to our teams and crews to the best of our ability. Nearly all fire assignments require that we function in a team environment.

Whether you are on a two-person initial attack module or a member of a 20-person handcrew or part of an Incident Management Team, your duty requires that you participate in building successful teams wherever you work.

Teams are made up primarily of followers, and all leaders begin as followers. The role of follower is not a passive one; followers need to commit to the team's mission as well as work hard to fulfill their assigned role.

Good teamwork skills are the foundation of good leadership skills**.** As you gain experience and your qualifications increase, you may take on more responsibility and step into leadership roles. However, before you can be an effective team leader, you must first understand how to be an effective team member and a valuable follower.

III.   Guidelines for Followers

As a follower, you have several personal responsibilities to the team:

- Develop your communication skills.

    - Redeem the Five Communication Responsibilities.

- Commit yourself to team results.

    - Base your actions on the mission and the best interests of the team.

- Be accountable for your actions.

    - When you make mistakes, act quickly and honestly to learn from them and move on.

- Become technically proficient.

    - Learn your job, develop a work ethic, and observe your environment.

Note to the instructor:

Consider having two students (or a student and an instructor) role-play some of the Five Communication Responsibilities. Point out the positive techniques used during the exchange. Create your own simple scenarios or use one from the Tactical Decision Games Library at: http://www.fireleadership.gov/

Note to the instructor:

Link guidelines to the human factors concepts presented in the course.

Example: Being technically proficient and observing your environment links to situation awareness.

⇄ **Exercise: Followers' Top 10 Team Contributions**

5-6, Exercise

Purpose: To identify follower behaviors that contribute to successful teams.

Method: Students first work individually on this exercise. Each student identifies three specific behaviors rooted in human factors concepts that will enable them, as followers, to make valuable contributions to the team.

Emphasize that each student should select behaviors that he or she is willing to practice routinely on their teams. The intent is that students commit to the behaviors that they list.

Allow 5 to 10 minutes for the students to formulate their responses then solicit a sampling of the responses.

Write the behaviors on a flipchart or whiteboard and tally duplicate responses. Build the composite list and identify follower's top 10 team contributions identified for this class.

⇄ **Exercise: Followers' Top 10 Team Contributions—continued**

Here are some example behaviors linked to each of the follower guidelines:

Developing your communication skills

Example behaviors: Restate your assignment and confirm messages that are sent to you; identify hazards that others may not have noticed; contribute during the AAR.

Commit yourself to team results

Example behaviors: Volunteer for duties that may be undesirable but important to the mission; look out for the well-being of other team members; help new team members learn the ropes.

Be accountable for your actions

Example behaviors: If you are uncertain about a task, ask for guidance; own up to errors as soon as possible.

Become technically proficient

Example behaviors: Observe your environment; seek out learning opportunities; don't let your boss outwork you.

Review Unit 5 Objectives.

5-7, Objectives

[image: two figures facing each other] **Facilitated Discussion**

Note to the instructor:

Take this opportunity to close out the course on a positive note. Use your own real-life examples of challenges you faced as a follower and how they affected you. (Bad supervisor; ethical dilemma in a situation that you did not control; didn't know what you were doing, but too proud to ask for help; and so on.) Facilitate discussion and relate it to the current challenges your audience faces.

Examples:

Become technically proficient.

As a sawyer, I learned that keeping my saw in top running condition was critical to my performance and overall team performance. A dull chain made my work harder and slowed team progress, but for a long time I didn't know how to sharpen it right and was afraid to ask.

Observe your environment.

I was mopping up under a snag when the top fell out. I was relying on my supervisor to look out for me and had stopped observing for myself. The results were almost fatal.

5-8, Close Out