

Crew Boss (Single Resource) S-230



NFES 2811

Student Workbook
NOVEMBER 2004



CERTIFICATION STATEMENT


on behalf of the

NATIONAL WILDFIRE COORDINATING GROUP

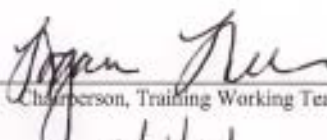
The following training material attains the standards prescribed for courses developed under the interagency curriculum established and coordinated by the National Wildfire Coordinating Group. The instruction is certified for interagency use and is known as:

Crew Boss (Single Resource), S-230
Certified at Level I

This product is part of an established NWCWG curriculum. It meets the COURSE DEVELOPMENT AND FORMAT STANDARDS – Fifth Edition, 2001 and has received a technical review and a professional edit.



Member NWCWG and Training Working Team Liaison
Date 11/11/04



Chairperson, Training Working Team
Date 11/8/04

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Additional copies of this publication may be ordered from National Interagency Fire Center,
ATTN: Great Basin Cache Supply Office, 3833 South Development Avenue, Boise, Idaho 83705.
Order NFES 2811.

PREFACE

Crew Boss (Single Resource), S-230 has been developed by an interagency development group with guidance from the National Interagency Fire Center (NIFC), Fire Training under the authority of the National Wildfire Coordinating Group (NWCG). The development group consists of the following representatives:

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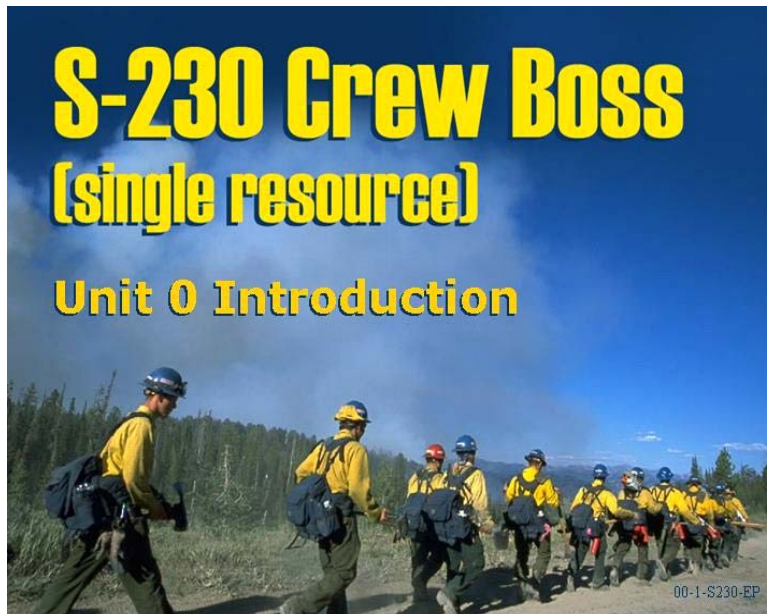
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Crew Boss (Single Resource), S-230



COURSE OBJECTIVES:

- Describe Crew Boss responsibilities prior to and during mobilization, on the incident, and during demobilization.
- Identify the hazards and risks on various incidents and describe how to mitigate them.
- Describe tactics that are appropriate to various wildland fire situations and implement them through the chain of command.



National Wildfire Coordinating Group



Mission Statement

The purpose of NWCWG is to coordinate programs of the participating wildfire management agencies to avoid wasteful duplication and to provide a means of constructively working together. The goal is to provide more effective execution of each agency's fire management program. The group provides a formalized system to agree upon standards of training, equipment, qualifications, and other operational functions.

E-mail comments or suggestions pertaining to this or any NWCWG course to: nwcg_standards@nifc.blm.gov

NWCWG Website: <http://www.nwcg.gov/>



I. INTRODUCTION OF THE COURSE
COORDINATOR AND INSTRUCTORS

NOTES

II. INTRODUCTION OF THE STUDENTS

Please present the following:

- Name
- Job title and normal duties.
- Where you work (agency, station, etc.).
- Incident command system (ICS) qualifications and most recent operations experience on an incident.

III. SCHEDULE OF EVENTS

A. Course Agenda

B. Sign-in sheet

C. Housekeeping

- Breaks (coffee, tea, soda, candy/vending machines, and punctuality).
- Message and telephone location.
- Cell phone policy.
- Classroom arrangement (working in groups).
- Facilities
- Other concerns.

NOTES

D. Course Prerequisites

E. Student Course Evaluations

Please complete a unit evaluation at the end of each day. A final overall course evaluation will be completed on the last day of class.

IV. COURSE PROCESS

This course will be presented through a series of short lectures, videotape, electronic presentation slides, and exercises.

This course is designed to emphasize the primary skills required of a Crew Boss (Single Resource). It is not intended to cover every detail of the position. It is required training for all single resource positions.

V. MEASURING PERFORMANCE FOR THIS COURSE

- There are unit quizzes, exercises, and a final examination for this course.
- All unit quizzes will be reviewed after completion.
- Students must achieve 70% or higher on the final examination.

VI. EXPECTATIONS

NOTES

A. Student Expectations Exercise

Review the questions listed on the electronic presentation (and below), then list your expectations for the class on a flip chart. Each group is to select a spokesperson to report their list to the class.

1. Why do you want to become a Crew Boss (Single Resource)?
2. What do you expect to gain from this course?

B. Instructor Expectations

The student will:

- Have an interest in becoming a Crew Boss (Single Resource).
- Have completed their pre-course work.
- Exhibit mutual cooperation with the group.
- Be open minded to accomplishments during the course.
- Use what is presented in the course to perform as a Crew Boss (Single Resource).
- Participate actively in all of the training exercises presented in the course.
- Return to class at stated times.

VII. CREW BOSS TRAITS



Exercise:

Within groups, list good and bad traits of a Crew Boss on a flip chart.

VIII. COURSE OVERVIEW

A. Position Description of a Single Resource Boss

Read the position description of a single resource boss in the Fireline Handbook (FHB). The FHB is the foundation for the Position Task Book (PTB).

To be considered for qualification, all items in the PTB must be initiated and signed off by your immediate supervisor.

B. Review Pre-Course Work

1. Discuss pre-course questionnaire.
2. The pre-course questionnaire will be collected.



OBJECTIVES:

1. Describe the values and principles of operational leadership.
2. Identify the qualities of good leadership.

I. LEADERSHIP CONCEPTS

NOTES

Crew Boss is the first position in the Incident Command System (ICS) where you need to make independent decisions based on your perception and knowledge of the situation.

The decisions you make as a Crew Boss can have major impacts on both the safety and effectiveness of your crew.

The most essential element of successful wildland firefighting is competent and confident leadership.

What does it mean to be a competent, confident leader?

Competent leaders are FULLY QUALIFIED and have sufficient skills to deal with the complexities of their position.

Confident leaders are EXPERIENCED in decision-making, and have trust in their ability to make the correct choices for the situation.

Competence and Confidence will both come through TRAINING and EXPERIENCE.

As a leader develops in competence, confidence will follow.

Leadership means providing purpose, direction, and motivation for wildland firefighters working to accomplish difficult tasks under dangerous and stressful circumstances.

In confusing and uncertain situations, a good operational leader will:

NOTES

A. Take Charge of Assigned Resources.

Establish chain of command and ensure subordinates are clear about who is in charge.

B. Motivate Firefighters with a “CAN DO SAFELY” Attitude.

Develop trust in your firefighters by ensuring their safety and well-being. Follow and enforce safety guidelines, share information, and update when changes occur.

C. Demonstrate Initiative by Taking Action in the Absence of Orders.

1. Conduct thorough size up of the situation before engaging in operations.
2. Mitigate safety concerns; build a plan with contingency actions and trigger points.

D. Communicate by Giving Specific Instructions and Asking for Feedback.

Give clear instructions. Keep communication lines open along the chain of command.

E. Supervise at the Scene of Action.

Be on scene during important events, potentially hazardous situations, and operations.



II. QUALITIES OF GOOD LEADERSHIP

A. A Good Leader Must be Proficient, both Technically and as a Leader.

1. Take charge when in charge.

Maintain situation awareness and remain focused on the big picture.

2. Adhere to professional standard operating procedures.

Examples: LCES, 10+18, agency rules and regulations.

3. Develop a plan to accomplish given objectives.

Plan to meet objectives in given time frames and to expected standards; have contingencies established in case the situation changes.

B. A Good Leader Must Make Sound and Timely Decisions.

NOTES

1. Maintain situation awareness in order to anticipate needed actions.

Review the risk management process in the Incident Response Pocket Guide (IRPG).

2. Develop contingencies and consider consequences; have a backup plan in case your primary plan fails. Examples:

- Can you hold your burn out operation if the wind increases or changes directions?
- Where is your next best place to establish a control line?
- Have you scouted your contingency line or just looked at the map?
- Are your logistical needs going to be met on time?
- Can your resources get through the shift without additional support?
- Should you make arrangements to get supplies yourself?
- Can you make ground delivery work if the air show is shut down or re-prioritized?

NOTES

3. Improvise within the leader's intent to handle a rapidly changing environment.
 - Make tactical changes as needed to handle the immediate needs of the situation.
 - Communicate any changes to the plan immediately.
 - Use the chain of command.
 - Stay within the scope of your responsibility.
 - Work with adjoining forces and supervisors to ensure LCES is not compromised.
 - Be ready to explain your actions and take responsibility for them.

“Base all actions on current and expected behavior of the fire.”

C. A Good Leader Must Ensure the Task is Understood, Supervised and Accomplished.

1. Issue clear instructions.
 - Effective communication is the key to good leadership.
 - Ask clarifying questions and listen to feedback. Give clear instructions and be sure they are understood.

2. Observe and assess actions in progress without micro-managing.
 - “More than one way to skin a cat.”
 - Allow some latitude in task performance unless safety is compromised.
 3. Use positive feedback to modify duties, tasks, and assignments when appropriate.
 - Practice good communication skills.
 - Use open-ended questions to help individuals come to the desired result.
- D. A Good Leader Must Develop Subordinates for the Future.
1. Clearly state expectations.
 - State your expectations clearly and often to eliminate misunderstandings or confusion about priorities and performance standards.
 - Communicate standards of performance, behavior, and position responsibilities to your firefighters before you are on the fireline.

NOTES

- During training, briefings, and After Action Reviews (AAR), the performance standards should be revisited and adjusted as needed to increase the effectiveness of your team.
2. Delegate tasks that you are not required to do personally.
 - Give your subordinates increasingly complex tasks/assignments as they progress in developing leadership skills and abilities.
 - You can delegate authority but not responsibility.
 3. Consider individual skill levels and developmental needs when assigning tasks.
 - Considering the complexity and potential problems related to a specific task (as well as the skills needed to perform the task), will allow you to assign the correct team member to the task.
 - Take advantage of training opportunities as they arise.



E. A Good Leader Must Know Their Subordinates and Look Out for Their Well-Being.

1. Put the safety of your subordinates above all other objectives.

- It is the responsibility of leaders to ensure that those under their control have a safe work environment. You cannot compromise on following LCES, the 10 and 18, or any other safety guidelines that pertain to the operation.
- You must mitigate or eliminate hazards as they are discovered.

“Fight fire aggressively, having provided for safety first.”

2. Take care of your subordinate’s needs.

- Ensure your firefighters have their logistical needs met before critical shortages occur.

NOTES

- Order food, water, and supplies well in advance of the need.
 - Observe work/rest guidelines and provide for time off when needed for family or other priority commitments.
3. Resolve conflicts between individuals on the team.
- When you place individuals in stressful situations for extended periods of time, conflicts are inevitable. The severity of the conflict is often elevated or decreased by the actions a supervisor takes.
 - Ensure team debriefings are conducted on a regular basis. Debriefings, if done in an open, professional and timely manner, can allow problems to surface and be dealt with before conflicts occur.
 - If there are severe or recurring personal issues between team members, you may need to obtain additional help from your supervisor or another mediator.

F. A Good Leader Must Keep Their Subordinates Informed.

NOTES

1. Provide accurate and timely briefings.

Obtain current and accurate information; communicate the information to your subordinates.

2. Give the reason (intent) for assignments and tasks.

Explain how your tactics mesh with the overall incident strategy that is in place or being developed.

3. Make yourself available to answer questions at appropriate times.

- Make conducting AARs part of your standard operating procedures. AARs allow individuals a chance to reflect on the events of the day or assignment soon after completion, while events are still fresh in their memory.
- Allow time to address individual concerns or issues in private after group debriefings.

“Maintain prompt communication with your forces, your supervisor, and adjoining forces.”

NOTES

G. A Good Leader Must Build the Team.

1. Conduct frequent debriefings with the team to identify lessons learned.

Review the AAR process in the IRPG.

2. Recognize individual and team accomplishments and reward them appropriately.

Recognize your team members through formal and non-formal means (extra effort awards, monetary and nonmonetary awards, promotions).

3. Apply disciplinary measures equally.

Follow agency guidelines for disciplinary actions. If you don't know the rules, get help from your human resource specialists or your supervisor.

H. A Good Leader Must Employ Their Subordinates in Accordance with Their Capabilities.

1. Observe human behavior as well as fire behavior.

Become a student of human behavior; attend leadership and management training courses, read books, etc.

2. Provide early warning for subordinates of tasks they will be responsible for.
 - Communicate standards of performance, behavior, and position responsibilities to your firefighters before you are on the fireline.
 - During training, briefings, and AARs, the performance standards should be revisited and adjusted as needed to increase the effectiveness of your team.

3. Consider team experience, conditioning, fatigue, and injury limitations when accepting assignments.
 - Know the condition and capabilities of your firefighters.
 - Ask your personnel about injuries, fatigue, mental, and physical condition during briefings and AARs.
 - Personal problems and conflicts can also affect the performance of the team.
 - Get to know your subordinates by taking the time to talk to them individually.



- I. A Good Leader Must Know Him/Herself and Seek Improvement.
 1. Know the strengths and weaknesses in your character and skill level.
 - Self-evaluation is difficult; however, it is essential.
 - Admit when you are in over your head.
 - When you know a better/safer way of doing something, speak up.
 2. Ask questions of peers and superiors.
 - Don't be afraid to admit that you don't know everything.
 - Find someone you trust and respect and let them mentor you.

3. Actively listen to feedback from subordinates.

Practice active listening and seek feedback from those you are leading. You will be surprised what you will discover about them and yourself.

J. A Good Leader Must Seek Responsibility and Accept Responsibility for His/Her Actions.

1. Accept full responsibility for and correct poor team performance.
 - You cannot delegate your responsibility, only your authority.
 - Poor performance must be corrected immediately, especially in issues regarding safety.
2. Credit subordinates for good performance.
 - Praise in public. It's not about you.
 - Award good performance as appropriate.
3. Keep your superiors informed of your actions.
 - Provide timely updates on your crew's progress throughout the operational period.
 - Advise superiors if you are unable to complete a task within the given time frame – or if you will finish ahead of schedule.

NOTES

K. A Good Leader Must Set the Example.

1. Share the hazards and hardships with your subordinates.
 - You must be on the scene of important events. Remain mobile so that you can respond to priority areas of your area of responsibility.
 - Eat the same food and work/rest under the same conditions as your firefighters.
2. Don't show discouragement when facing setbacks.
 - If you allow discouragement to dominate your thoughts you may lose perspective on important safety and tactical considerations that affect your team's performance.
 - It can be difficult to control your emotions when things are not going as planned. The main point is to not allow your feelings/emotions to cloud your judgment.
 - Team trust is built when leadership can remain decisive and objective during stressful or discouraging situations.

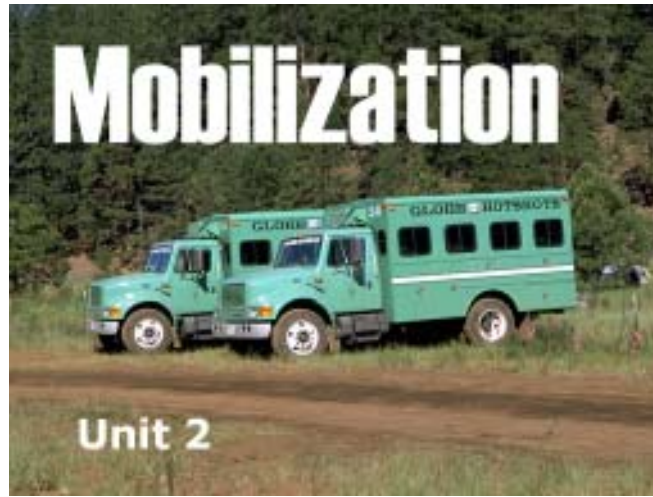
“Be Alert, Keep Calm, Think Clearly, Act Decisively.”

3. Choose the difficult right over the easy wrong.
 - The responsibilities of leadership require you to make difficult choices regarding right and wrong.
 - Establish a personal code of behavior that you will not compromise.

For additional information and resources for fireline leadership, refer to:

<http://www.fireleadership.gov>

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OBJECTIVES:

1. Identify the readiness and special equipment items that are required for the Crew Boss.
2. List eight pieces of information to request from dispatch prior to departure.
3. Identify five key elements of information needed to complete a Passenger/Cargo manifest.
4. Explain the importance of evaluating crew readiness and establishing crew organization.
5. Provide examples of appropriate travel procedures and conduct.

I. CREW BOSS KIT

NOTES

Kit will be assembled and prepared prior to receiving an assignment. Kit will contain critical items needed for functioning during the first 48 hours. Kit will be easily transportable and within agency weight limitation. Web gear or briefcase (not both) should not exceed 20 pounds.

Crew Boss Kit



- Proof of incident qualifications (Red Card)
- Position Task Book, NFES 2318
- Fireline Handbook, PMS 410-1, NFES 0065
- Incident Response Pocket Guide, NFES 1077
- National Interagency Mobilization Guide, NFES 2092
- Interagency Incident Business Management Handbook, NFES 2160
- Interagency Standards for Fire and Aviation Operations (Red Book)
- Radio frequency guide
- Agency directives

NOTES

Documentation Forms:

- ICS 214, Unit Log, NFES 1337
- ICS 226, Individual Performance Rating, NFES 2074
- SF-261, Crew Time Report, NFES 0891 and/or OF-288 Emergency Firefighter Time Report, NFES 0866
- SF-245, Manifest, Passenger/Cargo, NFES 1289
- Travel log
- Agency specific forms
- Accident forms

Miscellaneous Items (optional):

- Belt weather kit
- Handheld radio with extra batteries; cloning cable
- Compass and signal mirror
- Global Positioning System (GPS) unit
- Cell phone
- Phone list
- Phone/credit card
- Pocket calendar
- Pocket notepad
- Assorted pens, pencils, highlighters
- Maps and/or atlas
- Flagging
- Calculator
- Flashlight with extra batteries
- Alarm clock
- Camera
- Binoculars
- Watch
- Fiber tape

II. NOTIFICATION OF MOBILIZATION

NOTES

Upon receiving notification of mobilization from dispatch, a Crew Boss should request the following information:

- Incident/Project name
- Incident/Project order number
- Office reference number (cost code)
- Descriptive location/response area
- Legal location (township, range, section)
- Incident radio frequency (if available)
- Incident base/phone number
- Request number
- Reporting date/time and location
- Transportation arrangements/travel routes
- Special instructions

Retain a copy of the order form containing this information from dispatch for your personal incident experience record.

NOTES

The following information is needed from dispatch to fill out a Passenger/Cargo Manifest:

- Number of passengers
- Ordering unit
- Project name
- Project number
- Name of carrier
- Mode of transportation and identification number
- Pilot or driver
- Chief of party
- Report to
- If delayed, contact
- Departure – place and Estimated Time of Departure (ETD)
- Intermediate stops – place and ETD
- Destination – Estimated Time of Arrival (ETA) and place
- Passenger and/or cargo name
- Male or Female (M/F)
- Passenger weight
- Cargo weight
- Duty assignment, if applicable
- Home unit
- Signature of authorized representative
- Date

EXERCISE 2

Directions:

Complete the Passenger/Cargo Manifest form (on page 2.11) using the following information received from dispatch.

You are the Crew Boss for the Pecos River #1 crew (Type 2 crew), from New Mexico State Department of Lands located at Santa Fe, NM. Your crew's names and weights are:

Johnny Jones 243#, Fred Mertz 135#, Penny Crook 145#, Sally Rietz 135#, Tyrone Brown 165#, Richard Rodriguez 200#, Jose Villaneuve 167#, Tony Chin 140#, Roger Torez 135#, Mac Sanchez 243#, Susie Campbell 200#, Megan Christy 123#, Mike Yee 170#, Mica Goldstein 155#, Mohamed Smith 255#, Jon Johnson 176#, Toy Kim 110#, Yuk Yee 150#, Robert Stoprunning 167#.

You have two saw packs that weigh 50 pounds each. Each crew person has personal gear and web gear that weigh 55 pounds each. The fire you are going to is the Rocky Point fire on the New River Gorge NRA (NRP) managed by the National Park Service. You are flying into Dulles Airport on a NIFC contract jet and the pilot is Steve Smith. The crew is to report to Doug Wallner at New River Gorge.

STANDARD FORM 245 (6/77) Prescribed by USDA FSM 5716 USDI MP9400.518		PASSENGER AND CARGO MANIFEST			NO. OF PASSENGERS ON THIS PAGE ___	PAGE 1 OF _	
ORDERING UNIT		PROJECT NAME			PROJECT NO.		
NAME OF CARRIER		MODE OF TRANS & ID NO.			PILOT OR DRIVER		
CHIEF OF PARTY		REPORT TO:			IF DELAYED CONTACT		
DEPARTURE		INTERMEDIATE STOPS			DESTINATION		
PLACE	ETD	ETA	PLACE	ETD	ETA	PLACE	
PASSENGER AND/OR CARGO NAME		M/F	PASSENGER WEIGHT	CARGO WEIGHT	DUTY ASSIGNMENT IF APPLICABLE		HOME UNIT
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
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18.							
19.							
20.							
21.							
22.							
SIGNATURE OF AUTHORIZED REPRESENTATIVE					DATE		

CHIEF OF PARTY COPY

EXERCISE 3

At 2230 the dispatcher mobilizes a crew and calls the Crew Boss.

1. It is now 0600 the following morning and the last of the crew has just arrived. What should the Crew Boss do now?
2. Two crew members arrive in shorts and tennis shoes. They explain that their fire gear is in their red bags and they will change at the incident. What should the Crew Boss do?
3. What items should the Crew Boss include in a crew conduct briefing?

4. The crew has just arrived at the airport. What are the Crew Boss's responsibilities at this time?

5. A ramp manager informs the Crew Boss that his/her crew will be flying with three more crews and that his/her crew will be the first crew to load. What should the Crew Boss consider?

6. What items should the Crew Boss consider when loading and transporting people and equipment via ground transportation?

7. The crew has worked ten hours and is being released to go home. It is a five hour drive to their home unit and some crew members have an additional two hour drive to their duty station. What should the Crew Boss do?

UNIT 2 QUIZ

Circle the most correct answer.

1. If a rotation list at the local unit is in place and the Crew Boss is placed on call for an incident assignment, what should the Crew Boss do?
 - a. Prepare an appropriate list of dispatch office and dispatcher phone numbers.
 - b. Clear schedule to honor the commitment to a potential assignment.
 - c. Have transportation available to the dispatch center.
 - b. Keep dispatch informed of his or her location.
 - d. All of the above.

2. Miscellaneous optional items a Crew Boss may need include:
 - a. Compass
 - b. Belt Weather Kit
 - c. Signal Mirror
 - d. All of the above
 - e. None of the Above

3. Which item is most important when preparing a crew for a helicopter flight?
 - a. Crew manifest
 - b. Handheld radio
 - c. ICS-214, Unit Log
 - d. After Action Review (AAR)

4. When the crew is assembled at dispatch, the Crew Boss should:
 - a. Check-out PPE items to the crew members.
 - b. Check and load all tools on the bus.
 - c. Administer the work capacity test to anyone that needs it.
 - d. Get with dispatch and review specific items for the assignment.

5. Which item(s) is/are most important when evaluating crew members?
 - a. Red card qualifications
 - b. Individual physical condition (fatigue)
 - c. Work capacity test score
 - d. Job description at the home unit
 - e. a and b

6. If a Crew Boss is dispatched to a different geographic area and gets lost in transit, he or she should have which of the following?
 - a. Division supervisor's name
 - b. Dispatch telephone numbers
 - c. Map of the fire
 - d. Agency Administrator's name

7. Which piece of information received from dispatch upon mobilization is most important for a Crew Boss?
 - a. Type of incident
 - b. Aircraft name
 - c. Incident order number
 - d. Jurisdiction/Agency

8. Which items are most important for a Crew Boss when filling out a crew manifest?
 - a. Crew name, individual name, chief of party
 - b. Individual weights, cargo weight, demobilization destination
 - c. Aircraft type and number, pilot's name, date and time
 - d. a and b

12. A crew is released from the fire after a difficult 14-day assignment. It is an eight hour drive to their home unit. They will depart the fire at 1400 hours and arrive home by 2200 hours. Some crew members have an additional two hour drive to their duty station. What should the Crew Boss do?
(choose two answers)
- a. Drive straight home and request a motel at the home unit.
 - b. Drive to dispatch and stay the night.
 - c. Request to stay overnight at the incident.
 - d. Consider a short drive toward the home unit if it would increase quality sleep.

Crew Boss (Single Resource), S-230



OBJECTIVES:

1. Describe the intra-crew coordination considerations for the incident check-in process.
2. List five key pieces of information that should be gathered when receiving an assignment or briefing.
3. Describe the components of the Incident Action Plan (IAP) and how the components relate to the Crew Boss role in planning for safe and effective fire suppression activities.
4. Assess crew logistical needs based upon the operational period assignment.
5. List the essential items that must be covered during a crew briefing prior to assignment.

I. INTRA-CREW COORDINATION

NOTES

A. Why is it important to anticipate crew needs and coordinate activities prior to and during the incident check-in process?

B. How can a Crew Boss accomplish the necessary Crew Boss duties effectively?

C. What problems may surface if a Crew Boss doesn't prepare for, assign, and accomplish the necessary duties?

NOTES

D. What are the two types of briefings a Crew Boss will participate in?

1. Informal:

2. Formal:

On the majority of small crew and initial attack incidents, briefings will be informal. Document all briefings.

E. What important information should be gathered at an informal briefing?

How:

Small incidents - usually by the Incident Commander.

Large incidents - specific information pertaining to the Crew Boss assignment usually occurs after the operational period briefing and is given by the division supervisor.

- F. What important information should be gathered at a formal briefing?
-

How:

General information pertaining to the Crew Boss assignment given by the operations section chief.

Example: Daily morning operational briefing.

II. INCIDENT ACTION PLAN (IAP)

- A. What is a plan?

Ordered sequence of events to occur over a specified time period in order to accomplish specific objectives.

- B. What is an IAP?

A formal document normally developed by an Incident Management Team (IMT) that describes general control objectives. It reflects the overall incident strategy and specific action plans, which are to be implemented for the next operational period.

1. Operational period

The period of time scheduled for execution of a given set of tactical actions as specified in the IAP. Operational periods can be of various lengths, although usually not over 24 hours.

NOTES

2. Strategy

The general plan or direction selected to accomplish incident objectives.

3. Tactics

Deploying and directing resources on an incident to accomplish the objectives designated by strategy (“how the plan is accomplished”).

C. What types of incidents require an IAP?

Type 4/5: The incident is generally contained in the first burning period. Resources vary from a single module to several resources. These incidents have minimal complexity and **do not** require an IAP.

Type 3: Some or all of the command and general staff positions may be activated and/or an incident management team. The incident may be divided into divisions with multiple resources of various types. The incident will involve multiple operational periods and **may require** an IAP.

Type 1/2: These incidents require the mobilization of an incident management team. These incidents usually extend into multiple operational periods and can be of national significance. An IAP is **required** for these types of incidents.

1. Do all incidents utilize strategy?
 2. Do all incidents utilize tactics?
 3. Are all incidents managed within the time frame described as the operational period?
 4. Why don't all incidents utilize a written IAP?
- D. What are the parts of the IAP?
1. ICS 202, Incident Objectives
 - Developed by the IMT.
 - Used to communicate strategic decisions and guide tactical implementations.
 2. ICS 203, Organization Assignment List
 - Identifies names of people in primary overhead positions.
 - Valuable reference.
 3. Fire weather forecast

Summarizes weather influences and forecasts for the incident location.

NOTES

4. Fire behavior forecast
 - Discusses fire behavior past, present, and predicted.
 - Identifies areas of potential or special concern.
5. Safety message
 - Alerts personnel of general and specific hazards facing personnel assigned to the incident.
 - Not restricted to fireline conditions only.
 - ICS 215A, Incident Safety Analysis (LCES).
6. ICS 204, Assignment List
 - Identifies work location, supervisor, and assigned resources.
 - Assigns tasks, transportation, operational period start and finish.
 - References the special instructions or considerations for the assigned work area.

7. ICS 205, Incident Radio Communication Plan
 - Lists the radio frequency plan for the incident.
 - May identify special considerations for radio use.
8. ICS 206, Medical Plan
 - Gives procedures to follow if medical attention is needed.
 - May differentiate between minor medical (“medical transport” of injured individual) and major medical (“medevac”) procedures.
 - Should outline procedure for night shift medevac procedures, if applicable.
9. ICS 220, Air Operations Summary
 - Summarizes aircraft missions planned for the operational period.
 - Identifies aircraft assigned and available for use on the incident.

NOTES

10. Special instructions

- Tactical use of special equipment.
- Environmental considerations.
- Rehabilitation plan.
- Minimum Impact Suppression Tactics (MIST).

11. Human resource message, Equal Employment Opportunity (EEO)

Reinforces civil rights and equal employment opportunity concerns.

12. ICS 214, Unit Log

- Daily diary
 - Used to capture the main events during the operational period.
- A blank copy is usually included with the IAP.
- Submit copy to the planning unit, i.e., documentation unit leader (DOCL).

13. Maps

Includes an incident map, location of features, assigned work areas, and transportation routes.

EXERCISE 1

NOTE: The importance of filling out a ICS 214, Unit Log is to capture the main events during the operational period.

Use the following narrative to complete the ICS 214 on page 3.13.

You are the Crew Boss of the Pecos River #1 crew. The division supervisor (DIVS) wants you to keep a ICS 214.

The date is August 20, and it is now 0430. You are on your way to an operational period briefing for the Rocky Point fire. At the briefing you learn that your assignment is in Division D and the crew is going to cut and hold line. This division has four more crews, one strike team of engines, and one strike team of dozers assigned.

You get transportation and arrive at the drop point 3 at 0645. You walk to work, arrive on the work site at 0830, and your crew starts cutting fireline. At 1000, Division D calls and informs you that she wants a progress report at 1300. Everything is running smoothly; all five crews are working, leapfrogging and constructing line. The engine strike team is installing a hose lay along the fireline to support a firing operation that will begin at 1600.

You break your crew at 1200 for lunch and start up again at 1230. At 1255, one of your sawyers cuts his swamper on the arm. The swamper is bleeding profusely. The emergency medical technician (EMT) on the crew is able to slow down the bleeding while you contact the DIVS. She arranges for a medevac and the crews quickly cut a helispot. Your EMT and injured swamper arrive at the helispot as the medevac helicopter is landing. The injured swamper and EMT are airborne to the hospital at 1325.

At 1330 the DIVS calls for the progress report. You inform her that the work is progressing at the scheduled pace and there should not be a problem meeting the 1600 time frame for the firing operation.

At approximately 1350, you ask one of your crew members to take the weather observations. The readings are: wet bulb 62, dry bulb 95, RH 12%, wind SW at 11 miles per hour. At 1430, the fire intensity increases and the fire makes a major run at your indirect fireline. The fire easily crosses your line and continues on. All resources on the division regroup and start chasing the fire. Finally, at 1930, you and the rest of the division are able to pinch off the head and tie the slopover back into the main fire.

The night operational period personnel arrive at 2000 and you and your crew head back to the incident base on a school bus. At 2030, eight miles from base, the bus gets a flat tire. You call communications for assistance and they send a service vehicle. The mechanic arrives at 2145 and quickly repairs the tire. You arrive at the incident base at 2230. The kitchen is not open so the crew gets sack lunches while you complete time and accident forms. The squad bosses turn in tools and at 2330 you go to bed.

III. INCIDENT OBJECTIVES/WORK PLANNING
RELATIONSHIP

A. What are the most important components of the IAP?

- All are important for effective, coordinated, and safe incident management.

B. How do the incident objectives and tactical assignments relate to the Crew Boss role in planning for the work activities of the crew?

- Reflect the strategic parameters adopted by incident managers for the incident.
- Reinforce public and firefighter safety as priority #1.
- Will provide guidance for selecting the equipment and tactics that can be appropriately utilized by the crew.
- Will provide knowledge of the planning cycle and operational period and how it applies to the crew assignment.

IV. ASSESSING TACTICAL AND LOGISTICAL NEEDS

After a Crew Boss receives a briefing and an IAP, he/she needs to assess logistical needs.

EXERCISE 2

Based on your assigned crew's assignment, list the important preparations and information you will need to address, both prior to and during the assignment.

Develop a list of logistical concerns or needs that must be addressed to ensure the crew is able to function safely and effectively throughout the operational period.

Plumas Regulars (Division E):

Lassen Regulars (Division E):

Modoc #12 (Division B):

Six Rivers #4 (Division C):

Taos #7 (Group H):

Pike Regulars (Ruth Helibase):

V. CREW BRIEFING

The Crew Boss is responsible for gathering as much practical information as necessary before assignments begin. The Crew Boss is also equally responsible for ensuring all crew members are properly briefed.

How much information does the Crew Boss need to relay during the crew briefing?

- The Crew Boss does not need to relay everything, but must give the crew enough information to perform its assigned function safely and effectively.

EXERCISE 3

Scenario: You have been put in a situation where you have limited time to conduct a crew briefing. List the essential items to be covered in a briefing.

UNIT 3 QUIZ

1. A crew has just arrived at the incident base. What should the Crew Boss do now?
 - a. Hold a short briefing and delegate appropriate authority.
 - b. Tell them you are going to find out what's going on and that you'll find them later.
 - c. Designate certain crew members to help you obtain information and decide on a meeting time and place.
 - d. a and c
 - e. All of the above

2. En route to the Huck Finn fire, the Mark Twain Dispatch Center informs a Crew Boss to check in on Division A. What factors would the Crew Boss need to know at this time?
 - a. Radio frequency
 - b. The operations section chief's name
 - c. Location of the drop points
 - d. Specific travel directions
 - e. a and d

3. List five important questions that need to be answered when receiving a briefing or assignment.

4. Upon arrival at an incident, a Crew Boss is told to go to Division B and meet with the DIVS Smith on road No. 211 at the Beaver Dam. What should the Crew Boss do?
 - a. Get supplies and head for the dam.
 - b. Ask for a map and radio frequencies.
 - c. Request more information specific to the assignment.
 - d. a and b.

5. This morning's inversion will not allow the OSC1 to fly into camp for a briefing. The DIVS informs everyone in camp to go on the line and use yesterday's IAP. What should be the Crew Boss's primary concern?
 - a. Current situation status
 - b. Expected duration of assignment
 - c. Human resource message
 - d. Long range weather forecast

6. What components of the IAP are most important to the Crew Boss?
 - a. Organization assignment list and weather message.
 - b. Incident objectives, safety message and air operations plan.
 - c. Division assignment list and medical plan.
 - d. Communication plans and map.
 - e. All of the components of the IAP may be equally important.

7. Why should division assignment lists for other crews be of interest to a Crew Boss?
 - a. To see if work is fairly divided among crews.
 - b. To locate other crews from your own region.
 - c. To get radio frequencies and contact names.
 - d. To coordinate with adjoining forces.

8. What significance are the special instructions to the Crew Boss on the division assignment list?
 - a. Can help plan intra-crew assignments.
 - b. Give items for consideration in crew briefing.
 - c. Can help in tactical planning.
 - d. All of the above
 - e. a and c

9. After the morning briefing, you are informed that your assignment has changed. Instead of patrolling completed fireline in Division A, you will be assigned to Division B as part of a large firing operation. What is the first thing you will need to do?
- Meet with the DIVS of an adjoining division to discuss your new assignment.
 - Reassess your equipment needs and adjust accordingly.
 - Meet with your new DIVS for briefing.
 - All of the above.
10. While en route to DP5 on Division A for an assignment, the OSC1 calls a Crew Boss on the radio and requests the crew to divert to Division C, DP10. Prioritize the following actions the Crew Boss should take:
- Ask OSC1 if Division A is aware of this change.
 - Look up the radio frequency for Division C and make contact with the DIVS.
 - Pull out IAP map and figure out how to get to DP10.
 - Brief the crew.
- _____
 - _____
 - _____
 - _____
11. During the morning briefing, a Crew Boss learns the crew will burn out a large area of completed fireline. The crew has only one case of fuses. What should the Crew Boss do?
- Request a different assignment more suited to the crew's ability.
 - Take the fuses available and try to get re-supplied on the fireline.
 - Accept the assignment with the DIVS and obtain the appropriate supplies.
 - Continue rehabilitating the fireline previously built on the division.

12. After assessing the proposed assignment (from the scenario above), the Crew Boss feels the crew does not have the expertise to accomplish this firing operation. What should the Crew Boss do?
 - a. Consult with the DIVS and request a different assignment more suited to the crew's ability.
 - b. Use the available supplies to burn out a small section of line on the division.
 - c. Accept the assignment even with the lack of expertise and use it as a training opportunity.
 - d. Have the crew group up together until the DIVS makes a decision on what the assignment will be.

13. List the six essential items a Crew Boss should pass on to the crew during an initial briefing, prior to going to the line:

Incident Action Plan

INCIDENT OBJECTIVES	1. INCIDENT NAME Hermit	2. DATE PREPARED 10-4	3. TIME PREPARED 2300
4. OPERATIONAL PERIOD (DATE/TIME) <p style="text-align: center;">(10-5)</p>			
5. GENERAL CONTROL OBJECTIVES FOR THE INCIDENT (INCLUDE ALTERNATIVES)			
1) Provide for personnel and public safety.			
2) Protect structure at Martin Cabin site.			
3) Keep suppression costs commensurate with resource values.			
4) Keep acreage burned to less than 50 acres if possible in Yolla Bolla Middle Wilderness area(s).			
Keep fire south of West Low Gap to Black Rock Mountain Ridge and Road 10w60; west of Road 10w39 and north of Road 10w40 and 27n23.			
5) Keep acreage burned to less than 50 acres if possible in south portion of the south fork of the Trinity River and Shell Mountain Creek.			
6) Hold fire on Penny Ridge.			
7) Aggressively attack new fires as requested.			
6. WEATHER FORECAST FOR OPERATIONAL PERIOD See attachment			
7. GENERAL SAFETY MESSAGE See attachment			
8. ATTACHMENTS (MARK WITH AN "X" IF ATTACHED)			
<input checked="" type="checkbox"/> ORGANIZATION LIST (ICS 203) <input checked="" type="checkbox"/> MEDICAL PLAN (ICS 206) <input checked="" type="checkbox"/> EEO MESSAGE <input checked="" type="checkbox"/> ASSIGNMENT LIST (ICS 204) <input checked="" type="checkbox"/> INCIDENT MAP <input checked="" type="checkbox"/> FIRE BEHV. FORECAST <input checked="" type="checkbox"/> COMMUNICATIONS PLAN (ICS 205) <input checked="" type="checkbox"/> TRAFFIC PLAN <input checked="" type="checkbox"/> WILDERNESS INSTR. (DOZER USE)			
202 ICS 3-80	9. PREPARED BY (PLANNING SECTION CHIEF) <i>Bob Smith</i>	10. APPROVED BY (INCIDENT COMMANDER) <i>Tom Scott</i>	

ORGANIZATION ASSIGNMENT LIST		1. INCIDENT NAME	2. DATE PREPARED	3. TIME PREPARED
POSITION NAME		4. OPERATIONAL PERIOD (DATE/TIME)		
5. INCIDENT COMMANDER AND STAFF		10-5 /0600-1800		
INCIDENT COMMANDER		9. OPERATIONS SECTION		
DEPUTY		CHIEF		
SAFETY OFFICER		TRAINEE		
INFO. OFFICER		a. BRANCH I - DIVISION/GROUPS		
LIAISON OFFICER		BRANCH DIRECTOR		
6. AGENCY REPRESENTATIVES		DEPUTY		
AGENCY	NAME	DIVISION/GROUP	A	JEFF CAVES
CDF	ROGER LAKES	DIVISION/GROUP	D	LINDA SMIT
USFS	PAUL BRIMSON	DIVISION/GROUP	E	JOHN WILSON
USFS	MARY PAULCY	DIVISION/GROUP	F	TOM MOORE
BLM	HANK BROWN	DIVISION/GROUP		
7. PLANNING SECTION		b. BRANCH II - DIVISION/GROUPS		
CHIEF		BRANCH DIRECTOR		
DEPUTY		DEPUTY		
RESOURCES		DIVISION/GROUP		
SITUATION UNIT		DIVISION/GROUP		
DOCUMENTATION UNIT		DIVISION/GROUP		
DEMOBILIZATION UNIT		DIVISION/GROUP		
TECHNICAL SPEC		DIVISION/GROUP		
FIRE BEHAVIOR		c. BRANCH III - DIVISION/GROUPS		
EEO SPEC		BRANCH DIRECTOR		
REHAB. SPEC		DEPUTY		
TRAINING SPEC		DIVISION/GROUP		
HAND CREW SPEC		DIVISION/GROUP		
8. LOGISTICS SECTION		DIVISION/GROUP		
CHIEF		DIVISION/GROUP		
DEPUTY		DIVISION/GROUP		
a. SUPPORT BRANCH		DIVISION/GROUP		
DIRECTOR		DIVISION/GROUP		
SUPPLY UNIT		DIVISION/GROUP		
FACILITIES UNIT		DIVISION/GROUP		
GROUND SUPPORT UNIT		DIVISION/GROUP		
b. SERVICE BRANCH		d. AIR OPERATIONS BRANCH		
DIRECTOR		AIR OP. BRANCH DIR.		
		AIR TACTICAL GRP SUP.		
COMMUNICATIONS UNIT		AIR SUPPORT GROUP SUP.		
MEDICAL UNIT		HELIBASE MANAGER		
FOOD UNIT		AIR TKR/FIXED-WING CRD.		
203 ICS 1-82		10. FINANCE SECTION		
		CHIEF		
		DEPUTY		
		TIME UNIT		
		PROCUREMENT UNIT		
		COMP/CLAIMS UNIT		
		COST UNIT		
		LISA GOODWIN		
		STEVE HOLMES		
		CATHY WALLACE		
		KAREN ACTION		
		ROSS BRIMWELL		
		PREPARED BY (RESOURCES UNIT)		

WEATHER FORECAST

FORECAST #11 FOR THE HERMIT FIRE ISSUED 0500-PDT OCTOBER.
REDDING FIRE WEATHER OFFICE ATMU CA-07.

DISCUSSION: WEAK HIGH PRESSURE IS NOW JUST ALONG THE
COAST. EXPECT SLOW WARMING AND DRYING WITH LIGHT WINDS.

TODAY: INVERSION OVER AREA UNTIL 1300 TO 1500. MAXIMUM
TEMPERATURE 68 TO 73. MINIMUM HUMIDITY 38% TO 42%. WINDS
UPSLOPE 3 TO 6 MPH AND WEST 5 TO 10 MPH OVER RIDGES.

TONIGHT: STRONG INVERSION FORMING WITH LIGHT WINDS AND
GOOD HUMIDITY RECOVERY.

OUTLOOK THURSDAY: SLOW WARMING AND DRYING TREND WITH
LIGHT WINDS.

CHRIS FONTANA
REDDING FIRE WEATHER

FIRE BEHAVIOR FORECAST NO.13

NAME OF INCIDENT: _____ PREDICTION FOR: _____
FOREST: _____ OPERATIONAL PERIOD: _____
NAME AND DATE: _____
FORECAST ISSUED: 2200 HRS. - 10/0 SIGNED: _____

WEATHER SUMMARY: Improving conditions will occur; warmer, drier, improved humidities, and near normal after front winds.

FIRE BEHAVIOR (GENERAL): Behavior patterns have changed slightly due to the light showers that fell yesterday. 1-hour fine fuels reached moisture of extinction levels over the lower 2/3 of the slopes. 10-hour fuels raised 5-10%, but these should dry within the next 24-36 hours. 100-1000 hour fuels no change except probability of ignition down 55-77% through 1400 hours then 65-78% on exposed and non-shaded areas.

SPECIFIC:

BRANCH 1 (NORTH): This branch will have the greatest amount of exposure to possible drying conditions as all divisions (except "F" and Lower part of "E" and "A") will be in the wind influence and above inversion. Expect rates of spread of 8-12 in exposed wind areas. Spotting short range 1/10 - 3/10 mile. Continued intense burning of large 100-1000 hour fuels.

BRANCH 2 (SOUTH): Relatively moderate conditions will exist over this branch as fog and air moisture have reduced burning intensities. Smoldering of large materials and piles will be potential threats. Mop-up effort will be enhanced by slow/less intense conditions.

SPECIAL CONCERNS: Be sure when burning out/backfiring that fire carries well to main fire. Leave no islands near control lines posing a threat during future operational periods.

AIR OPERATIONS: Fog and low clouds may affect early supplying of line personnel at spike camp locations. Smoke should clear and allow clearer air after 1200 hours.

SAFETY: Allow ample time for accessing safety zones in division E/F throughout firing operations. Provide escape routes, watch out for rolling (hot) material that could create intense (head) runs to control line during firing operations.

SAFETY MESSAGE

NAME OF INCIDENT: _____ DATE _____
OPERATIONAL PERIOD (DATE/TIME): _____ 0600-1800 _____

The Primary factor leading up to an accident at this time is FATIGUE. As Crew Bosses your primary responsibility is the safety and welfare of your assigned personnel. Remember to pace yourself and your crew. Provide adequate food, water, rest and other pertinent supplies. Keep your Division Supervisor informed of your status and needs (advise your supervisor of your R&R needs). Follow the "2 for 1 Work/Rest Guidelines."

Incident Hazard (s) Reminder List:

- Falling snags and green trees.
- Steep slopes and loose footing.
- Dozers, vehicles, aircraft in work areas.
- Snakes, ticks, spiders.
- Road traffic.
- Cool/wet weather (be prepared).
- A sudden change in fire behavior due to an influence by the wind, fuels, topography and/or partially burned out areas inside the control line.
- Limited visibility due to fog/low clouds and smoke.
- Base hazards.

Follow helitack instructions and policies. When flying, carry fire shelters and wear personal protective equipment on all flights.

Special Note

To all personnel involved in the backfire operation in Division E and F:

- Have escape routes planned and safety zones constructed prior to firing.
- Watch for rolling material that may ignite fuels below your line and create rapid runs upslope.
- Maintain control and accountability of all assigned personnel.
- Watch for hang fires from Aerial Ignition Delivery System operation.
- Pay strict attention to Fire Orders, Watch Out Situations, and continually review Lookouts, Communications, Escape Routes, Safety Zones (L.C.E.S.).

Safety Officer

TACTICAL HAZARDS

- Indirect fireline
- Downhill fireline
- Underslung fireline
- Mid-slope fireline
- Frontal assault
- Anchor points
- Extreme conditions (spotting, wind driven)
- Reburn potential

OTHER HAZARDS

- Hazardous materials
- Transportation, 1 hr. +
- Communications
- Structure protection

TACTICAL HAZARD MITIGATIONS

- Maintain LCES at all times.
- Use Air Attack as a lookout.
- Follow Downhill Fireline Checklist.
- Post lookouts for snags, rolling material and spots below fireline.
- Ensure fireline is anchored.
- Develop anchor by constructing or burning out.
- Firefighters know current and predicted weather and fire behavior forecast.
- Line supervisors will provide clear concise briefing.
- Stay above snags, post lookouts, flag hazard trees and snags.
- Only construct direct line with immediate burn out of fuels.
- FBA/Meteorologist to develop weather watch system and broadcast any change in predicted weather.
- Firefighters monitor fire behavior and always have a safety zone nearby.

OTHER HAZARD MITIGATIONS

- Avoid hazmat situations.
- Avoid smoke from non-wood fiber material.
- Utilize hazmat response teams.
- Limit shifts to 14 hours total.
- Use remote camps to limit travel times.
- Use helicopter transport when feasible.
- Ensure traffic planning is safe and enforced.
- All firefighters will have communications.
- If communications can not be maintained, abort assignment.
- Always maintain LCES.
- Review “Structural Watch Out Situations.”
- Abandon structures before safety is compromised.
- Air attack and/or Lead Plane always in air to coordinate aircraft.
- Pilots will be briefed on strategy and tactics.

1. BRANCH I		2. DIVISION/GROUP A		ASSIGNMENT LIST				
3. INCIDENT NAME Hermit				4. OPERATIONAL PERIOD DATE <u>10-5</u> TIME <u>0600-1800</u>				
5. OPERATIONS PERSONNEL								
OPERATIONS CHIEF <u>Jim Smithers</u> BRANCH DIRECTOR _____				DIVISION/GROUP SUPERVISOR <u>Jeff Caves</u> AIR TACTICAL GROUP SUPERVISORY _____				
6. RESOURCES ASSIGNED THIS PERIOD								
STRIKE TEAM/TASK FORCE RESOURCE DESIGNATOR		LEADER		NUMBER PERSON S	TRANS. NEEDED	DROP OFF PT/TIME	PICK UP PT/TIME	
E 1460		Richards		5	N	DP-6/0800	DP-6/1800	
OC #36 Type 2		Johnson		21	N	DP-6/0800	Rtn. to Kelsy camp	
Water Tender		Burke		1	N	DP-6/0800	Rtn. to Kelsy camp	
7. CONTROL OPERATIONS Mop-up 200 feet in from the fireline. Share water tender with Division D.								
8. SPECIAL INSTRUCTIONS See attached instructions for wilderness boundary dozer line construction criteria & mitigations.								
9. DIVISION/GROUP COMMUNICATIONS SUMMARY								
FUNCTION		FREQ.	SYSTEM	CHAN.	FUNCTION	FREQ.	SYSTEM	CHAN.
COMMAND		168.075 TX/RX	KING/NIRSC	1	LOGISTICS			
TACTICAL		168.200 TX/RX	KING/NIRSC	3	AIR TO GROUND	170.000 TX/RX	KING/NIRSC	7
PREPARED BY (RESOURCES UNIT LDR.) Nancy Hayes				APPROVED BY (PLANNING SECTION CHIEF) Bob Smith			DATE 10/4	TIME 2345

1. BRANCH I		2. DIVISION/GROUP D		ASSIGNMENT LIST			
3. INCIDENT NAME Hermit				4. OPERATIONAL PERIOD DATE <u>10-5</u> TIME <u>0600-1800</u>			
5. OPERATIONS PERSONNEL							
OPERATIONS CHIEF <u>Jim Smithers</u>		DIVISION/GROUP SUPERVISOR <u>Linda Smit</u>					
BRANCH DIRECTOR <u>Duane Stevens</u>		AIR TACTICAL GROUP SUPERVISORY					
6. RESOURCES ASSIGNED THIS PERIOD							
STRIKE TEAM/TASK FORCE RESOURCE DESIGNATOR	LEADER	NUMBER PERSON S	TRANS. NEEDED	DROP OFF PT/TIME	PICK UP PT/TIME		
Type 4 Engine E 1084	Higgins	5	Y	DP-6/0800	DP-6/1800		
Type 4 Engine E 1474	Hatcher	3	Y	DP-6/0800	Rtn. to Kelsy camp		
Type 2 Crew Plumas 31	Brown	20	Y	DP-6/0800	Rtn. to Kelsy camp		
Type 2 Crew Tahoe 32	Hines	19	Y	DP-6/0800	Rtn. to Kelsy camp		
Type 2 Crew Six Rivers 18	Wilson	20	Y	DP-6/0800	Rtn. to Kelsy camp		
Type 2 Strike Team ST 9274 G	Anderson	45	Y	DP-6/0800	Rtn. to Kelsy camp		
7. CONTROL OPERATIONS Mop up and grid 200 feet. The length of the division. Continue to check for spots on north side of ridge.							
8. SPECIAL INSTRUCTIONS See attached instructions for <u>wilderness boundary dozer line construction criteria & mitigations.</u>							
9. DIVISION/GROUP COMMUNICATIONS SUMMARY							
FUNCTION	FREQ.	SYSTEM	CHAN.	FUNCTION	FREQ.	SYSTEM	CHAN.
COMMAND	168.075 TX/RX	KING/NIRSC	1	LOGISTICS			
TACTICAL	168.250 TX/RX	KING/NIRSC	5	AIR TO GROUND	170.000 TX/RX	KING/NIRSC	7
PREPARED BY (RESOURCES UNIT LDR.) Nancy Hayes			APPROVED BY (PLANNING SECTION CHIEF) Bob Smith			DATE 10/4	TIME 2345

1. BRANCH I		2. DIVISION/GROUP E		ASSIGNMENT LIST			
3. INCIDENT NAME Hermit				4. OPERATIONAL PERIOD DATE <u>10-5</u> TIME <u>0600-1800</u>			
5. OPERATIONS PERSONNEL							
OPERATIONS CHIEF <u>Jim Smithers</u>		DIVISION/GROUP SUPERVISOR <u>John Wilson</u>					
BRANCH DIRECTOR <u>Duane Stevens</u>		AIR TACTICAL GROUP SUPERVISORY					
6. RESOURCES ASSIGNED THIS PERIOD							
STRIKE TEAM/TASK FORCE RESOURCE DESIGNATOR	LEADER	NUMBER PERSON S	TRANS. NEEDED	DROP OFF PT/TIME	PICK UP PT/TIME		
Safety Officer	Hansen	1	Y	H-1 camp 0800	H2 - camp		
2 Plumas Fallers	Grant	3	N	"	H2 - camp		
Type 2 Redding Regs.	Lankster	20	Y	"	H2 - camp		
Redding Type 1 Smokejumpers	Atlas	20	N	"	H2 - camp		
Type 2 Lassen Regs.	Rodriguz	19	Y	"	H2 - camp		
Type 2 Plumas Regs.	Kenton	20	Y	Helibase- fly to H- 2/0800	Coyote along Chicago camp trail		
Type 2 Tahoe Regs.	Campton	20	Y	"	"		
7. CONTROL OPERATIONS Scatter brush & widen line where necessary from Fisher ridge to division E/F boundary. Begin backfire from Black Rock Mtn. out main ridge east toward H-2, 1/4-mile, (If time/conditions are favorable, continue backfiring to division E/F boundary) coordinate firing with division F Supervisor. Helicopter 901 with aerial ignition delivery system (firing boss-Jim Hall) available at 0930 to assist firing.							
8. SPECIAL INSTRUCTIONS Redding, Lassen, Jumpers return to H-2 and camp after operational period. Plumas, Tahoe and fallers to coyote along Chicago camp trail. Ensure <u>L.C.E.S.</u> at all times!							
9. DIVISION/GROUP COMMUNICATIONS SUMMARY							
FUNCTION	FREQ.	SYSTEM	CHAN.	FUNCTION	FREQ.	SYSTEM	CHAN.
COMMAND	168.075 TX/RX	KING/NIRSC	1	LOGISTICS			
TACTICAL	168.200 TX/RX	KING/NIRSC	3	AIR TO GROUND	170.000 TX/RX	KING/NIRSC	7
PREPARED BY (RESOURCES UNIT LDR.) Nancy Hayes			APPROVED BY (PLANNING SECTION CHIEF) Bob Smith			DATE 10/4	TIME 2345

1. BRANCH I		2. DIVISION/GROUP F		ASSIGNMENT LIST			
3. INCIDENT NAME Hermit				4. OPERATIONAL PERIOD DATE <u>10-5</u> TIME <u>0600-1800</u>			
5. OPERATIONS PERSONNEL							
OPERATIONS CHIEF <u>Jim Smithers</u>			DIVISION/GROUP SUPERVISOR <u>Tom Moore</u>				
BRANCH DIRECTOR <u>Duane Stevens</u>			AIR TACTICAL GROUP SUPERVISORY				
6. RESOURCES ASSIGNED THIS PERIOD							
STRIKE TEAM/TASK FORCE RESOURCE DESIGNATOR	LEADER	NUMBER PERSONS	TRANS. NEEDED	DROP OFF PT/TIME	PICK UP PT/TIME		
Type 2 Crew St 3600 G	Priest	36	Y	DP-12/0800	DP-12/1800		
Type 2 Crew St 1651 G	Benny	40	Y	DP-12/0800	DP-12/1800		
Type 2 Crew St 6601 G	Curb	38	Y	DP-12/0800	DP-12/1800		
Type 2 Crew St 1624 G	Smithe	38	Y	DP-12/0800	DP-12/1800		
Type 1 Crew Mormon Lake	Tisner	19	N	DP-12/0800	DP-12/1800		
Type 1 Crew St Warm Springs	Clemmens	20	N	DP-12/0800	DP-12/1800		
Type 2 Crew St Klamath #3	Kooly	20	Y	DP-12/0800	DP-12/1800		
Safety Officer	Barger	1	Y	DP-12/0800	DP-12/1800		
7. CONTROL OPERATIONS Complete line construction from South Fork Trinity river up Fisher Ridge to Division E/F boundary. Coordinate backfiring with division E and continue firing from division e/f/ boundary down to DP-12. Helicopter 901 with firing boss - Jim Hall will be available until 1800 to support firing operation.							
8. SPECIAL INSTRUCTIONS Crews will eat dinner at DP-12 prior to driving to base.							
9. DIVISION/GROUP COMMUNICATIONS SUMMARY							
FUNCTION	FREQ.	SYSTEM	CHAN.	FUNCTION	FREQ.	SYSTEM	CHAN.
COMMAND	168.075 TX/RX	KING/NIRSC	1	LOGISTICS			
TACTICAL	168.200 TX/RX	KING/NIRSC	5	AIR TO GROUND	170.000 TX/RX	KING/NIRSC	7
PREPARED BY (RESOURCES UNIT LDR.) Nancy Hayes			APPROVED BY (PLANNING SECTION CHIEF) Bob Smith			DATE 10/4	TIME 2345

1. BRANCH II		2. DIVISION/GROUP B		ASSIGNMENT LIST			
3. INCIDENT NAME Hermit				4. OPERATIONAL PERIOD DATE <u>10-5</u> TIME <u>0600-0800</u>			
5. OPERATIONS PERSONNEL							
OPERATIONS CHIEF <u>Jim Smithers</u>		DIVISION/GROUP SUPERVISOR <u>Tom Moore</u>					
BRANCH DIRECTOR <u>Steve Recker</u>		AIR TACTICAL GROUP SUPERVISORY					
6. RESOURCES ASSIGNED THIS PERIOD							
STRIKE TEAM/TASK FORCE RESOURCE DESIGNATOR	LEADER	NUMBER PERSON S	TRANS. NEEDED	DROP OFF PT/TIME	PICK UP PT/TIME		
Type 3 Engine E 3661	Wilson	5	Y	DP-H/0800	DP-4/1800		
Type 2 Crew Modoc #12	Mason	20	Y	DP-H/0800	DP-4/1800		
Type 2 Crew Lassen #6	Mead	20	Y	DP-H/0800	DP-4/1800		
Water Tender	McFarland	1	N	DP-H/0800	DP-4/1800		
7. CONTROL OPERATIONS							
Install hoselay from B/C division boundary to north section break and mopup all hotspots within 150 feet of the line. Use portable pumps if practical.							
8. SPECIAL INSTRUCTIONS							
See attached instructions for <u>wilderness boundary</u> dozer line construction criteria & mitigations.							
9. DIVISION/GROUP COMMUNICATIONS SUMMARY							
FUNCTION	FREQ.	SYSTEM	CHAN.	FUNCTION	FREQ.	SYSTEM	CHAN.
COMMAND	168.075 TX/RX	KING/NIRSC	1	LOGISTICS			
TACTICAL	168.200 TX/RX	KING/NIRSC	4	AIR TO GROUND	170.000 TX/RX	KING/NIRSC	7
PREPARED BY (RESOURCES UNIT LDR.)			APPROVED BY (PLANNING SECTION CHIEF)			DATE	TIME
Nancy Hayes			Bob Smith			10/4	2330

1. BRANCH II		2. DIVISION/GROUP C		ASSIGNMENT LIST			
3. INCIDENT NAME Hermit				4. OPERATIONAL PERIOD DATE <u>10-5</u> TIME <u>0600-0800</u>			
5. OPERATIONS PERSONNEL							
OPERATIONS CHIEF <u>Jim Smithers</u>		DIVISION/GROUP SUPERVISOR <u>Sue White</u>					
BRANCH DIRECTOR <u>Steve Recker</u>		AIR TACTICAL GROUP SUPERVISORY					
6. RESOURCES ASSIGNED THIS PERIOD							
STRIKE TEAM/TASK FORCE RESOURCE DESIGNATOR	LEADER	NUMBER PERSON S	TRANS. NEEDED	DROP OFF PT/TIME	PICK UP PT/TIME		
Type 3 Engine Strike Team	Willager	16		DP-4/0800	DP-4/1800		
Type 2 Crew Plumas #32	Andrews	20		DP-4/0800	DP-4/1800		
Type 2 Crew Six Rivers #4	Fesser	20		DP-4/0800	DP-4/1800		
2 Fallers	Jones	3		DP-4/0800	DP-4/1800		
7. CONTROL OPERATIONS Grid and flag spots and mop up 150 feet inside line the length of the division. Pick up supplies for backpack pumps from supply and take them with the crews.							
8. SPECIAL INSTRUCTIONS See attached instructions for <u>wilderness boundary</u> dozer line construction criteria & mitigations.							
9. DIVISION/GROUP COMMUNICATIONS SUMMARY							
FUNCTION	FREQ.	SYSTEM	CHAN.	FUNCTION	FREQ.	SYSTEM	CHAN.
COMMAND	168.075 TX/RX	KING/NIRSC	1	LOGISTICS			
TACTICAL	168.200 TX/RX	KING/NIRSC	4	AIR TO GROUND	170.000 TX/RX	KING/NIRSC	7
PREPARED BY (RESOURCES UNIT LDR.) Nancy Hayes			APPROVED BY (PLANNING SECTION CHIEF) Bob Smith			DATE 10/4	TIME 2330

1. BRANCH II		2. DIVISION/GROUP G		ASSIGNMENT LIST			
3. INCIDENT NAME Hermit				4. OPERATIONAL PERIOD DATE <u>10-5</u> TIME <u>0600-0800</u>			
5. OPERATIONS PERSONNEL							
OPERATIONS CHIEF <u>Jim Smithers</u>		DIVISION/GROUP SUPERVISOR <u>Dick West</u>					
BRANCH DIRECTOR <u>Steve Recker</u>		AIR TACTICAL GROUP SUPERVISORY					
6. RESOURCES ASSIGNED THIS PERIOD							
STRIKE TEAM/TASK FORCE RESOURCE DESIGNATOR	LEADER	NUMBER PERSON S	TRANS. NEEDED	DROP OFF PT/TIME	PICK UP PT/TIME		
Type 3 Engine Z601	Donnell	19	Y	DP- 11/0800	DP-11/1800		
Type 2 Crew Water Tender	Heins	1	Y	DP- 11/0800	Rtn. to base		
St crew OC-29 OC-30	Rogers	39	Y	DP- 11/0800	Rtn. to base		
St crew 9271	Reason	44	Y	DP- 11/0800	Rtn. to base		
Safety Officer	Moore	1	Y	DP- 11/0800	Rtn. to base		
7. CONTROL OPERATIONS Grid and mop up 200 feet inside the fire the length of the division.							
8. SPECIAL INSTRUCTIONS See attached instructions for <u>wilderness boundary</u> dozer line construction criteria & mitigations.							
9. DIVISION/GROUP COMMUNICATIONS SUMMARY							
FUNCTION	FREQ.	SYSTEM	CHAN.	FUNCTION	FREQ.	SYSTEM	CHAN.
COMMAND	168.075 TX/RX	KING/NIRSC	1	LOGISTICS			
TACTICAL	168.200 TX/RX	KING/NIRSC	4	AIR TO GROUND	170.000 TX/RX	KING/NIRSC	7
PREPARED BY (RESOURCES UNIT LDR.) Nancy Hayes			APPROVED BY (PLANNING SECTION CHIEF) Bob Smith			DATE 10/4	TIME 2330

1. BRANCH II		2. DIVISION/GROUP H		ASSIGNMENT LIST			
3. INCIDENT NAME Hermit				4. OPERATIONAL PERIOD DATE <u>10-5</u> TIME <u>0600-1800</u>			
5. OPERATIONS PERSONNEL							
OPERATIONS CHIEF <u>Jim Smithers</u>		DIVISION/GROUP SUPERVISOR <u>Karen Ames.</u>					
BRANCH DIRECTOR <u>Steve Recker</u>		AIR TACTICAL GROUP SUPERVISORY					
6. RESOURCES ASSIGNED THIS PERIOD							
STRIKE TEAM/TASK FORCE RESOURCE DESIGNATOR	LEADER	NUMBER PERSON S	TRANS. NEEDED	DROP OFF PT/TIME	PICK UP PT/TIME		
Type 2 Dozer 1150	Lynch	2	Y	Kelsy Camp/0800	1800		
Type 2 Dozer D6-C	Stout	2	Y	DP-4/0800	1800		
Type 2 Dozer D5-13	Drem	2	Y	DP-4/0800	1800		
Type 2 Crew Taos #7	Gonzalez	19	Y	DP-4/0800	1800		
7. CONTROL OPERATIONS Contact Karen Ames rehab group supervisor for work assignments.							
8. SPECIAL INSTRUCTIONS See attached instructions for <u>wilderness boundary</u> dozer line construction criteria & mitigations.							
9. DIVISION/GROUP COMMUNICATIONS SUMMARY							
FUNCTION	FREQ.	SYSTEM	CHAN.	FUNCTION	FREQ.	SYSTEM	CHAN.
COMMAND	168.075 TX/RX	KING/NIRSC	1	LOGISTICS			
TACTICAL	168.200 TX/RX	KING/NIRSC	4	AIR TO GROUND	170.000 TX/RX	KING/NIRSC	7
PREPARED BY (RESOURCES UNIT LDR.) Nancy Hayes			APPROVED BY (PLANNING SECTION CHIEF) Bob Smith			DATE 10/4	TIME 2330

1. BRANCH III		2. DIVISION/GROUP IA Initial Attack		ASSIGNMENT LIST					
3. INCIDENT NAME Hermit				4. OPERATIONAL PERIOD DATE <u>10-5</u> TIME <u>0600-1800</u>					
5. OPERATIONS PERSONNEL									
OPERATIONS CHIEF <u>Jim Smithers</u>		DIVISION/GROUP SUPERVISOR <u>Chap Pole</u>							
BRANCH DIRECTOR <u>Garn Benson</u>		AIR TACTICAL GROUP SUPERVISORY							
6. RESOURCES ASSIGNED THIS PERIOD									
STRIKE TEAM/TASK FORCE RESOURCE DESIGNATOR		LEADER		NUMBER PERSON S	TRANS. NEEDED	DROP OFF PT/TIME	PICK UP PT/TIME		
Type 2 Crew Pike Regulars		T. Foley		20	N	0800/Ruth Helibase	1800/Return Kelsy camp		
Type 3 Crew E11 211		F. Bird		2	N	0800/Ruth Helibase	1800/Return Kelsy camp		
Type 3 Crew E1122		B. Adams		2	N	0800/Ruth Helibase	1800/Return Kelsy camp		
7. CONTROL OPERATIONS Aggressively attack new fires as assigned by the operations section chief.									
8. SPECIAL INSTRUCTIONS Pike Regulars supply (1) additional firefighter for each engine. Teams to be ready for <u>immediate</u> dispatch!									
9. DIVISION/GROUP COMMUNICATIONS SUMMARY									
FUNCTION		FREQ.	SYSTEM	CHAN.	FUNCTION		FREQ.	SYSTEM	CHAN.
COMMAND REPEAT	LOCAL				SUPPORT REPEAT	LOCAL			
DIV/GROUP TACTICAL					GROUND- TO-AIR				
PREPARED BY (RESOURCES UNIT LDR.) Nancy Hayes				APPROVED BY (PLANNING SECTION CHIEF) Bob Smith			DATE 10/4	TIME 2330	

INCIDENT RADIO COMMUNICATIONS PLAN				1. Incident Name	2. Date/Time Prepared	3. Operational Period Date/Time
				HERMIT	10/04 2100	10/05
4. Basic Radio Channel Utilization						
System/Cache	Channel	Function	Frequency/Tone	Assignment	Remarks	
King/NIRSC	1	CMD Direct	168.075 TX/RX	Incident Commander, Operations, Air Operations, branch, division, Hermit Communications, Medical Unit	Branch director, division supervisors need to monitor command net. Use com RPT. Frequency only to contact base.	
King/NIRSC	2	CMD/Repeat	170.425 TX 168.075 RX	"	"	
King/NIRSC	3	Tactical	168.200 TX/RX	Division A & E	Turn in all cache radios at end of operational period. Return all line transfer slips at end of operational period.	
King/NIRSC	4	Tactical	168.050 TX/RX	Division B, C, G, H	Commo center will only monitor command RPT and support nets.	
King/NIRSC	5	Tactical	168.250 TX/RX	Division D & F Group IA	All medical emergencies should be communicated on command RPT only.	
King/NIRSC	6	Air to Ground	169.150 TX/RX	(Restricted) Aerial ignition delivery system operations.	Branch/division supervisors use support net for all orders.	
King/NIRSC	7	Air to Ground	170.000 TX/RX	Operations, Air Operations, branch directors, division supervisors.		
King/NIRSC	8	Air Guard	168.625 RX/TX	Aircraft Emergency	Emergency Use Only	
5. Prepared by (Communication Unit)						
<i>Dee Naaf</i>						

ICS 205 NFES 1330

MEDICAL PLAN	1. INCIDENT NAME	2. DATE	3. TIME	4. OPERATIONAL PERIOD					
	Hermit	PREPARED 10/4	PREPARED 2100	0600-1800					
5. INCIDENT MEDICAL AID STATIONS									
MEDICAL AID STATIONS	LOCATION			PARAMEDICS					
				YES	NO				
Hermit Base	2-miles south of Ruth Ranger Stat.			X					
6. TRANSPORTATION									
A. AMBULANCE SERVICES									
NAME	ADDRESS		PHONE	PARAMEDICS					
				YES	NO				
South Trinity Health Center	7am to 5pm ~ Mad River		514-3316	X					
Garbov Ambulance Service	317 Arther RD., Ashville		923-1121	X					
Fortune Ambulance Service	Anderson		911	X					
Mercy Air Ambulance	Mercy Hospital, Redding		225-2015	X					
Helicopter 502	Ruth Airport			X					
B. INCIDENT AMBULANCES									
NAME	LOCATION			PARAMEDICS					
				YES	NO				
Mercy, Redding	40.34.14		122.23.97						
Enlow, Chico	39.45.68		121.52.60						
Community Burn Ctr., Chico	" " "		" " "						
7. HOSPITALS									
NAME	ADDRESS		TRAVEL TIME	PHONE	HELIPAD		BURN		
					YES	NO	CTR		
					YES	NO	YES	NO	
Redding Medical	1100 Butte St., Redding		45M		244-5130	X			
Mercy Hospital	2525 South St., Redding		45M		246-0021	X			
Enlow Hospital	W. 5th St., Chico		1Hr.		897-5000	X			
Community Hospital	3500 Park Ave., Chico		1Hr.		344-1767		X	X	
8. MEDICAL EMERGENCY PROCEDURES									
<p>Medical unit will coordinate all evacuations with the operations section chief. Medical unit leader & compensation for injury person are located in Hermit base minor injuries transport to Hayfork Medical Unit. Serious injuries transport by helicopter to hospital in Redding. Burn victims transport to Enlow helipad then ambulance to burn center at Community.</p>									

AIR OPERATIONS SUMMARY		1. INCIDENT NAME		2. OPERATIONAL PERIOD (Date & Time)		3. DISTRIBUTION							
		HERMIT		10-5 0600-1800		HELIBASES <u>10 EA.</u> FIXED-WING BASES <u>10 EA.</u>							
4. PERSONNEL AND COMMUNICATIONS		NAME		AIR/GROUND FREQUENCY		5. REMARKS (Spec. Instructions, Safety Notes, Hazards, Phonics)							
AIR OPERATIONS BRANCH DIRECTOR		<u>REASNER</u>		<u>170.000/</u>		- Medevac ship available, 506 - Mark any helispots that have not been marked. - Retrieve all slings/garbage - Have aerial ignition delivery system machine ready by 0930. - Fly a.m. & p.m. food to camp. - Fly safely!!!							
AIR TACTICAL GROUP SUPERVISORY		<u>AA06/AA240</u>		<u>122.925</u>									
HELICOPTER COORDINATOR		<u>L-54</u>		<u>135.975</u>									
AIR TANKER/FIXED-WING COORDINATOR		<u>BURTON, JIM</u>											
HELIBASE MANAGER		<u>HALL, JIM</u>		<u>166.675</u>									
AERIAL IG. DEL. (AIDS)													
SYSTEM FIRING BOSS													
6. LOCATION/ FUNCTION		7. ASSIGNMENT		8.		9.		10.		11.		12.	
				FIXED-WING		HELICOPTERS		TIME		AIRCRAFT ASSIGNED		OPERATING BASE	
				NO.		NO.		AVAILABLE					
				TYPE		TYPE		COMMENT					
Division E		Use air tankers for pretreatment of black rock & fisher ridge. Use (AIDS) machine if conditions are favorable.		20		512		0700				Redding/ Ruth	
Division F		Same as division E, use Type 1 helicopter if needed.		05		901		0700				Redding/ Ruth	
Division C/G		Use helicopters as needed when requested		13		234		0700				Redding/ Ruth	
		Fly fallers to H-1 (first flight), then stage at helibase for IA.		30		502		0700				Redding/ Ruth	
		Recon flight (operations) MEDEVAC operations		28		506		0700				Redding/ Ruth	
		13. TOTALS		05		05							
		14. AIR OPERATIONS SUPPORT EQUIPMENT										15. PREPARED BY (Include Date & Time)	

SPECIAL INSTRUCTIONS

WILDERNESS BOUNDARY DOZER LINE CONSTRUCTION CRITERIA & MITIGATION

10/05

Day Operational Period

1. Dozer lines no wider than necessary; never more than 3 blades wide.
2. No dozer berms or piles; feather edges.
3. Leave trees in line where possible to prevent freeway appearance; concept is to break up the canopy.
4. After fire - water bar dozer/handlines. Pile cut vegetation back into dozer line from outside after fire has been classified controlled.
5. Handline in areas where slopes exceed 40%.
6. Where possible, keep dozer line outside wilderness boundary.
7. Same concept for safety zones (islands) - leave vegetation to prevent freeway appearance.
8. After fire, rehabilitation is done with small dozers and hand rehabilitation.

ADDITIONAL INSTRUCTIONS

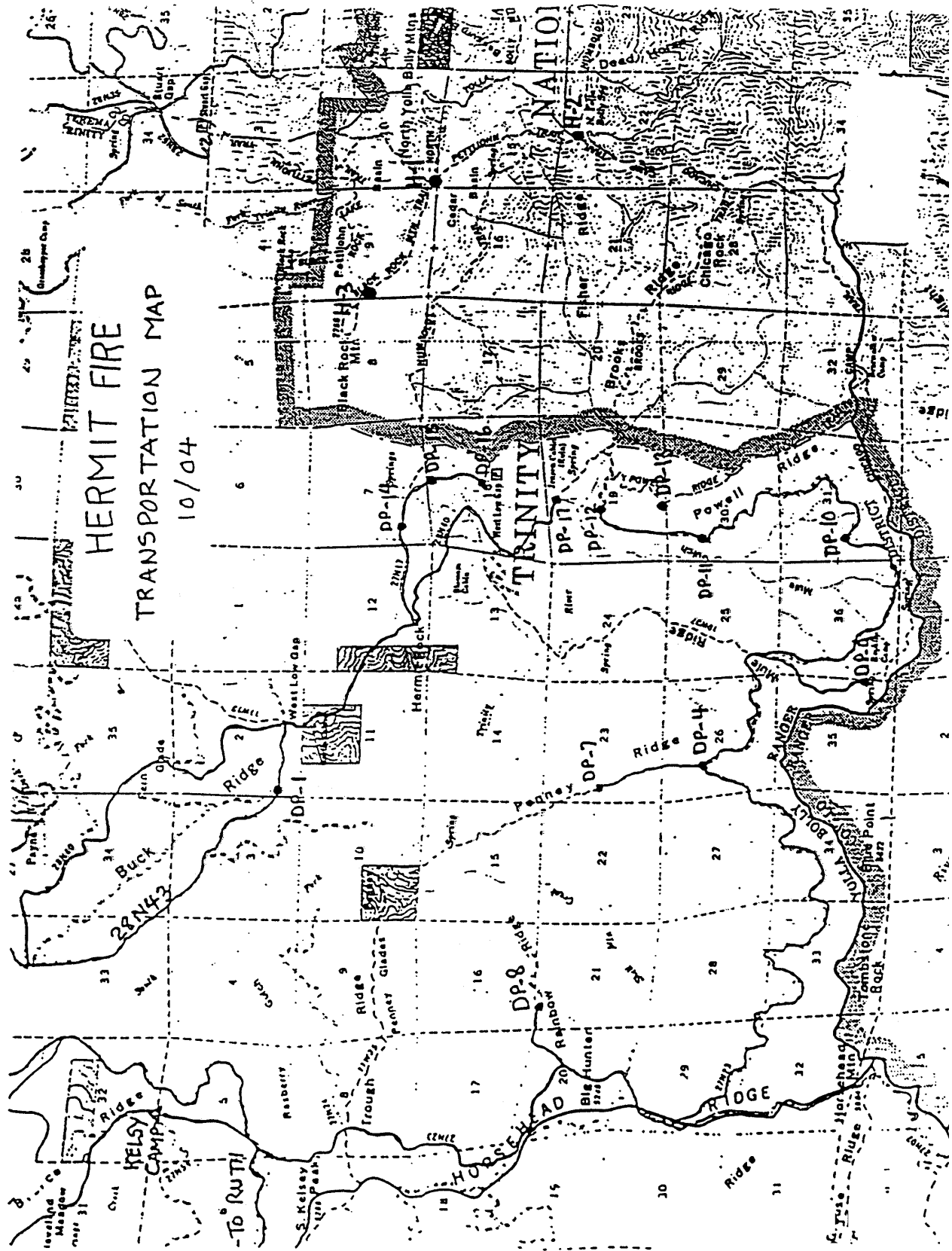
1. Flush cut stumps - brush too!
2. All trash comes out.
3. Keep impact from camps to a minimum.
4. HELISPOTS NEED ADVANCE APPROVAL FROM THE AIR SUPPORT GROUP SUPERVISOR!
5. Keep sanitation facilities away from water sources.

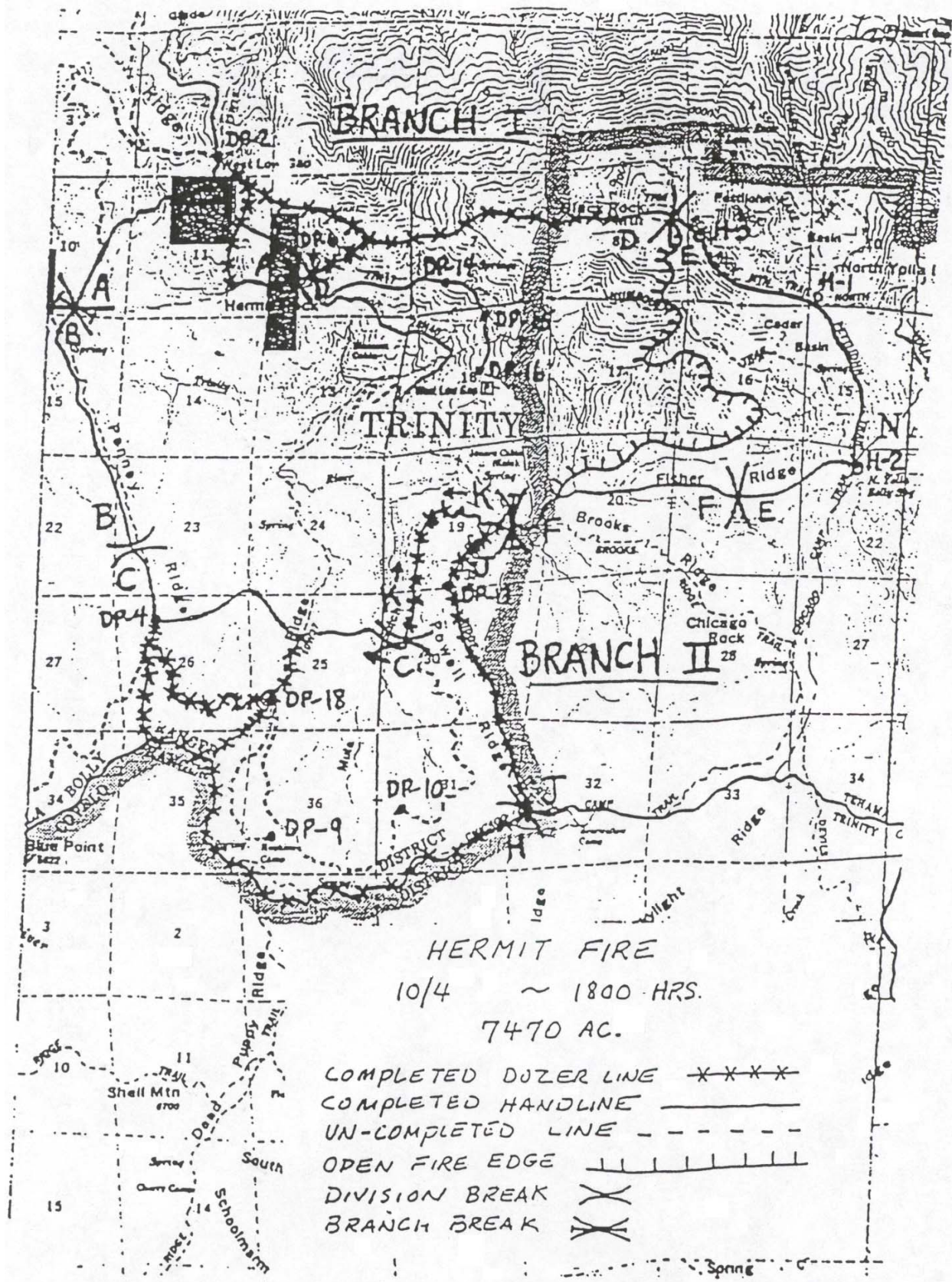
HERMIT FIRE
HUMAN RESOURCE MESSAGE
OPERATIONAL PERIOD 10/05

CIVIL RIGHTS ARE LAW. If you feel that you have been discriminated against because of RACE, COLOR, RELIGION, SEX (including sexual harassment), AGE (over forty), NATIONAL ORIGIN, PHYSICAL OR MENTAL HANDICAP, you have the RIGHT and RESPONSIBILITY to do something about it. Your first contact should be your immediate supervisor. As your EEO counselor, I am available also to assist you if you feel that you need further help.

Please feel free to ask me questions. I plan on being in the Medical Unit area from 0730 to 0830 and again from 2000 to 2100 each day.

Joe Barnone
EEO/Civil Rights Counselor





Crew Boss (Single Resource), S-230

Unit 4 - Fireline Operations



OBJECTIVES:

1. Identify the five steps of the risk management process.
2. Apply the five step risk management process to given scenarios.

I. RISK MANAGEMENT PROCESS

NOTES

The risk management process is beneficial in making operational decisions. Following this process ensures you have considered:

- The primary components of the environment.
- The risks.
- Applying controls to mitigate risks.

II. FIVE STEPS OF RISK MANAGEMENT

A. Step 1: Situation Awareness

1. Situation awareness is the foundation of the risk management process.
2. Without a good understanding of the situation, it is difficult to make a good decision.
3. Situation awareness sizeup:
 - Who is in charge
 - Objectives
 - Tactical instructions
 - Communications
 - Gather information:

- Scout the fire

NOTES

B. Step 2: Hazard Assessment

1. Estimate potential fire behavior hazards.
 - Look up/down/around indicators
2. Identify tactical hazards.
 - Watch out situations
 - Wildland/Urban Interface Watch Outs
3. What other safety hazards exist?
4. Consider severity vs. probability.

C. Step 3: Hazard Control

1. Establish anchor points and LCES.
2. Establish other hazard control measures (Downhill Line Construction Guidelines, Standard Firefighting Orders, Entrapment Avoidance).

D. Step 4: Decision Point

1. Are controls in place?
 - No, reassess the situation
 - Yes, next question
2. Are tactics based on fire behavior?
 - No, reassess the situation
 - Yes, next question

3. Have instructions been given and understood?
 - No, reassess the situation
 - Yes, next question
 4. Decision Point: Go/No Go
 - Are all identified risks mitigated?
 - Do the strategies and tactics make sense to you?
 - Has a briefing been given with feedback opportunity?
- E. Step 5: Evaluate
1. Personnel
 - Low experience levels with local factors?
 - Distracted from primary tasks?
 - Fatigue or stress reactions?
 - Hazardous attitude?
 2. What is changing?
 3. Are strategy and tactics working?

EXERCISE:

1. In your assigned groups, view the following slides. Three minutes will be allowed to assess each scenario.
2. Identify the following on each slide:
 - Hazards
 - Fire behavior
 - Tactical options
 - Safety concerns
 - Watch Out situations
3. Record your findings from each slide onto a flip chart for presentation to the class.

Hazards?
Fire behavior?

Tactical options?
Safety concerns?

Watch Out
situations?



4A-13-S230-EP

Hazards?
Fire behavior?

Tactical options?
Safety concerns?

Watch Out
situations?



4A-14-S230-EP

Hazards?
Fire behavior?

Tactical options?
Safety concerns?

Watch Out
situations?



4A-15-S230-EP

Hazards?
Fire behavior?

Tactical options?
Safety concerns?

Watch Out
situations?



4A-16-S230-EP

Hazards?

Tactical options?

Watch Out

Fire behavior?

Safety concerns?

situations?



4A-17-S230-EP

Hazards?

Tactical options?

Watch Out

Fire behavior?

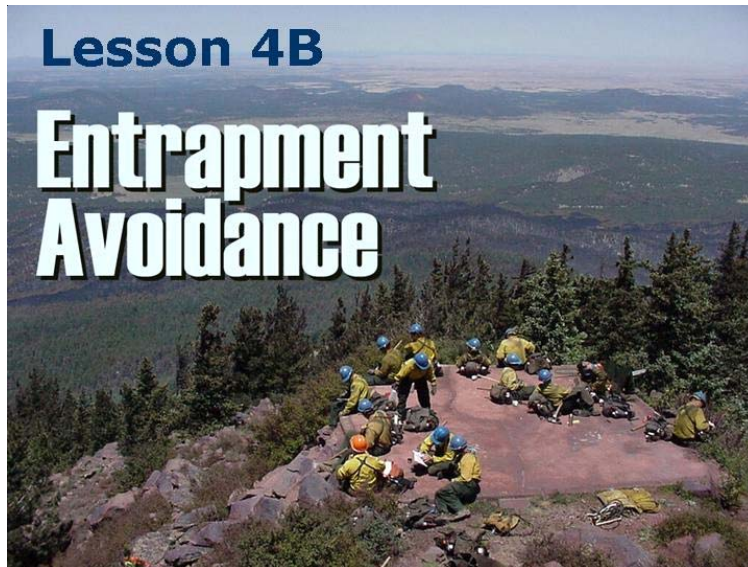
Safety concerns?

situations?



4A-18-S230-EP

Unit 4 - Fireline Operations



OBJECTIVES:

1. Describe the role LCES has in the risk management process.
2. Describe a protocol for negotiating a perceived unsafe assignment.
3. Given a set of fireline conditions, identify valid trigger point(s).
4. Define levels of engagement.
5. Describe a procedure for recognizing escape routes and safety zones when engaging a fire.
6. Given a set fireline condition, estimate minimum safety zone size using the Missoula Fire Lab model.
7. Identify human factors that contribute to fireline decision errors.
8. Given a fire scenario, determine the appropriate level of engagement as conditions change.



I. ENTRAPMENT AVOIDANCE

A. Loop Fire, Angeles National Forest, 11-1-1966.

Crew was attempting to finish a 200' section of line, downhill, between Division A and Division C. This was the final action necessary to contain the fire. It was estimated that the fire flashed through the 2,200' chimney canyon in less than one minute. Twelve Forest Service hotshot crew members lost their lives.

What skills do we use to avoid entrapment?

- Ability to gain good situation awareness.
- Ability to anticipate fire behavior.
- Ability to select effective strategy and tactics.
- Ability to make decisions about when to engage a fire.
- Ability to recognize good safety zone and escape route opportunities.

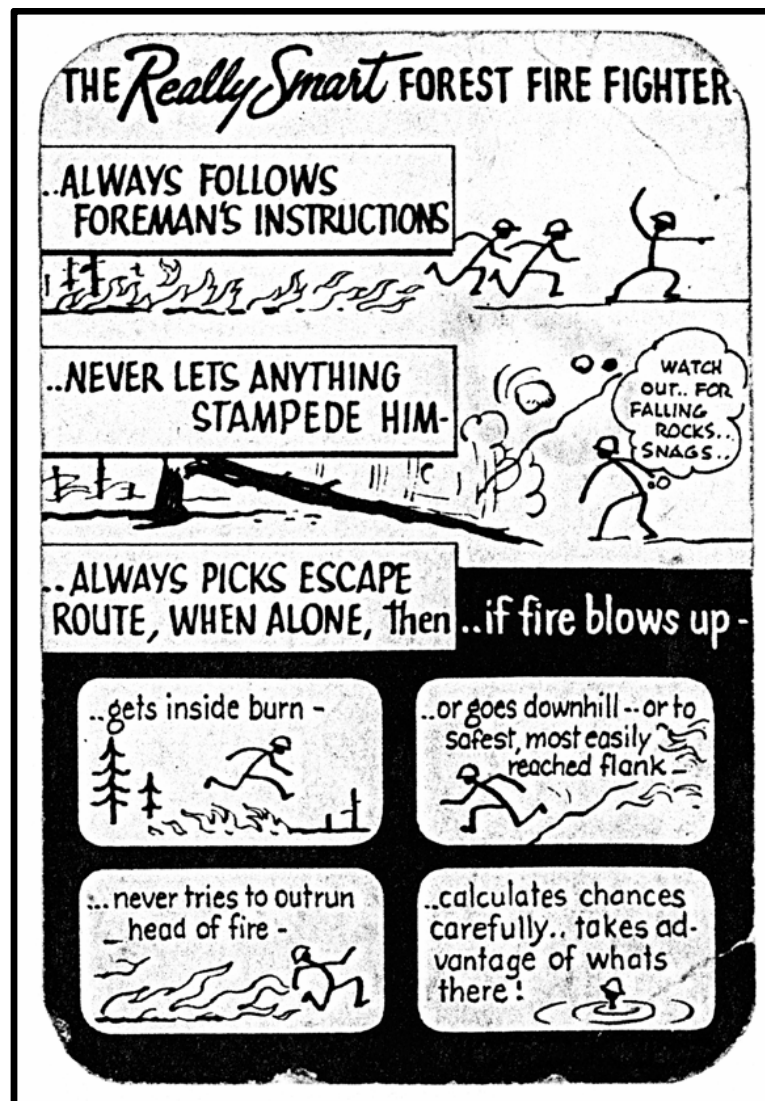
NOTES

B. Escape and Safety

Concept of escape has been in the firefighting profession long before there were defined rules of engagement.

The really smart leaders of firefighters have an escape and safety contingency plan in place before deciding to engage a fire!

This wallet-sized card was issued to firefighters in the early 1950s before the 10 standard firefighting orders were developed.



II. DECISION MAKING

NOTES

A. Key Decision Points

Avoiding entrapment on the fireline is all about deciding when, where, and how you engage the fire = decision points.

1. Decision point - accepting a new assignment and engaging the fire with planned suppression actions.
2. Decision point - continuing those suppression actions when there is a change in the fire ground situation.

B. Risk Decision for Engaging a Fire

The three courses of action that follow the decision point:

- Engage fire with planned assignment.
- Negotiate assignment.
- Turn down assignment.

C. Rules of Engagement

Defined rules of engagement have been a part of firefighting doctrine since 1958.

For better or worse, firefighting has become more complex and so have the rules of engagement.

NOTES

D. Risk Management

The risk management process is simply a procedural approach to using the rules of engagement that you already know.

This process provides the criteria to support your decision-making on the fireline.

1. What about LCES?

- Is LCES all you need to know?

- How does LCES relate to the Standard Firefighting Orders?

- What role does LCES have in the risk management process?

2. Right to know?

Federal law says all workers have the right to know about the hazardous materials they work around. What questions do all firefighters have the right to know the answers to?

- What are the hazards I face?
- Where do I go to be safe from those hazards?
- How do I get there?
- When should I go there?

3. Is there legitimate dissent?

- Do leaders have a responsibility to protect their firefighters from unnecessary risk?
- Have you ever been given a fire assignment that you thought was unsafe or excessively risky?
- How did you resolve that situation?
- How do you properly refuse risk?

NOTES

E. Risk Decision for Changing Situations

1. A pre-identified or anticipated event (time, place, or condition), that when it occurs, initiates a pre-planned response.
2. Hitting a trigger point means stop, evaluate the situation, and make a decision.
3. Trigger points are anticipated. Ask yourself “What are the changing factor(s) that can affect our mission success and safety today?”
 - Trends in weather?
 - Changes in fuel type and topography?
 - Tactical progress?
 - Logistical support?
4. Trigger point examples:
 - Fire environment

- Fire operations

5. Are all trigger points created equal?
- Trigger points will vary by geographic area and fuel type. What things should you do on a fire so you are able to identify valid trigger points?
-
-
-

6. Using trigger points.
- Establish trigger point(s) when potential exists for your fire situation to degrade.
 - Ensure that your situation awareness includes monitoring factors that relate to the trigger point(s) you set.
 - Have a planned response in place for your actions when a trigger point is hit.
 - Do not ignore a trigger point that has been hit!

COMPLETE THE EXERCISE ON THE FOLLOWING PAGE.

EXERCISE 1 - USING TRIGGER POINTS

WHAT ARE YOUR TRIGGER POINTS?

Answer the question in your groups and elect a spokesperson to present your solution. 10 minutes allowed for completion.

Your Assignment:

It is August 23 and you have been dispatched as the initial attack Incident Commander for the Davis Fire. The fire is located in the Northern Rocky Mountains in Montana. You have a hotshot crew and two Type 3 engines assigned to you.

Local Factors:

Fires you have worked here in Montana over the last couple of weeks have burned quite actively after 1400. Today's weather forecast calls for maximum temperature near 90, minimum relative humidity 18-20%, and northwest winds to 15 mph.

Fire Situation:

You have arrived at the fire and have a safe anchor point to work from. The fire is about 3 acres. The fire currently has a moderate rate of spread in surface fuels. The time is 1030.

Question:

What are your trigger points?

F. Levels of Engagement

NOTES

1. What do you do when a trigger point is hit?

- Validate continuing with full engagement of the fire, or
- Implement your pre-planned response.

2. Decision point

- Continue full engagement
- Hold in place
- Change tactics
- Withdraw

3. DRAW-D Concept

a. Defend

- Hold and improve the line.
- Buys time to reassess.
- Fireline can be improved.
- Troops can regroup.
- Patrol and mopup.
- Structure protection.

b. Reinforce

- Add resources necessary to advance or defend.
- Order additional personnel and equipment.
- Assist resources already on the fireline.

NOTES

- c. Advance
 - Direct/Indirect attack or active burn out operations.
 - Direct versus indirect line can be considered.
 - Firing operations.
- d. Withdraw
 - Abandon established position in response to influences adversely affecting the ability to advance or defend.
 - Move directly to a safety zone.
 - Certain situations may require crews to drop gear in order to move faster.
- e. Delay
 - Wait for conditions to meet pre-identified triggers necessary to advance or defend.
 - Gather information to ensure good situational awareness.
 - Consult with others.
 - Hold in place for improved conditions.

4. Leader's responsibilities

What responsibilities do leaders have when they initiate a change in the level of engagement on a fire?

- Communicate a clear change order to you firefighters.
- Account for all your firefighters.
- Ensure your firefighters change engagement as planned.
- Communicate the information to adjacent resources and up the chain of command.
- Ensure an experienced firefighter with a radio is the last person out during a withdrawal (most possibly you).
- Reassess the situation and re-brief before re-engaging the fire.

III. RECOGNITION

A. Escape Route and Safety Zone Recognition

We have been talking about decision-making.

- When to engage the fire?
- When to withdraw?

How do we recognize effective escape routes and safety zones so we can make those decisions?

NOTES

B. A Process to Use

- Observe the area
- Visualize fire spread
- Identify valid safety zones
- Inform others
- Evaluate conditions

1. Observe

Personally observe potential safety zones and escape routes in the work area.

2. Visualize

Build a mental picture of the fire behavior you would expect if conditions existed that would enable a crown fire to burn around your potential safety zone.

- Anticipate flame lengths.
- Anticipate convective influences.

3. Identify

Compare the fire behavior you visualize with the size and location of potential safety zones you observe in order to identify any true safety zones available.

4. Time

Have someone walk the route from the work location to the potential safety zone(s). They should identify any hazards and obstacles that would impede orderly and safe withdrawal to the safety zone.

5. Inform

Communicate the location and path of travel to those who work for you and around you.

Flag or otherwise mark if the escape route or safety zone is not obvious.

6. Evaluate

You must continually evaluate your escape and safety plan to ensure that it will still work.

- Time of day and fire intensity changes.
- Tactical progress and travel distance changes.

C. Safety Zone

1. What is a safety zone?

2. What are the three primary types of safety zones?

NOTES

3. Location, location, location.

- Heavy fuels?
- Down wind?
- Above the fire, in a chimney or in a saddle?
- Fine fuels and burn out?
- Flank of the fire?
- Lowest ground?

4. Radiant vs. convective heat.

Convective influences can push lethal heat to surprising distances and increase safety zone size requirements. What are these influences?

5. Estimating safety zone size.

- This model was developed by the Missoula Fire Lab.
- This model considers the heat impact from radiant heat only, thus it provides a tool to estimate minimum safety zone size.

COMPLETE THE EXERCISE ON THE FOLLOWING PAGE.

EXERCISE 2 - ESTIMATING SAFETY ZONE SIZE

WILL IT WORK FOR A SAFETY ZONE?

Answer the question in your groups and elect a spokesperson to present your solution. 10 minutes allowed for completion.

Your Assignment:

It is October 3 and your 20-person crew has been working on the 3,000 acre Madre fire for two days. The fire is located in the Coast Range of southern California. Your crew is one of four hand crews assigned to the Division C.

Local Factors:

The fire is burning in chaparral about 10' tall. For the last two days you have observed 20' flame height on upslope runs during the peak of the burning period. It is 0700; conditions are the same today and you are anticipating the same level of fire behavior.

Fire Situation:

The four crews in Division C are to construct indirect handline up a ridge to tie into a dozer line on top. The fire edge has not yet become established in the drainage adjacent to the proposed line location. You anticipate the fire will continue to make hooking upslope runs with the normal diurnal winds predicted for today.

Proposed Safety Zone:

You are at the anchor point which is an area at the base of the ridge that has been cleared by a dozer. The cleared area is flat and about 200 feet wide by about 300 feet long. Brush surrounds the cleared area on all sides.

Question:

Will it work for a safety zone?

It's never black and white. This is only an exercise to get you to think about safety zone criteria. Everyone painted a different mental picture of this situation based on their experience. You should have considered the following:

- Did you think about how much room you would need for all 80 firefighters and their vehicles?
- Did you consider location in relation to head of the fire?
- Did you consider the channeling effects of any significant topographic features?
- Did you consider convective influences of wind?

6. Requirements for an effective escape route.

- a. What are the requirements for an effective escape route?

NOTES

b. How do you calculate escape time?

c. Uphill escape routes.

7. Safety margin.

Your safety margin is simply the time you estimate it will take the fire to spread to your location, minus your known escape time.

This number needs to be a positive number!

For example, if you estimate that the fire could spread to your location in 30 minutes and your escape time is 10 minutes, the calculation is $30 - 10 = +20$. Your safety margin is 20 minutes.

a. Safety margin paradox:

- Firefighter escape time will increase during the burning period (fireline progress and fatigue).
- Fire rate of spread will increase during the burning period (typically warmer, drier, windier).
- Safety margin will decrease.
- Many fatalities have occurred because firefighters have waited too long to make the decision to leave (South Canyon).

NOTES

- b. How far away from my safety zone can I be and still have a positive safety margin?
 - When fire environment conditions degrade you must shorten escape time or even go to a less aggressive level of engagement. Escape times of 5-10 minutes may be required.
 - When fire environment conditions improve you can increase your escape time and become more aggressive in the level of engagement. Escape times of 30-60 minutes may be acceptable.
- c. Adjusting LCES.
 - Narrow safety margins should be considered a standard trigger point.
 - Conditions on fires seldom remain constant, you may need to adjust any or all parts of your LCES system several times during a shift to reflect changing conditions.

IV. THE HUMAN FACTOR

NOTES

A. Escape and Safety Decision Paths

Listed below are the four possible escape and safety decision paths and the associated LCES errors.

1. Normal escape
 - Safety zone; life is good.
2. Normal escape
 - Inadequate safety zone; deploy fire shelter.
 - Safety zone size estimation error.
3. Escape cut off
 - Select a deployment site; last resort survival.
 - Lookout observation error.
 - Communication of withdrawal alarm error.
 - Escape time estimation error.
4. No escape route in place
 - Select a deployment site; last resort survival.
 - Failure to establish LCES.

NOTES

B. Fires do not Kill Firefighters

- Firefighter decision errors kill firefighters.
- As you have just seen, four things can happen when you have to implement your escape and safety plan; three of them are bad.
- Your decision-making and communication skills as a leader will determine the outcome.

C. Entrapments = Decision Errors

1. Where do entrapments most frequently occur?

2. Who is most frequently involved?

NOTES

3. When do entrapments typically happen?

4. Why do entrapments happen?

D. The Bottom Line

The lesson was an opportunity for each of us to assess how we approach firefighter safety and a forum to learn from others.

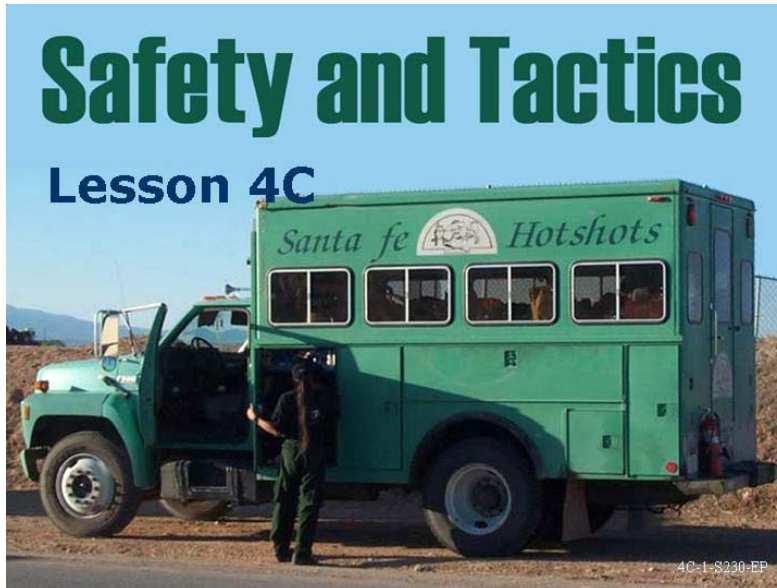
No rules, standards, policies, or checklists will ensure your safety on the fireline.

Maintaining awareness of your situation and using fundamental firefighting methods are the foundation for safe and effective fireline operations.

INAJA FATALITY FIRE MONUMENT - 1956. THE TEN STANDARD FIREFIGHTING ORDERS WERE DEVELOPED AFTER THIS TRAGEDY.



Unit 4 - Fireline Operations



OBJECTIVES:

1. Demonstrate the proper use of LCES in the fire environment in relation to the Crew Boss role.
2. Organize, plan and describe the actions that are required when a crew is deployed for fireline suppression activities.
3. Given an Incident Response Pocket Guide, safely complete a simulated fireline assignment.
4. Describe safety precautions that should be addressed by the Crew Boss in downhill and indirect fireline construction.
5. Describe applicable methods to employ in fireline construction that will facilitate rehabilitation.
6. List the items to check when inspecting a completed fireline.

7. List crew procedures used in staging areas.
8. Describe Crew Boss responsibilities for accidents, injuries, and near misses.
9. Identify supply needs and explain the process for re-supplying a crew while on the fireline.
10. Complete an After Action Review (AAR).

I. SIZING UP YOUR SITUATION

NOTES

A. Operational Activities

- Fireline construction
- Firing and holding operations
- Mopup and rehabilitation
- Initial attack

B. Sizeup Considerations

- Fuel characteristics
- Topographic characteristics
- Weather conditions
- Fire behavior conditions
- LCES
- Operational period
- Area of responsibility

C. Information Sources

- Line personnel
- Air tactical personnel
- Local people
- Planning unit personnel (field observers, situation unit leader)

D. Sizeup Methods

- Ask questions
- Request helicopter flight
 - Have the pilot make various passes over the work area, i.e., division(s).
- Personally travel the area
- Walk the fireline
- Assign individuals to sizeup

NOTES

E. Topography

- Aspect
- Position on the slope
- Downhill or uphill line construction
- Width of the canyon
- Box canyon or chute
- Percent of slope
- Potential for rolling material
- Natural or constructed barriers
- Elevation
- Saddles

F. Fuels

- Fuel characteristics
- Line construction specifications
- Access and mobility
- Safety zones
- Spotting potential
- Hazards to personnel

G. Fire Behavior

- Rate and direction of spread
- Type of fire spread
- Classification of the fire
- Indicators of extreme fire behavior
- Fire size
- Location

H. LCES (Lookouts, Communications, Escape Routes, Safety Zones)

- Post lookouts, maintain communications, establish escape routes and safety zones.
- Must be established and known to all firefighters before needed.

I. Weather Conditions

- Maximum and minimum relative humidity
- Wind velocity, direction, and pattern
- Temperature variations
- Thermal belts
- Thunder storm activity
- Inversions
- Foehn winds
- Fire weather forecasts
- Red flag warning, alerts
- Date of the last precipitation
- Indicators of stability

J. Other Elements

- Biological and environmental hazards
- Human made hazards
- Availability of critical support
- Crew condition
- Natural or constructed features
- Sensitive resource areas
- Accessibility and coordination with adjoining forces

NOTES

COMPLETE THE EXERCISE ON THE FOLLOWING PAGE.

EXERCISE 1 - SIZING UP YOUR SITUATION

Scenario:

A crew is assigned to Division A on a wildland fire incident. The crew is to fly to H-1 and then to construct direct line from H-1 to the A-B Division boundary.

1. Before the flight to H-1, what can the Crew Boss do to prepare for this assignment?
2. During the flight to H-1, what can the Crew Boss do to improve situation awareness in this assignment?
3. After the crew has arrived at H-1, what actions should the Crew Boss take prior to making crew assignments?

NOTES

II. FIRELINE AND HAND TOOL CONSIDERATIONS

A. Line Locator

B. Fireline Construction

- Barriers
- Handline
- Mechanized line
- Wet line
- Cold trailing
- Fireline explosives

C. Tool Selection

- Fuel type
- Soil
- Terrain features

D. Tool Assignment

- Fuel type
- Size and weight
- Length of assignment
- Endurance factor
- Training and experience

E. Crew Performance

- Spot fires
- Flare ups along the line
- Multiple lookouts
- Falling operations
- Hot spotting
- Split crew actions
- Staging area procedures

F. Line Specifications

- Canopy width or “the cut”
- Line width or “the scrape”

G. Minimum Impact Suppression Tactics (MIST)

Safety concerns:

- Lines not cut wide enough to stop the spread of a wildland fire.
- Personnel working with poor escape routes or no safety zones.

It is the Crew Boss’s responsibility to ensure that minimum impact suppression tactics are used whenever possible, but not at the expense of safety to the crew.

III. FIRELINE TACTICS

A. Direct Attack

- Parallel - a method of direct attack.

B. Indirect Attack

Hazards of indirect attack:

- Unburned fuel between you and the fire.
- Numerous shelter deployments and fatalities.
- Difficult to observe the main fire.
- Complacency
- Inadequate safety zones/escape routes.

IV. DOWNHILL FIRELINE CONSTRUCTION

The Crew Boss must possess the ability to determine whether a particular area or route will actually work as a safety zone and then apply this knowledge by communicating it to all crew members.

A. Downhill Fireline Construction Hazards

Downhill fireline construction is hazardous in steep terrain, fast-burning fuels, or rapidly changing weather conditions.

Downhill fireline construction should not be attempted unless there is no tactical alternative.

B. Downhill Line Construction Guidelines

1. Crew supervisor(s) and fireline overhead will discuss assignments prior to committing crew(s). Responsible overhead individual will stay with job until completed.
 - Decision is made by a competent firefighter after thorough scouting (Taskforce Leader [TFLD] or Incident Commander Type 4 [ICT4] qualified or higher).
2. Decision will be made after proposed fireline has been scouted by supervisor(s) of involved crew(s).
 - Downhill line construction should not be attempted when fire is directly below the proposed starting point.

3. LCES will be coordinated for all personnel involved.
 - Communication is established with crews working downhill and crews working toward them from below. When either crew can adequately observe the fire, communication will be established between the crews. Supervising overhead and a lookout posted where the fire can be seen.
 - The crew will be able to rapidly reach a safety zone from any point along the line if the fire unexpectedly crosses below them.
 - Be aware of and avoid the Watch Out Situations.
 - Fully comply with the Standard Firefighting Orders.
4. Direct attack will be used whenever possible; if not possible, the fireline should be completed between anchor points before being fired out.
 - If applicable, line firing should be done as the line progresses, beginning from the anchor point at the top. The burned area provides a continuous safety zone for the crew and reduces the likelihood of fire crossing the line.

NOTES

5. Fireline will not lie in or adjacent to a chute or chimney.
 - The fireline should not lie adjacent to a chute or chimney that could burn while crew is near.
6. Starting point will be anchored for crew(s) building fireline down from the top.
 - A downhill line should be securely anchored at the top. Avoid underslung line if practical.
7. Bottom of the fire will be monitored; if the potential exists for the fire to spread, action will be taken to secure the fire edge.

COMPLETE THE EXERCISE ON THE FOLLOWING PAGE.

EXERCISE 2 - DOWNHILL LINE CONSTRUCTION

In your group, review the assigned downhill line construction example shown in the video. Within your group, discuss how the checklist could have been implemented to provide for a safe assignment. Be prepared to present your findings to the class. Utilize the downhill checklist in the IRPG.

Note: Downhill Checklist was developed as a result of the Loop Fire.

Mann Gulch, 1949

Loop, 1966

South Canyon, 1994

NOTES

V. AIR SUPPORT

A. Air Support

- Retardant drops
- Sling loads
- Paracargo
- Reconnaissance
- Personnel movement

Do not rely on aviation resources as lookouts.

B. Aircraft Use

- Anticipate needs early
- Need is appropriate use
- Inform supervisor
- Confirm radio frequencies

C. Inappropriate Situations

- Poor visibility
- Heavy timber overstory
- Hazard trees
- Low values at risk
- Aircraft require an “out”
- High winds reduce drop accuracy
- Rotor wash or aircraft vortex problems
- Requesting late in the day means loss of daylight

D. Communicating with Aircraft

NOTES

1. Clock method

- Make visual contact
- Imagine clock
- Add vertical dimension
- Add distance
- Reference from a known location
- Reference to the parts of the fire
- Provide Global Positioning System (GPS) coordinates if available

2. Communicate target objective

COMPLETE THE EXERCISE ON THE FOLLOWING PAGE.

EXERCISE 3 - AIR SUPPORT

Scenario:

You are assigned to the Rocky Fire. The fire consists of four divisions. Your crew is assigned to Division B along with two other Type 2 hand crews. Division B and C have approximately 120 chains of open line between them in a remote roadless area. Divisions A and D are lined and mopup operations are in progress.

Fuels:

Fuel model 4.

Fire Behavior:

Division A and D are in a smoldering stage with some ground fire occurring. Occasional torching of aerial fuels can be expected throughout the operational period.

Divisions B and C are in a creeping fire stage experiencing intermittent open flame up to two feet along the perimeter of the fire. Occasional torching is occurring in the far north end of the fire between the two divisions.

Weather Current:

Mid-flame winds south at 0-3 miles per hour.
Relative humidity is 51%, and the temperature is 58 degrees.

Weather Predicted:

Mid-flame winds south to southwest 0-3 miles per hour.
Relative humidity 22% with a temperature of 80 degrees.

Assignment :

Build direct line and burn out where needed in conjunction with the other two hand crews in the division. There are four Type 2 hand crews working your direction in Division C. All three hand crews assigned to Division B are to be flown into H-3 at the Division A/B boundary.

The incident action plan (IAP) indicates the Rocky air tactical group supervisor will be airborne over the incident at 0700. There are three Type 2 helicopters and four Type 2 air tankers assigned to the incident.

The time is now 0600. The incident briefing has just concluded and your division supervisor (DIVS) has directed all of the Crew Bosses to meet outside the briefing tent for further directions.

Answer the following questions in groups and elect a spokesperson to provide your solutions to the class.

1. What helicopter/fixed wing issues should you and the DIVS discuss at this time?
2. What other incident personnel can you place orders with?
3. Describe the information you would provide when ordering air support.

4. What information should you request from the individuals you listed in question two when placing your order?

It is now 1000 and there is a spot fire causing problems. The DIVS has directed you to use the Type 2 helicopter to suppress the spot fire. The helicopter will be at your spot fire in five to eight minutes. There is a five-person squad from your crew with radio communications working the spot at this time. Your position is ten chains above the spot where you can clearly see your crew and the squad.

5. Describe any safety concerns you have regarding your crew in relation to the incoming air support and the appropriate actions you should take.
6. Describe the procedures and any equipment you will use to guide the responding aircraft to the target.
7. Describe the information that should be communicated to the pilot after the drop is completed.

Your crew has been working for three hours. They will be unable to complete the operational period without being re-supplied with drinking water and saw gas.

8. What actions should you take?

It is now 1100. Your DIVS advises you and the other two Crew Bosses that your crew is to use the necessary personnel and equipment to construct a new helispot in the area of where the crews expect to have completed line by 1800. The helispot must be built to land a Type 2 helicopter and be completed by 1700.

9. What are your safety concerns during the construction of the helispot?

10. List the minimum distances to accommodate overall length, rotor blade diameter and safety allowance for a two way helispot. Include touch down pad, safety circle dimensions and firmness requirements.

11. What procedures do you take when the helispot is complete and ready for operation?

NOTES

VI. FIRING AND HOLDING

A. Two Types of Firing Operations

1. Burn out

- Direct attack
- Crew Boss responsibility

2. Backfiring

- Indirect attack
- IC responsibility

B. Firing Operation Preparations

- Reduce fuels, pretreat
- Fall/pretreat snags
- Scatter/pretreat fuel
- Request support
- Install hoselays
- Request air drops
- Stage resources
- Recommend alternatives

C. Crew Boss Responsibilities

- Lines properly located
- Ladder fuels removed
- Cup trenches in place
- Snags are felled
- Line is burned out
- Spots located
- Lines tied together

D. Holding Operations

- Check for quality line
- Spread out
- Moving with the lighters
- Spot fire patrol
- Monitor problem areas
 - Flare-ups
 - Snags
 - Rolling material
- Coordinating with adjacent forces

NOTES

COMPLETE THE EXERCISE ON THE FOLLOWING PAGE.

EXERCISE 4 - FIRING AND HOLDING

Scenario:

You are a Type 2 Crew Boss. You have just completed check-in at the Diamond Fire Incident Base and have been briefed by the DIVS. Your assignment is to use your bus and pickup truck, drive to Drop Point 1, tool up and assist two Type 1 hotshot crews constructing fireline in Division A on the west flank of the fire. The hotshot crews have been working the fire for three hours constructing direct line and burning out where necessary. The fire has been burning for four hours.

Fuels:

Fuel model 2

Fire behavior:

The fire is burning in a northeast direction at a moderate rate of spread with spotting occurring up to 1/4 mile in front of the head of the fire. The flanks of the fire are experiencing a backing and flanking fire condition with some short range spotting occurring up to fifty feet outside the main fire edge. Topography is gentle slopes up to a maximum of thirty percent.

Current Weather:

Mid-flame winds are south southwest up canyon two to six miles per hour. Relative humidity is 18% and the temperature is 83 degrees.

Weather Predicted (by 2000):

Mid-flame winds down canyon three miles per hour and ridge top winds will be east two to six miles per hour. Relative humidity is expected to be 25% and the temperature should be about 68 degrees.

1. What should you consider regarding equipment and supplies prior to leaving the base?

2. What information should you discuss with the Type 1 Crew Bosses upon arriving at Drop Point 1?

You have discussed the general situation with the other two Crew Bosses. It is agreed by all of you that your crew will be most effective holding the completed line from DP-1 as far out from the line as you can safely deploy. The Type 1 crews estimate they have progressed with completed line construction approximately one mile from DP-1.

3. What procedures should you consider prior to deploying your crew?

Firing has been progressing successfully for 30 minutes when one of your squad boss radios to you that she is observing drift smoke coming from the trees 100 yards outside of the fireline.

8. What action should you consider at this time?

The squad boss reports a small spot fire (10 ft. x 10 ft.), burning in light fuel around the base of a snag. The fire is just getting established in the base of the snag. The squad boss advises she can handle the spot with the resources on scene.

9. What actions should you consider at this time?

10. Describe the appropriate suppression action that the squad boss should implement.

NOTES

VII. MOPUP AND REHABILITATION

A. Mopup

1. Establish LCES.
2. Sizeup
 - Identify hazards to personnel.
 - Identify critical threats to fireline.
 - Plan work according to mopup objectives.
3. Brief crew.
4. Obtain the proper mopup support equipment.
 - Go through proper chain of command.
5. Deployment of crew.
 - Gridding
 - Pairing up or “buddy system.”
 - Work the area in a methodical fashion.
6. Coordination with adjoining forces.
7. Night operations.
 - Safety considerations.

B. Rehabilitation

NOTES

Follow rehabilitation standards:

- Incident Action Plan (IAP).
- May work for rehabilitation specialist (Burned Area Emergency Response [BAER] team).

COMPLETE THE EXERCISE ON THE FOLLOWING PAGE.

EXERCISE 5 - MOPUP AND REHABILITATION

Scenario:

A crew has been working on a Type 2 incident for two weeks in the southeastern United States. Fuels are mostly in fuel model 6, the weather has been 70-80 degrees every day, and the relative humidity has averaged 30 - 50 percent. Thunderstorm winds have caused control problems and hazards most afternoons. Today the fire is smoldering and the lines have been completed around the entire perimeter.

1. What are some safety considerations that must be identified during the mopup phase of this fire suppression effort by the Crew Boss?
2. In addition to safety responsibilities, Crew Bosses must ensure that crew members function as effectively as possible. How can a Crew Boss ensure mopup is accomplished efficiently?
3. It is often extremely challenging for Crew Bosses to keep crew members motivated during mopup operations. How could a Crew Boss in this situation mitigate this challenge and guard against morale letdowns?

VIII. INITIAL ATTACK

NOTES

Crew Boss may be asked to divide the crew into smaller initial attack modules. Ensure that each module has a qualified Initial Attack Incident Commander.

Orientation briefing:

- Escape routes
- Safety zones
- Fuel types
- Local fire behavior
- Communication procedures
- Aircraft availability
- Local hazards
- Medical evacuation
- Special logistical support needs

COMPLETE THE EXERCISE ON THE FOLLOWING PAGE.

EXERCISE 6 - INITIAL ATTACK

Scenario:

A crew is working in the Southwest and has been assigned to assist with local initial attack activities. Lookouts in the area have reported 30 new starts from last night's lightning storm. Today's forecast calls for increased temperatures and local gusty winds.

1. As the Crew Boss, what can you do to prepare the crew for this assignment?

After the crew is prepared, the Fire Management Officer (FMO) requests the Crew Boss to break the crew into six 3-person and one 2-person modules because the reported fires have been smaller than 1/4 acre in size.

2. How should the Crew Boss organize the crew to meet the FMO's request?
3. What options does the Crew Boss have if there are only five crew members who are Initial Attack Incident Commander qualified?

It is now 2000 and lightning is starting many small fires in the area. Two more Initial Attack Incident Commanders have joined the crew and everyone is getting ready to initial attack the new fires.

4. What items would you brief your crew about in this situation?

IX. WILDLAND/URBAN INTERFACE

With the increased firefighting activities in the urban interface, wildland firefighters must become aware of a new fire environment.

A. Poor Access and Narrow One-way Roads

- Which direction should you have your vehicles pointed when parked?
- What sort of safety concerns would you have as a Crew Boss?

B. Bridge Load Limits

- What vehicles are using the bridge (dozers, engines, water tenders, crew transports)?

C. Wooden Construction and Wood Shake Roofs

- How would a crew help to mitigate this challenge?

D. Powerlines, Propane Tanks, and HazMat Threats

- What should the Crew Boss consider when encountering these situations when responding to an incident? Who should be contacted to mitigate the hazards?

E. Inadequate Water Supply

- What water source opportunities are in the Wildland/Urban environment?
 - Cattle tanks, swimming pools, fire hydrants, irrigation ditches.

- F. Natural Fuels 30 Feet or Closer to Structures
- How can a crew reduce the fuel loading problems near structures?
 - Do you cut down “ornamental landscaping?”
- G. Structures in Chimneys, Box Canyons, Narrow Canyons, or on Steep Slopes (30% or Greater).
- What would be a major safety issue for you and your crew?
 - How would you mitigate that safety issue?
- H. Extreme Fire Behavior
- It is appropriate and highly encouraged to pull back to a safe place and watch the fire when you are uncomfortable with the current fire behavior conditions.
- I. Strong Winds
- What are some of the problems you would expect to encounter in the Wildland/Urban environment under strong, erratic wind conditions?
- J. Evacuation of Public (panic)
- What are some of the problems you would expect to encounter during a public evacuation?

X. “WHAT WOULD YOU DO?”

NOTES

Given individual situations, students will act as Crew Boss and answer various “What would you do” questions.

Do you have any “What would you do” questions for the instructors?

Exercise 7 Tactical Decision Games



Directions:

1. The instructor/group facilitator will introduce a scenario (as a briefing), then select a student to provide a solution.
2. The instructor/group facilitator will direct the selected student to issue the decision as instructions to other students assigned to “subordinate roles.”
3. After instructions have been issued, the instructor/group facilitator will check role-playing subordinates’ feedback to ensure instructions were understood.
4. The instructor/group facilitator will select other students for additional solutions, repeating the process.

S-230 TDG Exercise

“ALASKA”

OBJECTIVE:

AS THE CREW BOSS, YOU MUST DECIDE HOW THE ASSIGNMENT CAN BE SAFELY APPROACHED AND THEN VERBALLY COMMUNICATE YOUR DECISION TO THE APPROPRIATE INDIVIDUALS.

SCENARIO:

You are the Crew Boss of a 16-person native Alaskan crew that you met briefly two hours earlier. One of your crew members has a radio and extensive experience as a liaison. This is your first time in Alaska. You have been in McGrath for three days waiting for a fire assignment. You have had an eight hour course “Alaska Fire Training.” Two hours earlier at 1000, a load of smokejumpers flew to a new start, Fire #X-357" approximately 100 miles to the northeast. You and your crew, “Fort Yukon #3” arrive on the fire by helicopter.

NOTES

S-230 TDG Exercise

“EASTERN AREA”

OBJECTIVE:

AS THE CREW BOSS, YOU MUST DECIDE HOW THE ASSIGNMENT CAN BE SAFELY APPROACHED AND THEN VERBALLY COMMUNICATE YOUR DECISION TO THE APPROPRIATE INDIVIDUALS.

SCENARIO:

You are the Crew Boss for a Type 2 contract crew from Puerto Rico. The crew has a full season of experience working together along with three squad bosses (FFT1s) and a Crew Boss trainee (CRWB-T). You have been told that the fire has made several extensive runs and a Type 1 Incident Management Team (IMT) is transitioning into place sometime this evening.

NOTES

Crew Boss (Single Resource), S-230



OBJECTIVES:

1. Describe the responsibilities the Crew Boss considers prior to returning to the incident base from a tactical assignment.
2. List the key responsibilities of the Crew Boss following tactical assignments while at the incident base or camp.
3. List the key responsibilities of the Crew Boss when the crew is out of service.

I. OFF LINE DUTIES

NOTES

A. When does a Crew Boss start planning off line duties?

B. What is the common factor Crew Bosses base their planning upon?

C. What should a Crew Boss consider regarding departure from an incident assignment?

NOTES

D. Prior to leaving an assignment and/or during travel status back to base in preparation for the next fire suppression operational period assignment, what functions should the Crew Boss have crew personnel perform?

E. When flying by helicopter back to the incident base, which load should the Crew Boss usually fly out with and why?

F. What Crew Boss responsibilities can be delegated to a subordinate supervisor following a tactical assignment while at base or camp?

G. What does the Crew Boss do when the crew is performing off line duties?

H. What should the Crew Boss do to improve morale of the crew?

I. When should the Crew Boss plan for crew activities?

J. What should a Crew Boss do at base or in camp following a tactical assignment?

NOTES

K. Crew welfare and crew conduct should both be considered Crew Boss responsibilities while the crew is out-of-service. What are two other primary responsibilities?

L. When is a Crew Boss responsible for crew members during off shift periods?

M. How can a Crew Boss personally provide for medical attention to his or her crew?

N. What form must be completed for a crew member requiring medical attention at a medical facility?

O. Why is it important for the Crew Boss to ensure that CA-1 and CA-16 forms or agency equivalent forms are promptly completed for any crew member injured on-the-job and requiring medical attention?

P. When completing forms involving claims for lost, stolen or damaged property, what incident personnel may the Crew Boss coordinate with?

Q. What other personnel does the Crew Boss have available on the crew to accomplish off line responsibilities?

COMPLETE THE UNIT QUIZ ON THE FOLLOWING PAGE.

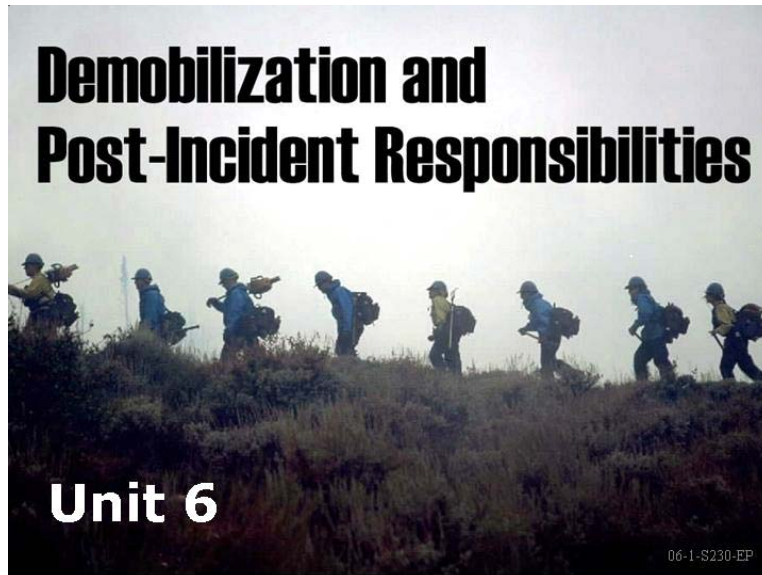
5. What Crew Boss responsibilities can be delegated to a subordinate supervisor following a tactical assignment while at the incident base or camp? List four.

6. List three key responsibilities a Crew Boss has prior to going out-of-service.

7. Crew welfare and crew conduct should both be considered Crew Boss responsibilities while the crew is out of service. Circle two other primary responsibilities.
 - a. Administrative responsibilities.
 - b. Communication of crew status.
 - c. Communication through home unit supervisor.
 - d. Develop incident action plan (IAP).
 - e. Secure line assignments that will meet crew training needs.

8. During out-of-service periods, what responsibilities does a Crew Boss have for providing medical attention to his or her crew? List three.

9. When completing forms involving claims for lost, stolen or damaged property, what incident personnel may the Crew Boss coordinate with?
- a. Division group supervisor
 - b. Compensation/claims unit leader
 - c. Security manager
 - d. All of the above
 - e. a and c
10. Explain why it is important for the Crew Boss to ensure that medical forms are promptly completed for any crew member injured on-the-job and requiring medical attention.



OBJECTIVES:

1. Describe procedures for re-supply of fire expended items.
2. List the steps necessary for the demobilization of a crew from an incident.
3. List the key responsibilities of a Crew Boss prior to disassembly of crew at the initial mobilization point.

I. RE-SUPPLY

NOTES

Re-supply: restocking property and supplies lost, damaged or consumed on an incident. Re-supply can occur from the supply unit at the incident, local cache or from other sources at the home unit.

A. When should fire-expended items be re-supplied back at your home unit? What type of items should be considered?

B. When should fire-expended items be re-supplied at the incident?

C. What types of items need to be considered?

NOTES

D. Why should items be re-supplied at the incident whenever possible?

E. Prior to demobilization, what should be done to re-supply expended items that cannot be replaced by the incident supply unit?

F. Prior to demobilization, what can be done to aid in the re-supply of expended items when there is not an incident supply unit present?

II. DEMOBILIZATION PROCEDURES

NOTES

A. What sources of information does the Crew Boss have available to keep informed of the demobilization process?

B. What issues does the Crew Boss need to consider before being reassigned to another incident?

C. What ICS form is usually used in the demobilization process?

D. Where does the Crew Boss obtain the ICS 221, Demobilization Checkout form?

NOTES

E. What actions that must be completed prior to demobilization from an incident?

F. What is the Crew Boss required to do after receiving the ICS 221 form?

G. As part of the demobilization process, when does the Crew Boss need to ensure that individual crewmembers sign or initial their personal firefighter time reports (FTR)?

III. POST-INCIDENT RESPONSIBILITIES

NOTES

A. The Crew Boss is responsible for what duties during return travel status?

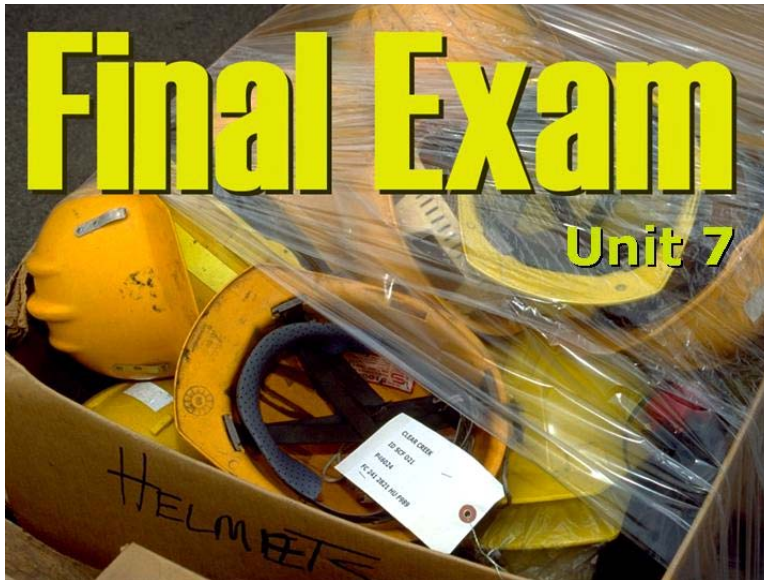
B. What are the primary responsibilities of a Crew Boss prior to disassembly of crew at home unit?

C. Why should a critique of the incident be performed with the crew (AAR)?

5. Circle the items during return travel status that a Crew Boss is responsible for:
 - a. Arranging meals for crew personnel.
 - b. Providing lodging.
 - c. Checking in with agency dispatch office, regarding travel status.
 - d. Crew conduct.
 - e. Providing telephone use at scheduled rest stops.
 - f. All the above.

6. List the steps necessary for demobilization of a crew from an incident.

Crew Boss (Single Resource), S-230



OBJECTIVE:

1. Obtain 70% or higher on the final examination to pass the course.

I. FINAL EXAMINATION INSTRUCTIONS

A. Time

You will have one hour to complete the final examination.

B. Reference Material

The following reference material will be allowed for the exam:

- Fireline Handbook
- Incident Response Pocket Guide
- Student Workbook

C. Points

There are 100 points possible on the final exam. Each answer is worth one point. Many questions ask for lists of items; if an answer is reasonable, credit will be given. In cases where a question is unclear, justification written beside the answer may also be given credit at the discretion of the instructor.

II. STUDENT FINAL COURSE EVALUATION

When you are finished with the exam, please complete the student final course evaluation.

