

# Helibase Manager S-371



NFES 2885

**Instructor Guide**  
**MARCH 2007**



## CERTIFICATION STATEMENT

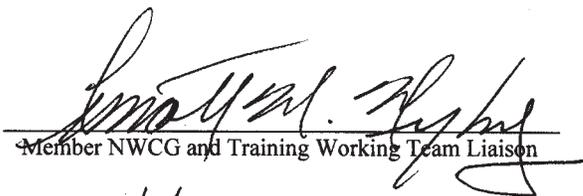
on behalf of the

### NATIONAL WILDFIRE COORDINATING GROUP

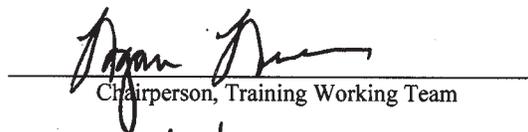
*The following training material attains the standards prescribed for courses developed under the interagency curriculum established and coordinated by the National Wildfire Coordinating Group. The instruction is certified for interagency use and is known as:*

Helibase Manager, S-371  
Certified at Level I

This product is part of an established NWCG curriculum. It meets the COURSE DEVELOPMENT AND FORMAT STANDARDS – Sixth Edition, 2003 and has received a technical review and a professional edit.

  
Member NWCG and Training Working Team Liaison

Date 3/11/2007

  
Chairperson, Training Working Team

Date 2/21/07

# Helibase Manager

## S-371

### Instructor Guide

MARCH 2007  
NFES 2885

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National Interagency Fire Center, Fire Training, 3833 S. Development Ave., Boise, Idaho 83705.  
E-mail: [nwcg\\_standards@nifc.blm.gov](mailto:nwcg_standards@nifc.blm.gov).

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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 2885.

**National Wildfire Coordinating Group  
Training Working Team  
Position on Course Presentation and Materials**

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

- Lead instructors are encouraged to enhance course materials to reflect the conditions, resources and policies of the local unit and area as long as the objectives of the course and each unit are not compromised.
- Exercises can be modified to reflect local fuel types, resources and conditions where the student will be likely to fill incident assignments. The objectives and intent of the exercises must remain intact.
- Test questions may be added that reflect any local information that may have been added to the course. However, test questions in the certified course materials should not be deleted to ensure the accurate testing of course and unit objectives.
- Test grades, to determine successful completion of the course, shall be based only on the questions in the certified course materials.

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

**Course Length for NWCG Courses**

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

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

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

## **PREFACE**

Helibase Manager, S-371 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:

### **U.S. FISH AND WILDLIFE**

Joe Krish – Blackwater National Wildlife Refuge

### **U.S.D.A. FOREST SERVICE**

Nic Strohmyer – Wasatch National Forest

Jeff Quick – Prescott National Forest

### **NATIONAL INTERAGENCY FIRE CENTER, FIRE TRAINING**

Ed Secakuku, Project Leader, NWCG Development Unit

Rose Secakuku, Editorial Assistant, NWCG Development Unit

Barbara Peterson, Graphic Artist, Instructional Media Unit

Comments regarding this package may be addressed to:

National Interagency Fire Center

Fire Training - Standards Unit

3833 S. Development Avenue

Boise, Idaho 83705

E-mail: [nwcg\\_standards@nifc.blm.gov](mailto:nwcg_standards@nifc.blm.gov)



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## COURSE INSTRUCTIONS

**This section contains instructions and information essential to the instructor in making an effective presentation. All instructors must be thoroughly familiar with this section and all other course material prior to presenting the course.**

### I. COURSE INTRODUCTION

The Helibase Manager, S-371 course will require 28 to 32 hours for presentation. This course is designed to meet the training needs of a Helibase Manager on an incident as outlined in the Wildland Fire Qualification System Guide, PMS 310-1, and the Position Task Book (PTB) developed for the position.

The Wildland Fire Qualification System Guide, PMS 310-1 provides guidance and a national wildfire standard for establishing minimum training, skills, knowledge, experience, and physical fitness requirements for the participating agencies of the National Wildfire Coordinating Group.

The instructor guide contains all information and references necessary for the course coordinator, instructors, and students. The course instructions contain information concerning course administration. Subject material is presented in units of instruction. Exercises in the units are designed to demonstrate procedures. Reference material is provided to assist students in the classroom and on the job.

The course is designed to be interactive in nature. It contains several exercises designed to facilitate group and class discussion. The lessons provide introduction to operational leadership, mobilization, arrival at the incident, risk management, entrapment avoidance, safety and tactics, off line duties, demobilization, and post-incident responsibilities.

While lead instructors are encouraged to enhance course materials to reflect conditions, resources, and policies of the local unit, they must ensure that objectives of the course and each unit are not compromised. Test questions may be added to reflect any local information that may have been added to the course. However, test questions in the certified course materials cannot be deleted to ensure accurate testing of the course and unit objectives.

## II. COURSE OBJECTIVES

Course objectives are stated in broad terms that define what the student will be able to accomplish after completing the course. At the successful completion of this course the students will be able to:

- Perform the tasks required of a Helibase Manager to develop, organize, and manage a helibase in given simulations and exercises to support incident activities.

## III. INSTRUCTOR PREREQUISITES

Refer to the Field Manager's Course Guide (FMCG), PMS 901-1 for instructor prerequisites specific to this course (online at <http://www.nwccg.gov/pms/training/>).

This is a 300 level course. In addition to the course specific instructor prerequisites, all instructors are required to have 32 hours of instructor training (Facilitative Instructor, M-410 or equivalent) as stated in the FMCG.

## IV. INSTRUCTOR PREPARATION

The material in this course is designed to be presented through a series of facilitated discussions and classroom exercises. Instructors must devote adequate time for their presentations and should draw from their experiences to add realism and credibility to the information provided.

The exercises are designed to demonstrate the student's ability to meet the objectives for each unit. A daily Incident Action Plan is utilized as part of an exercise to familiarize the students with locating and extracting information necessary to function in the position. The instructors must work through the exercises together and agree upon the solutions.

Students will be formed into groups for the exercises and intermixed according to experience level and geographic location of their home unit. Use the student profile the students submitted from the pre-course work to aid in arranging groups. Due to the nature of the exercises in this course, seating should allow for ease of discussion and interaction between the students.

The course coordinator/lead instructor will need to ensure an adequate number of coaches are available for each student group. The instructor serves as a coach and evaluator for the assigned group during the course. Assigned groups will work together throughout the course on all group exercises.

The coach is responsible for evaluating student's progress and participation in exercises, and for keeping students on track for all exercises. The coach is responsible for providing the final written evaluation for each student. For this reason it is important to recruit an instructor cadre that will be available to observe students for all units of instruction and exercises.

## V. COURSE MATERIALS

See Appendix A for course ordering and support information. This appendix contains information on course presentation materials that need to be ordered as well as support material and equipment.

### A. Instructor Guide

The Instructor Guide contains all the information needed for course presentation and list references for the course coordinator and instructors.

The Instructor Guide provides instructor notes to assist with teaching techniques and is presented in **BOLD CAPS** in the lesson plan.

The "Aids & Cues" column serves as a reminder for instructors to display or refer to specific lesson materials.

The codes listed in the Aids and Cues column are as follows:

- IG – Instructor Guide
- IR – Instructor Reference
- SW – Student Workbook
- SR – Student Reference
- EP – Electronic Presentation (PowerPoint)
- HO – Handout

B. Course Materials CD-ROM

The CD-ROM contains complete copies of the Instructor Guide, Appendixes, and Student Workbook in bookmarked files in portable document format (pdf). A bookmark is an electronic index to aid the reader in finding specific portions of the publication. To access the bookmark function, open the file and click on the bookmark tab.

C. Student Workbook

Student Workbooks should be ordered prior to the beginning of the course, one for each student.

D. Sample Agenda

A sample agenda is located at the end of this course introduction. It is suggested that the timeframes be removed from the agenda which is handed out to students. The agenda can be inserted into the student workbook prior to the beginning of the class.

E. Forms and Handouts

On pages 13 and 14 of these course instructions is a list of the forms and handouts utilized in each unit. The forms and handouts are located in the instructor guide, student workbook, and appendixes.

VI. STUDENT TARGET GROUP

This course is required training for all personnel desiring to be qualified as a Helibase Manager.

## VII. STUDENT PREREQUISITES

- Qualified as:
  - Helicopter Manager
  - Helispot Manager
- Recommended training which supports development:
  - Fireline Leadership, L-380
  - Intermediate ICS, I-300

## VIII. STUDENT PRE-COURSE WORK

Mail the following pre-course work materials (located in Appendix D) to students five weeks before they attend the course:

- Student profile form  

Students are to complete the form and send it to the course coordinator or lead instructor prior to class. The form will aid the instructors with placement of students into groups.
- Pre-course test  

Students will utilize the Interagency Helicopter Operations Guide (IHOG) to answer the test questions (students will also record the section and page number of the IHOG where the answer was found). Students are to bring the completed pre-course test to class for discussion.

## IX. COURSE SELECTION LETTER

See the Course Coordinator's Guide, PMS 907, for information on selection letters (online at <http://www.nwcg.gov/pms/training/>).

An example of the course selection letter is located at the end of this introduction section. This letter will accompany the student pre-course materials and explain time frames for submission of the student profile form, class start time, class location, etc.

## X. EXAMINATION AND CERTIFICATION

The instructor cadre will utilize an individual course grade sheet to evaluate each student on the following:

- Pre-course test (10%)
- Class participation (30%)
- Exercise participation – group (30%)
- Exercise participation – individual (30%)

Students must obtain 70% or higher on the individual course grade sheet to receive a certificate of completion for this course. The individual course grade sheet is located at the end of Unit 0.

## XI. CADRE MEETINGS

Cadre meetings are an opportunity for instructors to meet, review the material, and discuss concerns with the course coordinator or lead instructor. The meetings are most critical for instructors who do not have previous experience with the course. After each day's course presentation, a cadre meeting should be held to discuss concerns and progress. At the end of the course, a final cadre meeting should be conducted to evaluate instructor performance and suggest modifications for future courses.

## XII. RECOMMENDED CLASS SIZE

In order to facilitate group exercises, it is recommended that instructors maintain a maximum 4:1 ratio of students to instructors. This is to enable strong mentorship by the cadre to the students. Maximum class size is 24 students.

### XIII. SPACE AND CLASSROOM REQUIREMENTS

The classroom should be chosen and viewed well in advance of the presentation. The choice should be based on, but not limited to, the following characteristics:

- Provide adequate area for students and equipment.
- Be free from outside interruptions and interferences.
- Have controlled lighting, good acoustics, and good ventilation.
- Have supportive facilities such as break areas, restrooms, etc.

Refer to the Course Coordinators Guide, PMS 907 for more information.

### XIV. COURSE EVALUATION FORMS

The evaluation forms are located in Appendix E.

#### A. Unit and Course Evaluations

This is an opportunity for students to comment on the course and the instructors for the purpose of improving future training sessions. These forms are NOT to be sent to the NIFC Standards Unit.

#### B. Training Course Evaluations

Comments are to be made on this form by the course coordinator and/or lead instructor, which should include any relevant comments made by the students, and then submitted to:

National Interagency Fire Center  
Fire Training – Standards Unit  
3833 South Development Avenue  
Boise, Idaho 83705-5354

or e-mail to: [nwcg\\_standards@nifc.blm.gov](mailto:nwcg_standards@nifc.blm.gov)

## XV. APPENDIXES

### **The following appendix is included in this Instructor Guide:**

#### A. Appendix A – Course Ordering and Support Information

A list of materials needed is included in this appendix. Refer to the National Fire Equipment System Catalog, Part 2: Publications ([www.nwccg.gov/pms/pubs/](http://www.nwccg.gov/pms/pubs/)) for materials that need to be ordered.

### **The following appendixes are on the S-371 Course Materials CD-ROM:**

#### B. Appendix B – Electronic Presentations

This appendix contains the electronic presentation in PowerPoint format arranged by units.

#### C. Appendix C – Handouts

This appendix contains the Unit Logs (ICS 214) and the Wildfire Incident IAPs (Days 1 – 5). These handouts will need to be duplicated for each student.

#### D. Appendix D – Pre-Course Work Materials

This appendix contains the student profile form, pre-course test, and pre-course test answer key.

#### E. Appendix E – Course Evaluation Forms

This appendix contains the unit and course evaluation forms (duplicate these forms for student and instructor use).

## **HELIBASE MANAGER, S-371 Selection Letter Example**

Congratulations on being selected to attend Helibase Manager, S371 to be held at (*location*). The course will begin at (*time, date*), and end at (*time, date*).

The primary emphasis of this course will be to prepare individuals for the position of Helibase Manager.

### **Completion of the following pre-course work is mandatory:**

- Student profile form (mail to the *course coordinator or lead instructor by Date*).
- Pre-course test (bring to class).

### **Bring the following items to class:**

- Fireline Handbook  
<http://www.nwcg.gov/pms/pubs/pubs.htm>
- Position Task Book for Helibase Manager  
<http://www.nwcg.gov/pms/pms.htm>
- Interagency Helicopter Operations Guide (IHOG)  
<http://www.nifc.gov/ihog/>

If you desire to receive a certificate of completion for the course, please do not make travel arrangements to arrive after the scheduled start time or to depart prior to the scheduled course completion time.

In the event you cannot attend the course, please contact the course coordinator prior to the beginning of the class. This allows time for notifying personnel that may be on the waiting list to be contacted to fill the vacancy.

If you have any questions please contact the course coordinator, *Name, phone number, e-mail*.



**HELIBASE MANAGER, S371**  
**Sample Agenda**

Monday

1300 Unit 0 – Introduction  
1430 Unit 1 – Common Responsibilities, Procedures, & Duties  
1700 End of Day 1

Tuesday

0800 Unit 2 – Helibase Organization  
1030 Unit 3 – Helibase Briefings  
1200 Lunch  
1300 Unit 4 – Helibase/Helispot Selection and Layout  
1530 Unit 5 – Risk Management and Safety  
1700 End of Day 2

Wednesday

0800 Unit 5 (continued)  
0930 Unit 6 – Planning  
1200 Lunch  
1300 Unit 6 (continued)  
1430 Unit 7 – Helibase Operations Tactical/Logistical  
1700 End of Day 3

Thursday

0800 Unit 7 (continued)  
0930 Unit 8 – Helibase Emergency Procedures  
1200 Lunch  
1300 Unit 9 – Overview of Military Aviation Operations  
1430 Unit 10 – Buster Fire Final Exercise  
1700 End of Day 4



## FORMS AND HANDOUTS

### Unit 0

- ICS 211, Check-in List
- Individual Course Grade Sheet
- Unit Evaluation

### Unit 1

- Day 1 IAP
- ICS 214, Unit Log
- Unit Evaluation

### Unit 2

- Day 2 IAP
- Helibase Display Board Charts
- ICS 214, Unit Log
- Unit Evaluation

### Unit 3

- ICS 214, Unit Log
- Unit Evaluation

### Unit 4

- Day 3 IAP
- ICS 214, Unit Log
- Unit Evaluation

## Unit 5

- Day 4 IAP
- ICS 214, Unit Log
- Unit Evaluation

## Unit 6

- Day 5 IAP
- ICS 214, Unit Log
- Unit Evaluation

## Unit 7

- ICS 214, Unit Log
- Unit Evaluation

## Unit 8

- ICS 214, Unit Log
- Unit Evaluation

## Unit 9

- ICS 214, Unit Log
- Unit Evaluation

## Unit 10

- None

## **Helibase Manager, S-371**

### **Unit 0 – Introduction**

#### **INSTRUCTOR NOTES**

##### Student Sign-In Process

As students enter the class, have them sign in using the ICS 211 Check-in List (IG page 0.13). Their sign-in information will be used for the introduction exercise. Ensure that all students fully complete the ICS 211 before presenting this unit. When all students have completed the sign-in process, a cadre member will need to make copies of the completed ICS 211 for each student.

##### Student Work Groups

Instructor cadre should predetermine the groups by experience noted on their student profile forms. There may be a need to make some changes later to ensure there is a balance of experience in each group.

##### Pre-Course Test

The lead instructor is responsible to ensure that time is allocated in the course agenda to discuss the pre-course test. Coaches/mentors are responsible for correcting their assigned group's pre-course test. Students were to record their answers and the section and page number of the Interagency Helicopter Operations Guide (IHOG) where they found their answers. However, as the IHOG is revised, the locations to answers on the answer key may change (currently based on 2002 edition). In this situation, it is the responsibility of the coaches/mentors to validate student's responses to questions.

Remember: The main purpose of the pre-course test is for students to use the IHOG and become familiar with it.



## DETAILED LESSON OUTLINE

**COURSE:** Helibase Manager, S-371

**UNIT:** 0 – Introduction

**TIME:** 1.5 Hours

**TRAINING AIDS:** Computer, projector, screen, Fireline Handbook, Helibase Manager Position Task Book, course agenda, flip charts, markers, masking tape or tacks.

**OBJECTIVES:** During this unit the instructor will:

1. Introduce the course coordinator, instructors, and students.
2. Discuss administrative concerns.
3. Introduce the course and describe the responsibilities of a Helibase Manager.
4. Explain student work groups and coaches/mentors.
5. Discuss student and instructor expectations.
6. Explain course evaluation methods.

OUTLINE	AIDS & CUES
<p><b>NOTE:</b> Before presenting this unit, make sure all students have signed the ICS-211.</p> <p><b>COLLECT THE STUDENTS PRE-COURSE TEST.</b> Indicate that the tests will be graded and returned the next day for discussion.</p>	

OUTLINE	AIDS & CUES
<b>NWCG MISSION STATEMENT SLIDE.</b>	00-01-S371-EP
<b>WELCOME STUDENTS TO THE S-371 COURSE.</b>	00-02-S371-EP
<b>PRESENT UNIT OBJECTIVES.</b>	00-03-S371-EP
I. INSTRUCTOR INTRODUCTIONS	00-04-S371-EP
<p><b>EACH INSTRUCTOR SHOULD PRESENT THEIR:</b></p> <ul style="list-style-type: none"> <li>• Name</li> <li>• Home unit (agency, station, etc.)</li> <li>• Job title and duties</li> <li>• Incident qualifications and incident experience</li> </ul>	
II. STUDENT INTRODUCTIONS	00-05-S371-EP
<p><b>EXERCISE: Helibase Organization/Introductions</b></p> <p>This exercise will illustrate how the ICS 211 may be used as a method to gather information on qualifications of personnel in an actual helibase situation.</p> <p>Give each student a copy of the ICS 211 form they signed in on. Have students pair up and use the ICS 211 to gather the following information about each other:</p> <ul style="list-style-type: none"> <li>• Name</li> <li>• Home unit (agency, station, etc.)</li> <li>• Job title and duties</li> <li>• Incident qualifications and incident experience</li> </ul>	

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• What key position they would be qualified for on a helibase.</li> <li>• Why they are best suited for this position.</li> </ul> <p>Allow 5-10 minutes. Have students introduce each other to the class as they would to a helibase staff. Ensure they provide the requested information.</p> <p>III. ADMINISTRATIVE CONCERNS</p> <p><b>DISCUSS AS APPROPRIATE:</b></p> <ul style="list-style-type: none"> <li>• Lodging</li> <li>• Transportation</li> <li>• Breaks – vending machines, drinking fountains, restrooms, punctuality</li> <li>• Classroom arrangement – students will work in small groups for interactive exercises and simulations</li> <li>• Cell phones and pagers should be turned off</li> <li>• Smoking policy</li> <li>• Message location and available telephones</li> <li>• Other local concerns</li> <li>• Agenda</li> </ul> <p><b>HAND OUT THE COURSE AGENDA AND REVIEW.</b></p>	<p>00-06-S371-EP</p>

OUTLINE	AIDS & CUES
<p data-bbox="190 289 636 321">IV. COURSE OVERVIEW</p> <p data-bbox="285 380 1057 457">This course was developed based on the tasks in the Helibase Manager Position Task Book (PTB).</p> <p data-bbox="285 512 886 548">A. Helibase Manager Responsibilities</p> <p data-bbox="381 602 1057 722">As a Helibase Manager, you will move from a support role within the helibase operations, to managing the overall daily helibase operations.</p> <p data-bbox="190 779 1114 942"><b>ASK STUDENTS IF THEY HAVE EXPERIENCE MANAGING A HELIBASE DUE TO UNEXPECTED CIRCUMSTANCES. THIS MAY GIVE THE CADRE AN IDEA OF THE STUDENTS EXPERIENCE LEVEL.</b></p> <p data-bbox="381 1001 1102 1079">The daily tasks required of the Helibase Manager are a constant and ongoing process.</p> <p data-bbox="381 1136 1102 1299">The responsibilities of a Helibase Manager are listed in the Air Operations section of the Fireline Handbook (FHB) and the HEB2 Position Task Book.</p> <p data-bbox="190 1356 1057 1566"><b>HAVE STUDENTS COMPARE THE FHB RESPONSIBILITIES WITH THE PTB RESPONSIBILITIES. DISCUSS ANY QUESTIONS THE STUDENTS MAY HAVE ON THESE TWO DOCUMENTS.</b></p>	<p data-bbox="1175 289 1403 321">00-07-S371-EP</p> <p data-bbox="1175 1136 1403 1167">00-08-S371-EP</p>

OUTLINE	AIDS & CUES
<p>1. The skills are the same for both HEB1 and HEB2:</p> <ul style="list-style-type: none"> <li>• In the current performance based system, students must complete the tasks in the PTB to become qualified as a Helibase Manager Type 2 (HEB2).</li> <li>• To become qualified as a Helibase Manager Type 1 (HEB1) this process must be completed again.</li> </ul>	00-09-S371-EP
<p>2. The complexity increases from HEB2 to HEB1:</p> <ul style="list-style-type: none"> <li>• HEB2 – 1 to 3 helicopters</li> <li>• HEB1 – 4 or more helicopters</li> <li>• Interagency</li> <li>• Military operations</li> <li>• All risk missions</li> </ul> <p>Simulated situations and sharing of experiences from both the instructor cadre and the student group will be presented to aid in the process of becoming a Helibase Manager.</p> <p><b>SOME OF THE SIMULATED SITUATIONS IN THIS COURSE WILL BE AT THE COMPLEXITY LEVEL OF THE HEB1.</b></p> <p><b>THE STUDENT TARGET GROUP IS FOR HEB2, WHICH WILL BE CONSIDERED IN CLASSROOM PERFORMANCE.</b></p>	00-10-S371-EP

OUTLINE	AIDS & CUES
<p>B. Course Objective</p> <p>At the successful completion of this course the students will be able to:</p> <ul style="list-style-type: none"> <li>• Perform the tasks required of a Helibase Manager to develop, organize, and manage a helibase in given simulations and exercises to support incident activities.</li> </ul>	00-11-S371-EP
<p>V. STUDENT WORK GROUPS AND COACHES/ MENTORS</p> <p>Student participation is essential for successful completion of this course.</p> <p>A. Student Work Groups</p> <ol style="list-style-type: none"> <li>1. Group participation is emphasized because helibase operations require that the Helibase Manager interact with many people in various jobs and functions.</li> <li>2. Successful coordination between the various people and functions is the key to success as a Helibase Manager.</li> </ol> <p><b>DIVIDE STUDENTS INTO GROUPS OF 3-4. INFORM STUDENTS THAT THESE ARE THE GROUPS THEY WILL WORK IN FOR THE REMAINDER OF THE COURSE.</b></p>	00-12-S371-EP

OUTLINE	AIDS & CUES
<p>B. Coaches/Mentors</p> <ol style="list-style-type: none"> <li>1. Students will be coached, mentored, and evaluated by their assigned member of the instructor cadre.</li> <li>2. Coach/mentor will be available to help and answer any questions the students may have.</li> <li>3. Coach/mentor will be available to help students keep on track for all exercises.</li> </ol> <p><b>ASSIGN A COACH/MENTOR TO EACH GROUP. THE COACH/MENTOR WILL REMAIN IN THIS ROLE FOR THE ENTIRE COURSE.</b></p> <p>VI. COURSE EXPECTATIONS</p> <p>A. Student Expectations</p> <p><b>IN THEIR GROUPS, HAVE STUDENTS ANSWER THE FOLLOWING QUESTIONS ON A FLIP CHART (ALLOW 5 MINUTES). STUDENTS MAY PRESENT THEIR RESPONSES TO THE CLASS.</b></p> <ol style="list-style-type: none"> <li>1. What do you expect to learn from this course?</li> <li>2. Why do you want to become a Helibase Manager?</li> </ol> <p><b>POST THE LISTS AROUND THE CLASSROOM. REFER TO THE LISTS THROUGHOUT THE COURSE TO ENSURE EXPECTATIONS ARE BEING MET.</b></p>	<p>00-13-S371-EP</p>

OUTLINE	AIDS & CUES
<p>B. Instructors' Expectations</p> <p>The student will:</p> <ul style="list-style-type: none"> <li>• Have an interest in becoming a Helibase Manager.</li> <li>• Exhibit mutual cooperation with the group.</li> <li>• Be open minded to accomplishments during the course.</li> <li>• Use what is presented in the course to perform as a Helibase Manager.</li> <li>• Participate actively in all exercises and simulations presented in the course.</li> <li>• Return to class at stated times.</li> </ul>	
<p>VII. EVALUATION METHODS</p>	
<p>A. Measuring Student Performance</p>	<p>00-14-S371-EP</p>
<p><b>REFER STUDENTS TO THE INDIVIDUAL COURSE GRADE SHEET (SW PAGE 0.9; IG PAGE 0.15).</b></p>	<p>00-01-S371-IR/SR</p>
<p>Students will be evaluated by a member of the instructor cadre based on the following categories:</p> <ul style="list-style-type: none"> <li>• Pre-course test: 10%</li> <li>• Class participation: 30%</li> <li>• Exercise participation (group): 30%</li> <li>• Exercise participation (individual): 30%</li> </ul>	

OUTLINE	AIDS & CUES
<p>Students must achieve a total of 70% in order to receive credit for successfully completing this course.</p> <p>B. ICS 214 Unit Log</p> <p>The ICS 214 provides valuable reference notes. It is used to document incident events for each operational period.</p> <ol style="list-style-type: none"> <li>1. Students will use an ICS 214 to record events and scenarios from the IAP, and any other information that will help them in this class and in future assignments as helibase managers.</li> <li>2. The coaches/mentors will review the completed Unit Logs then return them to the students to use during class exercises.</li> </ol>	<p>00-15-S371-EP</p>
<p>C. Unit Evaluations</p> <p>The unit evaluation provides students the opportunity to give feedback throughout the course. Students will complete a unit evaluation at the conclusion of each unit.</p>	<p>00-16-S371-EP</p>
<p><b>ASK STUDENTS IF THEY HAVE ANY QUESTIONS.</b></p> <p><b>HAVE STUDENTS COMPLETE A UNIT EVALUATION.</b></p>	<p>00-17-S371-EP</p>







## Helibase Manager, S-371

### Individual Course Grade Sheet

Student Name: \_\_\_\_\_

Coach/Mentor: \_\_\_\_\_

Agency: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

(City, State, Zip)

EVALUATION ELEMENT	ELEMENT GRADE %		% OF TOTAL		RELATIVE WEIGHT
Class Participation	_____	X	.30	=	_____
Pre-Course Test	_____	X	.10	=	_____
Exercise Participation (group)	_____	X	.30	=	_____
Exercise Participation (individual)	_____	X	.30	=	_____
<b>FINAL GRADE</b>					

Lead Instructor: \_\_\_\_\_  
Signature Date

The final grade is a minimum indication of the student's ability to successfully perform the tasks presented in Helibase Manager, S-371.

A minimum final grade of **70%** has been established for successful completion of this course. Students who fail to meet this standard must acquire the knowledge and skills by re-taking the course or through on-the-job training.



## DETAILED LESSON OUTLINE

- COURSE:** Helibase Manager, S-371
- UNIT:** 1 – Common Responsibilities, Procedures, and Duties
- TIME:** 2 Hours
- TRAINING AIDS:** Computer, projector, screen, IHOG.
- OBJECTIVES:** Upon completion of this unit, students will be able to:
1. Identify key incident information necessary to begin helibase operations.
  2. Identify the responsibilities of the helibase manager necessary to promote positive interpersonal and interagency working relationships.
  3. Review and discuss applicable business management principles needed to manage an incident helibase.

OUTLINE	AIDS & CUES
<b>UNIT TITLE SLIDE.</b>	01-01-S371-EP
<b>PRESENT UNIT OBJECTIVES.</b>	01-02-S371-EP
<b>I. KEY INCIDENT INFORMATION</b>	
<b>REFER STUDENTS TO “HELIBASE MANAGER’S REMINDER LIST” (IHOG, APPENDIX H) AND DISCUSS KEY INFORMATION NECESSARY TO BEGIN HELIBASE OPERATIONS.</b>	IHOG Appendix H



OUTLINE	AIDS & CUES
<p data-bbox="298 283 672 317">B. Arrival at Incident</p> <p data-bbox="393 369 1081 449">What initial incident briefing information will you need?</p> <ul data-bbox="393 499 1094 1470" style="list-style-type: none"> <li data-bbox="393 499 834 533">• Obtain and review IAP</li> <li data-bbox="393 583 813 617">• Resource information</li> <li data-bbox="393 667 769 701">• Current operations</li> <li data-bbox="393 751 794 785">• Expected operations</li> <li data-bbox="393 835 764 869">• Expected duration</li> <li data-bbox="393 919 1078 953">• Helibase site selection/location/hazards</li> <li data-bbox="393 1003 1016 1037">• Current organization and personnel</li> <li data-bbox="393 1087 911 1121">• Outstanding resource orders</li> <li data-bbox="393 1171 951 1205">• Orders that need to be initiated</li> <li data-bbox="393 1255 1008 1335">• Adequate personnel support for all helicopter operations</li> <li data-bbox="393 1386 1094 1465">• Identify responsibilities within the chain of command</li> </ul>	<p data-bbox="1138 283 1373 317">01-04-S371-EP</p>
<p data-bbox="298 1520 886 1554">C. Primary Helibase Considerations</p> <p data-bbox="393 1606 1094 1724">When reporting to a helibase where operations are in progress, what are some of your primary considerations?</p> <ul data-bbox="393 1774 1094 1854" style="list-style-type: none"> <li data-bbox="393 1774 1094 1854">• Are operations safe enough to allow you to continue?</li> </ul>	<p data-bbox="1138 1520 1373 1554">01-05-S371-EP</p>

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• Are managers assigned and present?</li> <li>• Ensure helicopter managers check pilot and aircraft carding.</li> <li>• Are modules assigned?</li> <li>• Have all personnel been briefed?</li> </ul>	
<p>II. WORKING RELATIONSHIPS</p>	<p>01-06-S371-EP</p>
<p>A. Interagency Relationships</p> <p>What are some interagency considerations for the helibase manager?</p>	<p>01-07-S371-EP</p>
<p><b>ASK STUDENTS FOR EXAMPLES OF THE FOLLOWING INTERAGENCY CONSIDERATIONS.</b></p>	
<ul style="list-style-type: none"> <li>• Agency specific policies that may affect operations.</li> <li>• Different agency forms</li> <li>• Accommodations (motel rooms)</li> <li>• Length of operational period (duty limitations)</li> <li>• Military operations</li> </ul>	
<p><b>INFORM STUDENTS THAT MILITARY OPERATIONS WILL BE COVERED IN DEPTH IN A LATER UNIT.</b></p>	

OUTLINE	AIDS & CUES
<p data-bbox="298 283 867 321">B. Positive Working Relationships</p> <p data-bbox="393 369 1052 449">What are some methods to promote positive working relationships?</p> <ul style="list-style-type: none"> <li data-bbox="393 497 786 535">• EEO considerations <ul style="list-style-type: none"> <li data-bbox="488 583 919 621">– Avoid improper jokes.</li> <li data-bbox="488 669 1040 749">– Stop violation of EEO policies when observed.</li> </ul> </li> <li data-bbox="393 798 748 835">• Lead by example <ul style="list-style-type: none"> <li data-bbox="488 884 1024 921">– Wear appropriate safety gear.</li> <li data-bbox="488 970 1060 1050">– Conduct yourself in appropriate manner.</li> </ul> </li> <li data-bbox="393 1098 927 1136">• Awareness of crew dynamics <ul style="list-style-type: none"> <li data-bbox="488 1184 935 1222">– Intracrew relationships.</li> <li data-bbox="488 1270 1084 1308">– How crews work with each other.</li> <li data-bbox="488 1356 1057 1394">– CWN vs. regular agency crews.</li> </ul> </li> <li data-bbox="393 1442 1081 1522">• Utilize methods for mixing or matching to meet your needs.</li> <li data-bbox="393 1570 951 1608">• Recognize cultural differences.</li> </ul>	<p data-bbox="1138 283 1373 321">01-08-S371-EP</p>

OUTLINE	AIDS & CUES
<p>C. Provide Training Opportunities</p> <p>What can be gained by incorporating training on your helibase?</p> <ul style="list-style-type: none"> <li>• Use to integrate</li> <li>• Develop personnel</li> </ul> <p>Use Incident Training Specialists when necessary for task book administration, etc.</p>	01-09-S371-EP
<p>D. Helibase Manager Responsibilities</p> <p>1. Why are working relationships a responsibility of the helibase manager?</p> <ul style="list-style-type: none"> <li>• To manage multiple resources for the good of the team.</li> <li>• To ensure a safe and efficient operation.</li> </ul>	01-10-S371-EP
<p>2. Thoughts to consider in any aviation operation:</p> <p><b>THIS COURSE IS BASED ON THE PREMISE THAT STUDENTS ARE NOW RESPONSIBLE FOR ALL HELIBASE OPERATIONS.</b></p> <ul style="list-style-type: none"> <li>• You are now in charge of a sacred trust, the safety of human lives.</li> <li>• You must not let undue pressure (expressed or implied) influence your judgment during the performance of your duties.</li> </ul>	01-11-S371-EP

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• You must be able to develop “a team” in which members must participate and contribute to the safety of the operation.</li> <li>• You must delete false pride, calculated risk, real world, and “good enough for government work” from your professional vocabulary.</li> </ul>	01-12-S371-EP
<ul style="list-style-type: none"> <li>• You will not be criticized or stigmatized for any decision you make which will ensure added safety to an operation.</li> <li>• You must not let your actions instill the attitude of competition between pilots.</li> </ul> <p style="margin-left: 40px;">This attitude may hinder their performance and may compromise the safety of the mission.</p>	01-13-S371-EP
<p><b>“We manage people, who manage aircraft”</b></p> <p><b>“Take care of people first”</b></p>	01-14-S371-EP

OUTLINE	AIDS & CUES
<p>E. Available Information Sources</p> <p>What sources can the helibase manager go to for help?</p> <ul style="list-style-type: none"> <li>• Chain of command</li> <li>• Human resource specialist</li> <li>• Agency representatives</li> <li>• Host unit</li> <li>• Geographic area aviation specialists</li> </ul>	<p>01-15-S371-EP</p>
<p>III. FISCAL RESPONSIBILITIES</p> <p>A. Fiscal Concerns</p> <p>What are areas of concern related to fiscal accountability?</p> <ul style="list-style-type: none"> <li>• Cost effectiveness/efficiency</li> <li>• Contract costs/rates</li> <li>• Personnel accommodations</li> <li>• Pilot duty day limitations <ul style="list-style-type: none"> <li>– 14 hours duty day</li> <li>– 8 hours of flight time</li> <li>– 10 hours of uninterrupted rest</li> </ul> </li> </ul> <p>Pilot duty limitations may be subject to change in special situations such as military operations or extremely long and busy fire seasons.</p>	<p>01-16-S371-EP</p>

OUTLINE	AIDS & CUES
<p>B. Daily Fiscal Responsibility Practices</p> <p>What are some important daily fiscal responsibility practices?</p> <ul style="list-style-type: none"> <li>• Daily aircraft costs</li> <li>• Crew times</li> <li>• Contract equipment/shift tickets</li> </ul>	
<p><b>SLIDE 17 SHOWS AN EXAMPLE OF A COMPLETED EMERGENCY EQUIPMENT SHIFT TICKET.</b></p>	01-17-S371-EP
<p><b>EXERCISE: Incident Action Plan</b></p>	01-18-S371-EP
<p>Hand out the Day 1 IAP. Allow students five minutes to answer the following questions.</p>	01-01-S371-HO
<p>Based on the IAP:</p> <ol style="list-style-type: none"> <li>1. Who is the AOBD/ASGS?</li> <li>2. What's planned for today?</li> <li>3. What is the flight following frequency?</li> <li>4. What are the local flight hazards?</li> <li>5. What are your assigned resources?</li> <li>6. What is the air to ground frequency?</li> </ol>	
<p>After five minutes, tell students you are the ASGS and they have five minutes to ask you any questions. Do not give out too much information at this time. Giving too much information may compromise later instructional material.</p>	
<p>Review answers with class (slide 19).</p>	01-19-S371-EP

OUTLINE	AIDS & CUES
<p>IV. TRICKS OF THE TRADE</p> <p><b>THE FOLLOWING TIPS ARE TO BE USED AT THE INSTRUCTOR’S DISCRETION. INSTRUCTORS ARE ENCOURAGED TO ADD TIPS FROM THEIR PERSONAL EXPERIENCE. SOLICIT ANY ADDITIONAL TIPS FROM THE STUDENTS.</b></p> <p>Before arriving at the incident:</p> <ul style="list-style-type: none"> <li>• Pick up a phone book at the airport</li> <li>• Pick up forest and road maps</li> </ul> <p><b>EXERCISE: Unit Log</b></p>	<p>01-20-S371-EP</p>
<p>Hand out Unit Logs. Instruct students to complete an ICS 214 for this unit and hand it in to their coach/mentor.</p> <p>The assigned coach/mentor should review and return the Unit Logs to students as soon as possible. Ensure students sign the document.</p>	<p>01-02-S371-HO</p>
<p>Slide 21 gives students an idea of the information needed.</p>	<p>01-21-S371-EP</p>
<p><b>REVIEW UNIT OBJECTIVES.</b></p> <p><b>HAVE STUDENTS COMPLETE A UNIT EVALUATION.</b></p>	<p>01-22-S371-EP</p>

## DETAILED LESSON OUTLINE

- COURSE:** Helibase Manager, S-371
- UNIT:** 2 – Helibase Organization
- TIME:** 1.5 Hours
- TRAINING AIDS:** Computer, projector, screen, Helibase Display Boards (Part 1 and Part 2), FHB, IHOG.
- OBJECTIVES:** Upon completion of this unit, students will be able to:
1. Describe an effective helibase organization.
  2. Describe methods for coordinating helibase activities.

OUTLINE	AIDS & CUES
<p><b>NOTE:</b> Before beginning this unit, return students graded pre-course tests and discuss.</p>	
<p><b>HAND OUT THE DAY 2 IAP.</b> The exercise in this unit is based on the Day 1 IAP. The intent of this unit is for students to gain a better understanding of the organization of a well-run helibase.</p>	02-01-S371-HO
<p><b>HAND OUT UNIT LOGS.</b> Students will record information on the form during presentation of this unit.</p>	02-02-S371-HO



OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• Take-off and landing coordinator</li> <li>• Loadmaster</li> <li>• Mixmasters</li> <li>• Aerial ignition specialist</li> </ul> <p>What are the important aspects of each of these positions?</p>	
<p>C. Helibase Display Board Charts</p>	02-05-S371-EP
<p><b>GIVE EACH GROUP A SET OF HELIBASE DISPLAY BOARD CHARTS. HAVE THEM POST THE CHARTS IN THEIR AREA.</b></p>	Helibase Display Board Charts, Part 1 and Part 2
<p><b>SHOW SLIDES 6 AND 7; BRIEFLY REVIEW THE MAJOR HEADINGS OF THE CHARTS. THE CHARTS WILL BE DISCUSSED IN DETAIL IN UNIT 3.</b></p>	02-06-S371-EP 02-07-S371-EP
<ol style="list-style-type: none"> <li>1. Organizational chart</li> <li>2. Current flight hazards map</li> <li>3. Incident map</li> <li>4. Flight route pattern map</li> <li>5. Helibase layout map</li> <li>6. Current load calculations</li> </ol>	

OUTLINE	AIDS & CUES
7. IAP (daily)	
8. Crash-rescue plan	
9. Operational checklist	
D. Interaction with Other Incident Functional Units	02-08-S371-EP
1. A helibase operation will often interact with more ICS functional units and positions than any other operation on the incident.	
2. Developing an early rapport with these units is critical to the operation.	
3. What are unit/functions that require good working relationships? Why? <ul style="list-style-type: none"> <li>• Supply</li> <li>• Facilities</li> <li>• Security</li> <li>• Food unit</li> <li>• Ground support</li> <li>• Operations</li> <li>• Plans</li> <li>• Finance</li> </ul>	02-09-S371-EP thru 02-16-S371-EP

OUTLINE	AIDS & CUES
<p>II. COORDINATING HELIBASE ACTIVITIES</p> <p>A. Flying cargo and supplies out of helibase may cause some problems (mix-ups, delays, etc.).</p> <p>What are some ways to reduce these problems?</p> <ol style="list-style-type: none"> <li>1. Assign a helitack person to supply.</li> <li>2. Insist that all requests for equipment and supplies go through communications to the supply unit.</li> <li>3. Meet with the supply unit's key players early in the incident.</li> <li>4. Ask that all supplies delivered to the helibase be marked with destination and weights.</li> </ol> <p>B. Feeding the personnel required to staff a large helibase at the base camp can often require long travel times and late dinners.</p> <p>What are some methods the helibase manager can use to accommodate helibase personnel?</p> <ol style="list-style-type: none"> <li>1. Request that dinner be delivered to the helibase.</li> <li>2. Request that a satellite kitchen unit and staff be set up at the helibase is another good alternative.</li> </ol>	<p>02-17-S371-EP</p>

OUTLINE	AIDS & CUES
<p>C. Air support supervisors can become spread very thin on a large and complex incident.</p> <p>What can be done to free up time for the air support group supervisor?</p> <ol style="list-style-type: none"> <li>1. Ordering supplies directly can save time and effort.</li> <li>2. Discuss this option with air support - always keep them advised!</li> </ol> <p>D. Finance normally requires a daily helibase cost summary.</p> <p>What are some suggestions that would expedite this requirement?</p> <ol style="list-style-type: none"> <li>1. Establish procedures with air support to turn in cost summary to finance.</li> <li>2. Assign a person to deal with this task and deliver to finance personally.</li> <li>3. Ask finance how they want this prepared. What's required?</li> </ol>	<p>02-18-S371-EP</p>
<p><b>REFER STUDENTS TO THE HELIBASE DAILY USE AND COST SUMMARY FORM AND REVIEW (SW PAGE 2.11; IG PAGE 2.9).</b></p> <p><b>ANSWER ANY QUESTIONS THE STUDENTS MAY HAVE ON HOW TO COMPLETE THE FORM (IT WILL BE USED IN THE NEXT EXERCISE).</b></p>	<p>02-01-S371-IR/SR</p>

OUTLINE	AIDS & CUES
<p>E. To be successful, the helibase manager must organize information.</p> <ol style="list-style-type: none"> <li>1. Prioritize missions – make them known.</li> <li>2. Never compromise on safety.</li> <li>3. Be flexible to changing missions.</li> </ol>	02-19-S371-EP
<p><b>EXERCISE: Unit Log/Cost Summary</b></p>	
<p>Refer students to the following forms:</p>	
<ul style="list-style-type: none"> <li>• Helibase daily use and cost summary form (SW page 2.11; IG page 2.9)</li> </ul>	02-01-S371-IR/SR
<ul style="list-style-type: none"> <li>• Helicopter daily use and cost summary sheets (SW pages 2.13 and 2.14; IG pages 2.11 and 2.12)</li> </ul>	02-02-S371-IR/SR
<p>Using the information from the helicopter daily use and cost summary sheets, fill out the blank helibase daily use and cost summary form.</p>	
<p>Allow students 5-10 minutes; review solution on slide 20.</p>	02-20-S371-EP
<p>Instruct students to complete their ICS 214 for this unit and turn it in with the helibase daily use and cost summary form.</p>	

OUTLINE	AIDS & CUES
<p>III. TIPS</p> <ul style="list-style-type: none"> <li>• Develop a strong working relationship with the incident operations section chief as well as the air operations branch director.</li> <li>• The helibase manager is the helicopter expert. Keep other incident personnel advised of what can and cannot be accomplish for the operation.</li> <li>• The operations section chief may not get this information any other way.</li> </ul>	<p>02-21-S371-EP</p>
<p><b>REVIEW UNIT OBJECTIVES.</b></p>	<p>02-22-S371-EP</p>
<p><b>HAVE STUDENTS COMPLETE A UNIT EVALUATION.</b></p>	







**HELICOPTER DAILY USE AND COST SUMMARY**  
*(Submit to Helibase Manager at End of Each Day's Operations)*

HELIBASE: Wildfire DATE:     /     /     Day 2 HELICOPTER N #: 6093R

MAKE/MODEL: AS 350 B2 MANAGER'S NAME: Little

TYPE:     1     2  3     CWN  CONTRACT     OTHER (Specify):    

FLIGHT INVOICE REFERENCE NUMBER(S):    

FLIGHT TIME (HRS)		HOURLY RATE	COSTS:	
6.1	x	461.00	= TOTAL FT COST:	\$ 2,812.10
AVAIL (HRS or DAY)*		HRLY OR DAILY RATE		+
	x		= TOTAL AV COST:	\$
EXTENDED PILOT STANDBY		HOURLY RATE		+
6.0	x	35.00	= TOTAL EP COST:	\$ 210.00
EXT. DRIVER STANDBY		HOURLY RATE		+
	x		= TOTAL ET COST:	\$
EXT. MECHANIC STANDBY		HOURLY RATE		+
6.0	x	22.00	= TOTAL EM COST:	\$ 132.00
# OF CREWMEMBERS		R.O.N. (FS) RATE/DAY		+
2	x	66.00	= TOTAL FS COST:	\$ 132.00
SERVICE TRUCK MILES		RATE/MILE		+
85	x	.80	= TOTAL SM COST:	\$ 68.00
GALLONS FOAM CONCENTRATE USED		COST/GALLON		+
	x		= TOT FOAM COST:	\$
GALLONS RETARDANT USED		COST/GALLON		x
	x		= TOT RET. COST:	\$
SPECIAL EQUIPMENT (Radio, FLIR, Longline/Remote Hook, Agency-Supplied Fuel, etc.)			= TOT SPECIAL COST:	+
			<b>TODAY'S TOTAL COSTS:</b>	<b>\$ 3,354.10</b>

USE:

TOTAL PASSENGERS TRANSPORTED	TOTAL LBS CARGO DELIVERED	TOTAL GALLONS WATER	TOTAL GALLONS RETARDANT	TOTAL GALLONS FOAM
21	400			

COMMENTS:

\* Do not calculate for exclusive use contracts where availability is paid from presuppression funds.

HCM-17 (Test)  
(May, 1994)

## DETAILED LESSON OUTLINE

- COURSE:** Helibase Manager, S-371
- UNIT:** 3 – Helibase Briefings
- TIME:** 2 Hours
- TRAINING AIDS:** Computer, projector, screen, IHOG.
- OBJECTIVES:** Upon completion of this unit, students will be able to:
1. Describe methods to initially assess resource needs.
  2. Describe a method for displaying helibase organizational information.

OUTLINE	AIDS & CUES
<p><b>NOTE:</b> Much of the instructional material for this unit is based on information presented in Unit 2 and the Day 2 IAP. The exercise in this unit is based on the Day 1 and Day 2 IAPs.</p>	
<p><b>HAND OUT UNIT LOGS.</b> Students will record information on the form during presentation of this unit.</p>	03-01-S371-HO
<p><b>UNIT TITLE SLIDE.</b></p>	03-01-S371-EP
<p><b>PRESENT UNIT OBJECTIVES.</b></p>	03-02-S371-EP
<p>I. INITIAL RESOURCE ASSESSMENT</p> <p>A. Initial Assessment</p> <p>The helibase manager may arrive after a helibase operation has begun.</p>	03-03-S371-EP

OUTLINE	AIDS & CUES
<p>As a manager in any situation, what would be the logical first step?</p> <ul style="list-style-type: none"> <li>• Assess the current workings of the base including: <ul style="list-style-type: none"> <li>– Positions filled</li> <li>– Aircraft assigned</li> <li>– Aircraft expected</li> <li>– Expected duration of incident</li> <li>– Skill levels of personnel on the base</li> </ul> </li> </ul> <p>B. Common Mistakes</p> <p>What are some common mistakes that a helibase manager might make?</p> <ul style="list-style-type: none"> <li>• Coming on too strong too fast</li> <li>• Tunneling in – doing too much</li> <li>• Not letting go – delegate!</li> <li>• Not listening</li> <li>• Not establishing who’s responsible for what</li> <li>• Micromanaging</li> <li>• Being too laid back</li> <li>• Not making decisions when needed</li> </ul>	<p>03-04-S371-EP</p>

OUTLINE	AIDS & CUES
<p>C. Helibase Information Boards</p> <p><b>REFER STUDENTS TO THE HELIBASE INFORMATION BOARD CHARTS (SW PAGES 3.9 – 3.10; IG PAGES 3.9 – 3.10).</b></p> <p><b>DISCUSS HOW THESE BOARDS CAN BE UTILIZED TO MANAGE AND PRESENT INFORMATION.</b></p> <p>These boards are:</p> <ul style="list-style-type: none"> <li>• A valuable place for location of helibase information.</li> <li>• Utilized to help in managing that information.</li> <li>• A quick reference for resource location and identification.</li> <li>• Providing the same information to all personnel.</li> </ul> <p><b>GIVE EACH GROUP 10 MINUTES TO FILL OUT THEIR DISPLAY BOARD USING THE DAY 2 IAP.</b></p>	<p>03-05-S371-EP</p> <p>03-01-S371-IR/SR</p>
<p>II. THREE BASIC TYPES OF HELIBASE BRIEFINGS</p> <p>Briefings are merely a means to convey information and should be short.</p> <p>The primary intent is to keep all personnel as well informed as possible, thus providing a safer and more efficient operation.</p>	<p>03-06-S371-EP</p>





OUTLINE	AIDS & CUES
<p>E. Key Points of a Briefing</p> <p>Once the initial fact finding of a mission is complete, your first priority is to give a briefing that addresses the following key points:</p> <ul style="list-style-type: none"> <li>• Basic priorities and missions</li> <li>• Flight plan <ul style="list-style-type: none"> <li>– Routes and known hazards</li> </ul> </li> <li>• Radio frequencies and procedures</li> <li>• Safety considerations <ul style="list-style-type: none"> <li>– Develop a rapport</li> <li>– Maintain an open line of communication</li> </ul> </li> <li>• Crash rescue procedures</li> <li>• Medevac procedures</li> <li>• What are your expectations</li> <li>• Environmental/historical concerns</li> <li>• Be receptive to input/suggestions</li> </ul>	<p>03-12-S371-EP</p>
<p>All briefings should start on time! Be strict on this; it sets the tone for future expectations.</p>	<p>03-13-S371-EP</p>

OUTLINE	AIDS & CUES
<p><b>EXERCISE: Helibase Briefing</b></p> <p>Instruct groups to prepare a pre-operational briefing based on the Day 2 IAP and any other known information available.</p> <p>Encourage students to use any tools or aids available that will assist them in giving a complete and effective operational briefing.</p> <p>Allow 5-10 minutes for the students to prepare their operational briefings.</p> <p>Have groups select a spokesperson to give their briefing to the class. Ensure students include the following in their briefings:</p> <ul style="list-style-type: none"> <li>• Did they use the checklist on the helibase display board chart to present their briefing?</li> <li>• Did they use the form, daily helicopter operations briefing/debriefing checklist, in the IHOG to prepare their briefing?</li> <li>• Did they include site specific hazard and safety information, changes in missions, priorities, frequencies, etc.?</li> <li>• Environmental/historical concerns?</li> </ul>	<p>03-14-S371-EP</p>
<p><b>REVIEW UNIT OBJECTIVES.</b></p> <p><b>HAVE STUDENTS COMPLETE A UNIT EVALUATION.</b></p>	<p>03-15-S371-EP</p>







## DETAILED LESSON OUTLINE

**COURSE:** Helibase Manager, S-371

**UNIT:** 4 – Helibase/Helispot Selection and Layout

**TIME:** 2.5 Hours

**TRAINING AIDS:** Computer, projector, screen, IHOG.

**OBJECTIVES:** Upon completion of this unit, students will be able to:

1. Given a particular site, evaluate options and determine a helibase layout that best meets incident needs.
2. Identify common helispot management problems and resolutions.

OUTLINE	AIDS & CUES
<b>UNIT TITLE SLIDE.</b>	04-01-S371-EP
<b>PRESENT UNIT OBJECTIVES.</b>	04-02-S371-EP
<b>HAND OUT THE DAY 3 IAP.</b>	04-01-S371-HO
<b>HAND OUT UNIT LOGS.</b> Students will record information on the form during presentation of this unit.	04-02-S371-HO



OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• Dust</li> <li>• Ground surface cover</li> <li>• Traffic patterns</li> <li>• Airspace coordination (TFRs)</li> <li>• Endangered species, sensitive habitat</li> <li>• Fueling areas</li> <li>• Communications</li> <li>• Land ownership</li> </ul>	04-05-S371-EP
<p><b>SLIDES 6 - 10 SHOW EXAMPLES OF SITE CONSIDERATIONS.</b></p>	04-06-S371-EP thru 04-10-S371-EP
<p><b>EXPLAIN THAT A HELIBASE SITE MAY HAVE BEEN SELECTED BEFORE THE HELIBASE MANAGER ARRIVES.</b></p>	
<p>C. Items/Areas to Include in Helibase Layout</p> <ul style="list-style-type: none"> <li>• Aerial Hazards</li> <li>• Landing pads</li> <li>• Vehicle parking and movement</li> <li>• Fueling areas</li> <li>• Bus access and turnarounds</li> </ul>	04-11-S371-EP

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• Cargo area/longline operations</li> <li>• Personnel staging areas</li> <li>• Personnel loading zones</li> <li>• TOLC/radio operator location</li> <li>• Check in</li> <li>• Approach and departure paths</li> <li>• Sleeping areas</li> <li>• Security</li> <li>• Wind indicator</li> </ul>	04-12-S371-EP
<p>D. Site Selection Advisors</p> <ul style="list-style-type: none"> <li>• Local agency representative</li> <li>• Resource advisor</li> <li>• Dispatch office</li> <li>• Landowners if they can be located</li> </ul>	04-13-S371-EP

OUTLINE	AIDS & CUES
<p><b>EXERCISE: Site Layout, Part 1</b></p> <p><u>Purpose:</u> Student groups will prepare a helibase map layout based on the Day 3 IAP and any other information available concerning current and expected operations.</p> <p><u>Instructions:</u> Slides 15, 16, and 17 are maps of helibase sites. The instructor will need to make at least two copies each of these slides. Give each group one of the three sites for their helibase layout.</p> <p>Using Day 3 IAP, have students update their helibase display boards. Each group will then lay out the site assigned and create a helibase map based on the Day 3 IAP. Students may also refer to:</p> <ul style="list-style-type: none"> <li>• Elements of Helibase Site Selection (SW pages 4.9 – 4.13; IG pages 4.11 – 4.15)</li> <li>• Helibase Site Selection (SW pages 4.15 – 4.20; IG pages 4.17 – 4.22)</li> </ul> <p>Allow 15 minutes for each group to develop their layout map.</p> <p>Groups can present their proposed layout site to the class using either the paper or electronic copy of their assigned helibase. To use the electronic copy, project the slide of their assigned map onto a white dry erase board for students to draw their layouts.</p> <p>Give positive feedback at the conclusion of each presentation and note any areas for improvement. There are no right or wrong layouts. Students need to justify and have sound reasoning for their layouts.</p>	<p>04-14-S371-EP</p> <p>04-15-S371-EP 04-16-S371-EP 04-17-S371-EP</p> <p>04-01-S371-IR/SR</p> <p>04-02-S371-IR/SR</p>

OUTLINE	AIDS & CUES
<p><b>EXERCISE: Site Layout, Part 2</b></p> <p>Instruct groups to answer the following questions on a flip chart and present their responses to the class. Allow 15 minutes to complete.</p> <p>1. What supplies/equipment need to be ordered to support the selected site?</p>	<p>04-18-S371-EP</p>
<p>Review answers below and on slides 19 and 20.</p> <ul style="list-style-type: none"> <li>• Tents / tarps</li> <li>• First aid supplies</li> <li>• Toilets</li> <li>• Construction materials</li> <li>• Water tenders</li> <li>• Helicopter support kit</li> <li>• Pumps and hose</li> <li>• Drinking water</li> <li>• Coolers / drinks</li> <li>• Communication equipment</li> <li>• Tools</li> <li>• Additional supplies</li> <li>• Air operations kit</li> <li>• MRE's, cubes, swivels</li> </ul>	<p>04-19-S371-EP 04-20-S371-EP</p>
<p>2. What methods can be utilized to acquire necessary supplies and equipment?</p> <p>Review answers below and on slide 22.</p> <ul style="list-style-type: none"> <li>• Identify those individuals good at procuring (scrounging) items needed.</li> </ul>	<p>04-21-S371-EP 04-22-S371-EP</p>

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• Establish a liaison between the supply unit and helibase.</li> <li>• Provide helibase personnel to work in supply to help both units meet your needs.</li> <li>• Utilize support equipment carried on helitenders that are assigned to your helibase. Be prepared to re-supply tenders.</li> </ul>	
<p>II. IDENTIFY HELISPOT MANAGEMENT CONCERNS</p> <p><b>DISCUSS HELIBASE MANAGER’S RESPONSIBILITY FOR HELISPOT SELECTION AND SAFETY, RECOGNIZING THE DIFFICULTY IN LEAVING THE BASE TO EVALUATE HELISPOTS.</b></p>	04-23-S371-EP
<p>A. What are key helispot management concerns?</p> <ul style="list-style-type: none"> <li>• Selection and construction</li> <li>• Safety standards met</li> <li>• Clearly marked and known to all</li> <li>• Well managed</li> <li>• Good radio communications</li> <li>• Escape routes and safety zones</li> <li>• Minimum Impact Suppression Tactics (MIST) policy and procedures</li> </ul>	04-24-S371-EP

OUTLINE	AIDS & CUES
<p>B. How can we manage for the above concerns?</p> <ul style="list-style-type: none"> <li>• Delegate selection and construction to qualified personnel.</li> <li>• Monitor activities.</li> <li>• Obtain feedback (managers, pilots).</li> <li>• Delegate inspection.</li> <li>• Establish communications before approval of helispot.</li> <li>• Work with other resources to establish escape routes and safety zones.</li> <li>• Follow MIST guidelines as necessary.</li> </ul>	04-25-S371-EP
<p>C. The Real World</p> <ul style="list-style-type: none"> <li>• Helispots are usually selected by the overhead team.</li> <li>• Helispot numbering changes often unknown to the Helibase Manager.</li> <li>• Coordination between the Helibase Manager and the operation/planning sections is essential. DIVS must be notified when helispots are staffed.</li> <li>• MIST guidelines should not compromise safety.</li> </ul>	04-26-S371-EP

OUTLINE	AIDS & CUES
<p>Helispot, dip sites, and retardant plant operations can quickly become as, or more complex than, those on the main helibase.</p> <p>The Helibase Manager must recognize that this situation occurs and must plan accordingly.</p>	<p>04-27-S371-EP</p>
<p><b>REFER STUDENTS TO “HELIBASE AND HELISPOT REQUIREMENTS” (IHOG, CHAPTER 8). BRIEFLY REVIEW THE HIGHLIGHTS OF THE HELISPOT REQUIREMENTS.</b></p>	<p>IHOG, Chapter 8</p>
<p>III. TIPS</p> <p><b>THE FOLLOWING TIPS ARE TO BE USED AT THE INSTRUCTOR’S DISCRETION. INSTRUCTORS ARE ENCOURAGED TO ADD TIPS FROM THEIR PERSONAL EXPERIENCE.</b></p> <ul style="list-style-type: none"> <li>• Assign a person the task of helibase documentation (perhaps the student helibase manager).</li> <li>• Create and post a sign telling visitors where to check in and how to obtain a flight.</li> <li>• Reserve ten helispot numbers per division. When numbering helispots, reserve ten numbers per division to prepare for additional spots; for example, Division B would start with helispot #20 and Division C would start with #30.</li> <li>• Ensure spike camps are a safe distance away from helispots.</li> </ul>	<p>04-28-S371-EP</p>

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• Ensure that helispot markings are clearly visible from the air.</li> <li>• Mark power line hazards on the ground using orange panels supplied in the helibase support kit.</li> <li>• Consider alternative forms of communications (cell or sat phones, repeaters, VHF).</li> </ul>	
<p><b>EXERCISE: Unit Log</b></p> <p>Instruct students to complete their ICS 214 for Day 3 then turn them in to their coach/mentor. The coach/mentor will review them, make any notes that will benefit the students, and return them as soon as possible (some of the information in the ICS 214 may be needed for reference in other units).</p>	04-29-S371-EP
<p><b>REFER STUDENTS TO THE JUMP-START CHECKLIST AND REVIEW (SW PAGES 4.21 – 4.25; IG PAGES 4.23 – 4.27).</b></p>	04-03-S371-IR/SR
<p><b>REVIEW UNIT OBJECTIVES.</b></p>	04-30-S371-EP
<p><b>HAVE STUDENTS COMPLETE A UNIT EVALUATION.</b></p>	

## ELEMENTS OF HELIBASE SITE SELECTION

It should be recognized that seldom is the perfect helibase site available. In the site selection process, each of the following elements should be considered. The site that provides the safest, most efficient alternative is selected.

### I. LOCATION

#### A. Proximity to the Incident Site

1. Select site that provides the most efficient flight profile.
2. Elevation in relation to helispots
3. En route time to helispots
4. Ownership

#### B. Proximity to the Incident Base Camp

1. Transportation of crews
2. Overhead requirements
3. Convenience of supply transport
4. Meals for helibase staff
5. Will the flight routes be too close to camp?
  - a. Can camp over flights be avoided?
  - b. Are rest areas away from the noise of flight operations?

C. Proximity to Local Airport and/or Aviation Fuels Source

1. Local airport
  - a. Flight crew switches
  - b. Convenience for air support group supervisor
2. Local fuel consignee or jobber
3. Government provided fuel
  - a. Contracted large capacity fuel transporter
  - b. National guard or military; transporter

D. Highway or road access

1. Fuel truck access
2. Supply and logistical transport
3. Transportation for flight crews to local accommodations
4. Crew and overhead transportation

II. PHYSICAL REQUIREMENTS (SIZE AND SURFACE)

A. Select a site that meets present and projected needs (expansion).

1. Helibase command center
  - a. Flight line visible to operation center
  - b. Helibase communications adequate
2. Helispots with adequate safety circles

3. Cargo areas
    - a. Out of approach and departure routes
    - b. Contain in-coming and out-going cargo sites
    - c. Away from hazards
    - d. Must have good vehicle access
  4. Crew transport and manifesting area
    - a. Capable of handling projected crew movement on schedule
    - b. Properly marked
    - c. Has crew ready area
  5. Designated emergency landing area
  6. Vehicle parking area
    - a. Crew transports
    - b. Helibase and helicopter support vehicles
    - c. Area for fuel truck parking
  7. Sleeping area for helibase personnel
- B. Select a site which has surface type that will:
1. Support the type of aircraft being used
  2. Support the fuel trucks
  3. Accept dust abatement measures
    - a. Pumps, porta-tanks, sprinklers
    - b. Large water tender-spray bar application

C. Site selection criteria should include areas that would accommodate special projects.

1. Fireline explosive transport
2. Retardant operations
3. Aerial ignition projects

### III. AIRSPACE REQUIREMENTS FOR SAFE FLIGHT OPERATION

A. Traffic Patterns

1. Must not conflict with local non-incident use.
  - a. If necessary, file 91.137.
  - b. Inform local users of activity.
2. Establish and post the most safe and efficient traffic patterns.
3. Avoid over flight of developed areas.

B. Flight Hazards

1. Flight obstacles
2. Air traffic
3. Local weather
  - a. Fog
  - b. Wind
  - c. Inversion
  - d. Smoke

## IV. COMMUNICATIONS

### A. Radio Communications

1. Ground communications
  - a. Logistics
  - b. Line operations
  - c. Operations section chief
  - d. Helibase operations
2. Air to ground communications
  - a. Air attack
  - b. Flight following
  - c. Take off and landing controller
3. Air to air communications
  - a. Air attack to aircraft
  - b. Position reporting
  - c. Coordination between aircraft

### B. Telephone Communications

1. Inner-incident communication
2. Contractor communication



## HELIBASE SITE SELECTION

A helibase is an area established as a base of operations to support either project work or incidents by rotor wing aircraft. The area may need to accommodate no more than a single aircraft, or it may need to be large enough to safely and efficiently handle 12 to 15 helicopters of various types.

The numbers of aircraft based at any helibase are limited only by availability, need, space, complexity of the incident, and by management capabilities. The key to helibase site selection: The area selected must provide adequate space, suitable location, and communications potential to safely and efficiently support the project or incident.

Selecting the site on which to organize a helibase is one of the most difficult of a helibase manager's many duties. Some situations do not provide selection options. In such cases, the organization must be built to fit the helibase site selected. Helicopter support may be limited by the size and capacity of the available facility, thus support options other than the helicopter must be developed.

Normally, a helibase manager has several sites from which to choose. Selection of the correct site is essential to long-term, efficient, safe support operations. Few events are as disruptive or will challenge a helibase manager's skills more than moving the operation while still trying to meet incident support requests.

Four elements must be considered during the site selection process: location, physical requirements, airspace requirements, and communications. All four elements are equally important, and not necessarily listed in order of importance.

Remember to evaluate all elements. Site selection usually involves trade-off and compromise. The perfect helibase site is seldom available. Choose the best site available. The best site is the safest site, and often the safest site is also the most efficient.

## LOCATION

**Select a site that is efficient in terms of flight time to and from the incident site.** A site that is closer to the incident, but several thousand feet lower may not provide the most efficient flight profile. Flight time may be saved by selecting a site that is several miles farther away, but offers a better en route flight profile. Steep ascents and descents in heavily loaded helicopters are less efficient than more gradual flight profiles.

**Consider ownership in site selection.** Ideally, the site selected would belong to the agency or jurisdiction on whose land the incident is occurring. That is not always the case. Helibase site requirements are often best met by lands held in private ownership. If a site in private ownership offers a significant advantage over a site held in public ownership, opt for trying to work out a contract or agreement with the owner. This requires working through the incident procurement unit leader.

Make sure a written agreement is in effect, and the land owner has a clear understanding of what is involved in conducting helibase operations and the impact operations will have on the property. Be sure to inform the incident rehabilitation planning unit of any rehab needs at the helibase site. When public lands are used, take measures to impact the site as little as possible. Involve the host unit resource personnel.

Select a site that is relatively close the Incident Base Camp. Consider the number of crew and line personnel that will need to come through the helibase for transportation. Overhead will be requesting recon flights. Supplies and equipment will need to be transported to and from base camp. Meals will be brought to the helibase for base personnel, or the camp needs to be located near enough for those personnel to go to the kitchen.

Be careful not to locate the helibase too close to the camp. Flying over the camp on approach and departure routes is ill-advised. There will be people trying to sleep in camp. Air traffic noise does not promote rest!

**Consider the distance to a source for Jet-A.** Fuel truck drivers often have to spend long hours driving to secure fuel after operations have shut down for the night. With the stiffening of DOT regulations, these persons are often in violation of regulations. If a site near a commercial fuel outlet cannot be selected, consider ordering a contract fuel carrier, or utilizing a National Guard or military fueler, work through the procurement unit leader. The air support group supervisor is responsible for determining fuel supply sources, but often an ASGS has not been assigned, or is not yet on scene.

If there is an airport in the area, it is a good idea to visit the site and inform the Fixed Base Operator (FBO) of the situation. A local airport should be considered an asset to the incident. It is a source for fuel, a site to perform repairs and inspections, facilitates flight crew switches, and is a transportation terminal point for crews and overhead. It may be the best option for a helibase site. Determine approach and departure routes used at the airport to see if they conflict with proposed helibase routes. Let the FBO know he can expect some impact on his operation. Again, this is an ASGS responsibility, but may fall to the Helibase Manager.

**A helibase must have good highway or road access.** All supplies, crews, overhead, equipment, and fuel must arrive at the helibase by ground transport. The better the road system, the more efficient the overall support operation will be. Remember, if Type I and II helicopters are being used, the gross weight of the fuel trucks can be quite high. Good road access contributes to the overall safety of the operation. An important factor to consider is the ground transportation routes available to pilots, fuel truck drivers, and mechanics to local accommodations.

## PHYSICAL REQUIREMENTS

**Select a site that has adequate room to meet current and projected incident support requirements.** Consult the incident commander. Determine what the projected requirements will be. Don't set up in a site that will accommodate three Type III's when projections indicate a larger number of aircraft will be needed to support the suppression effort. Find out how many and what types of aircraft are on order.

Adequate room to establish a helibase command center, helipads for each helicopter, crew manifesting and loading areas, incoming and out going cargo decks, fuel truck and crew transport vehicle parking sites, and areas for helibase personnel to camp must be planned for. Vehicle parking areas must be designated and marked. Unmanaged parking creates congestion and hazards.

When working mixed types of helicopters off the same base, special attention must be given to safety circles and helipad site selections. When possible, keep Type I, II, and III aircraft separated. Remember the rotor wash, noise, and dust generated by each type. The site must be large enough that taxi ways and approach and departure routes provide separation between airborne and parked aircraft.

The command center should be located where the entire flight line is within view, yet be far enough away that noise will not hinder radio communications. Consider a trailer in which to house the operations center. If possible, locate the crew transportation area near the helibase entrance. This will reduce vehicle and foot traffic along the flight line. Locate the cargo areas on the end of the helibase nearest to the incident site. This will reduce external load overflights. Designate an emergency landing area, and establish one helipad to park transient and unassigned helicopters on.

**Select a site that has a surface which will support the type of operation you anticipate.** Make sure that it is dry and firm. Consider the weight of the support vehicles that follow helicopters. Fuel trucks can be very heavy. Can the ground be treated for dust abatement? Is the owner comfortable with chemical abatement? The ideal dust abatement setup is a live water source for pumps; hoses, and sprinklers. Porta-Tanks can be used to supply a ready source of water. Though large water tenders with spray bars are an option, often driving over the surface of the helibase creates more problems than are solved.

**Operations that involve helitorch, fireline explosive, or helicopter applied retardant support require separate areas of operation.** These areas do not have to be set up as another helibase, though that is often the most practical and is usually recommended. If the primary base has adequate space to set up special operations without conflicting with other requirements and present no hazard, it is acceptable to incorporate. Remember, FLE requires special security measures. When such operations are set up, whether on the same site as the main helibase or remote from it, a high degree of coordination between each organization must be established.

## AIRSPACE

**Select a site which has adequate airspace in which to conduct air support operations.** Two factors must be considered: traffic patterns and flight hazards.

**Airspace is as important in site selection as ground space.** Unless unobstructed airspace safely meets operational requirements is available, the site is not acceptable. Approach and departure routes must be carefully selected. It is illegal to overfly congested areas with external loads (CFR 14, sub-part C, 133.33, d, 2), and is ill-advised to habitually overfly congested areas in normal flight operations. Remember, rotor-wing operations have an effect on the local area; noise and dust are always generated. Consider local conditions and residents.

Check a Sectional to determine if Military Training Routes (MTRs) may conflict with your operations. Check with persons familiar with the area to see if the area you are considering for site selection has local air traffic. How far is the local airport? Consider having a 91.137 (Temporary Flight Restriction) established over the incident area.

Work through local dispatch to establish the restriction, and remember to remove it in a timely manner. If the site is near an airport, consider a visit to the FBO. Establishing a good relationship with this person can be very beneficial. Check with the air support group supervisor; he/she may have already made the visit.

## COMMUNICATIONS

All the best developed plans may be inadequate without well established communications. Be proactive in establishing communications. Look ahead and assess what type of communications will be needed to support expected helibase operations. Ensure that communications are maintained between all functions and personnel, for safe and efficient helicopter/helibase communications.

## A JUMP-START CHECKLIST FOR HELIBASE MANAGERS

### FIND OUT ASAP:

- Numbers, types, and present status of all assigned and on-board aircraft.
- Numbers, types, and estimated time of arrival (ETAs) of aircraft still on order or en route.
- Military aircraft (helicopters) on incident; names and location of their liaison officer.
- Any other restricted use category aircraft assigned; which ones and what restrictions.
- All pilots and aircraft currently carded.
- 9,600 channel radios in aircraft or on order.
- Operating frequencies assigned.
- Discreet VHF frequency requested.
- Back-up air to air and air to ground frequencies assigned and checked.
- VHF and fire net radios at helibase or on order.
- Need for a VHF Aircraft Link Kit.
- Communications problems (radios, operators) on the ground or in aircraft.
- Conflicting frequencies with adjoining fires.
- Qualified personnel on-board or ordered for all base and helispot operations.
- Specialized and support equipment on-board or ordered (helicopter support kit, porta-tanks, generators, AIDS machine, etc.).

- Use agreements completed for incident's use of facilities or private land for helibase, water dip spots, etc.
- Retardant availability – kind, quantity, and where.
- TFR 91.137 (91.91) requested – confirmed.
- Notification of any affected military routes done by dispatcher and/or FAA ATC.
- Phone numbers for: FAA ATC in incident area, airport, tanker bases, district and forest dispatchers.
- Helibase properly located and adequate for expansion if necessary.
- Are CWN helicopters coming with qualified crew modules? Also, with copy of contract?
- Adequate AV-gas, jet fuel, oil, and services available at helibase.
- Unusual flight hazards to aircraft operations in the incident area; don't overlook restricted areas and military low-level training routes.
- Pilots flying time remaining – for today and until mandatory day off.
- When do contract required “days off” occur on all contracted aircraft?
- Are relief pilots provided for?
- Any upcoming inspections requiring shutdown (50 or 100 hour inspections)?
- If so, will backup aircraft be needed?
- What are guarantee, hourly, availability, optional, and extended stand-by rates for all aircraft?
- Where are off-duty base personnel, air attack supervisor, and pilots staying (room and phone numbers)?

- Feeding and sleeping arrangements made for helibase personnel and pilots?
- Is ground transportation available for helibase personnel and pilots?
- Security needs for outlying helispots.
- Are presently assigned resources adequate to meet the tactical action needs?
- Are presently assigned resources adequate to meet the logistical support needs?
- Is extensive crew and supply shuttle by helicopter anticipated?
- If so, are Type II ships available?
- Any trainees assigned to air operations – who and in what capacity?
- Are FS 122, Flight Use Reports or OAS 23, Aircraft Use Report being completed for all contracted aircraft used on incident?

#### THINGS TO DO:

- Get with air support ASAP for briefing: problems, needs, concerns, and recommended actions.
- Start process of required reports: Air Ops Summary, Daily Flight Operations Log, Pilot Flight and Duty Record, Medevac Plan, Unit Log, etc.
- Brief and de-brief air operations personnel and pilots daily.
- Be prepared to make recommendations to air operations regarding capabilities, time frames for operations, limitations, and safety considerations to meet incident control objectives.
- Check all assigned personnel for medical qualifications (EMT, etc.).

- Order resources needed.
- Recommend release of resources not needed.
- Stay in contact with your people and with the air support.
- Maintain close awareness of operational safety considerations, e.g., if visibility starts to crowd marginal limitations, be ready to shut down.
- Monitor Air Ops radio traffic; enables you to get a feel of how things are going and will give you a jump on anticipating changes and heading off potential problems.
- Plan for clean-up and restoration of helibase and helispots upon termination of use (follow up).
- Overhead performance ratings with personnel.
- Anticipate demobilization. Be ready with priorities for release of personnel and aircraft; names, destinations, transportation needs, destinations of your aircraft, and is room available to take other release incident personnel. Coordinate early with plans and demob.
- On release, call in through the incident dispatch: Names, A/C identification, passenger manifests, flight plan with stops, final destination, ETDs, ETAs, get confirmation. Instruct pilot and/or chief of party to call in at each stop with ATA, ETD, and ETA to next stop.

#### THINGS NOT TO DO:

- Don't let yourself get tied up with the nuts and bolts of the jobs of others – you are a MANAGER. If you have to do their job, you aren't doing yours – replace them!
- Don't let yourself become isolated and out-of-communication. Things happen fast and decisions will be made, with or without you.

### THINGS TO REMEMBER:

- Air Ops are not particularly noted for their placid dispositions, endless patience, or sympathetic understanding. It is rumored that they come from an alien life form.
- Despite that, you need to have a hand in and insist that the air operations should be run the way you know it must be run.
- Do not allow the “urgency” (real or created) of any situation crowd you into taking any short cuts.
- Your job is to manage the helibase operations so as to support the incident’s control objectives but, NEVER AT THE PRICE OF AN UNSAFE OPERATION!!

### TO RUN A GOOD OPERATION:

- Know your job. Anticipate. Stay ahead. Order early. Stay informed. Keep your people informed. Resolve problems ASAP.
- Don’t be bashful. Anticipate timely resources release. Be positive. Expect the unexpected and be ready to do it all over again tomorrow!!

**MOST IMPORTANTLY - EVERY INCIDENT IS DIFFERENT – AS SITUATIONS CHANGE, PROBLEMS AND SOLUTIONS MAY ALSO CHANGE. NOTE ANY ADDITIONAL OR NEW CHECKLIST ITEMS AND PASS THEM ON. NOBODY HAS ALL THE ANSWERS!!**



## DETAILED LESSON OUTLINE

**COURSE:** Helibase Manager, S-371

**UNIT:** 5 – Risk Management and Safety

**TIME:** 3 Hours

**TRAINING AIDS:** Computer, projector, screen, course DVD, IHOG.

**OBJECTIVES:** Upon completion of this unit, students will be able to:

1. Define risk management as it applies to helibase operations.
2. Given a situation, apply established safety procedures and/or risk management methods to ensure safe helibase operations.

OUTLINE	AIDS & CUES
<b>UNIT TITLE SLIDE.</b>	05-01-S371-EP
<b>PRESENT UNIT OBJECTIVES.</b>	05-02-S371-EP
<b>HAND OUT THE DAY 4 IAP.</b>	05-01-S371-HO
<b>HAND OUT UNIT LOGS.</b> Students will record information on the form during presentation of this unit.	05-02-S371-HO

OUTLINE	AIDS & CUES
<p>I. DEFINE SAFETY AND RISK MANAGEMENT</p>	<p>05-03-S371-EP</p>
<p>A. Safety is an attitude.</p> <p>Safety is an attitude based upon an awareness of interagency aviation policy and procedures which have been derived from accumulated experiences, both successes and failures.</p> <p>Any mission can be accomplished safely provided the appropriate procedures are followed.</p>	
<p>B. Risk Management is a process.</p> <p>Risk Management is part of the aviation safety program, and provides managers with the tools and techniques to identify and mitigate risks involved in any mission or operation.</p> <p>By focusing on risk reduction, decisions can be made to utilize specific procedures which will improve the overall safety of the operation.</p>	<p>05-04-S371-EP</p>
<p>By adhering to sound safety practices and utilizing risk management techniques, a safer operational environment can be achieved on the helibase.</p>	<p>05-05-S371-EP</p>
<p><b>SHOW THE “RISK ASSESSMENT” MOVIE ON THE DVD (11:35 MINUTES).</b></p>	

OUTLINE	AIDS & CUES
II. IMPLEMENTATION OF RISK MANAGEMENT	05-06-S371-EP
<b>REFER STUDENTS TO “RISK MANAGEMENT” (IHOG, CHAPTER 3).</b>	IHOG, Chapter 3
A. Awareness	
Raise the level of awareness for risk management for all helibase personnel through briefings, training, and publications.	
B. Responsibility	
<ul style="list-style-type: none"> <li>• Overall risk management responsibilities for the helibase belong to the Helibase Manager.</li> <li>• Everyone is ultimately responsible for risk management practices.</li> <li>• The Helibase Manager must recognize when these responsibilities are beyond their capabilities and elevate them to a higher level.</li> </ul>	
<b>REFER STUDENTS TO THE RISK MANAGEMENT DOCUMENT AND BRIEFLY REVIEW (SW PAGES 5.17 – 5.23; IG PAGES 5.19 – 5.25).</b>	05-01-S371-IR/SR



OUTLINE	AIDS & CUES
<p>III. IDENTIFYING INHERENT HAZARDS</p>	<p>05-08-S371-EP</p>
<p>Inherent risks are associated with any helibase operation regardless of location, due to the basic nature of flight and the aviation environment.</p>	<p>05-09-S371-EP</p>
<p>A. Three Categories of Inherent Hazards</p>	<p>05-10-S371-EP</p>
<p>The hazards inherent on the helibase can be divided into three categories:</p>	
<ul style="list-style-type: none"> <li>• Environmental</li> <li>• Human</li> <li>• Mechanical</li> </ul>	
<p>1. Environmental hazards</p>	<p>05-11-S371-EP</p>
<ul style="list-style-type: none"> <li>• Wires, obstacles</li> <li>• Winds</li> <li>• High elevations/hot temperatures</li> <li>• Confined landing areas</li> <li>• Airspace congestion</li> <li>• Reduced visibility</li> <li>• Dusty helibase/helispots</li> </ul>	

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• MTR's</li> <li>• MOA's/SUA's</li> <li>• Poor radio communications</li> </ul>	
<p>2. Human hazards</p> <ul style="list-style-type: none"> <li>• Deficient experience/skill levels</li> <li>• Fatigue/stress</li> <li>• Urgency of situation</li> <li>• Poor crew cohesion</li> <li>• Ego</li> <li>• Attitude (pilots and personnel)</li> </ul>	05-12-S371-EP
<p>3. Mechanical hazards</p> <ul style="list-style-type: none"> <li>• Fuel</li> <li>• Maintenance deficiencies</li> <li>• Component failure</li> <li>• Security problems</li> </ul>	05-13-S371-EP

OUTLINE	AIDS & CUES
<p>B. Sources of Information for Hazard Identification</p> <p><b>DISCUSS HOW TO GATHER THIS INFORMATION:</b></p> <ul style="list-style-type: none"> <li>• Local knowledge</li> <li>• Maps</li> <li>• Pilots/flight crews</li> <li>• Helibase/helisport personnel</li> <li>• Incident personnel</li> <li>• Your eyes/ears</li> </ul>	05-14-S371-EP
<p>C. Methods For Gathering Hazard Information</p> <p>The task of gathering all the information needed to manage helibase operations is not practical for the helibase manager to accomplish alone.</p> <ul style="list-style-type: none"> <li>• Establish a method for gathering of hazard information.</li> <li>• Maintain the flow of information through the duration of the incident activities.</li> </ul>	05-15-S371-EP
<p>D. Information Management</p> <ul style="list-style-type: none"> <li>• <u>Delegate</u> – you can do only so much.</li> <li>• <u>Elevate</u> – when the situation is beyond your experience seek help.</li> <li>• <u>Monitor</u> – risk management is a continuous process.</li> </ul>	05-16-S371-EP

OUTLINE	AIDS & CUES
<p><b>EXERCISE: Hazard Identification-IAP</b></p> <p>Give students 10 minutes to review the Day 4 IAP and answer the following questions:</p> <ol style="list-style-type: none"> <li>1. What sections of the IAP may contain information about known hazards, or may point to potential hazards?</li> </ol>	05-17-S371-EP
<p>Review answers below and on slide 18.</p> <ul style="list-style-type: none"> <li>• ICS 220</li> <li>• Safety message</li> <li>• Fire behavior forecast</li> <li>• Incident map</li> <li>• Division assignments</li> </ul> <ol style="list-style-type: none"> <li>2. What hazards did you identify from the IAP?</li> </ol>	05-18-S371-EP
<p>Review answers below and on slide 19.</p> <ul style="list-style-type: none"> <li>• Increasing growth/complexity</li> <li>• Snags/rotor wash</li> <li>• Power lines</li> <li>• Structures</li> <li>• Visibility problems</li> </ul> <ol style="list-style-type: none"> <li>3. Were there any indications of potential hazards that you would investigate?</li> </ol>	05-19-S371-EP
<p>Review answers below and on slide 20.</p> <ul style="list-style-type: none"> <li>• Helispot construction</li> <li>• Helispot location</li> <li>• Conflicts due to increasing complexity</li> </ul>	05-20-S371-EP

OUTLINE	AIDS & CUES
<p>IV. MITIGATING SPECIFIC HAZARDS</p> <p><b>DISCUSS MITIGATION METHODS FOR EACH OF THE FOLLOWING ENVIRONMENTAL FACTORS.</b></p> <p><b>DISCUSS MITIGATION METHODS THE STUDENTS MAY HAVE SEEN EMPLOYED AT DIFFERENT HELIBASES.</b></p> <p><b>SOLICIT ANY IDEAS THEY MAY HAVE ABOUT DIFFERENT HAZARDS.</b></p>	<p>05-21-S371-EP</p>
<p>A. Environmental Factors</p> <p>1. Wires, obstacles</p> <ul style="list-style-type: none"> <li>• Mapping</li> <li>• Marking</li> <li>• Panels on ground</li> <li>• Briefings</li> <li>• Orientation flights</li> <li>• Removal of hazard</li> <li>• Relocation of helispots or work sites</li> <li>• Altering flight routes</li> </ul>	<p>05-22-S371-EP</p>

OUTLINE	AIDS & CUES
<p>2. Winds</p> <ul style="list-style-type: none"> <li>• Wind indicators</li> <li>• Marshalls</li> <li>• Defined approach/departure patterns</li> <li>• Feedback on changing conditions</li> <li>• Alternate sites/contingency planning</li> </ul>	05-23-S371-EP
<p>3. High density altitudes</p> <ul style="list-style-type: none"> <li>• Proper helispot selection/construction</li> <li>• Appropriate aircraft for mission</li> <li>• Load calculations correct</li> <li>• Additional downloading</li> <li>• Planning to utilize the coolest time of day</li> </ul>	05-24-S371-EP
<p>4. Confined landing areas</p> <ul style="list-style-type: none"> <li>• Aircraft selection for mission</li> <li>• Site selection</li> <li>• Make improvements</li> <li>• Avoid regular use of full power take-off/landing areas</li> </ul>	05-25-S371-EP

OUTLINE	AIDS & CUES
<p>5. Congested airspace</p> <ul style="list-style-type: none"> <li>• Adequate helibase layout/traffic patterns</li> <li>• TOLC qualified and functional at current complexity level?</li> <li>• Flight following procedures established?</li> <li>• Consider request for portable FAA tower</li> <li>• Establish flight routes/check-in points</li> <li>• Horizontal and vertical separation (fire traffic area)</li> <li>• Consider using a geographic feature or barrier to separate inbound and outbound flights</li> <li>• Adequate communications/frequencies</li> <li>• Backup communications plan (guard frequency).</li> <li>• Coordinate with air attack and helicopter coordinator</li> </ul>	<p>05-26-S371-EP</p>

OUTLINE	AIDS & CUES
<p>6. TFR's (Temporary Flight Restrictions)</p> <p>Check status with AOBD or ASGS. If neither is available, coordinate with local dispatch. Information they will need:</p> <ul style="list-style-type: none"> <li>• Location of TFR - Lat/Long</li> <li>• Incident elevation</li> <li>• Standard TFR dimensions are 3000' AGL and a 5 nautical mile radius.</li> <li>• Adjust size and altitude to fit incident conditions.</li> </ul>	05-27-S371-EP
<p>7. Visibility</p> <ul style="list-style-type: none"> <li>• Landing lights on</li> <li>• Planning for inversion conditions</li> <li>• Increase position reporting by pilots to other pilots</li> <li>• Limit number of aircraft operating in specific areas</li> <li>• Shutdown time earlier than required</li> <li>• Helicopter coordinator for logistical mission traffic control</li> </ul>	05-28-S371-EP

OUTLINE	AIDS & CUES
<p>8. Dusty conditions</p> <ul style="list-style-type: none"> <li>• Site selection</li> <li>• Dust abatement</li> <li>• Pumps/hose lays</li> <li>• Sprinkler systems</li> <li>• Bucket drops</li> <li>• Water tenders</li> </ul>	<p>05-29-S371-EP</p>
<p><b>SHOW SLIDES 30 AND 31; DISCUSS METHODS FOR MITIGATING FRUSTRATION AND BOREDOM.</b></p>	<p>05-30-S371-EP 05-31-S371-EP</p>
<p><b>REFER STUDENTS TO “FIVE HAZARDOUS ATTITUDES” (SW PAGES 5.25 – 5.29; IG PAGES 5.27 – 5.31). THIS ARTICLE PROVIDES FUTURE REFERENCE FOR THE FOLLOWING.</b></p>	<p>05-02-S371-IR/SR</p>
<p>B. Human Factors</p> <p>1. Experience/skills</p> <ul style="list-style-type: none"> <li>• Evaluate personnel skills.</li> <li>• Assign experienced personnel to specific positions based on incident complexity.</li> <li>• Provide training opportunities for all personnel.</li> <li>• Monitor pilot proficiency and flight skills.</li> </ul>	<p>05-32-S371-EP</p>

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• Do not make mission assignments which are beyond a pilot's skill level.</li> <li>• Order additional personnel for specialized assignments.</li> </ul> <p>2. Fatigue/stress</p> <ul style="list-style-type: none"> <li>• Monitor physical and emotional condition of personnel and pilots.</li> <li>• Provide adequate facilities for pilot and crew comfort.</li> <li>• Rotate personnel assignments for "change of scenery" and training opportunities.</li> <li>• Provide variety in mission assignments for pilots to avoid long periods of repetitive flight or difficult missions.</li> <li>• Ensure that adequate breaks from activity are taken.</li> <li>• Limit flight hours if necessary.</li> <li>• Ensure that R&amp;R guidelines are followed, but give days off if needed sooner than scheduled.</li> <li>• Take care of yourself; you need to set the example on the helibase.</li> </ul>	<p>05-33-S371-EP</p>

OUTLINE	AIDS & CUES
<p>3. Urgency of mission</p> <ul style="list-style-type: none"> <li>• Lead by example; establish methodical procedures for mission assignment/accomplishment.</li> <li>• Have all emergency procedures established, known, and ready for implementation.</li> <li>• Ensure that all personnel know their individual assignments, as well as the operational objectives for the period, and the overall incident objectives.</li> </ul>	05-34-S371-EP
<p>4. Human relations</p> <ul style="list-style-type: none"> <li>• Create an environment in which all personnel can work together as a team.</li> <li>• Address EEO policy, and monitor the working environment.</li> <li>• Make yourself accessible to all personnel; solicit feedback on how the operation is going.</li> <li>• Investigate all problems or complaints, no matter how minor.</li> <li>• A serious safety issue may come to your attention.</li> <li>• Do not allow crew rivalries or personal conflicts to continue once identified.</li> </ul>	05-35-S371-EP

OUTLINE	AIDS & CUES
5. Ego	05-36-S371-EP
6. Attitude	
C. Considerations for Mechanical Factors	05-37-S371-EP
1. Facilities for cleaning and maintenance. <ul style="list-style-type: none"> <li>• Lighting for mechanics</li> <li>• Adequate water for daily cleaning</li> </ul>	
2. Allow helicopter managers opportunity to utilize contracts to resolve problems. <ul style="list-style-type: none"> <li>• Encourage them to contact contracting officer/contracting officer representative (CO/COR) and agency technical specialists.</li> <li>• Insist on feedback/resolution once a problem is identified.</li> <li>• Monitor</li> </ul>	05-38-S371-EP
3. Elevate to a higher organizational level those maintenance items that are beyond your responsibility. <ul style="list-style-type: none"> <li>• Maintenance inspectors</li> <li>• Consider aviation safety teams</li> </ul>	05-39-S371-EP
<b>EXERCISE: Human Factors Mitigation Methods</b>	05-40-S371-EP
Refer students to the exercise and review the instructions (SW pages 5.31 – 5.34; IG pages 5.33 – 5.34).	05-03-S371-IR/SR

OUTLINE	AIDS & CUES
<p><b>EXERCISE: Problem Solving</b></p> <p>Refer students to the exercise and review the instructions (SW page 5.35; IG pages 5.35 – 5.36).</p> <p>The answers to the exercise are on slide 42.</p>	<p>05-41-S371-EP</p> <p>05-04-S371-IR/SR</p> <p>05-42-S371-EP</p>
<p><b>V. RISK MANAGEMENT AND SAFETY TIPS</b></p> <p>Consider the following example from the television show Hill Street Blues:</p> <p>At the briefing every morning, the Staff Sergeant told all the officers to be careful. Did he need to say that? Yes!</p> <p>Remember, let's be careful out there!</p> <p>The helibase manager's job is to see the big picture for safety.</p> <ul style="list-style-type: none"> <li>• Be a leader and lead by example.</li> <li>• If you don't wear the proper PPE, they won't.</li> <li>• Empower all personnel, pilots, and contractors to continually improve the safety of the operation.</li> <li>• Continually solicit feedback.</li> <li>• Safety problems should be corrected immediately as they occur.</li> <li>• If needed, operations can be shut down until safety issues are addressed.</li> </ul>	<p>05-43-S371-EP</p>

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• Create an environment which provides continual feedback from all personnel.</li> <li>• Utilize regularly scheduled briefings and debriefings.</li> <li>• Encourage internal briefings by all functions of the helibase operation.</li> <li>• Emphasize that all incidents needed to be reported so that safety issues can be addressed. If necessary fill out a Safecom and submit.</li> </ul> <p><b>EXERCISE: Unit Log</b></p> <p>Instruct students to complete their ICS 214 for Day 4 and hand them in to their coach/mentor. Allow 5 minutes.</p> <p><b>REVIEW UNIT OBJECTIVES.</b></p> <p><b>HAVE STUDENTS COMPLETE A UNIT EVALUATION.</b></p>	<p>05-44-S371-EP</p>

## **RISK MANAGEMENT**

Risk management is a tool that helps leaders make sound decisions in a logical manner. Used in a positive command climate, risk management can become a mind set that governs all unit missions and activities. Risk management enables leaders at all levels to do exactly what the term implies: manage risks.

The term is best applied generically, as leaders are confronted with a variety of risks: training risks, fiscal risks, and safety risks. Safety risk management, however, is a specific type of risk management. This article is directed toward safety risk management and how it fits into the leader's tool bag.

But before commanders can effectively use risk management as an accident-prevention tool, they must remember to:

- \* Integrate risk management into planning
- \* *Accept no unnecessary risk*
- \* Make risk decisions at the proper level
- \* Accept the risk if benefits outweigh the cost

### **Risk management in theory**

Risk management is a five-step cyclic process that is easily integrated into the decision-making process. This decision-making process is ingrained into incident team leaders and readily lends itself to safety risk management, so rather than advocate safety risk management as a separate consideration, let's put it into a process that leaders understand.

### **Risk management vs. risk assessment**

A risk assessment is a part of risk management. It can range from simple to complex. A risk assessment causes leaders to identify hazards and threats and place them in perspective relative to the mission or task at hand. Logically, one cannot identify the risk without first determining what the hazards are.

## Risk management applied

The first step in risk management is to *identify hazards*. The hazards are the potential sources of danger that could be encountered while performing a task or mission. For example, a unit is given a mission to transport passengers late at night across several states with heavy snowstorms forecast. Factors that determine hazards are weather, time of flight, terrain, equipment, and training of personnel. There could be other less obvious hazards that would become apparent during planning. Leaders should seek to identify all these hazards before the operation.

The second step is to *assess the hazards* to determine their cumulative effect on the mission or objective. Each of the hazards is analyzed to determine the probability of its causing a problem and the effect (severity) of the consequences should such a problem occur. Exercising judgment on how to eliminate or reduce hazards to lessen the overall risk is inherent in the risk assessment process. Additionally, the assessment of hazards should include those associated with not performing the flight mission.

**Assessing individual hazards.** Each identified hazard must be correctly assessed to determine its individual and cumulative effect on the mission. The risk assessment matrix is a tool to help flight crews, management, and operations supervisors analyze individual hazards to determine the probability (how likely is the hazard to cause an accident?) and the effect of the consequence is (how severe will the accident be?) should a problem occur.

**Assessing cumulative risk.** To assess the cumulative risk of mission hazards, units may develop a numerical risk-assessment worksheet appropriate for their operations, and/or generate an overall risk assessment using the matrix based on the identification and assessment of individual hazards.

However, if not properly used, the mission risk assessment can become a risk in itself if it established numerical values *too low* for the hazards identified. Conversely, the assignment of probability values that are *too high* may result in an over-cautious approach that ignores risk mitigation measures that have or will be taken.

To ensure the validity of the numerical values used in the mission risk assessment, units should ensure that the values yield a risk level commensurate with the complexity of the mission. First assess the risks both individually and cumulatively *without* mitigation measures, and then repeat the process for both individual and cumulative risks with mitigation measures either planned or in place.

The third step is to **make a risk decision**. Leaders are expected to weigh the risk against the benefits of performing an operation; however, the mentality is more often “mission-first.”

During the initial assessment (that is, prior to taking Step #4, Implementing Controls), some mission hazards may fall into the high-risk category. When one or a combination of these hazards falls into either of these categories, the overall initial mission risk assessment should fall into either one of these levels, *regardless* of the total cumulative numerical value obtained on the mission risk-assessment worksheet. The mission should then be elevated to the proper command level for review, recommendation of controls (see #4 below), and approval/disapproval.

Additionally, each hazard assessed could be classified as a low risk. However, the cumulative effect of all these low-risk hazards can significantly increase the overall (cumulative) mission risk.

Decisions become more obvious if the hard questions are asked first. Will the benefits to be gained from doing the mission outweigh the potential costs? Is there any single identified hazard that could of itself cause this mission to be a higher risk than is reflected on the risk assessment?

### **Appropriate levels for making a risk decision.**

Risk decisions should be made at a level of command that corresponds to the degree of risk. As such, guidance should be established as to who makes which risk decisions.

Too often, the risk-assessment decision is made at too low a level of command, either by design (that is, the risk assessment assigned purposely falls into the low or medium level) or by lower-level personnel making high-risk decisions independently. The effect is that the risk decision is not elevated to high-level commanders when their experience and command influence in lowering risks are most needed.

In cases where crews are performing risk assessments without the benefit of the chain of command's input, leaders are kept from fulfilling their leadership responsibilities. Risk management starts at the mission planning stages, not after the decision cycle has been completed. A poorly-assessed mission may yield a low risk value, thereby placing risk acceptance decisions at an inappropriate level.

Getting the chain of command involved in the entire risk management process — from identifying and assessing hazards to developing proper control measures and supervisory procedures to mitigate or diminish the effect of those hazards on unit operations — enhances the chances of accomplishing the mission safely.

Accidents highlight some common mission aspects that commanders should review as especially hazardous and deserving a higher risk value: crew experience, weather, mission complexity, and/or combinations of these. Commanders should train subordinate leaders to recognize hazardous situations and to elevate approval to the proper command level when one or a combination of these hazards exists.

The fourth step is to *implement the controls* established as a result of steps one through three. Included in this step is leader action to reduce or eliminate hazards, regardless of the risk level. Controls may be as substantial as writing a Standard Operating Procedure (SOP) or as simple as conducting a short safety briefing. If the risks cannot be eliminated, then we must look for ways to control them.

Remember, that once controls have been planned or implemented, an adjusted risk assessment should be performed using Steps 1 through 3. The purpose of this reassessment is to ensure the mission still falls within acceptable limits, or that unacceptable risks have been mitigated such that the mission can proceed.

In any mission scenario, the leader would provide the crew a mission briefing on the specifics of what he or she has decided. The leader would then require a brief back from the crew to ensure that all is understood.

Controls should be in place to ensure crews have a clear understanding of when the situation requires reassessment during mission execution. When new hazards arise or the risks of previously identified hazards increase, then pilots-in-command and air mission commanders need to reevaluate the cumulative risks and make new risk decisions. Many times that may mean aborting the mission until situations change or conditions improve.

The fifth step is to *supervise*. However, supervision in this sense goes beyond ensuring that people do what is expected of them. It includes following up during and after an action to ensure that all went according to plan, reevaluating the plan or making adjustments as required to accommodate unforeseen issues or situations, and incorporating lessons learned for future use.

### **Risk assessment in field situations**

Performing risk assessments in the field is limited by the amount of time available for planning and requires flexibility and judgment by leaders. Such risk assessments can be divided into three major categories:

**Hasty risk assessment** is required when planning time is minimal. (In this context, note that “hasty” is not to be considered synonymous with “inadequate.”) For example, while in flight an aviator encounters an unexpected thunderstorm. Planning time and reaction time are minimal. The pilot must quickly assess the risk and determine whether to land, attempt to fly over or around the weather cell, or abort the mission and return home to base.

Another example would be an air tanker pilot who experiences an engine failure on takeoff with a full retardant load. The decision as to whether to release the load must be made immediately. Time often does not allow extensive hazard identification and analysis. In these cases, do as much of the process as time will permit. Even a hasty risk assessment is better than just reacting. The secret lies in our ability to fully integrate risk management into our basic decision-making process.

**Deliberate risk assessment** is used when planning time permits. It involves systematic risk identification, evaluation, consideration of control options and risk decision making, implementation of controls, and supervision. For example, when a commander receives notice of a support mission 3 days in advance, there is ample time to identify and evaluate the hazards, develop and implement controls, and supervise preparations for the mission.

**In-depth risk assessment** should be used when risks appear high and time and resources allow thorough risk assessment. Risk assessment at this level requires more sophisticated techniques and professional reviews. An in-depth risk assessment is necessary when a unit is to utilize a new type of aircraft or initiate a new program (for example, rappelling).

Risk Assessment Matrix			HAZARD PROBABILITY				
			Frequent	Likely	Occasional	Seldom	Unlikely
			A	B	C	D	E
EFFECT	Catastrophic	I	EXTREMELY				MEDIUM
	Critical	II	HIGH	HIGH		MEDIUM	
	Moderate	III	HIGH	MEDIUM		LOW	
	Negligible	IV	MEDIUM				

**Effect:** If the hazard is encountered during a flight mission or aviation operation, the effect may be:

**Catastrophic:** Death or serious injury; system/equipment loss (aircraft or ground accident).

**Critical:** Serious injury; damage to equipment.

**Moderate:** Mission can be accomplished, though there may be adverse effects on mission efficiency (extra cost, delays, etc.).

**Negligible:** No effect on mission accomplishment.

**Probability:** The probability of encountering the hazard during the flight mission or operation may be:

**Frequent:** May be continuously or often encountered during each mission.

**Likely:** May be encountered several times during the course of many missions.

**Occasional:** May be encountered sporadically during the course of many missions.

**Seldom:** May be encountered infrequently, but chances are remote.

**Unlikely:** May be encountered only rarely; chances are possible, but improbable.



## FIVE HAZARDOUS ATTITUDES

### Flight Out of Balance

by Seth B. Cooley

Most pilots would agree that the single most important element in assuring the safety of a flight is the exercise of sound judgment, or good old-fashioned “common sense.” In the January issue of *AOPA Pilot* (p. 71), Editor Richard Collins discussed six qualities that can be associated with pilots who we consider to exercise good judgment: patience, intuition, organization, cool (sic), decisiveness, and coordination.

Clearly, judgment is the product of a combination - a balance - of factors that includes a pilot’s basic stick-and-rudder skills; his knowledge of aircraft, route, and weather; experience; training; personality; and attitude. But these factors can just as easily combine in an exercise of poor judgment as they can in good judgment. The challenge facing researchers seeking to formalize judgment training is to find ways to reinforce good decision-making processes and to discourage bad ones.

The personality factor is a particularly tough nut to crack because personality traits are deeply rooted behavioral characteristics that are usually established in childhood and are highly resistant to change. Attitudes, on the other hand, are not innate; they are learned responses to various types of situations. Attitudes can be influenced and changed (this is the stock-in-trade of advertising agencies, politicians, and theologians, among others).

In aviation, a pilot’s attitude toward safety in general, toward himself, and toward the very act of flying can greatly influence his judgment. If common sense were really so common, fewer accidents attributed to “pilot error” would occur. Researchers, therefore, have sought to formalize the difference between good attitudes and bad attitudes. They have come up with five “hazardous” attitudes that may exist in varying degrees in any pilot in any given situation. By recognizing the onset of hazardous attitudes in ourselves and understanding the antidotes to them, we can change our decision-making habits for the better.

## 1. Anti-Authority

The anti-authority attitude is found in pilots who dislike being told what to do, who resent external control over their actions. “Don’t tell me!” is their unspoken response to what they consider to be a challenge to their command prerogatives. These pilots often disregard rules, regulations, and procedures they feel are silly or unnecessary; they feel the rules were written for “the other guy.”

Nobody enjoys feeling like (sic) he is being pushed around. Moreover, the pilot has responsibility for, and is the final authority as to, what is appropriate for the safety of his flight. The pilot has the prerogative to question authority when he feels it to be in error. Under Federal Aviation Regulation 91.3, in an emergency the pilot may deviate from any rule or regulation to the extent necessary to meet that emergency. Be that as it may, when a pilot deliberately flouts the rules, he has stepped over the line into a hazardous attitude.

The antidote: When you find yourself flirting with the anti-authority hazardous attitude, think “Follow the rules. They are usually right.”

## 2. Impulsivity

Some pilots feel the need to do something - anything - immediately when confronted with a choice of action. “I must act now - there’s no time,” they say to themselves. What makes this attitude hazardous is that these pilots usually do the first thing that enters their heads; in other words, they don’t think. They don’t take time to select the best alternative.

Decisiveness is a positive attitude in a pilot, but making a decision in the absence of facts is a dangerous habit. “Plan your flight, then fly your plan” the military teaches its pilots. To fly safely, we must always have alternative courses of action in mind should something go wrong right now. (Sometimes this is mandated, as in alternate airport requirements under instrument flight rules.) Among other benefits, this reduces overall pilot workload.

Regardless of the swiftness of the onset of an unusual situation, it behooves the smart pilot to take a moment to analyze the situation, carefully consider his alternatives, and then make a decision based on the best possible course of action under the circumstances. It needn't take more than a moment if the pilot has the right decision-making attitude.

Antidote: When tempted to respond without thinking through a problem, remember "Not so fast. Think first."

### 3. Invulnerability

Despite the evidence supplied by such columns as "Never Again" that bad things can happen to anyone, some pilots defy logic and the laws of probability with an attitude of invulnerability. "It can't happen to me," they think, as they read of another gear-up landing or dual electric/vacuum failure in instrument meteorological conditions. They know accidents happen, they know anyone can be affected - they just don't believe it will ever happen to them personally.

The evidence of our senses should be enough. Anyone who has amassed sufficient experience in the cockpit will have had some untoward event occur at some time in his flying career. The alternative attitude - that something is likely to go wrong on each and every flight - is equally wrongheaded but overall a safer basis for decision-making. We are taught even in drivers' education courses to anticipate the unexpected. If nothing happens on a particular flight, fine, but anticipation of potential trouble is the first step toward dealing with it when (not if) it eventually happens.

Antidote: If you ever find yourself feeling that you fly under a lucky star, say to yourself, "It *could* happen to me."

### 4. "Macho"

A pilot we know - a mild-mannered, soft-spoken chap - started a takeoff into a strong crosswind recently, and finding that he could not keep the airplane tracking down the centerline, he thought about aborting. Realizing that friends were watching from the ramp, however, he continued the takeoff. As he drifted toward the runway edge lights with about two feet of altitude, he realized that he had fallen victim to the most perfidious of the hazardous attitudes, "macho." "I'll show them," he was unconsciously thinking. "I can do it."

The “macho” bug can bite the shy and retiring. It bites women with great regularity, as well, particularly women who feel they are somehow in competition with male pilots. But “macho” reaches its nastiest manifestations in pilots who, for whatever psychological reasons, are always trying to prove they are better than anyone else. They prove this to themselves by taking risks and trying to impress others. Beware of overconfidence.

Aviation’s fascination with having “the right stuff” unconsciously reinforces this most dangerous of attitudes. Recent popular books, films, and television programs imply that pilots who don’t take risks, who are afraid of facing a little danger, don’t have the moral fiber required of a “real” pilot. Having had the right stuff is of little consolation to the widow(er) and orphans of the pilot who had it.

In fact, the researchers’ choice of the word *macho* is probably ill-taken. Macho means nothing more than strong, manly. Though feminists may argue that this in itself is an undesirable attribute, the dictionary would disagree. Rather, the negative response we are supposed to have to the word is based on its misuse (probably in place of the word *machismo*, which is derived from macho but implies male domination) in popular culture over the last decade or two. A more appropriate word is *hubris*, meaning excessive pride self confidence, arrogance.

Competitiveness is a characteristic of modern society, and most of us probably fall prey to it on occasion. Competition has its place in aviation, but that place is not the day-to-day flying activities of the majority of general aviation.

Antidote: Be on guard for the hubris monster, for it is the most insidious of beasts. There’s nothing wimpy about saying, “Taking chances is foolish.” Just ask your kids.

## 5. Resignation

The flip side of the invulnerability coin is the attitude of resignation. “What’s the use?” say pilots who feel they have little control over what happens to them. They do not see themselves as players in their own lives’ dramas. They feel that circumstances are governed by luck, and they leave action to others, allowing other people or commitments to influence their decisions. They are resigned to leaving things as they are, and they may deny that a situation is as critical as it appears.

But listen to William Ernest Henley: “It matters not how strait the gate, how charged with punishments the scroll; I am the master of my fate, the captain of my soul.” Henley was not a resigned man. Above all, “the pilot in command of an aircraft is directly responsible for, and is the final authority as to, the operation of the aircraft.” (FAR 91.3[a]). No controller, no instructor, no set of rules or procedures can help you unless you are firmly, and comfortably, in command of your flight. It’s your ship; you are the captain, and you are the master of your fate.

Antidote: When things look bleak, tell yourself “I’m not helpless. I *can* make a difference.”

Become alert to hazardous attitudes creeping into your flight activities. Sensitizing yourself to them is the first important step in eliminating them. By telling yourself something different from what the attitude would have you believe, by taking an “antidote,” you can improve the way you react to adverse situations.

When seated comfortably reading a magazine by the fire, it is easy to deny the influence of hazardous attitudes. To discover the extent these attitudes may influence your flying, you may want to take an attitude inventory. The AOPA Air Safety Foundation has prepared a series of manuals for use in aeronautical decision-making courses. Manuals have been developed for student and private pilots, instructors, instrument pilots, commercial pilots, and those pilots operating multicrew aircraft. Each contains an attitude inventory that allows a pilot to score himself on the presence of hazardous attitudes in his decision-making processes. For more information on the aeronautical decision-making manuals, contact Richard D. Glass at AOPA ASF, 421 Aviation Way, Frederick, Maryland 21701; telephone 301/695-2196.

Most hazardous attitudes are based on normally positive attributes. They become hazardous when carried to an extreme, when they replace thought and analysis with rote responses, when the balance required by the decision-making process is lost. But they can be changed, and recognition is the first step toward turning a hazardous attitude back into a positive attitude and making common sense a little more common.



## **EXERCISE: Human Factors Mitigation Methods**

### Instructions:

Allow 30 minutes for this exercise.

This exercise consists of six scenarios and three questions. The same questions apply to each scenario.

Students will work in their groups and complete each scenario in sequence. Allow groups five minutes to work through each scenario. Select a group to present their answers and discuss among the class. There are no absolute answers to the scenarios.

### Questions:

1. What existing or potential safety problems are indicated in this scenario?
2. List several factors which may have contributed to this situation.
3. As helibase manager, how would you deal with this situation to reduce the risk and improve the overall safety of the operation?

### Scenarios:

**Scenario #1:** When you arrive at the helibase, there are several Type 2 helicopters hauling cargo out on longlines. You notice that one pilot is having problems hovering and picking up the load cleanly.

**Scenario #2:** You deliver a message to your deck coordinator to call home as soon as possible. He seems upset after the call and you ask if there is anything you can do. He says he'll manage. Later you notice he is wandering on the helibase and doesn't seem to be able to concentrate on the job.

**Scenario #3:** The helitack assigned to cargo were very busy for the first week of the incident, but lately things have slowed down. They have started taking turns at batting practice with a "tape-ball" they made. This has caught the attention of several of the parking tenders, who have started to make their own "equipment."

**Scenario #4:** A 206 B-III pilot approaches you and says that he is tired flying in circles all day on recon missions. The operations section chief has been using this aircraft extensively and has specifically requested this pilot because he knew him from a previous exclusive use contract.

**Scenario #5:** You are awakened late at night by loud voices and music. At the far end of the helibase sleeping area, helitack personnel from several crews and two pilots are partying. They offer you a beer as you walk up.

**Scenario #6:** There is a heated discussion going on at the pilot's lounge area concerning the "stupidity" of yesterday's aerial ignition operation which escaped and tripled the size of the incident. One pilot is extremely irate at the operations section chief and a helitack crew member comments, "this team is useless, you should have seen them at the "Fiasco incident" back in June ..."

## **EXERCISE: Problem Solving**

### Instructions:

Allow 10 minutes for this exercise.

Explain that the incidents in this exercise were actual events. Assign each group a different incident. Have groups list factors or events that may have contributed to these incidents occurring. Groups should also develop a solution for their incident and present it to the class. Review answers below and facilitate a classroom discussion following each groups presentation.

### Incidents:

**Incident #1:** For the third time today, involving different helicopters, loose trash and paper sleeping bags have been blown around during approach to several different helispots.

**Incident #2:** A pilot doing bucket work with a longline came in and fueled, then was given a mission to transport helitack to construct a helispot. On take-off, he had forgotten to disconnect the bucket and punched it off as he cleared trees at the end of the helibase.

**Incident #3:** A Bell 206 B-III pilot has returned and is very angry about the helitack at H-3 who had forgotten to check the cargo compartment during the last crew shuttle. The unremoved cargo created a serious near crash weight and balance problem for the pilot on takeoff, and he had to return to the helispot to be unloaded.

### Review answers below and on slide 42:

- No pilot walk around
- No parking tender
- Fatigue
- Hurried operation
- Sudden change in plans
- No request for a parking tender from adjacent modules
- Complacency
- Inadequate staffing
- Unfamiliar with helicopter types
- Attitude
- Pushing darkness

Continued on next page.

Discussion:

Ask students:

1. As the helibase manager, what action would you take to immediately resolve this problem?
2. How would you address this incident at the next pre-operational briefing?

## DETAILED LESSON OUTLINE

COURSE: Helibase Manager, S-371

UNIT: 6 – Planning

TIME: 3 Hours

TRAINING AIDS: Computer, projector, screen, IHOG.

OBJECTIVES: Upon completion of this unit, students will be able to:

1. Identify the planning and coordination required of the helibase manager to meet the needs of a changing incident.
2. Identify the tools a helibase manager utilizes in the planning process.
3. Develop a plan and order resources necessary to accomplish the objectives in the air operations section of the incident action plan.

OUTLINE	AIDS & CUES
<b>UNIT TITLE SLIDE.</b>	06-01-S371-EP
<b>PRESENT UNIT OBJECTIVES.</b>	06-02-S371-EP
<b>HAND OUT THE DAY 5 IAP.</b>	06-01-S371-HO
<b>HAND OUT UNIT LOGS.</b> Students will record information on the form during presentation of this unit.	06-02-S371-HO



OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• Logistics Section – To ensure that services meet your escalating needs. This would include food, supplies, garbage removal, ground transportation, and medical support.</li> <li>• Air Operations Branch Director – To ensure that the overall actions of the helibase are understood and that problems are quickly identified and resolved.</li> </ul> <p>C. Importance of Coordination</p> <p>Why is it important for the helibase manager to coordinate with other incident functions?</p> <ul style="list-style-type: none"> <li>• Considerations for demobilization planning should start at the beginning of the incident.</li> <li>• In order to provide an efficient and seamless operation.</li> <li>• In order to have input into the following day’s mission plans.</li> <li>• To ensure the IAP contains no missions that would be considered unreasonable, unsafe, or unattainable.</li> <li>• To be proactive versus reactive.</li> <li>• To ensure that you understand mission priorities and objectives.</li> </ul>	<p>06-05-S371-EP</p>

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>To provide “no surprise” helibase management.</li> </ul> <p>For example, ensure overhead team is well aware of planned maintenance and aircraft limitations or considerations that will affect their planned operations.</p>	
<p><b>EXERCISE: Helibase Coordination</b></p> <p>Refer students to the exercise and review the instructions (SW page 6.9; IG page 6.9).</p>	<p>06-06-S371-EP</p> <p>06-01-S371-IR/SR</p>
<p><b>II. PLANNING TOOLS</b></p> <p>In order to complete mission planning, a helibase manager must understand the resources on site, their capability, and their limitations.</p> <p>Various forms have been developed to assist in tracking this information.</p> <ul style="list-style-type: none"> <li>HCM forms pertain to individual helicopters and are usually completed by the helicopter managers.</li> <li>HBM forms are summary forms that pertain to multiple aircraft.</li> </ul>	<p>06-07-S371-EP</p>
<p>Appendix A and Appendix B of the IHOG explains how the HCM and HBM forms are used. Blank copies of the forms are located in the index of the IHOG.</p>	<p>IHOG</p>

OUTLINE	AIDS & CUES
<p>A. What information can the helibase manager obtain from each helicopter manager to aid in planning?</p> <ul style="list-style-type: none"> <li>• Helicopter Information Sheet (HCM 6)</li> <li>• Helicopter Crew Information Sheet (HCM 7)</li> <li>• Single Helicopter Load Capability Planning Summary - Multiple Helispots and Fuel Loads (HCM 11)</li> </ul> <p>B. Where does the helibase manager record information necessary for the planning process?</p> <ul style="list-style-type: none"> <li>• Helibase Aircraft Information Summary (HBM 3)</li> <li>• Load Capability Planning Summary - By Multiple Helispots (HBM 4)</li> <li>• Resource Planning Capability Chart (HBM 6)</li> </ul> <p>There are many forms available you will need to use based on your knowledge and incident complexity.</p> <p>Many of the HBM/HCM forms record similar information (HBM 2, HBM 4, HBM 6). Use what you are comfortable with.</p>	<p>06-08-S371-EP</p> <p>06-09-S371-EP</p> <p>06-10-S371-EP</p> <p>06-11-S371-EP</p> <p>06-12-S371-EP</p> <p>06-13-S371-EP</p>

OUTLINE	AIDS & CUES
<b>EXERCISE: Crew Information and Capability</b>	06-14-S371-EP
Refer students to the exercise and review the instructions (SW pages 6.11 – 6.31; IG pages 6.11 – 6.31).	06-02-S371-IR/SR
C. What other sources of information are available to aid in the planning process?	
<ul style="list-style-type: none"> <li>• ICS 220, Air Operations Summary</li> <li>• ICS 202, Incident Objectives</li> <li>• ICS 204, Division Assignment List</li> </ul>	
D. What methods can the helibase manager use to ensure they have the correct information?	
<ul style="list-style-type: none"> <li>• Be proactive in gathering information.</li> </ul>	
<p style="margin-left: 40px;">Attempt to plan ahead for major resource status changes 72+ hours (for example, the release of aircraft or duty limitations of pilots or aircraft).</p>	
<ul style="list-style-type: none"> <li>• Delegate daily responsibilities for gathering and documenting information.</li> </ul>	
<b>EXERCISE: Planning</b>	06-15-S371-EP
If timing is appropriate, complete in class or have students complete as homework and present in the morning prior to introducing Unit 7.	
Refer students to the exercise and review the instructions (SW page 6.33; IG pages 6.33 – 6.34).	06-03-S371-IR/SR



OUTLINE	AIDS & CUES
<b>EXERCISE: Unit Log/Cost Summary</b>	06-18-S371-EP
Refer students to the completed helicopter daily use and cost summary forms (SW pages 6.35 – 6.40; IG pages 6.35 – 6.40).	06-04-S371-IR/SR
Based on the information provided in the helicopter daily use and cost summary forms, have students complete a:	
<ul style="list-style-type: none"> <li>• Daily use and cost summary for Day 5</li> </ul>	
<ul style="list-style-type: none"> <li>• Unit Log for Day 5</li> </ul>	
When students are finished, review solution on slide 19.	06-19-S371-EP
<b>REVIEW UNIT OBJECTIVES.</b>	06-20-S371-EP
<b>HAVE STUDENTS COMPLETE A UNIT EVALUATION.</b>	

## **EXERCISE: Helibase Coordination**

### Instructions:

Based on the hypothetical situations below, groups will list the tasks they must accomplish to ensure a smooth operation and which helibase function would help coordinate the tasks. This will include inter-helibase coordination. The hypothetical situations do not relate to the current IAP. Allow 10 minutes for groups to develop their lists then discuss answers below.

### Hypothetical situation #1:

You are to add three aircraft and modules to your helibase tomorrow. On a flip chart, list what tasks you must accomplish to ensure a smooth operation and which helibase function would help coordinate the tasks.

### Answers:

- Additional landing pad locations - DECK
- Location of additional fuel trucks - DECK
- Location of additional support vehicles - DECK/GSUL
- Module sleeping areas - DECK/FACL
- Increased ground transport needs - GSUL
- An increased number of meals (lunches) - FACL
- Increased support items (fire extinguishers, support kits, tarps) - SUPL

### Hypothetical situation #2:

After reviewing the above answers, announce that the new resources have arrived. Ask students who they should coordinate with or notify. Review answers below.

### Answers:

- Report the arrivals to the ASGS or the AOBD, along with aircraft and crew status and capabilities.
- Report the arrivals to planning section.
  - Resource unit leader (ICS 211 and offer copies of HCM 7 forms).
  - Request additional copies of the IAP.



## **EXERCISE: Crew Information and Capability**

The forms for this exercise are on SW pages 6.13 - 6.31 and IG pages 6.13 - 6.31. Tell students that the completed forms will be used in the next exercise. Ask students if they have any questions before proceeding. Allow 30 minutes to complete.

### Instructions:

1. Review the following completed forms:
  - Helicopter information sheets, HCM 6
  - Helicopter crew information sheets, HCM 7
  - Single helicopter load capability planning summary - multiple helispots and fuel loads, HCM 11
  - Resource planning capability chart, HBM 6
2. Summarize the above information on the following forms:
  - Helibase aircraft information summary, HBM 3
  - Helispot information summary, HBM 2
3. Put the information above on the helibase planning chart (example: helispot info, A/C info, etc.).



DATE: \_\_\_/\_\_\_/\_\_\_

**HELICOPTER INFORMATION SHEET**

(SUBMIT TO HELIBASE MANAGER IMMEDIATELY UPON ARRIVAL)

MAKE AND MODEL:  
**N Bell UH-B1  
 88976**

A/C INC/PROJ ORDER NO:		REQUEST NO: A-
CHECK ONE: <input type="radio"/> EXCLUSIVE-USE CONTRACT <input checked="" type="radio"/> CALL-WHEN-NEEDED <input type="radio"/> AGENCY-OWNED <input type="radio"/> OTHER (EG, Military):	CHECK ONE: <input type="radio"/> TYPE 1 HELICOPTER <input checked="" type="radio"/> TYPE 2 HELICOPTER <input type="radio"/> TYPE 3 HELICOPTER  LIMITED (RESTRICTED)? <input checked="" type="radio"/> YES <input type="radio"/> NO	COLOR OF AIRCRAFT:  <b>Yellow/Brown</b>  PASSENGER SEATS: <b>0</b>
AGENCY AND HOME UNIT: <b>BLM Wyoming</b>		PHONE: (     )
COAR/COR NAME: <b>J. Freeland</b>		PHONE: ( <b>703</b> ) <b>555-3131</b>
CONTRACTING OFFICER NAME: <b>Bob Carr</b>		PHONE: ( <b>208</b> ) <b>387-5762</b>
COMPANY NAME/CONTACT: <b>Hawkins &amp; Powers</b> <b>D. Hawkins</b>		PHONE: ( <b>703</b> ) <b>567-8244</b>

TYPE BUCKET/FIXED-TANK	CARRIED ON BOARD?	CAPACITY	FOAM INJECTION?	SPECIFIC CAPABILITIES
<b>Bambi</b>	<input checked="" type="radio"/> YES <input type="radio"/> NO	<b>240</b>	<input checked="" type="radio"/> YES <input type="radio"/> NO	LONGLINE/REMOTE HOOK? <input checked="" type="radio"/> YES <input type="radio"/> NO CAROUSEL? <input type="radio"/> YES <input checked="" type="radio"/> NO CARGO LETDOWN? <input type="radio"/> YES <input checked="" type="radio"/> NO RAPPEL? <input type="radio"/> YES <input checked="" type="radio"/> NO SHORT-HAUL RESCUE? <input type="radio"/> YES <input checked="" type="radio"/> NO AERIAL IGNITION? <input type="radio"/> OPSD <input type="radio"/> HELITORCH
OTHER CAPABILITIES, AVIONICS, ETC. <b>9600 Radio</b>				

VENDOR SERVICE TRUCK		GOVERNMENT HELITENDER (CREW CHASE TRUCK)	
MAKE AND MODEL	<b>Ford</b>	MAKE AND MODEL	<b>n/a</b>
LICENSING STATE AND NO.	<b>WY 6666</b>	4 WD?	<input type="radio"/> YES <input type="radio"/> NO
AVIATION FUEL TANK CAP.	<b>1500</b>	TRAILER?	<input type="radio"/> YES <input type="radio"/> NO
		NUMBER OF SEATS	OTHER: <input type="radio"/> YES <input type="radio"/> NO

FT/HR: <b>614</b>	HOURLY AVAIL: <b>Daily/3099</b>	HRS GUAR/DAY: <b>3</b>	SUBSISTENCE/DAY: <b>\$66.00</b>	NO. OF VENDOR CREW: <b>2</b>
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MAINTENANCE AND VENDOR CREW INFORMATION			
CURRENT HOBBS: <b>334.7</b>		NEXT 100-HOUR DUE AT: <b>424.7</b>	
NAME	POSITION (PILOT/MECHANIC/DRIVER)	NEXT SCHED. DAY OFF	DATE RELIEF DUE IN
<b>B. Hawkins</b>	<b>Pilot</b>	<b>9-1</b>	<b>9-1</b>
<b>B. Thorough</b>	<b>Mechanic/Driver</b>	<b>9-1</b>	<b>9-1</b>
IF APPLICABLE, VENDOR CREW'S LODGING FACILITY:		PHONE:	
REMARKS:			

DATE: \_\_\_/\_\_\_/\_\_\_

**HELICOPTER INFORMATION SHEET**

(SUBMIT TO HELIBASE MANAGER IMMEDIATELY UPON ARRIVAL)

MAKE AND MODEL:  
Bell 205  
**N**  
224MS

A/C INC/PROJ ORDER NO:		REQUEST NO: A-
CHECK ONE: <input checked="" type="radio"/> EXCLUSIVE-USE CONTRACT <input type="radio"/> CALL-WHEN-NEEDED <input type="radio"/> AGENCY-OWNED <input type="radio"/> OTHER (EG, Military):	CHECK ONE: <input type="radio"/> TYPE 1 HELICOPTER <input checked="" type="radio"/> TYPE 2 HELICOPTER <input type="radio"/> TYPE 3 HELICOPTER  LIMITED (RESTRICTED)? <input type="radio"/> YES <input checked="" type="radio"/> NO	COLOR OF AIRCRAFT:  <b>White, Yellow/Green</b>  PASSENGER SEATS: <b>9</b>
AGENCY AND HOME UNIT: <b>BLM, Carson City, NV</b>		PHONE: ( <b>702</b> ) <b>885-6000</b>
COAR/COR NAME: <b>Greg Gall, BLM, Nevada State Office, Reno, NV</b>		PHONE: ( <b>702</b> ) <b>352-7006</b>
CONTRACTING OFFICER NAME: <b>Bob Carr, OAS, Boise, ID</b>		PHONE: ( <b>208</b> ) <b>387-5760</b>
COMPANY NAME/CONTACT: <b>Ray Franz, Idaho Helicopters, Boise, ID</b>		PHONE: ( <b>208</b> ) <b>344-4361</b>

TYPE BUCKET/FIXED-TANK	CARRIED ON BOARD?	CAPACITY	FOAM INJECTION?	SPECIFIC CAPABILITIES
<b>Bambi Bucket</b>	<input checked="" type="radio"/> YES <input type="radio"/> NO	<b>350</b>	<input type="radio"/> YES <input checked="" type="radio"/> NO	LONGLINE/REMOTE HOOK? <input checked="" type="radio"/> YES <input type="radio"/> NO CAROUSEL? <input checked="" type="radio"/> YES <input type="radio"/> NO CARGO LETDOWN? <input checked="" type="radio"/> YES <input type="radio"/> NO RAPPEL? <input type="radio"/> YES <input checked="" type="radio"/> NO SHORT-HAUL RESCUE? <input type="radio"/> YES <input checked="" type="radio"/> NO AERIAL IGNITION? <input type="radio"/> OPSD <input type="radio"/> HELITORCH
<b>Fixed tank-</b>	<input checked="" type="radio"/> YES <input type="radio"/> NO	<b>270</b>	<input checked="" type="radio"/> YES <input type="radio"/> NO	
OTHER CAPABILITIES, AVIONICS, ETC.				

VENDOR SERVICE TRUCK		GOVERNMENT HELITENDER (CREW CHASE TRUCK)	
MAKE AND MODEL	<b>Dodge D600</b>	MAKE AND MODEL	<b>Chevy 3500</b>
LICENSING STATE AND NO.	<b>ID BA1328</b>	LICENSING STATE AND NO:	<b>I 162407</b>
AVIATION FUEL TANK CAP.	<b>1500 Gals.</b>	NUMBER OF SEATS	<b>6</b>
		4 WD?	<input checked="" type="radio"/> YES <input type="radio"/> NO
		TRAILER?	<input type="radio"/> YES <input checked="" type="radio"/> NO
		OTHER:	<input type="radio"/> YES <input type="radio"/> NO

FT/HR: <b>632.00</b>	HOURLY AVAIL: <b>350.00</b>	HRS GUAR/DAY: <b>8AH</b>	SUBSISTENCE/DAY: <b>66.00</b>	NO. OF VENDOR CREW: <b>3</b>
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MAINTENANCE AND VENDOR CREW INFORMATION			
CURRENT HOBBS: _____		NEXT 100-HOUR DUE AT: _____	
NAME	POSITION (PILOT/MECHANIC/DRIVER)	NEXT SCHED. DAY OFF	DATE RELIEF DUE IN
<b>Dave Lund</b>	<b>Pilot - Primary</b>	<b>9-1</b>	<b>9-1</b>
<b>Greg Deacon</b>	<b>Pilot - Relieft</b>	<b>9-1</b>	<b>9-1</b>
<b>Rick Thlelman</b>	<b>Mechanic</b>		
<b>Bill Martin</b>	<b>Fuel Trk. Attend.</b>		
IF APPLICABLE, VENDOR CREW'S LODGING FACILITY:		PHONE:	
REMARKS:			

DATE: \_\_\_/\_\_\_/\_\_\_

### HELICOPTER INFORMATION SHEET

(SUBMIT TO HELIBASE MANAGER IMMEDIATELY UPON ARRIVAL)

MAKE AND MODEL:  
**N** 370EH  
 Bell 212

A/C INC/PROJ ORDER NO:		REQUEST NO: A-
CHECK ONE: <input checked="" type="radio"/> EXCLUSIVE-USE CONTRACT <input type="radio"/> CALL-WHEN-NEEDED <input type="radio"/> AGENCY-OWNED <input type="radio"/> OTHER (EG, Military):	CHECK ONE: <input type="radio"/> TYPE 1 HELICOPTER <input checked="" type="radio"/> TYPE 2 HELICOPTER <input type="radio"/> TYPE 3 HELICOPTER  LIMITED (RESTRICTED)? <input type="radio"/> YES <input checked="" type="radio"/> NO	COLOR OF AIRCRAFT: <b>White,          Red, Black</b>  PASSENGER SEATS: <b>11</b>
AGENCY AND HOME UNIT: <b>USFS Los Padres N.F.</b>		PHONE: ( <b>702</b> ) <b>885-6000</b>
COAR/COR NAME: <b>Lonnie Briggs</b>		PHONE: ( <b>702</b> ) <b>352-7006</b>
CONTRACTING OFFICER NAME: <b>Rick Willis</b>		PHONE: ( <b>208</b> ) <b>287-5760</b>
COMPANY NAME/CONTACT: <b>Era Helicopters Sid Baird</b>		PHONE: ( <b>208</b> ) <b>344-4361</b>

TYPE BUCKET/FIXED-TANK	CARRIED ON BOARD?	CAPACITY	FOAM INJECTION?	SPECIFIC CAPABILITIES
<b>Fixed Tank</b>	<input checked="" type="radio"/> YES <input type="radio"/> NO	<b>360 gl.</b>	<input checked="" type="radio"/> YES <input type="radio"/> NO	LONGLINE/REMOTE HOOK? <input checked="" type="radio"/> YES <input type="radio"/> NO CAROUSEL? <input type="radio"/> YES <input checked="" type="radio"/> NO CARGO LETDOWN? <input checked="" type="radio"/> YES <input type="radio"/> NO RAPPEL? <input checked="" type="radio"/> YES <input type="radio"/> NO SHORT-HAUL RESCUE? <input type="radio"/> YES <input checked="" type="radio"/> NO AERIAL IGNITION? <input type="radio"/> OPSD <input type="radio"/> HELITORCH
<b>Bambi</b>	<input type="radio"/> YES <input checked="" type="radio"/> NO	<b>400 gl</b>	<input type="radio"/> YES <input checked="" type="radio"/> NO	
OTHER CAPABILITIES, AVIONICS, ETC.				

VENDOR SERVICE TRUCK		GOVERNMENT HELITENDER (CREW CHASE TRUCK)	
MAKE AND MODEL	<b>KW</b>	MAKE AND MODEL	<b>International n/a</b>
LICENSING STATE AND NO.	<b>NV 09006A</b>	LICENSING STATE AND NO:	<b>A 168527</b>
AVIATION FUEL TANK CAP.	<b>8,000 gals.</b>	NUMBER OF SEATS	<b>7</b>
		4 WD?	<input type="radio"/> YES <input checked="" type="radio"/> NO
		TRAILER?	<input type="radio"/> YES <input checked="" type="radio"/> NO
		OTHER:	<input type="radio"/> YES <input type="radio"/> NO

FT/HR: <b>681.00</b>	HOURLY AVAIL: <b>2,504.00/Day</b>	HRS GUAR/DAY:	SUBSISTENCE/DAY: <b>66.00</b>	NO. OF VENDOR CREW: <b>4</b>
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MAINTENANCE AND VENDOR CREW INFORMATION			
CURRENT HOBBS: _____		NEXT 100-HOUR DUE AT: _____	
NAME	POSITION (PILOT/MECHANIC/DRIVER)	NEXT SCHED. DAY OFF	DATE RELIEF DUE IN
<b>Wayne Leitner</b>	<b>Pilot</b>		
<b>Jerry Nation</b>	<b>Pilot</b>		
<b>Al Tiffany</b>	<b>Mechanic</b>		
<b>Mike Schwind</b>	<b>Driver</b>		
IF APPLICABLE, VENDOR CREW'S LODGING FACILITY:		PHONE:	
REMARKS:			

DATE: ___/___/___	<b>HELICOPTER INFORMATION SHEET</b> (SUBMIT TO HELIBASE MANAGER IMMEDIATELY UPON ARRIVAL)	MAKE AND MODEL: B206 LIII N 969W
A/C INC/PROJ ORDER NO:	REQUEST NO: A-	

CHECK ONE: <input checked="" type="radio"/> EXCLUSIVE-USE CONTRACT <input type="radio"/> CALL-WHEN-NEEDED <input type="radio"/> AGENCY-OWNED <input type="radio"/> OTHER (EG, Military):	CHECK ONE: <input type="radio"/> TYPE 1 HELICOPTER <input type="radio"/> TYPE 2 HELICOPTER <input checked="" type="radio"/> TYPE 3 HELICOPTER  LIMITED (RESTRICTED)? <input type="radio"/> YES <input checked="" type="radio"/> NO	COLOR OF AIRCRAFT:  White  PASSENGER SEATS: 6
AGENCY AND HOME UNIT: <b>USDA, FS - Coronado N F</b>	PHONE: ( 520 ) 824-3555	
COAR/COR NAME: <b>Alex Stone</b>	PHONE: ( 520 ) 824-3555	
CONTRACTING OFFICER NAME: <b>P.J. Haar</b>	PHONE: ( 520 ) 842-3126	
COMPANY NAME/CONTACT: <b>Brilles Wing and Helicopter</b>	PHONE: ( 818 ) 994-1445	

TYPE BUCKET/FIXED-TANK	CARRIED ON BOARD?	CAPACITY	FOAM INJECTION?	SPECIFIC CAPABILITIES
<b>Bambi</b>	<input checked="" type="radio"/> YES <input type="radio"/> NO	<b>125 gl.</b>	<input type="radio"/> YES <input checked="" type="radio"/> NO	LONGLINE/REMOTE HOOK? <input checked="" type="radio"/> YES <input type="radio"/> NO CAROUSEL? <input type="radio"/> YES <input checked="" type="radio"/> NO CARGO LETDOWN? <input checked="" type="radio"/> YES <input type="radio"/> NO RAPPEL? <input checked="" type="radio"/> YES <input type="radio"/> NO SHORT-HAUL RESCUE? <input type="radio"/> YES <input checked="" type="radio"/> NO AERIAL IGNITION? <input checked="" type="radio"/> PSD <input type="radio"/> HELITORCH
OTHER CAPABILITIES, AVIONICS, ETC. <b>9600, VHF, GPS, Intercom, V.O.R.</b>				

VENDOR SERVICE TRUCK		GOVERNMENT HELITENDER (CREW CHASE TRUCK)		
MAKE AND MODEL	<b>Chevy 250</b>	MAKE AND MODEL	<b>Chevy 1 ton</b>	4 WD? <input checked="" type="radio"/> YES <input type="radio"/> NO
LICENSING STATE AND NO.	<b>CA 4C08849</b>	LICENSING STATE AND NO:	<b>Govt.</b>	TRAILER? <input type="radio"/> YES <input checked="" type="radio"/> NO
AVIATION FUEL TANK CAP.	<b>500 gals.</b>	NUMBER OF SEATS	<b>6</b>	OTHER: <input type="radio"/> YES <input type="radio"/> NO

FT/HR: <b>518.00</b>	HOURLY AVAIL:	HRS GUAR/DAY:	SUBSISTENCE/DAY: <b>66.00</b>	NO. OF VENDOR CREW: <b>2</b>
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Daily Rate

MAINTENANCE AND VENDOR CREW INFORMATION			
CURRENT HOBBS: <b>1568.2</b>		NEXT 100-HOUR DUE AT: _____	
NAME	POSITION (PILOT/MECHANIC/DRIVER)	NEXT SCHED. DAY OFF	DATE RELIEF DUE IN
<b>Gene Wilson</b>	<b>Pilot</b>	<b>8/18 - 8/19</b>	<b>08-18</b>
<b>Carolyn Wilson</b>	<b>Driver</b>	<b>8/18 - 8/19</b>	<b>08-18</b>
IF APPLICABLE, VENDOR CREW'S LODGING FACILITY: _____ PHONE: _____			
REMARKS:			

DATE: \_\_\_/\_\_\_/\_\_\_

**HELICOPTER INFORMATION SHEET**

(SUBMIT TO HELIBASE MANAGER IMMEDIATELY UPON ARRIVAL)

MAKE AND MODEL:  
**N 6093R**  
**A-Star B-2**

A/C INC/PROJ ORDER NO:		REQUEST NO: A-
CHECK ONE: <input checked="" type="radio"/> EXCLUSIVE-USE CONTRACT <input type="radio"/> CALL-WHEN-NEEDED <input type="radio"/> AGENCY-OWNED <input type="radio"/> OTHER (EG, Military):	CHECK ONE: <input type="radio"/> TYPE 1 HELICOPTER <input type="radio"/> TYPT 2 HELICOPTER <input checked="" type="radio"/> TYPE 3 HELICOPTER  LIMITED (RESTRICTED)? <input type="radio"/> YES <input checked="" type="radio"/> NO	COLOR OF AIRCRAFT: <b>Maroon &amp; White</b>  PASSENGER SEATS: <b>5</b>
AGENCY AND HOME UNIT: <b>USFS Beaverhead N.E. Dillion, Montana</b>		PHONE: ( <b>406</b> ) <b>683-3975</b>
COAR/COR NAME: <b>George Johnson</b>		PHONE: ( <b>406</b> ) <b>683-3975</b>
CONTRACTING OFFICER NAME: <b>Rick Willis</b>		PHONE: ( <b>208</b> ) <b>387-5669</b>
COMPANY NAME/CONTACT: <b>River City Helicopters</b>		PHONE: ( <b>208</b> ) <b>772-2117</b>

TYPE BUCKET/FIXED-TANK	CARRIED ON BOARD?	CAPACITY	FOAM INJECTION?	SPECIFIC CAPABILITIES
<b>Bambi</b>	<input checked="" type="radio"/> YES <input type="radio"/> NO	<b>250</b>	<input checked="" type="radio"/> YES <input type="radio"/> NO	LONGLINE/REMOTE HOOK? <input checked="" type="radio"/> YES <input type="radio"/> NO CAROUSEL? <input type="radio"/> YES <input checked="" type="radio"/> NO CARGO LETDOWN? <input type="radio"/> YES <input checked="" type="radio"/> NO RAPPEL? <input type="radio"/> YES <input checked="" type="radio"/> NO SHORT-HAUL RESCUE? <input type="radio"/> YES <input checked="" type="radio"/> NO AERIAL IGNITION? <input type="radio"/> PSD <input checked="" type="radio"/> HELITORCH
<b>Griffith</b>	<input type="radio"/> YES <input type="radio"/> NO	<b>275</b>	<input type="radio"/> YES <input checked="" type="radio"/> NO	
OTHER CAPABILITIES, AVIONICS, ETC. <b>9600, VHF, GPS, Intercom, V.O.R.</b>				

VENDOR SERVICE TRUCK		GOVERNMENT HELITENDER (CREW CHASE TRUCK)	
MAKE AND MODEL	<b>Ford F6000</b>	MAKE AND MODEL	<b>Chevy</b>
LICENSING STATE AND NO.	<b>ID YB2628</b>	4 WD?	<input checked="" type="radio"/> YES <input type="radio"/> NO
AVIATION FUEL TANK CAP.	<b>1,200 gals.</b>	LICENSING STATE AND NO:	<b>A238510.</b>
		TRAILER?	<input type="radio"/> YES <input checked="" type="radio"/> NO
		NUMBER OF SEATS	<b>6</b>
		OTHER:	<input type="radio"/> YES <input type="radio"/> NO

FT/HR: <b>461.00</b>	HOURLY AVAIL:	HRS GUAR/DAY:	SUBSISTENCE/DAY: <b>66.00/person</b>	NO. OF VENDOR CREW: <b>3</b>
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Daily Rate

MAINTENANCE AND VENDOR CREW INFORMATION			
CURRENT HOBBS: <b>2258.0</b>		NEXT 100-HOUR DUE AT: <b>2281.0</b>	
NAME	POSITION (PILOT/MECHANIC/DRIVER)	NEXT SCHED. DAY OFF	DATE RELIEF DUE IN
<b>Gordon Miscoi</b>	<b>Pilot</b>	<b>8/8</b>	<b>8/8</b>
<b>Eric Tannler</b>	<b>Mechanic</b>	<b>8/8</b>	<b>8/8</b>
<b>Bob Gust</b>	<b>Driver</b>	<b>8/8</b>	<b>8/8</b>
IF APPLICABLE, VENDOR CREW'S LODGING FACILITY:		PHONE:	
REMARKS:			

## HELICOPTER CREW INFORMATION SHEET

(SUBMIT TO HELIBASE MANAGER IMMEDIATELY UPON ARRIVAL)

AIRCRAFT INCIDENT/PROJECT ORDER NUMBER \_\_\_\_\_ AIRCRAFT REQUEST NUMBER: \_\_\_\_\_

CREW NAME OR RESOURCE ID #: <b>N88976</b>
--

TYPE OF CREW: ( ) ATTACHED TO CONTRACT HELICOPTER (Do Not Enter Incident Order/Request Numbers For Each Individual)  
 ( ) ATTACHED TO CWN HELICOPTER (Enter Overhead "O" Incident Order/Request Numbers In Column Next To Each Individual's Name)

NAME	ORDER/ REQUEST #	TRANSPORT METHOD	RETURN TO (CITY)	LAST DAY OFF	QUALIFICATIONS/ SPECIAL SKILLS	TRAINING NEEDS
Helicopter Manager <b>J. Freeland</b>	<b>O-144</b>	<b>GOV</b>	<b>Caliente, NV</b>	<b>8-15</b>	<b>HCWN, HEB1, DIVS, STCR, HECM</b>	
Assistant Manager						
Lead Crewperson						
Crewperson						
Crewperson						
Crewperson						
Crewperson						
Crewperson						
Crewperson						
Crewperson						

## HELICOPTER CREW INFORMATION SHEET

(SUBMIT TO HELIBASE MANAGER IMMEDIATELY UPON ARRIVAL)

AIRCRAFT INCIDENT/PROJECT ORDER NUMBER \_\_\_\_\_ AIRCRAFT REQUEST NUMBER: \_\_\_\_\_

TYPE OF CREW: ( ) ATTACHED TO CONTRACT HELICOPTER (Do Not Enter Incident Order/Request Numbers For Each Individual)

( ) ATTACHED TO CWN HELICOPTER (Enter Overhead "O" Incident Order/Request Numbers In Column Next To Each Individual's Name)

CREW NAME OR RESOURCE ID #: <b>224MS</b>
--

NAME	ORDER/ REQUEST #	TRANSPORT METHOD	RETURN TO (CITY)	LAST DAY OFF	QUALIFICATIONS/ SPECIAL SKILLS	TRAINING NEEDS
Helicopter Manager <b>Craig Hall</b>					<b>HECM, HCWN, HEB2</b>	
Assistant Manager <b>Kevin Johnson</b>					<b>HECM, HCWN</b>	
Lead Crewperson <b>Jason Merrell</b>					<b>HECM, RADO</b>	
Crewperson <b>Scott Johnson</b>					<b>HECM</b>	
Crewperson <b>Stacey Saucedo</b>					<b>HECM, RADO</b>	
Crewperson <b>Shane O'Connell</b>					<b>HECM</b>	
Crewperson <b>Atticus Vorce</b>					<b>HECM</b>	
Crewperson						
Crewperson						
Crewperson						

## HELICOPTER CREW INFORMATION SHEET

CREW NAME OR  
RESOURCE ID #:  
**Arroyo Grande**  
**370EH**

(SUBMIT TO HELIBASE MANAGER IMMEDIATELY UPON ARRIVAL)

AIRCRAFT INCIDENT/PROJECT ORDER NUMBER \_\_\_\_\_ AIRCRAFT REQUEST NUMBER: \_\_\_\_\_

TYPE OF CREW: (X) ATTACHED TO CONTRACT HELICOPTER (Do Not Enter Incident Order/Request Numbers For Each Individual)

( ) ATTACHED TO CWN HELICOPTER (Enter Overhead "O" Incident Order/Request Numbers In Column Next To Each Individual's Name)

NAME	ORDER/ REQUEST #	TRANSPORT METHOD	RETURN TO (CITY)	LAST DAY OFF	QUALIFICATIONS/ SPECIAL SKILLS	TRAINING NEEDS
Helicopter Manager <b>Ted Mathiesen</b>			Arroyo Grande		OSC2, SOF2, HEB1, HERS, HRAP, OPB2	
Assistant Manager <b>Keith Alvord</b>			Arroyo Grande		DIVS, HEB1, DOZB, FALC, HRAP, FELB, STEN, STCR	
Lead Crewperson <b>Al Driesbach</b>			Arroyo Grande		DIVS, HEB1, HERS, HRAP, HLCO	
Crewperson <b>Vince La Rocco</b>			Arroyo Grande		FFT1, HRAP, EMT1, TOLC	
Crewperson <b>Scot Baskett</b>			Arroyo Grande		FFT2, HRAP, EMT1, TOLC	
Crewperson <b>Travis Ederer</b>			Arroyo Grande		FFT2, HRAP, EMT1, TOLC	
Crewperson <b>Dave Sewell</b>			Arroyo Grande		FFT2, HRAP	
Crewperson						
Crewperson						
Crewperson						

## HELICOPTER CREW INFORMATION SHEET

(SUBMIT TO HELIBASE MANAGER IMMEDIATELY UPON ARRIVAL)

CREW NAME OR RESOURCE ID #: <b>969W</b>
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AIRCRAFT INCIDENT/PROJECT ORDER NUMBER \_\_\_\_\_ AIRCRAFT REQUEST NUMBER: \_\_\_\_\_

TYPE OF CREW: ( ) ATTACHED TO CONTRACT HELICOPTER (Do Not Enter Incident Order/Request Numbers For Each Individual)

( ) ATTACHED TO CWN HELICOPTER (Enter Overhead "O" Incident Order/Request Numbers In Column Next To Each Individual's Name)

NAME	ORDER/ REQUEST #	TRANSPORT METHOD	RETURN TO (CITY)	LAST DAY OFF	QUALIFICATIONS/ SPECIAL SKILLS	TRAINING NEEDS
Helicopter Manager <b>Alex Stone</b>			Boise, ID	7/27	HEB1, HERS, HRAP, FALB, CRWB, FLIR, HCWN	
Assistant Manager <b>Manuel Gil</b>				7/25	FFT1, CRWB, HRAP, HERS, PACK, HCWN	DIVS
Lead Crewperson						
Crewperson <b>Jami Butler</b>				7/27	HCWN, HECM, HEB1, HRAP, LOAD, FALB, ABRO	
Crewperson <b>David Pyers</b>				7/28	HECM, HRAP, FFT2, LOAD, ABRO	
Crewperson <b>Al Roper</b>				7/25	HECM, HRAP, FFT2, LOAD, ABRO	
Crewperson <b>Rueben Morales</b>				7/28	HECM	
Crewperson						
Crewperson						
Crewperson						

## HELICOPTER CREW INFORMATION SHEET

(SUBMIT TO HELIBASE MANAGER IMMEDIATELY UPON ARRIVAL)

AIRCRAFT INCIDENT/PROJECT ORDER NUMBER \_\_\_\_\_ AIRCRAFT REQUEST NUMBER: \_\_\_\_\_

CREW NAME OR RESOURCE ID #: <b>6093R</b>
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TYPE OF CREW: ( ) ATTACHED TO CONTRACT HELICOPTER (Do Not Enter Incident Order/Request Numbers For Each Individual)

( ) ATTACHED TO CWN HELICOPTER (Enter Overhead "O" Incident Order/Request Numbers In Column Next To Each Individual's Name)

NAME	ORDER/ REQUEST #	TRANSPORT METHOD	RETURN TO (CITY)	LAST DAY OFF	QUALIFICATIONS/ SPECIAL SKILLS	TRAINING NEEDS
Helicopter Manager <b>Denny Nesbitt</b>		Helicopter	Dillion, MT	7-23	TFLD, HECM, IARR, HRSP, ENOP, MODEL 60 & UNDER	DIVS, ASGS
Assistant Manager <b>Rosy Perry</b>		Helicopter	Dillion, MT	7-27	FFT1, ENGB, HEB2, FALC	CRWB, DEKC
Lead Crewperson						
Crewperson <b>Thor Casey</b>		GOV	Dillion, MT	7-23		
Crewperson <b>Jim Woodcock</b>		GOV	Dillion, MT		FFT1, HECM, FALB, ENGB, ICT4	
Crewperson <b>Jill Olson</b>		GOV	Dillion, MT		FFT2, FALB	
Crewperson <b>Mike Rowe</b>		GOV	Dillion, MT		FFT2, ENOP, FALB	SQBS, HECM, ENGB
Crewperson						
Crewperson						
Crewperson						

**SINGLE HELICOPTER LOAD CAPABILITY PLANNING SUMMARY  
MULTIPLE HELISPOTS AND FUEL LOADS**

DAY 5

DATE: \_\_\_/\_\_\_/\_\_\_

BLOCK 1: HELICOPTER INFORMATION		N88976	
DATE: Day 5	MAKE/MODEL: Bell UH-1B	PILOT: B. Hawkins	
A/C EQUIPPED WEIGHT:	FULL FUEL WT: _____	_____	
FLIGHT CREW WT:	AT _____ GALLONS	_____	

BLOCK 2: ALLOWABLE PAYLOADS	HELISPOTS OR PRESSURE ALTITUDE IN 500-FOOT INCREMENTS						
	HELIBASE	H95 *T-III Only	H111	H119	H51 *T-III Only	H-59	H-80
ELEVATION	3920	5800	6000	6500	6500	6000	6300
TEMP	ALLOWABLE PAYLOADS AT FULL OR WORKING (Circle One) FUEL WEIGHT : HIGE / HOGE						
5C OR 41F	/	/	/	/	/	/	/
10C OR 50F	/	/	/	/	/	/	/
15C OR 50F	/	/	/	/	/	/	/
20C OR 68F	/	/	/	/	/	/	/
25C OR 77F	/	/	/	/	/	/	/
30C OR 86F	/	/	1400	1400	1400	1400	1400
35C OR 95F	/	/	/	/	/	/	/
40C OR 104F	/	/	/	/	/	/	/
45C OR 113F	/	/	/	/	/	/	/
50C OR 122F	/	/	/	/	/	/	/

**BLOCK 3: PAYLOAD ADJUSTMENTS.** ADD THESE WEIGHTS TO ALLOWABLE PAYLOAD ONLY IF THE REMAINING FUELS IS EQUAL TO OR LESS THAN THE FULL OR WORKING FUEL WEIGHT AS INDICATED ABOVE.

IF \_\_\_\_\_ GALS FUEL, THEN ADD \_\_\_\_\_ LBS      IF \_\_\_\_\_ GALS FUEL, THEN ADD \_\_\_\_\_ LBS  
 IF \_\_\_\_\_ GALS FUEL, THEN ADD \_\_\_\_\_ LBS      IF \_\_\_\_\_ GALS FUEL, THEN ADD \_\_\_\_\_ LBS

**SINGLE HELICOPTER LOAD CAPABILITY PLANNING SUMMARY -  
MULTIPLE HELISPOTS AND FUEL LOADS**

DAY 5

DATE: \_\_\_/\_\_\_/\_\_\_

BLOCK 1: HELICOPTER INFORMATION		224MS	
DATE: Day 5	MAKE/MODEL: Bell 205	PILOT: D. Lund	
A/C EQUIPPED WEIGHT:	FULL FUEL WT: _____	_____	
FLIGHT CREW WT:	AT _____ GALLONS	_____	

HELISPOTS OR PRESSURE ALTITUDE IN 500-FOOT INCREMENTS						
BLOCK 2: ALLOWABLE PAYLOADS	HELIBASE	H95 *T-III Only	H111	H119	H51 *T-III Only	H-59 H-80
ELEVATION	3920	5800	6000	6500	6500	6000 6300
TEMP	ALLOWABLE PAYLOADS AT FULL OR WORKING (Circle One) FUEL WEIGHT : HIGE / HOGE					
5C OR 41F	/	/	/	/	/	/ /
10C OR 50F	/	/	/	/	/	/ /
15C OR 50F	/	/	/	/	/	/ /
20C OR 68F	/	/	/	/	/	/ /
25C OR 77F	/	/	/	/	/	/ /
30C OR 86F	/	/	1540	/	1540	1540 / 1540
35C OR 95F	/	/	/	/	/	/ /
40C OR 104F	/	/	/	/	/	/ /
45C OR 113F	/	/	/	/	/	/ /
50C OR 122F	/	/	/	/	/	/ /

BLOCK 3: PAYLOAD ADJUSTMENTS. ADD THESE WEIGHTS TO ALLOWABLE PAYLOAD ONLY IF THE REMAINING FUELS IS EQUAL TO OR LESS THAN THE FULL OR WORKING FUEL WEIGHT AS INDICATED ABOVE.			
IF _____ GALS FUEL, THEN ADD _____ LBS	IF _____ GALS FUEL, THEN ADD _____ LBS	IF _____ GALS FUEL, THEN ADD _____ LBS	IF _____ GALS FUEL, THEN ADD _____ LBS
IF _____ GALS FUEL, THEN ADD _____ LBS	IF _____ GALS FUEL, THEN ADD _____ LBS	IF _____ GALS FUEL, THEN ADD _____ LBS	IF _____ GALS FUEL, THEN ADD _____ LBS

**SINGLE HELICOPTER LOAD CAPABILITY PLANNING SUMMARY -  
MULTIPLE HELISPOTS AND FUEL LOADS**

DAY 5

DATE: \_\_\_/\_\_\_/\_\_\_

BLOCK 1: HELICOPTER INFORMATION		370 EH	
DATE: Day 5	MAKE/MODEL: Bell 212	PILOT: W. Leitner	
A/C EQUIPPED WEIGHT:	FULL FUEL WT: _____	_____	
FLIGHT CREW WT:	AT: _____ GALLONS	_____	

HELISPOTS OR PRESSURE ALTITUDE IN 500-FOOT INCREMENTS							
BLOCK 2: ALLOWABLE PAYLOADS	HELIBASE	H95 *T-III Only	H111	H119	H51 *T-III Only	H-59	H-80
ELEVATION	3920	5800	6000	6500	6500	6000	6300
TEMP	ALLOWABLE PAYLOADS AT FULL OR WORKING (Circle One) FUEL WEIGHT : HIGE / HOGE						
5C OR 41F	/	/	/	/	/	/	/
10C OR 50F	/	/	/	/	/	/	/
15C OR 50F	/	/	/	/	/	/	/
20C OR 68F	/	/	/	/	/	/	/
25C OR 77F	/	/	/	/	/	/	/
30C OR 86F	/	/	/ 1690	/ 1690	/ 1690	/ 1690	/ 1690
35C OR 95F	/	/	/	/	/	/	/
40C OR 104F	/	/	/	/	/	/	/
45C OR 113F	/	/	/	/	/	/	/
50C OR 122F	/	/	/	/	/	/	/

BLOCK 3: PAYLOAD ADJUSTMENTS. ADD THESE WEIGHTS TO ALLOWABLE PAYLOAD ONLY IF THE REMAINING FUELS IS EQUAL TO OR LESS THAN THE FULL OR WORKING FUEL WEIGHT AS INDICATED ABOVE.			
IF _____ GALS FUEL, THEN ADD _____ LBS	IF _____ GALS FUEL, THEN ADD _____ LBS	IF _____ GALS FUEL, THEN ADD _____ LBS	IF _____ GALS FUEL, THEN ADD _____ LBS
IF _____ GALS FUEL, THEN ADD _____ LBS	IF _____ GALS FUEL, THEN ADD _____ LBS	IF _____ GALS FUEL, THEN ADD _____ LBS	IF _____ GALS FUEL, THEN ADD _____ LBS

**SINGLE HELICOPTER LOAD CAPABILITY PLANNING SUMMARY -  
MULTIPLE HELISPOTS AND FUEL LOADS**

DAY 5

DATE: \_\_\_/\_\_\_/\_\_\_

BLOCK 1: HELICOPTER INFORMATION 969W	
DATE: Day 5	MAKE/MODEL: L-3
A/C EQUIPPED WEIGHT:	FULL FUEL WT: _____
FLIGHT CREW WT:	AT _____ GALLONS
PILOT: G. Wilson	

HELISPOTS OR PRESSURE ALTITUDE IN 500-FOOT INCREMENTS						
BLOCK 2: ALLOWABLE PAYLOADS	HELIBASE	H95 *T-III Only	H111	H119	H51 *T-III Only	H-59 H-80
ELEVATION	3920	5800	6000	6500	6500	6000 6300
TEMP	ALLOWABLE PAYLOADS AT EULL OR WORKING (Circle One) FUEL WEIGHT : HIGE / HOGE					
5C OR 41F	/	/	/	/	/	/ /
10C OR 50F	/	/	/	/	/	/ /
15C OR 50F	/	/	/	/	/	/ /
20C OR 68F	/	/	/	/	/	/ /
25C OR 77F	/	/	/	/	/	/ /
30C OR 86F	/	/ 405	/ 405	/ 405	/ 405	/ 405 / 405
35C OR 95F	/	/	/	/	/	/ /
40C OR 104F	/	/	/	/	/	/ /
45C OR 113F	/	/	/	/	/	/ /
50C OR 122F	/	/	/	/	/	/ /

**BLOCK 3: PAYLOAD ADJUSTMENTS.** ADD THESE WEIGHTS TO ALLOWABLE PAYLOAD ONLY IF THE REMAINING FUELS IS EQUAL TO OR LESS THAN THE FULL OR WORKING FUEL WEIGHT AS INDICATED ABOVE.

IF \_\_\_\_\_ GALS FUEL, THEN ADD \_\_\_\_\_ LBS      IF \_\_\_\_\_ GALS FUEL, THEN ADD \_\_\_\_\_ LBS  
 IF \_\_\_\_\_ GALS FUEL, THEN ADD \_\_\_\_\_ LBS      IF \_\_\_\_\_ GALS FUEL, THEN ADD \_\_\_\_\_ LBS

**SINGLE HELICOPTER LOAD CAPABILITY PLANNING SUMMARY -  
MULTIPLE HELISPOTS AND FUEL LOADS**

DAY 5

DATE: \_\_\_/\_\_\_/\_\_\_

BLOCK 1: HELICOPTER INFORMATION		6093R	
DATE: Day 5	MAKE/MODEL: AS-350 B2	PILOT: G. Misoi	
A/C EQUIPPED WEIGHT:	FULL FUEL WT: _____	_____	
FLIGHT CREW WT:	AT _____ GALLONS	_____	

BLOCK 2: ALLOWABLE PAYLOADS	HELISPOTS OR PRESSURE ALTITUDE IN 500-FOOT INCREMENTS						
	HELIBASE	H95 *T-III Only	H111	H119	H51 *T-III Only	H-59	H-80
ELEVATION	3920	5800	6000	6500	6500	6000	6300
TEMP	ALLOWABLE PAYLOADS AT EULL OR WORKING (Circle One) FUEL WEIGHT : HIGE / HOGE						
5C OR 41F	/	/	/	/	/	/	/
10C OR 50F	/	/	/	/	/	/	/
15C OR 50F	/	/	/	/	/	/	/
20C OR 68F	/	/	/	/	/	/	/
25C OR 77F	/	/	/	/	/	/	/
30C OR 86F	/	/ 510	/ 510	/ 510	/ 510	/ 510	/ 510
35C OR 95F	/	/	/	/	/	/	/
40C OR 104F	/	/	/	/	/	/	/
45C OR 113F	/	/	/	/	/	/	/
50C OR 122F	/	/	/	/	/	/	/

**BLOCK 3: PAYLOAD ADJUSTMENTS.** ADD THESE WEIGHTS TO ALLOWABLE PAYLOAD ONLY IF THE REMAINING FUELS IS EQUAL TO OR LESS THAN THE FULL OR WORKING FUEL WEIGHT AS INDICATED ABOVE.

IF _____ GALS FUEL, THEN ADD _____ LBS	IF _____ GALS FUEL, THEN ADD _____ LBS
IF _____ GALS FUEL, THEN ADD _____ LBS	IF _____ GALS FUEL, THEN ADD _____ LBS











## **EXERCISE: Planning**

### Instructions:

Students will update their display boards with the information below and information from the previous exercise. There is information that will affect their decisions on the division assignment pages and the air operations summary of the Day 5 IAP. There is no perfect plan. The objective is to use the tools available (IAP, IHOG forms, etc.).

- Helicopter 4MS will be unavailable due to recent mechanical problems.
- Review the IAP and determine the missions you need to accomplish or cannot accomplish.
- Set helibase priorities and assign resources to each mission.
- Identify any other IHOG forms that might be used.
- Plan for the unexpected.
- Describe the method to make the plan known.

Allow 30 minutes to complete, 15 minutes for discussion. Ask for two volunteers to present their plans. Verify that students identified the following problems and how (these problems are included in the IAP and the handout information):

- There are probably too many crews to move in the time provided (see ICS 220, Div. I/L/F ICS 204s).
- There is a time frame conflict with retardant pre-treatment and personnel shuttle on Division F at H59 (see ICS 220, ICS 204).
- There may be lack of helitack for continuous operation of all helispots identified on ICS 220, HCM 7.

(continued on next page)

- Restricted aircraft must be noted - specific mission use (ICS 220 or HBM 3).
- Helispot H51 and H95 are Type III only spots - HCM 11.
- Helicopter 4MS is unavailable due to mechanical problems.
- What is the specific mission for the radio repeater?
- Can crews walk from H-91 to H-95?



**HELICOPTER DAILY USE AND COST SUMMARY**  
*(Submit to Helibase Manager at End of Each Day's Operations)*

HELIBASE: Wildfire DATE:   /  /   HELICOPTER N #: N224MS

MAKE/MODEL: Bell 205 MANAGER'S NAME: Hall

TYPE:    1     2    3    CWN  CONTRACT    OTHER (Specify):   

FLIGHT INVOICE REFERENCE NUMBER(S):   

FLIGHT TIME (HRS)	HOURLY RATE	COSTS:	
x		= TOTAL FT COST:	\$
AVAIL (HRS or DAY)*	HRLY OR DAILY RATE	+	
8.0	<b>350</b>	= TOTAL AV COST:	\$ 2,800.00
x			
EXTENDED PILOT STANDBY	HOURLY RATE	+	
x		= TOTAL EP COST:	\$
EXT. DRIVER STANDBY	HOURLY RATE	+	
x		= TOTAL ET COST:	\$
EXT. MECHANIC STANDBY	HOURLY RATE	+	
x		= TOTAL EM COST:	\$
# OF CREWMEMBERS	R.O.N. (FS) RATE/DAY	+	
3	66.00	= TOTAL FS COST:	\$ 198.00
x			
SERVICE TRUCK MILES	RATE/MILE	+	
x		= TOTAL SM COST:	\$
GALLONS FOAM CONCENTRATE USED	COST/GALLON	+	
x		= TOT FOAM COST:	\$
GALLONS RETARDANT USED	COST/GALLON	x	
x		= TOT RET. COST:	\$
SPECIAL EQUIPMENT (Radio, FLIR, Longline/Remote Hook, Agency-Supplied Fuel, etc.)		= TOT SPECIAL COST:	+
		<b>TODAY'S TOTAL COSTS:</b>	<b>\$ 2,998.00</b>

USE:

TOTAL PASSENGERS TRANSPORTED	TOTAL LBS CARGO DELIVERED	TOTAL GALLONS WATER	TOTAL GALLONS RETARDANT	TOTAL GALLONS FOAM
21	400			

COMMENTS: Ship docked .2 hr. on availability, for replacement of generator and OAS approval to bring back on line.

\* Do not calculate for exclusive use contracts where availability is paid from presuppression funds.



**HELICOPTER DAILY USE AND COST SUMMARY**  
 (Submit to Helibase Manager at End of Each Day's Operations)

HELIBASE: Wildfire DATE:    /   /    HELICOPTER N #: N969W  
 MAKE/MODEL: Bell 206 BIII MANAGER'S NAME: Stone  
 TYPE:     1     2  3     CWN  CONTRACT     OTHER (Specify):    

FLIGHT INVOICE REFERENCE NUMBER(S):    

FLIGHT TIME (HRS)	HOURLY RATE	COSTS:	
3.0	518.00	= TOTAL FT COST:	\$ 1,554.00
AVAIL (HRS or DAY)*	HRLY OR DAILY RATE	+	
x		= TOTAL AV COST:	\$
EXTENDED PILOT STANDBY	HOURLY RATE	+	
4	30.00	= TOTAL EP COST:	\$ 120.00
EXT. DRIVER STANDBY	HOURLY RATE	+	
4	30.00	= TOTAL ET COST:	\$ 120.00
EXT. MECHANIC STANDBY	HOURLY RATE	+	
x		= TOTAL EM COST:	\$
# OF CREWMEMBERS	R.O.N. (FS) RATE/DAY	+	
2	66.00	= TOTAL FS COST:	\$ 132.00
SERVICE TRUCK MILES	RATE/MILE	+	
57	.75	= TOTAL SM COST:	\$ 42.75
GALLONS FOAM CONCENTRATE USED	COST/GALLON	+	
x		= TOT FOAM COST:	\$
GALLONS RETARDANT USED	COST/GALLON	x	
x		= TOT RET. COST:	\$
SPECIAL EQUIPMENT (Radio, FLIR, Longline/Remote Hook, Agency-Supplied Fuel, etc.)		= TOT SPECIAL COST:	+
		TODAY'S TOTAL COSTS:	\$ 1,968.75

USE:

TOTAL PASSENGERS TRANSPORTED	TOTAL LBS CARGO DELIVERED	TOTAL GALLONS WATER	TOTAL GALLONS RETARDANT	TOTAL GALLONS FOAM
8	30			

COMMENTS:

\* Do not calculate for exclusive use contracts where availability is paid from presuppression funds.





## DETAILED LESSON OUTLINE

**COURSE:** Helibase Manager, S-371

**UNIT:** 7 – Helibase Operations Tactical/Logistical

**TIME:** 2 Hours

**TRAINING AIDS:** Computer, projector, screen, IHOG.

**OBJECTIVES:** Upon completion of this unit, students will be able to:

1. Given simulated situations, demonstrate the ability to manage requests for tactical and logistical missions.
2. Describe how to implement effective communications in changing operational situations.

OUTLINE	AIDS & CUES
<p><b>NOTE:</b> This unit contains several scenarios based on a tactical/logistical situation. Students will answer questions from each scenario that will lead into short discussions.</p> <p>The instructor for this unit should be familiar with the information provided in Unit 6. Emphasize that the planning for this operational period was completed in Unit 6 and this unit will focus on implementation of the plan.</p>	
<p><b>HAND OUT UNIT LOGS.</b> Students will record information on the form during presentation of this unit.</p>	07-01-S371-HO
<p><b>UNIT TITLE SLIDE.</b></p>	07-01-S371-EP
<p><b>PRESENT UNIT OBJECTIVES.</b></p>	07-02-S371-EP

OUTLINE	AIDS & CUES
<p>I. MISSION REQUESTS</p> <p>A. Ordering</p> <p>Who can order?</p> <p>1. Tactical:</p> <ul style="list-style-type: none"> <li>• Incident Commander</li> <li>• Operations (DIVS, branch, group, crew)</li> <li>• Air operations branch director</li> <li>• Air tactical group supervisor</li> <li>• Air support group supervisor</li> </ul> <p>2. Logistical:</p> <ul style="list-style-type: none"> <li>• Incident Commander</li> <li>• Planning Section Chief</li> <li>• Logistics Section Chief</li> <li>• Helispot manager</li> </ul> <p>Orders typically come through the supervisor down the chain of command.</p>	<p>07-03-S371-EP</p>

OUTLINE	AIDS & CUES
<p>In most cases it would be unrealistic for all requests to be channeled through the air support group supervisor.</p>	
<p>It is essential that ordering channels and authority be identified and made clear to all.</p>	07-04-S371-EP
<p><b>EXERCISE: Tactical/Logistical Situation</b></p>	07-05-S371-EP
<p>Review the purpose and instructions with students.</p>	
<p><u>Purpose:</u></p>	
<p>This unit contains several scenarios based on a tactical/logistical situation. Given a situation and scenario, students will make the prompt decisions required of a Helibase Manager.</p>	
<p><u>Instructions:</u></p>	
<p>Refer students to the helibase operations tactical/logistical situation (SW page 7.11; IG page 7.13).</p>	07-01-S371-IR/SR
<p>Explain that the situation will apply to each scenario. Students may also use the Day 5 IAP and crew information sheets from Unit 6 for the scenarios.</p>	
<p>Give students a few minutes to review the situation then refer them to Scenario #1 (SW page 7.13; IG page 7.15).</p>	07-02-S371-IR/SR
<p>Allow groups five minutes to answer the questions.</p>	
<p>Select one or two groups to present their solutions to the class then discuss the suggested solutions on slide 6.</p>	07-06-S371-EP

OUTLINE	AIDS & CUES
<p>B. How are orders received by the Helibase Manager?</p> <ol style="list-style-type: none"> <li>1. From the Incident Action Plan</li> <li>2. ICS 220, Air Operations Summary</li> <li>3. ICS 204's, Division Assignment sheets</li> <li>4. Oral communications <ul style="list-style-type: none"> <li>• Radio</li> <li>• In-person</li> <li>• Telephone - cellular</li> </ul> </li> <li>5. Written communications <ul style="list-style-type: none"> <li>• General message form, ICS 213</li> <li>• FAX</li> <li>• Notes</li> </ul> </li> </ol>	<p>07-07-S371-EP</p>
<p><b>REFER STUDENTS TO THE HELIBASE MISSION REQUEST LOG, HBM 8 (IHOG, APPENDIX B). STUDENTS MAY USE THIS TO RECORD REQUESTS.</b></p>	<p>IHOG, Appendix B</p>
<p><b>TACTICAL/LOGISTICAL SCENARIO #2.</b></p>	<p>07-08-S371-EP</p>
<p>Refer students to Scenario #2 (SW page 7.15; IG page 7.17).</p>	<p>07-03-S371-IR/SR</p>
<p>Allow groups five minutes to answer the questions.</p>	
<p>Select one or two groups to present their solutions to the class then discuss the suggested solutions on slide 9.</p>	<p>07-09-S371-EP</p>

OUTLINE	AIDS & CUES
<p>C. Mission Priorities</p> <p>1. How are mission priorities determined?</p> <ul style="list-style-type: none"> <li>• Incident Commanders</li> <li>• Air Operations Branch Director</li> <li>• Air Tactical Group Supervisor</li> <li>• Air Support Group Supervisor</li> <li>• Operations Section Chief</li> <li>• Helibase Manager</li> <li>• Incident Action Plan</li> <li>• ICS 220</li> <li>• Tactical vs. logistical</li> <li>• Efficient and effective use of resources</li> <li>• Agency needs</li> <li>• Flexibility</li> </ul>	<p>07-10-S371-EP</p>

OUTLINE	AIDS & CUES
<b>TACTICAL/LOGISTICAL SCENARIO #3.</b>	07-11-S371-EP
Refer students to Scenario #3 (SW page 7.17; IG page 7.19).	07-04-S371-IR/SR
Allow groups five minutes to answer the questions.	
Select one or two groups to present their solutions to the class then discuss the suggested solutions on slide 12.	07-12-S371-EP
<p>2. Dealing with conflicting priorities:</p> <ul style="list-style-type: none"> <li>• Identify the conflict.</li> <li>• Communicate to the incident functions involved.</li> <li>• Attempt to resolve.</li> <li>• Discuss how adjustments to the plan can be made to accomplish changes in mission priorities.</li> <li>• Elevate any conflicts that exceed your ability to resolve.</li> </ul>	07-13-S371-EP
<b>TACTICAL/LOGISTICAL SCENARIO #4.</b>	07-14-S371-EP
Refer students to Scenario #4 (SW page 7.19; IG page 7.21).	07-05-S371-IR/SR
Allow groups five minutes to answer the questions.	
Select one or two groups to present their solutions to the class then discuss the suggested solutions on slide 15.	07-15-S371-EP

OUTLINE	AIDS & CUES
<p>D. Follow Established Ordering Procedures</p> <ol style="list-style-type: none"> <li>1. Orders should go through chain of command.</li> <li>2. Consider having resources available.</li> <li>3. Elevate decision to the next level.</li> </ol>	07-16-S371-EP
<p><b>TACTICAL/LOGISTICAL SCENARIO #5.</b></p>	07-17-S371-EP
<p>Refer students to Scenario #5 (SW page 7.21; IG page 7.23).</p>	07-06-S371-IR/SR
<p>Allow groups five minutes to answer the questions.</p>	
<p>Select one or two groups to present their solutions to the class then discuss the suggested solutions on slide 18.</p>	07-18-S371-EP
<p>E. Tracking Mission Request Orders</p> <ol style="list-style-type: none"> <li>1. Maintain the Helibase Mission Request Log, HBM 8.</li> <li>2. Constantly monitor and re-prioritize</li> <li>3. Unfilled requests must be communicated back to the requester.</li> <li>4. Document pertinent information on the Unit Log, ICS 214.</li> </ol>	07-19-S371-EP

OUTLINE	AIDS & CUES
<b>TACTICAL/LOGISTICAL SCENARIO #6.</b>	07-20-S371-EP
Refer students to Scenario #6 (SW page 7.23; IG page 7.25).	07-07-S371-IR/SR
Allow groups five minutes to answer the questions.	
Select one or two groups to present their solutions to the class then discuss the suggested solutions on slide 21.	07-21-S371-EP
F. Order/Communication Breakdown	07-22-S371-EP
1. Ensure order is delivered as timely as possible.	
2. Follow up to find out where breakdown occurred.	
3. Ensure that missions are documented on the Mission Request Log.	
<b>TACTICAL/LOGISTICAL SCENARIO #7.</b>	07-23-S371-EP
Refer students to Scenario #7 (SW page 7.25; IG page 7.27).	07-08-S371-IR/SR
Allow groups five minutes to answer the questions.	
Select one or two groups to present their solutions to the class then discuss the suggested solutions on slide 24.	07-24-S371-EP

OUTLINE	AIDS & CUES
<p>II. COMMUNICATION</p> <p>A. Effective Communication Components</p> <p>What components are necessary for effective helibase operations?</p> <ol style="list-style-type: none"> <li>1. Establish and maintain clear channels of communication.</li> <li>2. Appropriate types and amount of equipment.</li> <li>3. Adequate number of frequencies.</li> <li>4. Correct frequency assignments.</li> <li>5. Qualified aircraft base radio operator.</li> <li>6. Qualified take off and landing coordinator.</li> </ol>	<p>07-25-S371-EP</p>
<p><b>TACTICAL/LOGISTICAL SCENARIO #8.</b></p>	<p>07-26-S371-EP</p>
<p>Refer students to Scenario #8 (SW page 7.27; IG page 7.29).</p>	<p>07-09-S371-IR/SR</p>
<p>Allow groups five minutes to answer the questions.</p>	
<p>Select one or two groups to present their solutions to the class then discuss the suggested solutions on slide 27.</p>	<p>07-27-S371-EP</p>

OUTLINE	AIDS & CUES
<p>B. Utilizing Communication Components</p> <p>How do you use these components?</p> <ol style="list-style-type: none"> <li>1. Flight following</li> <li>2. Receiving orders/mission requests</li> <li>3. Sending messages</li> <li>4. Coordinating the deck</li> <li>5. Coordinating with the helispots</li> <li>6. Contingency operations, back-up plans for loss of communications.</li> </ol>	<p>07-28-S371-EP</p>
<p><b>TACTICAL/LOGISTICAL SCENARIO #9.</b></p>	<p>07-29-S371-EP</p>
<p>Refer students to Scenario #9 (SW page 7.29; IG page 7.31).</p>	<p>07-10-S371-IR/SR</p>
<p>Allow groups five minutes to answer the questions.</p>	
<p>Select one or two groups to present their solutions to the class then discuss the suggested solutions on slide 30.</p>	<p>07-30-S371-EP</p>

OUTLINE	AIDS & CUES
<p>C. Expanding Communication Requirements</p> <p>How do you deal with expanding communication needs?</p> <ol style="list-style-type: none"> <li>1. Short term: <ul style="list-style-type: none"> <li>• Human repeaters</li> <li>• Other aircraft</li> <li>• ATGS</li> </ul> </li> <li>2. Long term: <ul style="list-style-type: none"> <li>• Radio repeaters</li> <li>• Relay links</li> <li>• Order additional frequencies</li> <li>• Order technical specialists</li> </ul> </li> </ol>	<p>07-31-S371-EP</p>
<p>III. TIPS</p> <ul style="list-style-type: none"> <li>• Order plenty of extra radio batteries.</li> <li>• Use equipment helitack personnel may have brought to the incident.</li> <li>• Cell phones may be a useful tool.</li> <li>• Limit the channels scanned by helibase personnel.</li> </ul>	

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• Obtain pre-assigned deck frequencies from communications unit leader.</li> <li>• Use frequency guides to reference local unit frequencies.</li> </ul> <p><b>EXERCISE: Unit Log</b></p> <p>Instruct students to complete their ICS 214 and hand them in to their coach/mentor.</p> <p><b>REVIEW UNIT OBJECTIVES.</b></p> <p><b>HAVE STUDENTS COMPLETE A UNIT EVALUATION.</b></p>	<p>07-32-S371-EP</p>

## **EXERCISE: Tactical/Logistical Situation**

You are the Helibase Manager on the Wildfire incident. This is day five of the incident and the time is 0645.

The incident has experienced a dramatic increase in size and complexity over the last two days.

The team is planning an aggressive tactical air operation to support ground crews in a push to secure Divisions I and L. The weather forecast will be much the same as yesterday.

There are two Type 3 and three Type 2 helicopters assigned to the helibase. There are four exclusive use and one CWN helicopters operating on the incident. There are adequate personnel assigned to the helibase at this time, but some crews have been out most of the summer and the fatigue factor is evident. All helibase positions are filled, but there is a lack of experience in some positions.

Objectives for the helibase today as outlined in the air operations summary are:

- Shuttle crews to Divisions F, I, L, 6 crews had to “coyote” at H-80 because of shutdown time on day four.
- Support line operations with water and retardant drops.
- Provide recon and IR mapping missions.
- Radio repeater maintenance.

You have just finished the pre-operational briefing and rotors are turning as a Type 3 prepares for a morning recon. The AOBD is calling you on the radio and you need to give a briefing to a new pilot.



## **Tactical/Logistical Scenario #1**

The Division L supervisor has just placed a supply order through the helibase.

### Questions:

1. Does the division supervisor have authority to place orders? How would you know?
2. Is this the proper place for these orders?
3. How should the helibase manager assist?

### Suggested solutions are below and also on slide 6:

1. Generally, yes. If delegated by the operations section chief or incident commander.
2. No, the order should go to the supply unit via communications unit, unless you have the supplies at helibase (cubitainers, backpack pumps).
3. Offer to pass this order along to the supply unit while explaining that these need to be ordered through the communications unit.

Establish that Division L can communicate with ICP. Often the helibase can hear the fireline better than the ICP.

Also, use this information to your advantage, have cargo prepared to receive this order when it arrives.



## Tactical/Logistical Scenario #2

OPSC arrives during the morning crew shuttle and wants a recon flight for 5 IMT members and the Forest Supervisor.

### Questions:

1. Does the person ordering this flight have the authority to do so?
2. Does the helibase manager have the authority to make this decision?
3. How would you prioritize this new request?

### Suggested solutions are below and also on slide 9:

1. Yes
2. Yes; expand on ICS chain of command and how operations will always be a wild card.
3. Explain to the operations section chief the options available if they want to do the mission with a Type 2 helicopter which is currently doing the crew shuttle.

Utilizing the Type 2 helicopter would delay the crew shuttle and timeframes would not be met.

The helibase manager can give the Operations Section Chief the following options:

- Have less overhead take the flight and utilize a Type 3 helicopter.
- The Operations Section Chief overrides the crew shuttle and does the recon.



### **Tactical/Logistical Scenario #3**

At 0730 the HESM on H51 advises you that there is garbage at the helispot which needs to be removed before the crew shuttle.

#### Questions:

1. What information will you need to handle this problem?
2. What options are available to alleviate this problem without completely disrupting the morning crew shuttle?

#### Suggested solutions are below and also on slide 12:

1. How much garbage is there? Is it in sling loads ready to be longlined out or can it go internal? What size ship is needed, Type 2 or Type 3?
2. Use one or two Type 3 helicopters to remove trash while Type 2s shuttle crews to H-111 until H-115 is clear for them to land.

Break one Type 2 away from the crew shuttle to Division L (H-111, H-119) and have it sling the garbage out.

Have the four crews at H-115 assist the HESM in moving garbage off the helispot so ships can land safely.



## **Tactical/Logistical Scenario #4**

At 0900 the DIVS calls helibase to request a helicopter to transport two squads of a crew from H-91 to H-95 for a burnout operation.

### Questions:

1. Is helibase the proper place for the DIVS to place this request?
2. Should the HELM send a helicopter immediately?
3. Who would the HELM contact to determine mission priorities?

### Suggested solutions are below and also on slide 15:

1. Yes or no, depending on how OPSC has set up the ordering procedures. Generally, DIVS should place this request directly to Operations.
2. Maybe have a Type 3 available at 0900, but a helicopter should not be sent immediately.
3. This needs to be elevated to AOBD or OPS for prioritizing.



## **Tactical/Logistical Scenario #5**

You just received a phone call from the HELM of an adjacent incident. Their Type 1 helicopter has mechanical problems. The incident wants to borrow one of your Type 2 helicopters to move gear from one spike camp to another before nightfall.

### Questions:

1. Can the HELM order directly from you?
2. Who can approve this mission request?
3. How would you coordinate the logistics of this mission? What information would you need to share with the other HELM?

### Suggested solutions are below and also on slide 18:

1. No, the request should go through the chain of command.
2. Your air operations branch director, operations section chief or even the incident commander.
3. While you have the HELM on the phone, discuss flight following, payment management codes, if it is necessary to provide additional support, such as managers/helitack, and release times in regards to legal shutdown.



## **Tactical/Logistical Scenario #6**

At 1200 spike camp calls helibase to inquire about 100 cubitainers of water that were to be delivered at 0900 during the AM shuttle.

### Questions:

1. Why hasn't the helibase delivered the cubitainers?
2. Do you feel this mission requires immediate attention?
3. How should the HEBM follow up?

### Suggested solutions are below and also on slide 21:

1. Apparently, no request was ever made. Check IAP Mission Requests.
2. Yes, there will be six crews spiked there that evening. The water isn't needed until tonight, but based on mission priorities there might not be very many opportunities to deliver it.
3. Advise pertinent resources of pending request. Consider those needing communication of this breakdown: Supply unit, plans, air support group supervisor.

Document on Helibase Mission Request Log and Unit Log ICS 214.

Advise deck/cargo loadmaster of order to arrive at helibase.



## **Tactical/Logistical Scenario #7**

The helibase radio operator has difficulty monitoring more than one radio and has very little fire experience.

### Questions:

1. Can you continue the operational period with this radio operator?
2. What can you do immediately to remedy this situation? Are qualified radio operators available?
3. How could you best utilize this person?

### Suggested solutions are below and also on slide 24:

1. Probably not, the complexity is too high.
2. Check the HCM 7 forms for a qualified helibase radio operator.

Reassign a qualified person as the helibase radio operator, and find a replacement for that person's position.

3. The original radio operator could be made a student to the qualified helibase radio operator. Other options include reassigning this person based on their experience and red card qualifications to another helibase position such as working for the personnel or cargo loadmasters.



## **Tactical/Logistical Scenario #8**

To this point, the helibase has been operating on the air-to-ground frequency assigned to the incident. Incident interference has made it difficult for the DECK to maintain communications on the deck. After consulting the ASGS, you are asked to remedy the situation ASAP.

### Questions:

1. Is this a minor inconvenience or a real problem?
2. Whom do you contact to resolve this problem?
3. What options do you have until another frequency can be assigned?

### Suggested solutions are below and also on slide 27:

1. This is a real problem since it is compromising safety.
2. The communications unit leader.
3. Stay off the radio and use runners, megaphone or get the deck coordinator a bike, ATV or vehicle.

If there are enough programmable radios, check the frequency guide for one of the universal radio frequencies available for use.



## **Tactical/Logistical Scenario #9**

Helicopter 0EH is doing crew shuttles from H-51 to H-59. H-59 is a known radio dead spot, 0EH has not called in for 20 minutes. The last known location was on final for H-59.

### Questions:

1. What methods will you use to establish contact with the helicopter?
2. If this turns out to be a non-emergency situation, how can communications with helibase and H-59 be established?

### Suggested solutions are below and also on slide 30:

1. Request that air tactical group supervisor contact H-59. If there is no air tactical group supervisor, utilize other helicopters, Division E/F/G group supervisors, or any crews on those divisions.
2. Short term: Relay from other helispots, airborne helicopters, ATGS, human repeaters.
3. Long term: Human repeater, radio repeater, relocate H-59.



## DETAILED LESSON OUTLINE

**COURSE:** Helibase Manager, S-371

**UNIT:** 8 – Helibase Emergency Procedures

**TIME:** 4 Hours

**TRAINING AIDS:** Computer, projector, screen, course DVD, IHOG.

**OBJECTIVES:** Upon completion of this unit, students will be able to:

1. Identify types of emergency situations that may be encountered.
2. Describe how to plan for and manage potential emergency situations.
3. Prepare a briefing for helibase personnel which addresses helibase and incident emergency procedures.
4. Given a simulated emergency, demonstrate the ability to coordinate an appropriate response.

OUTLINE	AIDS & CUES
<b>NOTE:</b> Some of the emergency procedures information is duplicated. It is important that “all” emergency procedures are well thought out and well planned.	
<b>HAND OUT UNIT LOGS.</b> Students will record information on the form during presentation of this unit.	08-01-S371-HO
<b>UNIT TITLE SLIDE.</b>	08-01-S371-EP
<b>PRESENT UNIT OBJECTIVES.</b>	08-02-S371-EP

OUTLINE	AIDS & CUES
I. INTRODUCTION	08-03-S371-EP
A. Importance of Helibase Emergency Procedures <ul style="list-style-type: none"> <li>• Few other courses address these topics.</li> <li>• Few other topics are as important to commit to memory.</li> </ul>	
B. Be Prepared <p>In an emergency, if you must remind your personnel of what to do (or they need to read it or look it up), they are not well prepared to manage the situation.</p> <ul style="list-style-type: none"> <li>• Performing well in an emergency situation can save lives.</li> <li>• Being well prepared and doing a good job in an emergency situation reduces inherent feelings of guilt.</li> </ul>	08-04-S371-EP
C. Types of Emergencies	
There are two broad types of emergencies:	08-05-S371-EP
1. Emergencies that occur on the helibase.	08-06-S371-EP
2. Emergencies that occur off the helibase.	08-07-S371-EP
Examples: <ul style="list-style-type: none"> <li>• Downed or overdue aircraft</li> </ul>	

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• Aircraft in-flight emergency such as: <ul style="list-style-type: none"> <li>– Chip light</li> <li>– Vibration</li> <li>– Hydraulics</li> <li>– Engine failure</li> </ul> </li> <li>• Aircraft fire or fire indicator light</li> <li>• Aircraft fuel leak</li> <li>• Pilot lost or disoriented in flight</li> <li>• Serious injuries requiring helicopter evacuation</li> <li>• Fuel spill at the helibase</li> <li>• Hard landing</li> </ul>	
<p>All helicopter emergencies will involve the helibase to some degree.</p>	08-08-S371-EP
<p>What have you learned concerning the management of these emergencies?</p>	08-09-S371-EP
<p>Are you adequately trained in emergency procedures and prepared to manage an emergency situation?</p>	
<p><b>REFER STUDENTS TO THE CRASH RESCUE CHECKLIST (IHOG, CHAPTER 12).</b></p>	IHOG, Chapter 12
<p><b>REFER STUDENTS TO THE FUEL SITE CHECKLIST (IHOG, APPENDIX I).</b></p>	IHOG, Appendix I

OUTLINE	AIDS & CUES
<p data-bbox="190 289 1073 321">II. PREPARATION FOR HELIBASE EMERGENCIES</p> <p data-bbox="285 380 922 411">A. Emergency Management Preparation</p> <p data-bbox="190 470 1130 590"><b>BRIEFLY DESCRIBE THE FOLLOWING (THEY WILL BE DISCUSSED MORE IN-DEPTH LATER IN THE UNIT).</b></p> <ul data-bbox="383 646 1130 1749" style="list-style-type: none"> <li data-bbox="383 646 935 678">• Plans are posted and reviewed.</li> <li data-bbox="383 737 1097 810">• Personnel are briefed daily and know their assignments.</li> <li data-bbox="383 869 1065 942">• Medical personnel are on base (briefed, flight ready, manifested).</li> <li data-bbox="383 1001 1024 1075">• Helitack is assigned to assist medical personnel.</li> <li data-bbox="383 1134 1073 1207">• Evacuation, extrication, and medical kits (weighed, manifested).</li> <li data-bbox="383 1266 1130 1339">• Medevac aircraft and crew are ready on five minutes notice.</li> <li data-bbox="383 1398 1130 1472">• Load calculations are prepared for medevac and crash rescue scenarios.</li> <li data-bbox="383 1530 1000 1604">• Pilots have adequate information to complete the mission safely.</li> <li data-bbox="383 1663 1024 1736">• Crash rescue truck and personnel are briefed and ready.</li> </ul>	<p data-bbox="1179 289 1406 321">08-10-S371-EP</p> <p data-bbox="1179 1266 1406 1297">08-11-S371-EP</p>

OUTLINE	AIDS & CUES
<p data-bbox="285 289 708 323">B. Information Gathering</p> <p data-bbox="380 380 1122 457">What information must you gather in order to plan your emergency procedures?</p> <ul style="list-style-type: none"> <li data-bbox="380 512 1101 590">• Does the unit have an aircraft crash rescue plan or hazard map?</li> <li data-bbox="380 644 1130 722">• What procedures for medical evacuation are already in use at the incident area?</li> <li data-bbox="380 777 1000 1745">• Hospitals: <ul style="list-style-type: none"> <li data-bbox="475 867 797 900">– Local hospitals</li> <li data-bbox="475 913 1101 1035">– Capabilities (emergency room, burn unit, trauma unit, air transport capabilities)</li> <li data-bbox="475 1047 704 1081">– Location</li> <li data-bbox="475 1094 870 1127">– Physical description</li> <li data-bbox="475 1140 802 1173">– Phone numbers</li> <li data-bbox="475 1186 699 1220">– Helipad?</li> <li data-bbox="475 1232 898 1266">– Helicopter capabilities</li> <li data-bbox="475 1278 751 1312">– Frequencies</li> <li data-bbox="475 1325 997 1358">– Transport time by air/ground</li> </ul> </li> <li data-bbox="380 1400 1005 1745">• Local ambulance providers: <ul style="list-style-type: none"> <li data-bbox="475 1491 704 1524">– Location</li> <li data-bbox="475 1537 776 1570">– Dispatch time</li> <li data-bbox="475 1583 802 1617">– Phone numbers</li> <li data-bbox="475 1629 1005 1707">– Medical capabilities (basic or advanced life support)</li> <li data-bbox="475 1719 829 1753">– Numbers of units</li> </ul> </li> </ul>	<p data-bbox="1179 289 1409 323">08-12-S371-EP</p> <p data-bbox="1179 783 1409 816">08-13-S371-EP</p>

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• Other air ambulance capabilities in the region: <ul style="list-style-type: none"> <li>– Local military medevac units</li> <li>– Location</li> <li>– Distance</li> <li>– Phone numbers</li> <li>– Activation procedures</li> </ul> </li> <li>• Local fire departments that could respond to an aircraft crash rescue situation. <ul style="list-style-type: none"> <li>– You may wish to request that a contract be initiated to have them provide an engine at the helibase.</li> </ul> </li> <li>• The above information can be recorded on the Helibase Emergency Rescue Plan.</li> </ul>	<p>08-14-S371-EP</p>
<b>BRIEFLY DISCUSS HOW TO UTILIZE THE PLAN.</b>	
<p>C. Information Sources</p>	
<p>Where can the helibase manager obtain this information?</p>	
<ul style="list-style-type: none"> <li>• By calling local hospitals and medical providers.</li> <li>• The local area dispatch should have a downed aircraft pre-accident plan which will contain some of the information.</li> <li>• The internet</li> </ul>	

OUTLINE	AIDS & CUES
<p>D. Information Gathering Tips</p> <ol style="list-style-type: none"> <li>1. Always try to obtain the following prior to arrival at the incident: <ul style="list-style-type: none"> <li>• Phone books</li> <li>• Hospital information</li> <li>• Hazard maps</li> <li>• Forest or state maps</li> <li>• Ambulance or air ambulance providers</li> </ul> <p>These items may not be available at the incident.</p> </li> <li>2. If time permits while en route to the incident or while in staging or waiting at the airport, call local hospitals for information.</li> <li>3. Obtain physical descriptions of the hospitals: <ul style="list-style-type: none"> <li>• Their location</li> <li>• Helicopter landing pad?</li> <li>• Pad size</li> <li>• Frequencies used</li> <li>• Aircraft assigned</li> <li>• Burn unit?</li> <li>• Trauma center?</li> <li>• Alternate landing sites</li> </ul> </li> </ol>	<p>08-15-S371-EP</p>

OUTLINE	AIDS & CUES
<p>E. Medical Evacuation Plans</p> <p>Review the Medical Plan in the Day 5 IAP (ICS-206) for medevac instructions.</p> <ul style="list-style-type: none"> <li>• Does it mention the helibase?</li> <li>• Does it address air evacuation?</li> <li>• Do you have skills/personnel to contribute?</li> </ul> <p>Note: Review your crew information sheets.</p>	<p>08-16-S371-EP</p>
<p>Since many incidents are in remote areas with poor road access, a request for medical evacuation by air should be expected.</p>	<p>08-17-S371-EP</p>
<p><b>EXERCISE: Helibase Emergency Rescue Plan</b></p>	<p>08-18-S371-EP</p>
<p>Refer students to the blank Helibase Emergency Rescue Plan (SW page 8.21; IG page 8.25) and review the following:</p> <p><u>Instructions:</u></p> <p>Each group will develop an Emergency Rescue Plan for the helibase display board.</p> <p>Students may use the Medical Plan ICS 206 of the Day 5 IAP, the Helicopter Information Sheets, and the Helicopter Crew Information Sheets, that were presented in Unit 6.</p> <p>Allow 10 minutes. Ask one of the groups to present their plan. Have the other groups comment and discuss. Call on additional groups for presentation as needed.</p>	<p>08-01-S371-IR/SR</p>

OUTLINE	AIDS & CUES
<p>F. Coordination with the Medical Unit Leader</p> <p>1. Helibase medevac goals</p> <ul style="list-style-type: none"> <li>• To provide a rapid response of medical/rescue personnel if required.</li> <li>• To reduce confusion or risk when responding.</li> </ul> <p>In order to reduce confusion and risk, it is necessary to train and manifest all non-helitack medical personnel prior to the request to respond.</p> <ul style="list-style-type: none"> <li>• To reduce patient transport time during the “Golden Hour.”</li> </ul> <p>The “Golden Hour” is the first hour after an injury, when survival chances are greatest if medical attention is received.</p> <p>2. Coordination with the Medical Unit Leader</p> <p>Given the expectation of a request for air transport of injured parties and the previously stated goals, it is wise to:</p> <ul style="list-style-type: none"> <li>• Request a paramedic and EMT from the medical unit be permanently stationed at the helibase in order to reduce dispatch time and to provide time to train them.</li> </ul>	<p>08-19-S371-EP</p> <p>08-20-S371-EP</p> <p>08-21-S371-EP</p>

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• Request that an ambulance be stationed at the helibase or within ten minutes of travel time from the helibase.</li> <li>• Assign helitack to work with each medical person assigned to the helibase. The helitack person's job is to keep the non-helitack trained medic and medevac operation safe.</li> <li>• Ensure the medical personnel are flight ready, briefed, and manifested.</li> <li>• Weigh and manifest all medical, extrication, or transportation gear.</li> </ul>	<p>08-22-S371-EP</p>
<p><b>EXERCISE: Helibase Crash Rescue Plan</b></p> <p>For this exercise, students may refer to their completed Helibase Emergency Rescue Plan.</p> <p><u>Instructions:</u></p> <p>Use the crash rescue plan checklist (exhibit 12-1 in the IHOG) and the medical plan from Day 5 IAP to develop a Crash Rescue Plan for your helibase. Use a blank sheet of paper. The product should be in a form that can be used as a briefing tool to be posted at the helibase.</p> <p>Allow 30 minutes. Ask one of the groups to present their plan. Have the other groups comment and discuss. Call on additional groups for presentation as needed.</p>	<p>08-23-S371-EP</p>



OUTLINE	AIDS & CUES
<p>4. Readiness</p> <p>Proper PPE is a must at all times.</p> <ul style="list-style-type: none"> <li>• Full fire resistant clothing</li> <li>• Gloves</li> <li>• Flight helmet or hardhat</li> <li>• Boots</li> <li>• Radio with helmet adapter cord</li> </ul> <p>During an emergency there is little time to grab gear that isn't on your person.</p> <p>There is only time to put on your gloves, extend your collar, and ensure your shirt is tucked in.</p> <p>5. Ensure all crash rescue personnel have received a briefing specifically addressing their job.</p> <p>This should include:</p> <ul style="list-style-type: none"> <li>• Dispatch procedures and when to move.</li> <li>• Aircraft hazards</li> <li>• What to do, when, and proper positioning.</li> </ul>	

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• Pilot briefing on aircraft specifics, doors, emergency access, pull pins, etc.</li> <li>• Protect the people, keep water between them and any fire</li> <li>• Never leave the nozzle, even when no fire is apparent. Stay ready while the helitack remove passengers.</li> </ul> <p style="text-align: center;">Debrief after every situation as soon as possible, and learn from the experience.</p>	
<p><b>REFER STUDENTS TO “PASSENGER BRIEFINGS” (SW PAGES 8.25 – 8.27; IG PAGES 8.29 – 8.31).</b></p>	08-03-S371-IR/SR
<p><b>CONSIDER PROVIDING STUDENTS WITH A SAMPLE BRIEFING OF YOUR OWN.</b></p>	
<p>B. Types of Crash/Rescue Equipment</p> <ul style="list-style-type: none"> <li>• Crash Rescue Kit (tools)</li> <li>• Evacuation kit (stokes litter, S.K.E.D.)</li> <li>• Fire extinguishers</li> <li>• Crash/rescue truck/engine using AFFF foam.</li> </ul>	08-26-S371-EP
<p><b>REFER STUDENTS TO THE “CRASH/RESCUE EQUIPMENT REQUIREMENTS” TABLE (IHOG, CHAPTER 9).</b></p>	IHOG, Chapter 9





OUTLINE	AIDS & CUES
V. EMERGENCY PROCEDURES	08-31-S371-EP
A. Responding to an In-Flight Emergency Situation	
1. Clear the deck.	08-32-S371-EP
2. Move non-helitack personnel well away from the deck.	
3. Assign helitack to stay with non-helibase personnel.	08-33-S371-EP
4. Launch the ready alert medevac aircraft and crash rescue team with their equipment to locate and follow the distressed aircraft.	
5. Prepare base personnel and crash rescue equipment.	08-34-S371-EP
6. Notify AOBD or ASGS.	
7. Request an ambulance if one is not stationed on base.	08-35-S371-EP
8. Maintain flight following for all base aircraft (don't forget them).	
9. Clear the primary air frequency for the emergency. Have other aircraft switch to the alternate frequency.	





OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>7. The command frequency may need to be cleared during the emergency.</li> <li>8. If the patient is to be carried out by litter request the appropriate resources, perhaps one or more crews, to assist. This is especially important in rough terrain.</li> <li>9. Flight following for non involved aircraft must continue throughout the emergency and until all aircraft have returned to base.</li> <li>10. Notify the AOBD or ASGS as soon after receiving the request as you reasonably can.</li> </ul>	08-43-S371-EP
<ul style="list-style-type: none"> <li>D. Responding to an Aircraft Engine Fire Situation <ul style="list-style-type: none"> <li>1. Protect or assist the pilot and passengers as first priority. Fire suppression is secondary.</li> <li>2. If the pilot is in the aircraft stand by until they have exhausted all on-board capabilities.</li> <li>3. If the pilot exits the aircraft (and the aircraft is on fire) attempt to suppress the fire with extinguishers.</li> <li>4. If Halon is unavailable, use other types of extinguishers.</li> </ul> </li> </ul>	08-44-S371-EP
<ul style="list-style-type: none"> <li>5. In addition to the extinguishers use the crash rescue engine (foam and water).</li> </ul>	08-45-S371-EP

OUTLINE	AIDS & CUES
<p>6. Notify the local fire department or contact communications and request assistance.</p> <p>7. Notify the AOBD or ASGS.</p> <p>8. Flight following must continue throughout the emergency.</p> <p>The use of non-halon fire extinguishers, foam or water, will result in the loss of an aircraft engine costing many thousands of dollars.</p> <p>This is only done after the pilot/crew abandon the aircraft or request assistance, and only as an attempt to save the aircraft at the cost of an engine.</p>	<p>08-46-S371-EP</p>
<p>E. Responding to a Fuel Spill Situation</p> <p>1. Preparation</p>	<p>08-47-S371-EP</p>
<p><b>REFER TO THE FUEL SITE CHECKLIST IN APPENDIX I OF THE IHOG.</b></p>	<p>IHOG, Appendix I</p>
<p>2. Procedures</p> <ul style="list-style-type: none"> <li>• Provide first aid</li> <li>• Decontaminate people as needed</li> <li>• Contain the spill <ul style="list-style-type: none"> <li>– Dike it</li> <li>– Use absorbent materials</li> </ul> </li> <li>• Notify AOBD/ASGS</li> </ul>	

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• Begin clean-up <ul style="list-style-type: none"> <li>– Garbage cans with liners</li> <li>– Shovels</li> </ul> </li> </ul> <p><b>SHOW THE “PERFORMANCE VS. REALITY” MOVIE ON THE DVD (9:25 MINUTES).</b></p> <p>Ask students to evaluate the crash rescue emergency procedures as they watch the video.</p> <p>After the video, discuss the following improper crash rescue emergency procedures that were identified. Discuss methods for improvement.</p> <ul style="list-style-type: none"> <li>• No support equipment/personnel</li> <li>• Inadequate communication</li> <li>• Use proper terminology: crash vs. downed aircraft</li> <li>• No fire extinguishers</li> <li>• Too many people too close</li> <li>• No pad markers</li> <li>• Cargo occupying the better landing areas</li> <li>• No established procedures</li> <li>• No EMTs identified</li> </ul>	

OUTLINE	AIDS & CUES
<p>F. Overview</p> <ul style="list-style-type: none"> <li>• Emergency procedures must be known.</li> <li>• There is not time to look them up during a crisis.</li> <li>• The key to performing well in an emergency is preparation and practice, practice, practice...</li> </ul>	<p>08-48-S371-EP</p>
<p><b>REFER STUDENTS TO “TRAINING TO STANDARDS IS THE KEY TO REDUCING HUMAN ERROR” (SW PAGES 8.29 – 8.30; IG PAGES 8.33 – 8.34).</b></p>	<p>08-04-S371-IR/SR</p>
<p><b>EXERCISE: Helibase Briefings</b></p> <p>Have students work in groups. Assign each group one of the following briefings to prepare and present to the class:</p> <ul style="list-style-type: none"> <li>• Helibase emergency procedures.</li> <li>• Briefing for non helitack medical personnel.</li> <li>• Briefing for the crash rescue engine crew.</li> </ul> <p>Allow 10 minutes. Have groups present their briefings to the class. The class should identify the differences or additions they would propose.</p>	<p>08-49-S371-EP</p>

OUTLINE	AIDS & CUES
<p data-bbox="190 285 557 323"><b>EXERCISE: Unit Log</b></p> <p data-bbox="190 375 1081 453">Instruct students to complete their ICS 214 for this unit then hand them in to their coach/mentor.</p> <p data-bbox="190 554 711 592"><b>REVIEW UNIT OBJECTIVES.</b></p> <p data-bbox="190 642 1130 680"><b>HAVE STUDENTS COMPLETE A UNIT EVALUATION.</b></p>	<p data-bbox="1179 554 1406 592">08-50-S371-EP</p>



## HELIBASE EMERGENCY RESCUE PLAN

HELIBASE: \_\_\_\_\_ INCIDENT/PROJECT: \_\_\_\_\_ DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_  
*In the event of an injury, either incident-related or aircraft-mishap-related, fast and efficient medical evacuation procedures must be immediately initiated. Safety will be of primary concern during medivac.*

At least one helicopter must be designated each day to be available for medivac operations. A secondary helicopter should be designated in the event the primary is involved in an accident or otherwise unavailable. If a hospital or military facility has helicopter medivac capability, the use of these aircraft should be strongly considered for transport of injured personnel to medical facilities.

A minimum of \_\_\_\_\_ Emergency Medical Technician(s) will be assigned to Helicopter Medivac Operations.

Use the Emergency Medical Services - Helicopter Ambulance Request sheet to obtain injury and site information for unknown locations. Information below should be updated as aircraft availability changes.

FAA N#	HELICOPTER MANAGER	PAX SEATS	LITTER/RAPPEL/EXTRACTION/ SHORT-HAUL CAPABLE?	REMARKS (Medical Equipment On Board or Assigned, etc.)

NEAREST MEDICAL FACILITY:	GEOGRAPHIC LOCATION	LATITUDE	LONGITUDE	VOR	NM	DEG	EST FT	CONTACT FREQ	REMARKS (Landing Site, etc.)
NEAREST BURN CENTER:									

HELICOPTER LIFEFLIGHT FACILITY LOCATED AT	TYPE AIRCRAFT	PHONE NUMBER	OPERATING FREQUENCY(IES)	REMARKS



## Emergency Exit from Medium Helicopters

Information about exiting from wide bodied helicopters raises some interesting points. Most medium helicopters are 7.5' to 8' wide.

Consider a crash where the aircraft comes to rest on its side. The emergency exit is now 7.5' plus from the ground, and rear passengers are suspended sideways, trying to get out of the machine.

Of 71 crashes in Canada (of medium type 204, 205, and 212), 25.3% (18) came to rest on their side; and 22.2% (4) experienced post crash fires.

Recommendations to help prevent injury or death in this type of crash:

- Know how all emergency exits work and their location on the helicopter.
- During the crew or passenger briefing, explain how to exit the A/C under these conditions, and where the exits are.
- Pick out the tallest person and give them more detailed instructions on how to avoid panic and how to help the other passengers exit from the helicopter.
- Make sure that the pilot is aware of your concerns and who is selected to help the passengers exit in an emergency.
- If helitack are aboard the A/C, then make sure they know the procedures. Do not take it for granted that the helitack know.
- If possible, check to ensure that the screws holding the emergency exit handle covers are all the proper type. The wrong type could cause removal of the covers to require more force than normal.



## Passenger Briefings

A tedious requirement or a potential life saver? How many of us are guilty of the following:

On rollout, the flight attendant begins the briefing. We casually raise one eye, yawn, and continue to read the Wall Street Journal. During the course of an active fire season, aircraft managers are asked to brief countless thousands of passengers.

Many of us who give briefings (and those receiving them), share one common thing – indifference! The dominant thought during the briefings is “how many times do I have to go through this?” When this thought prevails, the briefing becomes a routine chore. Perhaps if we have a better understanding of briefings we’ll be able to put our hearts back in to it.

Let’s first identify why we brief passengers prior to their flight. True, it is a requirement, but more important is to increase the odds of occupant survivability during an aircraft crash.

There are four primary requirements that an aircraft must meet for occupant crash survival. These requirements are: (1) the structure must maintain a livable volume; (2) must keep the occupant’s crash loads within human non-injury tolerances; (3) restrain the occupant, and (4) provide the means and time for escape.

A recent FAA civil helicopter crash study indicated that the six most serious crash hazards are: (1) post crash fires; (2) excessive deceleration loads; (3) unusual aircraft impact conditions due to wire strikes; (4) occupant restraint problems/clearances; (5) lack of available shoulder harnesses (allowing striking of the structure), and (6) injuries that prevented escape.

Let's look at how many of the four survivability requirements and the six crash hazards we can address in a normal passenger briefing.

<u>Primary Requirement/Hazard</u>	<u>Briefing Element</u>
1. Maintain a livable volume	None
2. Keep crash loads within tolerance	Proper use of flight helmets. Assume proper crash position.
3. Restrain the occupant	Proper use of lap/shoulder belts. Assume proper crash position (extremely important when only lap belts are available).
4. Provide means/time for escape	Proper use of restraints. Use of door latches and emergency exits (which side is down, how to exit).
5. Post crash fires	Proper use of Nomex clothing. In flight smoking policy. Location of fire extinguishers. Include elements of #4.
6. Excessive deceleration loads	Include elements of #2.
7. Impact conditions from wire strike	Passengers are another set of eyes. Look for aerial hazards.
8. Occupant restraint problems	Include elements of #3.
9. Injuries that prevented escape	Include elements of #4.

As you can see, we don't address all of the primary requirements and crash hazards during a passenger briefing, but we do cover a great deal.

The next time you are asked to give a briefing, assume that your passengers have never heard one before. You know that is not always the case, but you can't be sure the briefing they received two days ago was as thorough as the one you are about to give. When finished, you should feel good in knowing that you have done what you can to increase the survivability odds of your passengers.

If you are on the receiving end, please pay close attention and be patient. You may have been through it a hundred times, but each aircraft is unique. Doors open differently, restraint systems aren't the same, and fire extinguishers are in different locations. If the briefing doesn't cover such things as fire extinguisher location, how to open doors, etc., then ask. It is in your best interest to do so.

Hopefully this short message has reinforced the reasons for briefings. Keep in mind that passenger briefings may be tedious, monotonous, boring, etc. The bottom line is they have the potential to prevent serious injury and to save lives.



## **Training to Standards is the Key to Reducing Human Error**

### Major reasons for human error:

- |  |                    |
|--|--------------------|
| • Standards are not clear, practical, or do not exist.                     | Management failure |
| • Standards exist but are not known or ways to achieve them are not known. | Training failure   |
| • Standards are known but are not enforced.                                | Leader failure     |
| • Standards are known but are not followed.                                | Individual failure |

Quality training is top priority. Quality training produces disciplined and highly motivated personnel, and it bonds individuals through shared experiences and mutual challenges.

Safe performance is a predictable result of performing to standard, and performing to standard is a result of training to standard. Training to standard leads directly to discipline – both collectively and individually, and disciplined individuals and operations are inherently safe.

Human error is a definite cause in more than 80 percent of all accidents – air and ground. The human error problem is not unique to Interagency. Human error is also the single largest cause of accidents for our sister agencies, our military, and commercial aviation. Future reductions in accident losses will be directly related to reducing human errors with accident-causing potential.

Accident experience shows that human error accidents are frequently clear indicators of training weaknesses. The same training weaknesses would quickly deplete an agency's capability to fight a fire. The root cause of the problem is failure to train to standard or to the right standard. The solution lies in integrating safety into our training and operation processes.

On a large portion of human error-related accidents, the error causing the accident can usually be tied in some way to a failure to train to standard or to enforce the standards. This is true Forest Service-wide (in air and ground operations). Too many people misunderstand the term "human error."

For example, when an aircraft accident investigation team lists human error as a cause factor, it doesn't necessarily mean that someone went out and did something to intentionally cause the crash.

Human error means the aircraft crashed because an individual made a performance error. The individual did something wrong or failed to do something correctly that caused the crash. The reason for the performance error, however, could be lack of training, lack of established standards, or failure to follow standards.

The point is, when standards are not clear or practical or do not exist, and the individual makes an error, that error is the result of management failure – failure to establish standards. If standards exist, but are not known or ways to achieve them are not known, and the individual causes an accident because they do not know the standards, we have a training failure.

When standards exist and are known, but leaders fail to enforce them, human error is the result of leader failure. When standards are known, but are not followed – when individuals fail to perform to established and enforced performance standards – then we have individual failure.

## DETAILED LESSON OUTLINE

**COURSE:** Helibase Manager, S-371

**UNIT:** 9 – Overview of Military Aviation Operations

**TIME:** 1 Hour

**TRAINING AIDS:** Computer, projector, screen, Military Use Handbook.

**OBJECTIVE:** Upon completion of this unit, students will be able to:

- Identify and discuss methods for the integration and coordination of military aviation operations with daily helibase operations.

OUTLINE	AIDS & CUES
<b>UNIT TITLE SLIDE.</b>	09-01-S371-EP
<b>PRESENT UNIT OBJECTIVE.</b>	09-02-S371-EP
<b>I. MILITARY VS. CIVILIAN HELICOPTER OPERATIONS</b>	
<b>A. Situations that May Require Military Aircraft</b>	09-03-S371-EP
1. Outstanding resource orders for aircraft nationally.	
2. Political deployment in order to meet national planning levels.	
3. Supplement fleet to release civilian aircraft for other/higher priority.	

OUTLINE	AIDS & CUES
<p>B. Military vs. Civilian Aircraft/Crews/Operations</p> <p>1. National guard vs. active military/reserve</p> <ul style="list-style-type: none"> <li>• National guard can be deployed through state agreement.</li> <li>• Active military/active reserve needs to be activated through pre-established national channels and agreements.</li> <li>• Different levels of knowledge.</li> </ul>	09-04-S371-EP
<p><b>HAND OUT MILITARY USE HANDBOOK (MHB); REFER STUDENTS TO CHAPTER 70 - AVIATION.</b></p>	MHB
<p>2. Allocation and use</p>	
<p>3. Agency positions vs. military positions</p>	
<p>4. Military vs. civilian aircraft</p> <ul style="list-style-type: none"> <li>• Configuration</li> </ul>	09-05-S371-EP
<ul style="list-style-type: none"> <li>• Markings and paint schemes</li> </ul>	09-06-S371-EP
<p>Military aircraft is painted/marked for low visibility.</p>	09-07-S371-EP
<ul style="list-style-type: none"> <li>• Interaction</li> </ul> <p>Military tend to fly low-level, treetop level due to survivability in combat.</p>	

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• Radios and equipment</li> </ul> <p style="margin-left: 40px;">Language and frequencies often not common.</p>	
<p>5. Military vs. civilian crews</p> <ul style="list-style-type: none"> <li>• Internal organizational structure – rank vs. ICS position – military based on rank whereas civilian leans towards knowledge, skills, and abilities.</li> </ul>	09-08-S371-EP
<ul style="list-style-type: none"> <li>• Flight crew size (military much larger, generally)</li> </ul>	09-09-S371-EP
<p><b>DISCUSS DIFFERENCES BETWEEN CIVILIAN AIRCRAFT AND MILITARY AIRCRAFT FLIGHT CREWS (FOR EXAMPLE, MILITARY CREW CHIEFS RESPONSIBILITY WITH BUCKET DROP).</b></p>	
<ul style="list-style-type: none"> <li>• Duty limitations <ul style="list-style-type: none"> <li>– It is required to keep a record of all military flight time.</li> </ul> </li> <li>• Performance and capabilities</li> </ul>	09-10-S371-EP
<p><b>REFER TO MHB, CHAPTER 70.</b></p>	MHB, Chapter 70

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• Interaction <p>Helibase Manager must be proactive in recognizing attitudes that may be negative towards military (civilian pilots worried about loss of money, competition, airspace conflict).</p> </li> </ul> <p>6. Military vs. civilian helicopter operations</p> <ul style="list-style-type: none"> <li>• Terminology <ul style="list-style-type: none"> <li>– Government acronyms</li> </ul> </li> <li>• Actual helibase operations <ul style="list-style-type: none"> <li>– Involve military personnel in your briefings/debriefings</li> <li>– PPE</li> </ul> </li> <li>• Fueling <ul style="list-style-type: none"> <li>– Government generally provides fuel for military.</li> <li>– They provide their own fueling personnel.</li> <li>– Helibase Manager should consider hazardous materials concerns.</li> </ul> </li> <li>• Load calculations vs. Performance Planning Cards (PPC)</li> </ul>	<p>09-11-S371-EP</p> <p>09-12-S371-EP</p>

OUTLINE	AIDS & CUES
<p>7. Categories of use</p> <ul style="list-style-type: none"> <li>• Bucket only</li> <li>• Crew shuttle only</li> <li>• Medevac</li> </ul> <p>8. Command and control helicopters</p> <p>9. Training and qualifications</p>	<p>09-13-S371-EP</p>
<p>C. Combining Efforts</p> <p>How do you work together with these differences?</p> <p>1. Establish and maintain open lines of communication; work with the military helicopter manager assigned.</p>	<p>09-14-S371-EP</p>
<p>2. Knowledge of operational procedures needed to facilitate military/civilian air operations</p> <ul style="list-style-type: none"> <li>• Logistics</li> <li>• Facilities</li> </ul>	<p>09-15-S371-EP</p>
<p>3. Brief all personnel on any necessary operational adjustments needed to maintain safe military/civilian operations.</p> <p>4. If possible include military personnel in briefings.</p>	<p>09-16-S371-EP</p>

OUTLINE	AIDS & CUES
<p>II. HAZARDS WITH MILITARY HELICOPTER OPERATIONS</p> <p><b>DISCUSS MILITARY AVIATION HAZARDS.</b></p> <ul style="list-style-type: none"> <li>• Low rotors - Blackhawk</li> <li>• Rotor wash - Chinooks</li> <li>• Major static - Chinooks</li> <li>• JP5 - gas/kerosene mix</li> </ul> <p><b>EXERCISE: Demobilization/Military Use, Part 1</b></p> <p>Students may work in groups. Students are to read the scenario then use information from the Day 5 IAP (and other information and tools available) to answer the questions.</p> <p>When students finish, discuss their answers. There are no wrong answers. The exercise is for students to plan and prioritize aircraft resources. Allow 5 minutes for completion.</p> <p><b>Scenario:</b> Due to changing national priorities, the wildfire incident will need to release several helicopters. These helicopters will be replaced by military helicopters.</p> <p>You will need to release the following helicopters and their assigned personnel:</p> <p>2 - Type 2 helicopters 1 - Type 3 helicopter</p>	<p>09-17-S371-EP</p> <p>09-18-S371-EP</p> <p>09-19-S371-EP</p> <p>09-20-S371-EP</p>

OUTLINE	AIDS & CUES
<p>In their place you will receive:</p> <ul style="list-style-type: none"> <li>1 - CH-47</li> <li>2 - UH-60 Blackhawks</li> <li>50 - Personnel and equipment</li> <li>2 - Military tractor trailers</li> <li>2 - Hemets (military fuel carrier)</li> <li>1 - 3000 gallon military fuel tender</li> </ul> <p><b>Questions:</b></p> <ol style="list-style-type: none"> <li>1. Which helicopters will you release and why?</li> <li>2. What, if anything, will you as the helibase manager need to do to prepare for utilization of military helicopters?</li> </ol>	
<p><b>EXERCISE: Demobilization/Military Use, Part 2</b></p>	<p>09-21-S371-EP</p>
<p>Hand out Unit Logs. Each student will prepare an ICS 214 for this unit based on changes caused by the introduction of military aircraft. Allow 5 minutes for completion.</p>	<p>09-01-S371-HO</p>
<p><b>REVIEW UNIT OBJECTIVE.</b></p>	<p>09-22-S371-EP</p>
<p><b>HAVE STUDENTS COMPLETE A UNIT EVALUATION.</b></p>	<p>09-23-S371-EP</p>



## DETAILED LESSON OUTLINE

- COURSE:** Helibase Manager, S-371
- UNIT:** 10 – Final Group Exercise: Buster Fire
- TIME:** 3 Hours
- TRAINING AIDS:** Computer, projector, screen. Print a copy of the map on PowerPoint slides 5 and 7 for each group.
- OBJECTIVES:** Upon completion of this unit, students will be able to:
1. As a member of your assigned group, provide input for answers to exercise questions.
  2. During the exercise make decisions as a helibase manager.
  3. Given different situations, describe how you as “helibase manager” would resolve and take care of the situation.

OUTLINE	AIDS & CUES
<b>UNIT TITLE SLIDE.</b>	10-01-S371-EP
<b>PRESENT UNIT OBJECTIVES.</b>	10-02-S371-EP
<b>FINAL GROUP EXERCISE: Buster Fire</b>	10-03-S371-EP
<u>Instructions:</u>  In their assigned groups, students will read the scenarios and answer the questions. After completion of each scenario, have groups present their answers to the class.	

OUTLINE	AIDS & CUES
<p><u>Scenario 1 (allow 10 minutes):</u></p> <p>Day 1: You have been assigned as the HEB2 on an emerging fire in Nevada. You are to fly to Las Vegas, get a rental vehicle and drive to the fire. You arrive in Las Vegas at approximately 0900 and notice that the resource order for you states that the fire location is the “Parsnip Peak Area.” You were given a facsimile of the resource order and the only legible items are the fire name, fire number, location and a contact number. You dial the telephone number on the resource order and a lady answers the phone saying that you have reached Ely Interagency Dispatch.</p> <p>1. What are at least three pieces of information you need to get in order to proceed?</p> <p><b>Possible answers:</b></p> <ul style="list-style-type: none"> <li>• <b>Directions to the fire and/or the helibase.</b></li> <li>• <b>Estimated driving time to fire and/or helibase.</b></li> <li>• <b>Contact point at the fire and helibase.</b></li> <li>• <b>Current frequencies being used on the fire.</b></li> <li>• <b>Current number and type of helicopters on scene (only one T3 CWN right now).</b></li> <li>• <b>Number and types of helicopters on order.</b></li> <li>• <b>Any special considerations for flying in that area (MOA’s, SUA’s, etc.)?</b></li> <li>• <b>Any special policies or hazards in this area (wilderness, special rules, local policies, etc.)?</b></li> </ul>	

OUTLINE	AIDS & CUES
<p data-bbox="190 289 634 323"><u>Scenario 2 (allow 10 minutes):</u></p> <p data-bbox="190 380 1146 636">It takes you over five hours to drive to the location described to you by Ely dispatch. You arrive at a Nevada State Parks compound where there are a number of fire vehicles and firefighters. The column from the fire is readily visible and you estimate the fire at roughly 10 miles from the compound. While driving there, you see several other smoke columns in the area.</p> <p data-bbox="190 688 1000 722">2. What are at least three things you should do next?</p> <p data-bbox="261 779 548 812"><b>Possible answers:</b></p> <ul data-bbox="261 867 1110 1304" style="list-style-type: none"><li data-bbox="261 867 764 900">• <b>Find the ICP and check in.</b></li><li data-bbox="261 955 753 989">• <b>Directions to the helibase.</b></li><li data-bbox="261 1043 1110 1077">• <b>Confirm the info that you got from Ely dispatch.</b></li><li data-bbox="261 1131 1032 1165">• <b>Get a copy of the shift plan (if there is one).</b></li><li data-bbox="261 1220 1078 1304">• <b>Get copy of frequencies used on this fire (both VHF-FM and VHF-AM).</b></li></ul> <p data-bbox="190 1358 1086 1392"><b>Note:</b> Make sure students receive the following information:</p> <ul data-bbox="261 1446 1122 1791" style="list-style-type: none"><li data-bbox="261 1446 1122 1530">• <b>Number and type of helicopters currently on the fire (one T3 CWN now).</b></li><li data-bbox="261 1585 1122 1791">• <b>Number and type of helicopters on order (one T3 Exclusive Use with full module ETA 0900 tomorrow, and one T2 CWN with module to be released from a neighboring fire in the next day or two).</b></li></ul>	

OUTLINE	AIDS & CUES
<p><u>Scenario 3 (allow 10 minutes):</u></p> <p>The ICT3 tells you that the helibase is located in a small pasture adjacent to the ICP. Looking out the window you see a truck filled with Jet-A right next to the building that you are in.</p> <p>3. Once you find the HCWN, what information can you get?</p> <p><b>Possible answers:</b></p> <ul style="list-style-type: none"> <li>• <b>Current status of helicopter (today’s FT, cumulative FT, etc.)</b></li> <li>• <b>Frequency issues (enough, working OK, etc.)</b></li> <li>• <b>Any air-related problems?</b></li> <li>• <b>Sunset/sunrise for today and next few days.</b></li> <li>• <b>Adequate supplies? (HELB kits, fire extinguishers, cargo nets, etc.)</b></li> <li>• <b>Inspect helibase layout.</b> <ul style="list-style-type: none"> <li>– <b>Adequate for one ship? Room for expansion?</b></li> <li>– <b>Safety items?</b></li> <li>– <b>PPE being used</b></li> <li>– <b>Position of fuel truck</b></li> <li>– <b>Flagging, signs, parking area, crew staging, etc.</b></li> </ul> </li> </ul>	

OUTLINE	AIDS & CUES
<p data-bbox="190 289 634 323"><u>Scenario 4 (allow 10 minutes):</u></p> <p data-bbox="190 380 1122 548">After reviewing the helibase, you decide that the current location is too close to camp and that no more than a single T3 helicopter could operate here. You want to find a new site for the helibase before the other helicopters arrive.</p> <p data-bbox="190 600 1045 678">4. List five things to consider when selecting a site for a helibase.</p> <p data-bbox="261 737 548 770"><b>Possible answers:</b></p> <ul data-bbox="261 825 1084 1394" style="list-style-type: none"><li data-bbox="261 825 602 858">• <b>Land ownership.</b></li><li data-bbox="261 913 667 947">• <b>Proximity to the fire.</b></li><li data-bbox="261 1001 639 1035">• <b>Proximity to camp.</b></li><li data-bbox="261 1089 1084 1167">• <b>Vehicle access (weight restricted bridges, poor roads, etc.)</b></li><li data-bbox="261 1222 805 1255">• <b>Dust abatement needs, if any.</b></li><li data-bbox="261 1310 1078 1388">• <b>Terrain (inversions, fire burning towards your base, etc.)</b></li></ul>	

OUTLINE	AIDS & CUES
<p><u>Scenario 5 (allow 10 minutes):</u></p> <p>The ICT3 suggests that you take a look at a large pasture about halfway between the ICP and fire. He drives to the site with you and a DIVS. They say that they were told that it's OK with one of the landowners if you use this site. The pasture appears to be flat terrain with tall green grass that is big enough to accommodate light helicopters, the medium helicopter, and possibly a second medium if needed. There is a single gate off of the main road to access the pasture. Also, there is a small creek running through the pasture that has kept the grass green. They agree to name this site "Two Track."</p> <p>5. List one "pro" and one "con" for using this site.</p> <p><b>Possible answers:</b></p> <ul style="list-style-type: none"> <li>• <b>Pros: Good access; grass makes for natural dust abatement.</b></li> <li>• <b>Cons: Stream may be in a critical watershed—fueling operations; tall grass may be hiding obstacles.</b></li> </ul> <p>6. Should you use this site?</p> <p><b>Yes, but make sure that you have permission from the landowners.</b></p>	

OUTLINE	AIDS & CUES
<p>7. List three people that you may want to consult in helibase site selection.</p> <p><b>Possible answers:</b></p> <ul style="list-style-type: none"> <li>• <b>Local agency(s) representative.</b></li> <li>• <b>Local resource advisor.</b></li> <li>• <b>Local dispatch office.</b></li> <li>• <b>Landowners if they can be located (and if using private lands, get finance involved to work out an agreement).</b></li> </ul> <p><u>Scenario 6 (allow 5 minutes):</u></p> <p>The ICT3 is insistent that you move the base to the Two Track site and begin operating there as quickly as possible because the current helibase location is needed to stage crews and equipment that are already beginning to show up and are clogging up the road by the ICP. He assures you that one of the landowners said it is OK to be there. You decide that verbal permission is a good start and move the base to the new site just as the Exclusive use Type 3 helicopter shows up.</p> <p>8. Is this the right decision?</p> <p><b>Yes, it is the right decision based upon what you know right now. (What really happened was one brother gave permission to use the land, but the other brother didn't know about it or want the government there).</b></p>	

OUTLINE	AIDS & CUES
<p>9. Do you direct the Exclusive use helicopter to the new site or the old site?</p> <p><b>You should direct them to the old site since you only looked at the new site and have not thoroughly scouted the new site for hidden hazards. Also, it is not set up to receive aircraft.</b></p> <p><u>Scenario 7 (allow 15 minutes):</u></p> <p><b>Give each group a copy of the Two Track map. Students are to read the scenario, answer the questions, and complete a helibase layout on the Two Track map.</b></p> <p>The rest of the day proceeds smoothly with both helicopters doing recon missions and supporting the ground crews with bucket drops. About 15 minutes before legal sunset the ICT3 calls on the radio and says he will be at the base in half an hour and wants an extensive recon and mapping of the 500-acre fire.</p> <p>10. Do you accept this mission? Why or why not? What should your response be?</p> <p><b>No. Not enough time left in the day it's to close to sunset. Suggest perhaps an early morning recon flight can be schedule.</b></p> <p>11. After both of the helicopters are on the ground for the night, what are three tasks do you need to accomplish?</p> <p><b>Possible answers:</b></p> <ul style="list-style-type: none"> <li><b>Conduct helibase debriefing and attend debriefing at the ICP.</b></li> </ul>	<p>10-04-S371-EP</p> <p>10-05-S371-EP</p>

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• <b>All helibase related paperwork (cost summaries, ICS-220, ICS-214, etc.).</b></li> <li>• <b>Ensure that helibase personnel know what time the morning fire/helibase briefing(s) will be.</b></li> <li>• <b>Collect crew and helicopter information sheets from the helicopter managers.</b></li> <li>• <b>Provide security for the helibase.</b></li> </ul> <p><u>Scenario 8 (allow 5 minutes):</u></p> <p>Day 2: The following morning you are attending (with both helicopter managers) the AM briefing when you get a radio call from someone on one of the helicopter crews. The HECM tells you that one of the landowners has just arrived at the helibase and wants to know, “just what the hell you’re doing on my land.” The HECM is obviously nervous and wants to know what to do.</p> <p>12. What should you do?</p> <ol style="list-style-type: none"> <li>a. Meet with the landowners to calm the situation.</li> <li>b. Conduct the base operations briefing and get going for the day and ignore the landowner.</li> <li>c. Call law enforcement ... “lock and load.”</li> <li>d. <b>None of the above. (You should have the ICT3 or a local agency rep deal with the landowner while you conduct the helibase briefing).</b></li> </ol>	

OUTLINE	AIDS & CUES
<p data-bbox="190 289 634 323"><u>Scenario 9 (allow 20 minutes):</u></p> <p data-bbox="190 375 1097 501"><b>Give each group a copy of the Dry Creek map. Students are to read the scenario, answer the question, and complete a helibase layout on the Dry Creek map.</b></p> <p data-bbox="190 554 1133 856">The landowner insists you be off the land immediately and then drives off saying you'd better be gone by the time he gets back. One of the employees at the State Parks office suggests that the base be moved to a large pasture directly across the road from the ICP. He tells you the land belongs to the State Parks and is leased to a local rancher for grazing. He shows you a lands map of the area and the land is definitely State Parks land.</p> <p data-bbox="190 909 1110 1211">An inspection of the site reveals that it would make for a good helibase: large flat pasture, close to ICP, green grass for dust abatement, good access from the road, etc. <b>(If a student asks, they do not see any cattle in the pasture right now.)</b> By the time you review the new site, both helicopters are in the air doing bucket work to support crews. It is agreed that this site will be called "Dry Creek."</p> <p data-bbox="190 1264 1133 1522">The Exclusive Use helicopter has been flying for almost an hour and a half but the CWN helicopter has only been flying for half an hour due to a minor problem found during preflight. The order for the T2 helicopter has not yet been filled as the T2 CWN is still assigned to a nearby fire and there is no word when it will be released.</p> <p data-bbox="190 1575 1081 1659">13. What would be a good way or order to move the base? All at once, bit by bit, helicopter by helicopter?</p> <p data-bbox="261 1711 1081 1795"><b>There are no right or wrong answers, but it should generate good class discussion.</b></p>	<p data-bbox="1179 289 1403 323">10-06-S371-EP</p> <p data-bbox="1179 380 1403 413">10-07-S371-EP</p>

OUTLINE	AIDS & CUES
<p><u>Scenario 10 (allow 10 minutes):</u></p> <p>Day 3: Before the morning briefing at the ICP, the CWN manager approaches you and tells you that during the night a small number of cattle got into the pasture with the helicopters and damaged the helicopter. The CWN module (4 people) spent the night staying awake to keep the cattle from further damaging the helicopters.</p> <p>Only the HCWN has not exceeded the work to rest ratio. The module from the exclusive use helicopter (10 people) has only one person who exceeded the work-rest ratio. The damage to the helicopter includes a pushed in window, two bent radio antennas on the tail boom and a bent convex mirror bracket. The pilot of the aircraft is very angry and is currently on the phone to the helicopter company. He is not sure when or if the helicopter will be able to fly today.</p> <p>At the fire camp briefing the ICT3 springs a change in plans from the previous night's planning meeting. He wants to use both helicopters to transport a crew to a division on the fire that has previously not been staffed and spike them out for the night. He also wants a recon flight of that division with his OPSC, the DIVS for that division and the crew boss for the crew going into that area.</p> <p>Two local resource advisors also want a flight to recon the fire to prepare for the arrival of a local BAER team. About this time, another DIVS calls the ICP and requests a helicopter for some bucket work on his division.</p> <p>The communications unit leader then announces that he'll need a flight soon to replace the batteries in a temporary repeater assigned to the fire.</p>	

OUTLINE	AIDS & CUES
<p>14. List at least five considerations or items that need to be addressed at this point, either with the ICT3 or the HCWN.</p> <p><b>Possible answers:</b></p> <ul style="list-style-type: none"> <li>• <b>Notify the ICT3 that one ship is unavailable for an indeterminate amount of time.</b></li> <li>• <b>Have the HCWN get with his pilot and the helicopter company to start resolving the problems/arranging repairs.</b></li> <li>• <b>Have the HCWN start documenting the incident and damage.</b></li> <li>• <b>Ask the ICT3 what his priorities for the flights are.</b></li> <li>• <b>Have HCWN notify the CO for that helicopter contract.</b></li> <li>• <b>Ask the HELB if some of his crew can work with the CWN helicopter for that day.</b></li> <li>• <b>Ensure that the radio repeater is not accessible in any other way than by helicopter.</b></li> <li>• <b>Make sure that the HCWN has a blank SAFECOM form and that you get a copy of the completed SAFECOM for the incident file.</b></li> </ul>	

OUTLINE	AIDS & CUES
<p><u>Scenario 11 (allow 5 minutes):</u></p> <p>The ICT3 tells you that the priorities for the flights are as follows: Bucket work first, then the recon with the OPSC, then the crew shuttle, then the resource advisor flight (with the understanding the bucket missions would take priority). After being hard pressed, the radio technician admits that he can drive to a place close to the repeater and hike less than a mile to it. About three hours later the HCWN tells you that the helicopter has been fixed and can start flying missions.</p> <p>15. Do you let the CWN start flying?</p> <p><b>There is no right or wrong answer; it depends on the actions of the HCWN and how well he's taken care of the situation.</b></p> <p><b>If the HCWN is experienced and has documented everything well, it would probably be OK to start using that helicopter.</b></p> <p><b>If the HCWN cannot prove to your satisfaction that the repairs are in accordance with policy (a maintenance inspector has been called to approve the repairs to the bracket, the radio antennae, re-seating the window, etc.), then you probably should not use them.</b></p>	

OUTLINE	AIDS & CUES
<p data-bbox="190 289 634 323"><u>Scenario 12 (allow 5 minutes):</u></p> <p data-bbox="190 375 1133 905">You decide to get the CWN into the mix and help finish the crew shuttle. Operations on the fire run smoothly for the remainder of the morning, the crew shuttle is completed and the various recon flights get done. By early afternoon, the helicopters are back doing bucket work. At the end of a fuel cycle, the Exclusive Use helicopter comes back in for fuel and you overhear the pilot telling the HCWN that he hasn't seen any smoke or flame in the area that he's been working on for quite a while, but the DIVS wants him to come back. The pilot says that there is plenty of work for him out on the fire but not on the division he just came from. A couple of the other DIVS out on the fire are currently requesting helicopter support.</p> <p data-bbox="190 953 1122 1035">16. How could you handle this situation? Describe a possible course of action.</p> <p data-bbox="261 1087 548 1121"><b>Possible answers:</b></p> <ul data-bbox="261 1178 1133 1703" style="list-style-type: none"><li data-bbox="261 1178 1133 1255">• <b>Talk with the pilot to confirm the assessment of the situation.</b></li><li data-bbox="261 1310 1133 1434">• <b>Call the DIVS and see if he can get by without bucket drops for a bit, and have the helicopter go to another division.</b></li><li data-bbox="261 1488 1133 1566">• <b>Contact the ICT3 or Operations Chief and have them make the call to the DIVS.</b></li><li data-bbox="261 1621 1133 1703">• <b>Let it go for now, but mention heli-mopping at the next briefing in camp.</b></li></ul>	

OUTLINE	AIDS & CUES
<p><u>Scenario 13 (allow 5 minutes):</u></p> <p>That afternoon, you get a radio call from the ICT3 requesting that you come up to the ICP. When you get there, you see the IC talking with a representative from the State Park Service and what appears to be a very angry rancher. It turns out that the rancher is upset that there is a helibase set up on land that he is leasing for grazing. He wants the helicopters out of there so that he can move cattle in from an adjoining pasture (the pasture where the helicopter-damaging cattle came from). The ICT3 then informs you that you will once again need to find a suitable site for a new helibase, and that the Type 2 helicopter that had been on order for the last two days will be here sometime before legal sunset. There will also be a BV-107 (Type 1) assigned to this fire because it is being released from another district fire but the fire management team wants to hang onto it.</p> <p>17. List at least two questions that you would ask the ICT3, the local resource advisor, and/or the local dispatch.</p> <p><b>Possible answers:</b></p> <ul style="list-style-type: none"> <li>• <b>Are the roads and bridges that come out to the helibase capable of supporting the heavy fuel trucks that are associated with Type 1 helicopters?</b></li> <li>• <b>Historically, when there were Type 1 helicopters used on fires in this area, where were they based? On-scene? At a local airport?</b></li> <li>• <b>Are there any other sites in the vicinity of the fire that could accommodate 2 lights, a medium, and a heavy helicopter?</b></li> </ul>	

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"><li data-bbox="261 289 1117 415">• <b>If the type 1 is assigned to this fire but not really needed, does it have to come out to the fire at all or can it get staged somewhere else?</b></li></ul> <p data-bbox="191 468 1101 594">18. Now that there are four helicopters on this incident, what main point needs to be brought to the attention of the ICT3 and the local dispatch office?</p> <p data-bbox="261 646 1076 772"><b>That you are not qualified to manage a Type 1 helibase (4 or more helicopters) and that an HEB1 would need to be ordered.</b></p>	

# **APPENDIX A**

## **COURSE ORDERING AND SUPPORT INFORMATION**



## COURSE ORDERING AND SUPPORT INFORMATION

### Helibase Manager, S-371

The following items may be ordered from the National Interagency Fire Center, Great Basin Supply Office Cache in Boise, Idaho 83705. Consult the current NWCG National Fire Equipment System Catalog, Part 2: Publications for current prices and ordering procedures. This publication is available online at [www.nwcg.gov/pms/pubs/](http://www.nwcg.gov/pms/pubs/)

#### Each instructor will need:

NFES 2885	S-371 Instructor Guide
NFES 2887	S-371 Course Materials CD-ROM
NFES 2888	DVD “Risk Assessment” and “Performance vs. Reality”
NFES 2866	Helibase Display Boards Part 1 (1 set per group)
NFES 2867	Helibase Display Boards Part 2 (1 set per group)

#### Each student will need:

NFES 2886	S-371 Student Workbook
NFES 0065	Fireline Handbook <a href="http://www.nwcg.gov/pms/pubs/pubs.htm">http://www.nwcg.gov/pms/pubs/pubs.htm</a>
NFES 1885	Interagency Helicopter Operations Guide <a href="http://www.nifc.gov/ihog/">http://www.nifc.gov/ihog/</a>
NFES 2175	Military Use Handbook <a href="http://www.nifc.gov/nicc/logistics/references.htm">http://www.nifc.gov/nicc/logistics/references.htm</a>
NFES 2327	Helibase Manager Position Task Book <a href="http://www.nwcg.gov/pms/pubs/pubs.htm">http://www.nwcg.gov/pms/pubs/pubs.htm</a>

The Course Coordinator should be familiar with:

- Course Coordinator's Guide, PMS 907, available at <http://www.nwccg.gov/pms/training/training.htm>

Additional materials and equipment needed:

- A computer with projector (LCD), speakers, projection screen, and PowerPoint presentation software for electronic presentations.
- Flip charts or white boards with markers or chalkboard with chalk for the instructors.
- DVD player.