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| UNIT OVERVIEW |
| **Course** Helicopter Crewmember, S-271 |
| **Unit** 1 - Readiness |
| **Time** TBD |
| **Objectives**1. Describe information and materials needed for ICS/LE assignment.2. Describe the information that is received from dispatch when assigned to an incident.3. Describe the check-in process upon arrival at the incident.4. Describe the information gathered from the assigned supervisor at the incident. |
| **Strategy**This unit will help students to understand the policies and procedures associated with accepting an assignment and checking in at the assignment. This will be done through lecture and student interaction. |
| **Instructional Method(s)*** Facilitation/informal lecture with PowerPoint
* Group exercise
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| **Instructional Aids*** Computer with LCD projector and presentation software
* Fireline Handbook, PMS 410-1
* IRPG
* IHOG
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| **Exercise(s)*** Initial Briefing (role play)
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| **Evaluation Method(s)*** Classroom review and group exercise discussion
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| **Outline**I. The Helicopter CrewmemberII. Aviation Life Support and SurvivalIII. Readiness for AssignmentIV. Assignment InformationV. Check-in ProcessVI. Initial Briefing |
| **Aids and Cues Codes**The codes in the Aids and Cues column are defined as follows:IG – Instructor Guide IR – Instructor ReferenceSW – Student Workbook SR – Student ReferenceHO – Handout Slide – PowerPoint |

# UNIT PRESENTATION

COURSE: Helicopter Crewmember, S-271

UNIT: 1 – Readiness

| OUTLINE | AIDS & CUES |
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| Unit Title Slide.Present Unit Objectives.I. Duties and responsibilities of the Helicopter Crewmember are as follows: * Constructs helispots, manifest, loads, and unloads cargo and personnel, marshals’ helicopters, rigs external loads, etc.
* Assist Manager in performing daily inventory check and in ensuring operational readiness of helicopter unit; performs tool, equipment, and vehicle maintenance and refurbishment; performs facility and cache maintenance.
* Participates in proficiency checks and drills.
* Participates in safety sessions and critiques; provides preflight safety briefings to passengers; ensures own and others’ safety and welfare in all aspects of job.

Ii. aviation life support and survivalA. Aviation Life Support Equipment (ALSE)If available view the “Personal Protective Equipment Video”The ALSE handbook provides policy and responsibilities requirements.1. PolicyPolicy states that, the responsibility of management is to “provide employees with a safe and healthful work environment.”2. Agency ResponsibilitiesAgencies are responsible for implementing their PPE program. They are also responsible for evaluating aviation activities and providing employees with the appropriate equipment and training.3. Why Personal Protective Equipment (PPE)Ask students why they need PPE? Lead into the following accident synopsisThis accident occurred on August 3, 2000. The helicopter was destroyed when it abruptly rolled to the right and impacted terrain during hover after takeoff at Montello, Nevada.The helicopter was providing support of wildland firefighting activities and taking off with two passengers on board. The pilot “picked the helicopter up” to a 3 foot hover height and glanced down at the engine torque gauge. Suddenly, the helicopter did a “violent snap roll” to the right coming to rest upright. He estimated the whole event lasted about a ¼ second.During the roll sequence, the main rotor blades entered the front cabin area and impacted the left front seat passenger on the head.The flight helmet received substantial damage. The integrity of the outer shell was maintained, while the inner Styrofoam liner received substantial indentations absorbing most of the impact.Although the passenger was seriously injured, the flight helmet saved his life.An aviator’s flight helmet can save your life if properly fitted. The following topics within this unit will cover proper fitting and care of the primary element of PPE that should be worn during special use activities.B. Care and Fitting of your PPEPrior to dispatch or flight missions all helicopter crewmembers and passengers are required to wear the following PPE:* Nomex clothing (fire resistant clothing)
* Nomex flight gloves (fire resistant or leather gloves)
* Leather Boots
* Flight helmet

Be sure PPE is readily available in preparation for an assignment.1. Fire Resistant ClothingThe purpose of wearing fire resistant clothing is to protect you from a flash fire. The preferred material is Nomex.* Clothing must be kept clean – do not use starch.
* Clothing worn over Nomex (Coats, sweatshirts, coveralls, etc.) should be made of a fire resistant material. Natural fibers such as wool, cotton, or leather is best.
* To provide adequate protection, under garments worn next to skin should also be made of fire resistant material or natural fibers.

Emphasize the need to wear natural fiber clothing as outerwear and underwear. Describe the effects of synthetic clothing when exposed to flames.Chemically altered clothing is acceptable as fire resistant, and chemically treated is not. This is due to the fact that the chemical treatment will launder out and will no longer provide protection.2. Flight Suit* Should fit loosely to provide trapped air for insulation.
* Sleeves should be long enough to reach first knuckle of thumb.
* Pants should reach the floor while standing.

3. Gloves* Gloves should have a long cuff extending above the wrist.
* Flight suit should be secured snugly over the gloves at the wrist.
* Glove should fit snugly to provide for dexterity.

Ask for a volunteer to demonstrate the proper fitting of flight suit and gloves.4. Boots* Boots should be made of all leather uppers.
* Flight suit should be secured snugly around the ankles.

5. Head, Hearing, and Eye Protection* Flight Helmets, consisting of a one-piece hard shell, must cover the top, sides and rear of the head, and comply with the national standard.
* Hearing protection program is required whenever employees are exposed to noise equal to, or exceeding an eight-hour time-weighted average of 85 decibels (dBA).
* Eye protection is required in work environments where air particle contaminants are present.

The three standards mentioned are met with the SPH-5 flight helmet.Demonstrate the proper fitting of the aviator’s flight helmet. It is imperative that students understand how to properly fit and wear the helmet.The SPH-4 is no longer being manufactured and has been replaced by the SPH-5. The Gentex SPH-5 is the current upgrade from the previous version. The fiberglass outside shell has been improved by replacing it with Kevlar. The interior webbing suspension system has been replaced using a thermoplastic liner (TPL).The current helmet exceeds the safety performance of the previous SPH-4 helmet in all areas of technical testing (crash force attenuation, helmet retention characteristics, overall weight, and hearing attenuation).Ask for a volunteer to participate in fitting the helmet.The procedure to ensure proper fit of the helmet is to demonstrate:* Donning and removing (doffing) the helmet.
* Adjusting the nape strap.
* Fastening and unfastening the chinstrap.
* Operating the sun visor.

Don the helmet as follows:* Grip the retention assembly below the earcups as shown.
* Spread the sides of the helmet slightly and position the front edge firmly against the forehead.
* Roll the helmet back and down onto the head. Press the helmet firmly downward with both hands to ensure that the helmet is properly seated on the head and the ears are surrounded by the earcups.
* Check the distance between the eyebrows and the edge of the helmet shell; it should be approximately ¾” for optimum vision.
* Tighten the rear of the retention assembly by adjusting the hook and pile closure and tightening the nape strap through the adjustment buckle.
* Fasten the chinstrap by inserting the snap end through the D-ring on the right side of the assembly, and snapping the connectors.
* Tighten the chinstrap to the desired tension. Once the desired tension is achieved, the chinstrap can be fastened and unfastened via the snap.
* Lower and raise the visor the test operation and clearance.

Evaluate the fit according to the following criteria:* The earcups should surround the ears completely.
* The ear seals should be compressed to the greatest degree possible without discomfort.
* The overall fit should be comfortable; no hotspots or pressure points should exist.

Remove the helmet by unfastening the chinstrap. Unsnap the strap button and unfasten the trap through the right-hand D-ring. Hook the thumbs in the earcups and spread the helmet at the earcup area. Roll the helmet upward and rearward.If the ear seals are not sufficiently compressed, remove the helmet and tighten the helmet cross straps. Two cross straps are located behind each earcup. Don the helmet, tighten the chinstrap, and recheck the ear seal compression.If the ear seals are still not sufficiently compressed after the cross straps have been tightened, remove the helmet and add earcup spacer pads behind each earcup as required. Pads are supplied with each new helmet.The following material from 6 to 6C is applicable to open water flights usually only found in Alaska.6. Survival EquipmentThe nature of the survival equipment each aircraft carries depends on whether the flight will be strictly over water, over land, or special use. Basically there are two categories of survival equipment:* Over Water
* Over Land

We will cover the minimum required for survival in the event of a crash.When planning a mission, each person should ensure they have the appropriate clothing for the mission environment.You wouldn’t wear Gucci loafers and a cotton sweater when flying an Alaskan wolf survey in January.Refer students to the aviation life support equipment (ALSE) handbook and cover policy for the following issues.a. Over WaterThe appropriate over water ALSE consists of:* Type of mission (extended over water or not).
* Weather
* Water conditions (water temp < 50 degrees F).

Point out that part 135. 167 of the FAR governs our extended over-water operations.b. Personal Flotation Devices (PFD)All occupants must wear PFDs during any flight performing takeoffs and landings on water.* In single engine aircraft, PFDs must be worn when the flight is beyond gliding distance from shore.
* In multi-engine aircraft, PFDs do not need to be worn but must be immediately available to all the occupants when the flight is beyond gliding distance from shore.

Immediately available means all occupants have immediate access to a PFD in the event of an emergency (not stored in a rear cargo compartment).Ask for a volunteer to model the PFD. Explain to the students how a PFD is worn and how it operates.Inflatable PFDs should not be deployed until after you have exited the downed aircraft. Deploying a PFD while inside a submerged or overturned aircraft may make egress from the aircraft impossible.c. Anti-Exposure Garments* In single engine aircraft, all occupants in single engine aircraft must wear anti-exposure garments when conducting extended over-water flights where the water temperature is less than 50 degrees F.
* In multi-engine aircraft, anti-exposure garments must be immediately available to all occupants when conducting extended over-water flights where the water temperature is less than 50 degrees F.

There are two types of anti-exposure garments:1) Anti-exposure flight suit, a one-piece insulated coverall that provides some hypothermia protection and buoyancy.2) Survival suit, a dry immersion suit made from closed cell material.Caution should be taken where, wearing anti-exposure garments will hinder their ability to egress from a submerged or overturned aircraft.d. Survival KitsSurvival kits are required for all special use activities and are recommended for all missions.At a minimum an aircraft survival kit should include:The aircraft contract specifies what should be in the aircraft survival kit.* Knife
* Signal mirror
* Signal flares (6)
* Matches
* Space blanket
* Water (1 qt./person)
* Food (2 days/person)
* Candles
* Water purification tablets
* Collapsible water bag
* Whistle
* Magnesium fire starter
* Nylon rope (50 ft)

e. Personal Survival EquipmentAlthough policy does not require that agency personnel carry personal survival kits, it is recommended.Aircraft accident experience has shown that survival equipment not attached to the occupants at the time of egress is often not recovered by the survivors.The following are suggested items to have in a personal survival kit:* Waterproof matches
* Magnesium fire starter
* Space blankets
* Large plastic bag
* First aid kit
* Knife
* Hand-held radio
* Water purification tablets
* Signal mirror
* Flashlight
* Whistle

IiI. readiness for assignmentAssemble Information and Materials for AssignmentSuggested items to have:* Fireline pack
* Passenger/Cargo Manifest
* Passenger Briefing Card
* IRPG
* Radio w/flight helmet connector
* Cloning cable
* Global positioning system (GPS)
* Spare batteries
* Calculator
* Fiber tape
* Black electrical tape
* Flagging
* Knife
* Notepads
* Blue or black pens
* Crew time report
* Fire timesheets (OF-288)
* ICS-214/other ICS forms

iV. assignment information A. Dispatch Ordering Process1. Initial attack dispatch places an aircraft resource order locally first (they check with cooperators first). * If the order is unfilled, it goes to the Geographical Area Coordination Center (GACC).

If the order is still unfilled, it goes to the National Incident Coordination Center (NICC) in Boise, Idaho. NICC has the ultimate authority regarding use of aircraft resources. * This cycle returns to the local initial attack dispatch.

2. The requesting unit must request that a module be assigned to an aircraft when ordering the aircraft. * When a fire helicopter is ordered, a manager and module must be ordered at the same time through the dispatch system.
* These orders for personnel are filled at the regional level first, if available. If not, the national level will attempt to fill.

B. Acceptance of AssignmentInitial out of unit assignment information you should obtain before leaving the home unit.Personnel will be notified of an out of unit assignment by their respective agency (dispatch). The following minimum information should be obtained before departing.After you accept an assignment, make sure you don't leave your home unit until you receive a copy of the resource order.This is usually a Resource Order or any other written document with all the pertinent information:* Incident name
* Incident order number
* Incident phone number
* Request number
* Reporting location
* Reporting time
* Transportation arrangements, travel routes
* Contact procedures (telephone/radio)
* Charge code

Explain the difference between an overhead single resource order and an overhead attached to an aircraft order. (A-1.2, O-36)C. MobilizationObtain a copy of the Resource Order and request number from the dispatching office.Determine mode of travel and pack accordingly.* Commercial airline
* GOV
* Charter flight
* Rental vehicle

Discuss various packing options depending on mode of travel.The local unit dispatch office may be able to provide you with additional information such as:* Briefing packets
* Maps
* Situation updates
* Additional frequencies and contacts
* Flight itineraries

D. Module PreparationThe helicopter crewmember may or may not know the other module members or where they are from. If possible, a brief contact prior to dispatch can verify items like PPE, radio, and radio equipment compatibility, any details to “marry up.”Emphasize:“Marriage” of the helicopter and module should occur at a pre-designated location away from the incident. This is where the module manager completes the pre-use inspection and documentation.The Helicopter Manager must be confirmed before NICC assigns a call-when-needed (CWN) helicopter.For any fire assignment, with the exception of Alaska, the following modules must be assigned to each aircraft:

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| Category | Standard Category | Restricted Category |
| Type 1 | Manager plus 4 | Manager only |
| Type 2 | Manager plus 3 | Manager only |
| Type 3 | Manager plus 2 | Manager only |

NICC will not automatically assign a module to helicopter orders; the requesting unit must request a module be assigned when ordering the aircraft.Occasionally, crewmembers are ordered to support helibase functions and are not assigned to an aircraft or helicopter manager. V. check-in processThe following is specific to going out as an overhead single resource order. A. Arrive at the Incident and Check-inEach individual should ensure that all information needed to complete the Check-in List (ICS-211) is provided. Resource Order and request numbers, manifest information, home base, departure point, method of travel and other qualifications blocks are especially important.There may be several locations for incident check-in. Check-in officially logs you in at the incident and provides important release and demobilization information.B. Check-in LocationsCheck in. You may check-in at the following locations:* Incident command post
* Base or camp
* Staging area
* Helibase (for direct assignment)

Discuss procedure differences if going out on an exclusive use module.VI. initial briefingAfter check-in, locate your incident supervisor (helibase manager or helicopter manager) and obtain your initial briefing.The items you receive in your briefing, in addition to functional objectives.A. Initial briefingUpon arrival on the incident/project you need to be briefed on:* The organization structure
* IAP or PASP
* The objectives
* Status of the project/incident
* Current and predicted weather (evening thunderstorms, red flag days, etc.)
* Hazard/safety issues
* Assigned duties
* Radio frequencies
* Other resources (aircraft equipment personnel and facilities)
* Flight hazard map
* Maps of the area.
* Meals
* Helibase layout
* Helispot locations
* Deck procedures
* Briefing/debriefing times
* Crash rescue procedures and plan

Hand out a copy of an IAP.B. Incident action plan key information from briefing There are a number of ICS forms that you will see and use regularly as a helicopter crewmember. Some examples are:Forms in the Incident Action Plan (IAP)* ICS 201, Incident Briefing
* ICS 202, Incident Objectives
* ICS 203, Organization Assignment List
* ICS 204, Division Assignment
* ICS 205, Incident Radio Communication Plan
* ICS 206, Medical Plan

Any questions?Review Unit Objectives.Hand out unit quiz. Correct quiz as a class. | Slide 1-1Slide 1-2Slide 1-3Slide 1-4Slide 1-5Slide 1-6Slide 1-7Slide 1-8Slide 1-9Slide 1-10Slide 1-11Slide 1-12Slide 1-13Slide 1-14Slide 1-15Slide 1-16Slide 1-17Slide 1-18Slide 1-19Slide 1-20Slide 1-21Slide 1-22Slide 1-23Slide 1-24Slide 1-25Slide 1-26Slide 1-27Slide 1-28Slide 1-29Slide 1-30Slide 1-31Slide 1-32Slide 1-33Slide 1-34Slide 1-35Slide 1-36Slide 1-37Slide 1-38Slide 1-39Slide 1-40Slide 1-41Slide 1-42Slide 1-43Slide 1-44Slide 1-45Slide 1-46Slide 1-47Slide 1-48Slide 1-49Slide 1-50Slide 1-51Slide 1-52Slide 1-53Slide 1-54Slide 1-55HO-1-2 |