RADIO OPERATOR (RADO) J-158

Job Aid
May, 2002
NFES 1968

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:

Radio Operator (RADO), J-158
Certified at Level I

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

Member NWCG and Training Working Team Liaison

Date 5/15/02

Chairperson, Training Working Team

Date 5/9/02

Description of the Performance Based System

The NWCG Wildland and Prescribed Fire Qualifications System is a "performance-based" qualifications system. In this system, the primary criterion for qualification is individual performance as observed by an evaluator using approved standards. This system differs from previous wildland fire qualifications systems which have been "training based." Training based systems use the completion of training courses or a passing score on an examination as a primary criteria for qualification.

A performance-based system has two advantages over a training based system:

- Qualification is based upon real performance, as measured on the job, versus perceived performance, as measured by an examination or classroom activities.

- Personnel who have learned skills from sources outside wildland fire suppression, such as agency specific training programs or training and work in prescribed fire, structural fire, law enforcement, search and rescue, etc., may not be required to complete specific courses in order to qualify in a wildfire position.

    1. The components of the wildland fire qualifications system are as follows:

        a. Position Task Books (PTB) contain all critical tasks which are required to perform the job. PTBs have been designed in a format which will allow documentation of a trainee's ability to perform each task. Successful completion of all tasks required

of the position, as determined by an evaluator, will be the basis for recommending certification.

IMPORTANT NOTE: Training requirements include completion of all required training courses prior to obtaining a PTB. Use of the suggested training courses or job aids is recommended to prepare the employee to perform in the position.

b. Training courses and job aids provide the specific skills and knowledge required to perform tasks as prescribed in the PTB.

c. Agency Certification is issued in the form of an incident qualification card certifying that the individual is qualified to perform in a specified position.

2. Responsibilities

The local office is responsible for selecting trainees, proper use of task books, and certification of trainees, see appendix A of the NWCG Wildland and Prescribed Fire Qualification System Guide, PMS 310-1, for further information.

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Sponsored for NWCG publication by the NWCG Training Working Team

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Comments regarding the content of this publication should be directed to:
National Interagency Fire Center, National Fire Training Support Group, 3833 S. Development Ave., Boise, Idaho 83705.
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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 1968.

PREFACE

The Radio Operator (RADO) has been identified as a position within the National Wildfire Coordination Group (NWCG) Wildland Fire Suppression Curriculum. The courses within the performance based curriculum may be administered by either an instructor lead formal training course or by the use of “job aids”.

Job aids are “how to” books that assist an individual in performing specific tasks associated with a position. They may be used by an individual, in a trainee position, who has met all of the prerequisites, but has not completed the position task book for that position. They are also used after the individual has become qualified, as an aid or refresher in doing the job.

The performance based system stipulates that an individual must complete a Position Task Book prior to becoming qualified for that position. Refer to the “Wildland and Prescribed Fire Qualification System Guide, PMS 310-1” for the established standards for this position.

This job aid was developed with guidance from the National Interagency Fire Center, Fire Training group under the authority of the National Wildfire Coordinating Group, with coordination and assistance of personnel from the following agencies:

United States Department of the Interior
Bureau of Land Management

United States Department of Agriculture
United States Forest Service

We appreciate the efforts of those people associated with the development and review of this package.

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RADIO OPERATOR (RADO) JOB AID

INTRODUCTION

The Radio Operator (RADO) works in the communications unit, under the logistics section. The immediate supervisor for the RADO is the Incident Communications Center Manager (INCM) who manages the Incident Communications Center (ICC). In the absence of an INCM, the Communications Unit Leader (COML) will supervise the RADO position. The Communications Technician (COMT) also works in the Communications Unit. Often the COMT requests assistance from the RADO to help clone and check-out radios.

The primary responsibility of the RADO is to pass accurate and timely information from the sender to the receiver and follow through with an accurate and timely response to the sender if needed. Other duties that may be required are documentation of all calls, filing of documentation, radio check-out/in, equipment checks, etc.

There could be from one to eight or more RADOs in the ICC. This will depend on whether the incident is operating with day and night operational periods, or the incident has camps and staging areas. The location where the primary command functions are performed is the Incident Command Post (ICP). You, as the RADO, may work out of or in a camp located closer to the operations area.

GENERAL

1. Obtain and assemble information and materials needed for kit.

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

   Suggested kit items:

   These items can be ordered from the National Fire Equipment System Catalog, Part 2. The local dispatch center can help with ordering procedures.

   - PMS 410-1, Fireline Handbook, NFES # 0065
     - information on every ICS position
     - tactical line resources - kind and type
     - explanation of terms
   - ICS 213, General Message, NFES # 1336
     - minimum of 20
   - ICS 210, Status Change, NFES # 1334 (1 pad)
   - Radio Station Log, NFES #0370 (1 pad)
   - Telephone Call Register, NFES #0816 (1 pad)
   - Flashlight
   - Alarm clock
   - Appropriate office supplies (pens, pencils, paper, markers)

   If more of the above materials are needed while on an incident, they can be found in the Logistics Kit (green military box) which may be located at the Supply Unit.

MOBILIZATION

2. Obtain complete information from your local dispatch upon initial activation.

   Information which is important to obtain about the incident

   - Incident name
   - Incident order number
   - Request number
   - Incident number
   - Reporting time
   - Reporting location
   - Transportation arrangements/travel routes
   - Contact procedures during travel (telephone/radio)

   Your home dispatch unit will make travel arrangements for you. They will also have information on accommodations (e.g. fire camp, hotel), driving directions, etc. Once contacted to respond to an incident, it is important to keep in touch with your home dispatch unit should there be additional information.

3. Gather information necessary to assess incident assignment and determine immediate needs and actions.

   Information about the following should help you determine items you may want to bring in your personal fire pack.

   - Type of incident (flood, fire, hurricane)
   - Current situation (heavy mobilization or getting ready to demobilize)
   - Weather (hot, cold, wet, dry)
   - Terrain (mountains, desert)

INCIDENT ACTIVITIES

4. Arrive at incident and check in.

   - Arrive properly equipped.
     - Kit and personal gear

   - Check in within acceptable time limits.
     - This is the first thing you should do upon arrival at an incident.

   - Locate check-in and check in according to agency guidelines.
     - Check-in is usually located at the entrance to the ICP. If the Planning Section has been set up, you can always check in there.

   - Report to the Time Unit to initiate a time report.
     - Check-in should be able to tell you the location of the Time Unit.

   - Report to COML or the INCM. If you cannot locate the COML or the INCM report to the logistics section chief (LCS).

5. Obtain briefing from INCM (COML if there is no INCM).

   - Learn location of units/sections at the incident base and ICP.

     - You will be relaying messages to these units/ sections.
     - You will need to know their location as well as key personnel.
     - Make a map of where communication personnel are sleeping in case of an emergency.

   - Understand time of first work period and discuss work schedule.

- Your first work period could be very long until other RADOs arrive.
- Discuss how many hours of travel you have had to get to the incident as this may affect how many more hours you can work that day.

• Discuss specifics of the Incident Action Plan (IAP) for the current operational period, particularly ICS 204(s), Assignment List.

  Be familiar with the IAP so that locations, procedures, work assignments, and objectives of the operational period are understood. The IAP is a reference manual. It contains:

  - ICS 202 - Incident Objectives
  - ICS 203 - Organizational Assignment List
  - ICS 204 - Assignment List
  - ICS 205 - Incident Radio Communication Plan (frequencies and assignments)
  - ICS 206 - Medical Plan (emergency information, phone numbers)
  - ICS 220 - Air Operations Summary (lists aircraft operations for the operational period)
  - Weather (current and expected for the operational period)
  - Fire Behavior (expected for the operational period)
  - Safety Message (lists hazards)
  - Demobilization Plan (procedures to follow during demobilization)
  - ICS 214, Unit Log (to be filled out for the operational period)
  - Maps of the incident (key locations)

- Several specific forms in the IAP are discussed in detail below.

  ICS 203, Organizational Assignment List

  This will give you names to attach to positions of personnel you will be trying to locate in the operations area and in the ICP. The ICS 207-WS, Organization Chart, can be filled out and posted in the ICC for a quick visual of the location of those personnel.

  ICS 204, Assignment List

  The ICS 204 names all resources (key personnel, crews, engines, miscellaneous overhead, heavy equipment, etc.) assigned to that division and the objectives for that period. Verify names and positions on the ICS 204. The map will show:
  - branch breaks (roman numerals =BR I)
  - division breaks (DIV. [alpha letter] =DIV A)
  - drop points (DP+# =DP 3)
  - helispots (H+# =H-4)

  Drop off and pick-up points and times are listed for all resources. This is critical information as these points and times could change at the end of an operational period. Channel and frequency assignments for each division are listed at the bottom. You may be requested to locate a resource on the incident; this is a good source of information for that search.

  ICS 205, Incident Radio Communication Plan (see Appendix J, page 54)

  This is a key document. It lists the channels, frequencies, operational assignment, and operational location of where a frequency is being

used. You will use this information to locate operational personnel. More importantly, you will need to be able to describe to incoming operations personnel which channel they will use depending on the operational area they are assigned to. If there is not a Communication Plan in place, find out from the COML what frequencies are being used.

Calls and messages on the radio are known as "traffic." Groups of radios designed to handle certain types of "traffic" are called "nets." Several nets may be operating on the incident.

- Tactical Net

  This net is used by the crews, engines, etc. This net cannot be monitored by the ICC, as it is line-of-sight only. Usually a different frequency is assigned to each division. If someone requests this frequency, locate the ICS 205 and relay the frequency for the specific division requested.

- Command Net

  This is the primary incident radio net. Most of the operational traffic is on this net, usually through a repeater, to operations, overhead or the incident base. An example of this would be instructions from the operations section to the field/base or traffic from one division to another concerning personnel movements, fire behavior, etc.

- Logistics/Camp Net

  It is called the "Camp Net" because most units using these radios are in camp. Examples of

logistics net traffic would be checking with the supply unit to see if items have arrived, tracking locations of vehicles and drivers in the ground support unit, calling the food unit for meal hours, etc.

- Air-to-Ground Net

  This is used almost exclusively by the helibase to communicate with aircraft associated with the incident. This is not monitored by the ICC. If someone requests this frequency, locate the ICS 205 and relay the frequency.

- Air-to-Air Net

  This net is used strictly between aircraft. The ICC cannot monitor this frequency. If someone requests this frequency, locate the ICS 205 and relay the frequency.

The Command net radios and Camp net radios cannot talk to each other. Traffic from one net to the other must be relayed through the ICC. Listen carefully, as you may have to relay if you hear a field (operations) unit calling a logistics unit.

ICS 206, Medical Plan and medevac process

Names, locations and phone numbers of medical facilities which may be used by the incident are listed on this form. The actual medevac process can be listed on this form or may be listed on a separate document. You definitely need to obtain and post the step-by-step medevac process which will be used by this incident. An injury notification, medevac information form is located in Appendix E, page 47. When possible, write down the steps for a medevac on a large paper and post it in full view of the

RADOs. The COML/INCM should have already cleared the medevac plan for use by the ICC.

ICS 220, Air Operations Summary

The ICS 220 has information on all aircraft tail numbers assigned to the incident.

- Allocation of phones to the units and existence of a phone directory.

  If possible, obtain copies of all phone directories which may be useful to the incident. As soon as possible, a phone directory of all incident phones and locations should be distributed to all units. This should be done by the COMT, however, it often falls to the RADO.

  The main incoming line should be answered: "(Name of incident) ICP". Be sure to find out how the phone system has been set up. Are you the switchboard operator? Will all units/sections answer their own phones? Should personal calls be made by credit card for everyone at the incident?

- Process for supply orders from the operations area.

  Incident management teams have specific processes for this. Find out what that will be from the INCM, COML or Supply Unit Leader (SPUL).

- Presence of/need for message board

  For those personnel who receive messages while they are out of the ICP, the easiest method for passing this information is to have a message board outside the ICC listing the names of those who have messages. Keep the messages in a file inside ICC.

Cross off names as personnel retrieve their messages.

Post other information such as the IAP on the message board.

- Post frequently used phone numbers

  Display phone numbers such as local law enforcement, medical facilities, dispatch office, etc. on the wall for quick reference.

If the INCM has not arrived at the ICP, or is not available, the COML may give you your briefing. Be sure the COML covers all of the above topics. It is important that you understand all these items because the COML will leave to set up equipment, etc., leaving you alone or with one other RADO in the Communications Unit in the early stages of the incident. It will be up to you to pass on information in a timely and accurate manner.

6. Perform duties in accordance with incident communications unit structure.

   - Understand communications unit jobs/positions.

     - COML
       Communications unit leader supervises the communications unit which includes the Incident Communications Center (ICC).

     - INCM

       Incident communications center manager supervises the ICC.

- RADO

  Works in the ICC relaying information.

- COMT

  Communications Technician installs and maintains communications equipment, including check-out and maintenance of handheld radios.

See Appendix A, page 34 for the Communication Unit Organization chart.

- This is very important, as the Communications Unit is usually in immediate need of your services while equipment is being set up.

• Understand Incident Command System organizational structure/jobs/positions.

It is critical for the RADO to understand the ICS structure to be able to pass information. This can be found in more depth in the 410-1,Fireline Handbook. A quick reference is the ICS 203, Organization Assignment List in the IAP, or the ICS 207, Organizational Chart (see Appendix K, page 55).

7. Obtain work materials and equipment.

• Obtain necessary tables, chairs, lights, office supplies etc., from supply.

  - In the absence of the INCM, the RADO may be responsible for ordering supplies and equipment from the Supply Unit. Order what you think is the minimum you will need to get started. Other items can be ordered by the COML/INCM later.

8. Perform duties with constructive attitude and skill.

- Maintain professional demeanor.

- Remain flexible in the face of changing priorities.

  - Incidents are constantly changing. Be flexible and stay current as events happen. Sudden changes in “routine” business, such as medevacs or public evacuations, need to be handled in the same accurate and flexible manner.

- Cooperate with other RADOs.

  - It is critical that information be passed among all the RADOs and the INCM throughout the day. Being a part of this process will maintain continuity of information flow.

- Process information as directed.

  - Following procedures set up by the INCM for information dissemination is important. Different teams, COMLs, and INCMs have processes which work better for their management styles. Be flexible and follow along.

- Use standard (fire) terminology, symbols, designators, and acronyms.

  - Appendices P, page 61 and Q, page 64 contain many of these. Be sure to familiarize yourself with what is contained in the Appendices so you can find it when you have a question.

- Continue involvement in decisions.

  - If you are asked to be involved in making decisions pertaining to your work processes or procedures, or the ICC in general, you should take the opportunity to give your input.

9. Effectively transfer information verbally or in writing.

   - Use correct radio/telephone protocols.

     See Appendix D, page 44 for detailed information on radio call procedures. Sound professional at all times. Your voice should give the impression that you are alert and ready. Replies should be as immediate as possible.

   - Communicate with other RADOs and incident personnel.

   - Write legibly

     Print if that is more legible than writing. Offer assistance if someone seems to be having problems contacting another party. You may need to write down the message and relay it to the second party.

   Never take for granted that a message has been received. The receiver should verify receipt of the message. Usually they will say “COPY” to tell you they heard the message. Do not acknowledge a transmission unless you are sure that you have it correct and understand it. If the terminology used in the system is unfamiliar to you, learn the terminology.

   Caution should be exercised in attempting to explain or amplify a message given to you to transmit. If the person receiving the message indicates doubt as to the

meaning of a message, repeat the message verbatim. If the person is still unable to understand the meaning of the message, refer the message to the originator for clarification.

Use your best qualities of dialect and enunciation. Pronounce words clearly and somewhat slowly: a rate of about 60 words per minute is proper. Always use **CLEAR TEXT** (see Appendix P, page 61) when talking on the radio.

It is your job to not only answer the radio, but to document all messages into and sent out of ICP Communications through the radio by you or other ICC personnel. This is especially important because follow-up may be needed later by someone else, such as for crew transportation off the fireline at a later time. Your radio log (see Appendix G, page 49) is the official documentation of what happened. If there is a medical claim or other follow-up action, the log becomes a critical document.

Messages need to record:

- Date
- Time
- Who the message is from
- Who the message is to
- Who took the message (your initials)
- Message content

The person who originated the radio call closes the message. Example: “ICP CLEAR”, meaning the ICP is off the radio.

The radio must be monitored at all times while there are crews in the field or being transported to and from the fireline. At least two people should be by the radio, one to be the lead operator, and the other to run messages, give the lead operator a break when needed, or just to help listen or record messages.

A “Message Board/Box” should be established. The outside board will list those who have messages to be picked up inside the ICC in the message box. As personnel pick up their messages, their name is erased from the board. A list can also be posted near the meal line, however, do not forget to update it.

See “Incident Communications Center Notes” Appendix B, page 35 for additional suggestions and information. Refer to Appendix N, page 59 for proper time format to use (24-hour clock.)

10. Participate in communications unit/incident communications center manager meetings

    - Provide information on radio equipment performance.

        - The COML/INCM should make you aware of communications restrictions, coverage limitations, equipment malfunctions, other frequency interference problems, channel congestion, and field personnel who are having trouble communicating. Example: static on the “command net” radio.

    - Discuss any information flow problems. This includes message follow-up from other units.

11. Demonstrate familiarity with communications equipment, procedures, and basic functions/capabilities

    It is likely RADOs will be asked to assist the COML or COMT with equipment duties. The COML or COMT should outline the procedures they want followed. If they do not, use the following information to create a system.

- Hand-held, portable, multi-channel radios

  If you are unfamiliar with the operation of the radio or the remote telephone, have the COML, COMT, INCM, or other RADO on duty explain their operation.

  One or more radios should be designated with a label as the “master cloning radio”. This radio must stay in the ICC. Have the COML, COMT, INCM or RADO on duty instruct you in its use. See Appendix C, page 43 for more information about the “master cloning radio(s).” Ensure that the radios are the same model as the master cloning radio. *Check with the COMT for the most current cloning procedures depending on the model of radio to be cloned.*

- UHF and VHF systems (not interchangeable).

  Assist the user in interpreting the ICS 205. Be sure the user understands what operational channel to be on, the air channel, emergency channel, and any other frequencies which the user may need.

  - UHF is used for the “camp net.” These radios have small diameter antennas. National Interagency Fire Center (NIFC) systems will have BLUE labels.

  - VHF is used for “command” and “tactical” applications. These antennas are larger diameter. NIFC systems will have RED labels.

- Procedure for radio check-out/in

  Try to have two people doing check-out; one to do the accountability paperwork and one to prepare the radio (put the antenna on, turn to proper channel, turn it on, and test it [using a standard 10 count] against a known working radio on the same channel).

  - Respond with proper frequency when requested. Refer to the ICS 204 or 205 for the resource listing, which will also identify the channel/frequency those resources are using.

- Accountability forms for radio check-out/in

  Systems available:

  - Resource locator cards (T-cards) - are in the NIFC radio kits. These can be placed in a T-card sorter rack in the radio kit. Record name, ICS position, and radio number. Be careful when assigning a radio number. Radio K118-01 is in Kit 118, slot 1, not Kit 018 or Kit 218, which also have slot 1. Empty one kit before starting another. Know who can check-out a radio and look at the IAP positions on the ICS 203 and ICS 204. Operations will prioritize radio distribution when shortages occur.

  - Paper forms are also included in the NIFC kits. These can be used instead of the T-card system.

- Procedure for battery check/issuing

  If the COML/COMT has a battery tester you will be able to test batteries for power before handing them

out to the personnel. Another way to check the battery is to key the radio; if the red battery light on the top of the radio comes on and quickly goes out, or does not come on at all, new batteries are needed. If personnel want spare batteries, give them a set. Almost all radios use AA batteries.

- Check-out appropriate radio accessories.

  On the radio check-out form/card, note which accessories (microphone, mobile mount) are being attached to that radio.

- Checking radios back in

  Make sure the radio works properly. Check the condition of the battery. If there is any doubt, replace the battery. Place the radio back in the proper kit box, in the proper slot. Pull radio T-card/list, mark date radio has been returned, and cross off name.
  If a problem with the operation of the radio is discovered by you or the user, write a note about what is wrong, put it with the radio, and put the radio upside down in the appropriate kit slot. Inform the COMT/COML about this radio when convenient.

- Battery recycling

  If it has not been done label a large box for “Dead Batteries.” Batteries which are not strong enough to operate a handheld radio will still have enough power to operate “walkmans”.

- Remote phone system (base to line, base to camp, base to helibase).

  Each remote telephone should be marked with a label indicating which location it serves.

- Cellular phone (cell coverage, battery recharging)

  If there is cell phone coverage in the area around the incident have COML/INCM explain the boundaries. You may be asked by cell phone users for this information. Assist cell phone users with battery recharging needs. Gather cell phone numbers of incident personnel. This may be the method you use to communicate with these personnel.

- Hardline phones

  Normal, hardline telephones should have the number marked on a label indicating the call back number.

- Facsimile machine

  Sometimes there is one located at the ICC. You should have a list of the FAX numbers for all machines at the ICP.

- Public address system (paging)

  If you have a paging system, find out what areas it covers and how to use it from the COMT, COML or INCM.

12. ICS 213, General Message

- Understand when form is to be used.

  Whenever information is passed through the ICC from an originator to another party. This includes: orders, information, requests, contacts needing to be made, emergency calls, etc.
- Correctly fill out the form.

- Correctly route the form.

- Complete the follow-up process to close the loop on requests.

  If the intention is to receive a response to a message, you need to follow-up by passing an answer or information back to the requestor. The job is not complete until the loop has been closed. The originator of the message fills out the top portion of the ICS 213. In order to have a proper audit trail, it is important to fill out BOTH the DATE AND TIME in the upper right hand side of the form. (Enter TIME in the untitled box immediately to the right of the DATE box.) See Appendix M, page 58.

Originator of the message fills out:

TO: POSITION:
FROM: POSITION:
SUBJECT:
DATE:
TIME: (enter in the box to the right of DATE)

MESSAGE CONTENT:

Quantity(s)
Names
Phone Numbers
Delivery: Date/Time/Location

SIGNATURE/POSITION

Originator:
Tears out and keeps the white copy marked:

SENDER: REMOVE THIS COPY FOR YOUR FILE

Addressee:

Receives the yellow and pink copies

Writes: REPLY content
DATE/TIME
SIGNATURE/POSITION

Keeps yellow copy for records.
Sends pink copy back to originator.

Instructions for filling out the form:

- To: indicate unit/person the general message is intended for. Be specific.
- Position: indicate the location where the unit/person is located (ground support unit leader, Samson camp, communications, etc.)
- From: indicate appropriate designation and location of sender.
- Subject: fill in if applicable.
- Date: list the date and time.
- Message: think through your message before writing it down. Try to be as concise and brief as possible.
- Reply: this section is intended to be used by the unit/person who receives the message to reply to your message.
- Date: record the date and time of reply.
- Signature: record signature and title of the person replying.
- Retain and file copy of form.

The ICS 213 may be initiated by the RADO and any other personnel on an incident. Upon completion it may be hand carried to the addressee or the communications center for retransmission.

- Ordering equipment and supplies for the operations area.
  All equipment and supply orders from the operations area will be placed through ICP ICC. Usually, the division group supervisor (DIVS) orders all operational supplies for his/her division. Use the following procedure when ordering equipment or supplies which are to be delivered by air or ground.

  - Name of person placing order
  - Type and amount of equipment and supplies needed.
  - Time order needs to be delivered
  - Location of where order is to be delivered (from map grid or Global Positioning System [GPS])
  - Ground contact (person to receive supplies) and radio channel.

  Immediately deliver message to the Receiving/ Distribution Manager (RCDM) or the Supply Unit Leader (SPUL).

  Follow-up:

  - Find out how soon supply will have the order to ground support or helibase.
  - Find out how soon ground support or helibase will be ready to deliver supplies to the fireline.
  - Relay to ordering party approximate time order will be en route from ground support or helibase.
  - Follow-up on order with ordering party to be sure ground support or helibase has made delivery.

  All messages routed through the ICC, should be handled in a similar manner.

13. Processing documentation and other forms used

- Telephone Call Register. Maintain a phone log which contains the name of the party calling and their phone number. Incoming calls are important to log especially those related to emergencies. See Appendix H, page 52.

- Radio Station Log. Filling in the TIME, TO/FROM, and your initials is critical. Put as much information in the content section as it takes to adequately capture the information being relayed. If there is considerable traffic it may require one person to talk on the radio and a RADO documenting what it said. Capturing emergency information accurately is critical. (See #15 - Emergency Situations.) See Appendix I, page 53.

- ICS 210, Status Change. Use this to show a change in operational status of a tactical resource. The card is given to the resource unit leader (RESL) in planning. See Appendix L, page 56.

- Correctly file communications paperwork daily for documentation purposes.

  Use large envelops, file folders, or an expandable file. These can be found at supply.

  - Telephone Call Register
  - Radio Station Log
  - ICS 201, Incident Action Plan
  - ICS 210, Status Change
  - ICS 213, General Message
  - ICS 214, Unit Log
  - Other communications related paperwork

14. Respond with appropriate communications to emergency situations.

- Medical transport request.
  - This should not be a critical emergency. This term is used for personnel who are injured but do not require immediate air evacuation. These are non-life-threatening medical conditions.
  - Use the form “Injury Notification Protocol for the ICC” (See Appendix E, page 47.)
- **Medevac** request.
  - **This is a critical emergency**. The term Medevac should only be used when transportation must be by air (usually helicopter) for a life-threatening emergency. There are occasions when air transport will be used because it is more efficient (e.g. badly sprained ankle too far from a road to walk out to get transportation.)
  - Use the form “Injury Notification Protocol for the ICC” (See Appendix E, page 47)
- Aircraft emergency.
  - The term “hard down” in reference to a helicopter landing means the helicopter crashed. If you hear this term, assume an emergency. Start the notification process with the Air Operations Branch Director (AOBD).
- Evacuation
  - Occasionally the ICP could be threatened requiring evacuation. This process should be handled by the operations section chief (OSC),

safety officer (SOF), or logistic section chief (LSC). Evacuation of homes is usually handled through the local county sheriff's office. You may be told to notify the agency dispatch center to request notification of the sheriff as requested by the OSC. Be sure you get the correct location information of the evacuation area. All media inquiries about evacuations should be passed to the information officer (IOF).

- Search and Rescue (SAR)

  - If it is incident personnel the incident may handle the situation internally. There are numerous sheriff's offices which have SAR capability. You may be requested by the IC or OSC to contact the agency dispatch center to request notification of the sheriff's office to arrange for SAR assistance. If a member of the public requires SAR, this is the responsibility of the sheriff's office, however the incident may be requested by the sheriff's office to assist.

- Fatality

  - In the case of a fatality - **DO NOT say the person(s) name or crew name(s) over the radio - ever!**

  - Use the notification process outlined below. There will be sufficient time to also notify the IC and the IOF and others who will need to deal with the situation. Remind personnel at the site not to move or touch anything as there will be a further investigation.

- Process for managing emergencies

  Emergency traffic always has priority over routine traffic. Usually the phrase "Emergency Traffic" will be used to announce an emergency.

- Other critical information to pass on

  Red Flag warning or Fire Weather watch is critical weather information for the incident personnel. Announce the Red Flag warning/Fire Weather watch to all divisions/units asking them to acknowledge that they received the information. This is usually done with a roll call. Document that everyone received the information.

Radio traffic priority is as follows:

- Injury, life threatening hazard, medical aid, or well being of any person
- First report of a new incident
- Initial attack dispatch to the start of a new fire
- Air operations
- Red Flag warning/Fire Weather watch
- Normal communications such as report on conditions, crew placement, supply orders, etc.

MEDEVAC RADIO PROCESS:

- Stop and/or control all other traffic on that radio net until the message is delivered. Routine traffic should cease until the termination of the emergency.

  On the radio net having the emergency say: "ALL UNITS, THERE IS A MEDICAL EMERGENCY, PLEASE CLEAR THIS FREQUENCY". Repeat as necessary.

- Use the form “Injury Notification Protocol for the ICC”. (See Appendix E, page 47)

- Obtain ID of the caller (name and incident position).

- Identify nature of the emergency (medical, car wreck, etc.)

- Obtain location of the emergency and caller (could be different). Obtain enough information to easily locate the victims.

- Send the nearest help. (Ask medical unit leader [MEDL], SOF, OSC or INCM who that may be.)

  If a medical emergency arises check if the MEDL or staff are available, have them come to the ICC and manage the emergency from there. They need to be at the ICC so you can document on the radio log what is said in the conversation. **This is critical regardless of the degree of the emergency**! You may need to divert other radio traffic to another frequency. If necessary become a recorder or a message runner.

  - One person talks on the radio
  - A second person writes down all the radio traffic.
  - A third person either serves as a runner to the medical unit or contacts them on the “camp net”. This person can also log phone calls related to the situation.

  See example of a medevac radio station log in Appendix G, page 49.

- If air transportation is required have another RADO request flight availability from the following, in the following order:
  - Air Operations Branch Director (AOBD)
  - Air Support Group Supervisor (ASGS)
  - Helibase Manager (HEB)

- Have a pre-made sign saying "MEDEVAC IN PROGRESS, COME BACK LATER" and post this to the entrance of the ICC. This should stop unnecessary traffic into the ICC.

- In cases of ***ANY MAJOR INJURY OR FATALITY*** on the incident notify:

  - Medical Unit Leader (MEDL)
  - Safety Officer (SOF)
  - Compensation/Claims (COMP)
  - Operations (OSC) if it is operations related
  - Incident Commander (IC) if safety and medical have not
  - Information Officer (IOF)

- In cases of any ***MINOR*** injury on the incident notify:

  - Medical Unit Leader (MEDL)
  - Safety Officer (SOF)
  - Compensation/Claims (COMP)

- If in doubt about who to notify, ask the INCM, MEDL, or SOF.

15. Respond with appropriate communications to routine requests/information.

    - Supply orders from the operations area, camps, helibase, etc.

- Locating personnel at the incident base or in the field. Use camp map(s), ICS 204 or ICS 203.

- Routing “camp net” and “operations net” traffic.

- Incoming phone calls to base/camp(s). Message board to post messages.

16. Transition with replacement personnel

    - Brief replacement on major events from the concluding operational period, unusual situations or conditions, and information required by the COML.

    - Provide written notes about items that need follow-up during the upcoming operational period.

      Include the following information:

      Current activities:
      - Orders not filled
      - Messages not delivered
      - Messages awaiting reply

      Equipment Status:
      - Incoming order(s)
      - Equipment being demobilized
      - Frequency change(s)
      - Phone number change(s)

      Any unusual communications situations:
      - Operational period change(s)
      - Arrival of new resources
      - Recent or on-going medical emergency(s)

DEMOBILIZATION

17. Demobilization and check-out

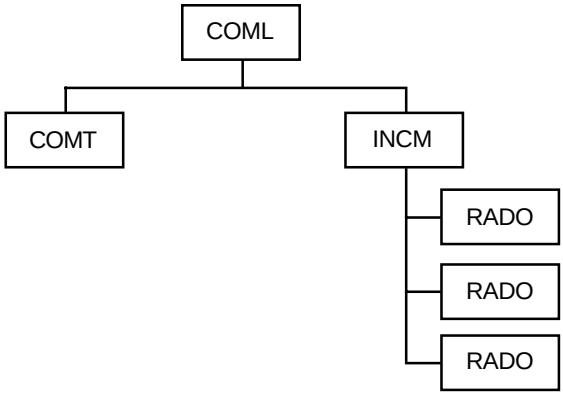
- Receive demobilization instructions from supervisor.
- Ensure that incident and agency demobilization procedures are followed (process ICS 221, Demobilization Check-Out.)

APPENDIX

COMMUNICATIONS UNIT ORGANIZATION EXAMPLE

Depending on the size, duration, and number of operational periods, there could be a day/night COML, day/night/swing INCMs and COMTs, and three sets of RADOs covering day/night/swing operational periods. Additional RADOs would be added if there are camps or remote locations which need RADO assistance.

This is a normal configuration with the addition of more RADOs to cover incidents with considerable radio traffic.



APPENDIX B

INCIDENT COMMUNICATIONS CENTER NOTES

The following list was compiled so all radio operators are aware of these specific communications problems, record keeping systems, and procedural avenues to enhance smooth ICC operations.

Communications:

1. RADOs do not have to wait for squelch tails to stop before keying radio to respond.

2. Acknowledge every transmission immediately with COPY, STANDBY, etc., while finishing documenting the message. Do not leave the caller in suspense before acknowledging the call while the recorder is documenting the entire message.

3. Key the radio (1 to 2 sec.), THEN talk, otherwise the first word or more will be cut off.

4. Enunciate. Speak clearly. DO NOT mumble or shout. Use clear text (see Appendix N, page 59).

5. Identify the originator of the message and enough of the content of the message to let the caller know you heard and understood the message.

6. Use the standard phonetic alphabet for alpha characters, such as H-16 would be Hotel-16. This avoids confusion. Spellings over the radio should also be communicated with the standard phonetic alphabet. (Appendix O, page 60)

7. Sign off to clear the net for other radio traffic.

ICC Procedures:

1. It is extremely important to have the RADOs monitor the radio at all times. Personnel should not have to call the ICC repeated times to obtain a response from the RADOs. This becomes very disconcerting to field personnel.

2. RADOs need to be very cognizant of names and positions of personnel in the field. RADOs should strive to identify line overhead by name. Not all operations personnel remember to use their title or crew name when calling the ICC.

3. The Incident Action Plan (IAP) is an essential source of resource information for the ICC. It is imperative that the RADOs know how to quickly find the location of personnel in the field. They should be familiar with drop points, divisions, helispots, and operations overhead.

4. Valuable information can be obtained by close monitoring of all radio nets. Changes in location and events can be picked up through listening to conversations on the radio, (division supervisor calling the helibase to notify them of a helicopter crash).

5. It is important for RADOs to be able to see at least some of the incident area as soon as possible. This gives them a better understanding of the lay of the land, transportation problems, particular drop point and helispot problems.

6. No more than two radio nets should be assigned per radio operator. Net phone sets/radios need to be arranged for ease of movement from one radio operator to the other for conversations.

7. The ICC is involved in relaying messages. Care must be taken to complete the relay. Be sure to follow-through completely to all personnel involved.

8. Use of a **"Medevac in progress, please come back later"** sign is helpful to keep congestion out of the ICC during a crisis.

9. Priorities and procedures for use of telephones must be established. If this is not strictly enforced in the beginning, the ICC will have problems for the duration of the incident deciding on personal vs. business calls.

10. Concentrate on one problem at a time and follow through until resolution to ensure all details are completed and nothing is left hanging.

11. Radio and battery checkout needs to be in a different location than the dispatch operation. This does not mean that RADOs cannot assist with these duties, however, congestion could be a problem.

12. Relay messages only if necessary. Second hand communications are susceptible to misinterpretation.

Record Keeping Procedures:

1. Each radio net should have its own radio log book with pages numbered sequentially. Mixing log pages from different radio nets into one combined sequentially numbered folder creates confusion.

2. Use of abbreviations should be encouraged to shorten writing in the radio log, however, abbreviations have to be understandable. If not, extended descriptions should be added as soon as possible.

3. It is important to begin a filing system for paperwork during the initial start-up. Radio logs and other documentation should be filed daily. Like documentation should be grouped together within these daily files.

4. Have a file for all undeliverable messages. A message board, located outside, should have names on it of personnel with messages in the file.

5. Use a telephone log to track all phone calls. Log should include name, city, state, date/time, outgoing number, and nature of call.

6. Radio checkout form should include the individual's incident position along with their name. Print information so it is legible - NO SIGNATURES!

7. Phone lists which are important for RADOs to have:

    - Frequently used local and long distance numbers
    - Other incident numbers if the incident is a complex
    - Emergency numbers list (includes medical and others)
    - Local unit dispatch (expanded dispatch)
    - Cell phone numbers of key personnel

8. Post a list of aircraft tail numbers for the incident and other aircraft which could fly into the area from a fixed wing base.

9. Distribute phone extension list to other units, as well as all other pertinent phone numbers, emergency numbers, and keep the list current.

10. Towards the end of the incident, during heavy demobilization, make a clean list of personnel who have radios. It is a handy reference as the radio operators sign the ICS 221, Demobilization Checkout sheet.

11. If the Fire Behavior Analyst (FBAN) requests RADOs to record weather observations for the incident, the FBAN should supply an easy form to fill out. Calls can come from camps, lookouts, and field observers with these observations.

12. Information posted for RADOs:

    - Incident Map - to include constant update of new helispots and drop points. The situations unit should have the latest information.

        - Telephone list
        - Medevac plan
        - Radio frequency plan
        - Organizational chart
        - Operational period schedule
        - Incident action plan
        - Air operations organization chart

    - Instructions on how to request a helicopter

    - Position which decides on requests for helicopter

        - Procedure for requesting retardant drops from dispatch.

HANDHELD RADIO OPERATION

Listed here are key points in operating a handheld radio.

Operating Portable Radios

1. Carrying Case - For the most part you will not need to remove the radio from the carrying case. The case protects the instrument from exposure to moisture, dust, damage, and insulates it somewhat from vibration.

2. Antenna - Screw the antenna on to the radio, it will fit only in one place. Always tighten it snugly and never operate your radio having the antenna disconnected or you may damage the radio.

3. On-Off Switch - On the radio you will find an "On-Off" switch. Turn the knob clockwise to turn the radio on.

4. Microphone - The microphone has a small button on it that is pressed down to activate the transmitter when you are talking. It is released when you complete sending your message, otherwise your radio will not receive messages.

5. Squelch Control - The squelch function is disabled when the squelch knob is at full counterclockwise position. If there is an annoying noise you can mute it by rotating the knob clockwise. Further clockwise rotation from the mute point will make the radio less sensitive and therefore require stronger message signals to "break" squelch.

6. Volume/On-Off - Turn radio "ON" and increase volume by rotating the knob clockwise.

7. *Channel Select Knob*- set the radio on the correct channel. This may be located on the ICS-215.

Using The Radio

The best radio in the world is of little use if messages are misunderstood or can not be heard because of improper use.

1. Official Use Only - Agency radios are used only for official business. Many private citizens have scanners capable of monitoring our frequencies. Cooperating agencies and organizations monitor our frequencies for informational purposes.

2. Message Priorities - Radio traffic becomes heavy at times and it may be necessary to set priorities on the messages to be sent. Priorities have been established in this order.

    a. Death, injury or medical aid - If death or injury is occurring or seems imminent, a person involved should break in with "I HAVE AN EMERGENCY/ MEDEVAC." They should give their name (position), location, and situation. If you hear a message like this, leave the frequency open for the emergency traffic.

    b. New incident - In reporting a new incident, give the legal description (location) of the incident, if possible.

    c. Other incident suppression messages - These may cover such items as information on food, equipment and tool orders.

    d. Routine - normal radio traffic

3. Plan Your Message - Make your message straight to the point by planning it. Know what you are going to say before you push the microphone button. Do not wait until you start transmitting and then do your thinking out loud, on the radio.

4. Profanity - By planning your message you are also less apt to use profanity. Profanity is not allowed.

5. Report Facts - Your messages should contain only facts, not opinions, unless your opinion is asked for.

6. Brevity - Your messages should be to the point, factual, and brief. Avoid the use of unnecessary words.

7. Clarity - You need to speak clearly, and at a constant speed to avoid misunderstandings. Speaking clearly is essential.

8. Normal Conversation - Talk into the microphone at your normal conversation level and speed. If you speak too loudly or too fast, your voice and the message may be distorted.

9. Unnecessary Noise - All sounds and noises cannot be avoided. When possible move away from excessive noise and post notices that advise personnel coming into ICC to remain as quiet as possible.

APPENDIX C

Procedure for Cloning Handheld Radios

1. Obtain **MASTER** radio, group number to be programmed.
2. Remove side connectors.
3 Turn **MASTER** radio **ON.**
4. Press # and **Group #** to put in proper group (e.g., group 3, #03, group 11, #11)
5. Insert button end of programming cloning cable/plug cord in radio/Master.
6. At the same time press the button on the master end of the cloning cable/plug and the **FCN** button on the keyboard until **PROG "CH 0"** shows in the display.
7. If not, repeat steps 5 and 6.
8. Obtain radio to be cloned (called a slave).
9. Turn slave **OFF.**
10. Connect other end of cable to slave. Turn slave **ON.**
11. Press # and **Group #** to put in proper group (e.g., group 3, press #03; group 11, press # 11)
12. Press the "*****" button on the **MASTER,** display will flash **PROG.**
13. Press **FCN** on **MASTER.** Program downloads.
14. Done if **MASTER** display flashes **PROG.** Go to step 18.
15. If error, **MASTER** display flashes **FAIL.**
16. If **FAIL,** press **CLR** on **MASTER,** check cable, clone power, etc.
17. If error, repeat steps 12 and 13.
18. When done, turn off **SLAVE** and remove cable. If more **SLAVES,** leave **MASTER ON.** Start at step 8 and repeat as necessary.
19. When completely done turn off **MASTER** and remove cable/plug.

Note: Check with the COMT for the most current cloning procedures depending on the model of radio to be cloned.

APPENDIX D

CONTACT CONVENTIONS

The ICC is normally referred to on the radio as the "incident base", "ICP", or the name of the incident. For example: "Clear Creek Base", "Clear Creek ICP". Other terms used to contact the ICC are "Clear Creek Communications", "Communications", "Base". Be alert for these calls.

When calling on the radio, always say the name of the station being called first. For example, if DIVS Smith was calling ground support, he would say: "GROUND SUPPORT (pause), SMITH". Ground support would answer with: "SMITH (pause), GROUND SUPPORT".

Command and General staff are usually called by their position, (Logistics Section Chief would be called "Logistics", Division A's supervisor would be called "Division A").

Messaging:

Call the person or position you are trying to reach, then give your location. For example, Clear Creek Base wants to reach Engine 2669. Call "ENGINE 2669, THIS IS CLEAR CREEK BASE". When called, answer with your location, "THIS IS CLEAR CREEK BASE."

If you could not hear who called you, ask them to identify themselves. For example, "STATION CALLING, THIS IS CLEAR CREEK BASE, PLEASE IDENTIFY YOURSELF" or "STATION CALLING, THIS IS ICP, PLEASE REPEAT."

If you have a long message, break transmission every 30 seconds or so and wait before continuing. This allows time for the receiver to write down the message and creates a break in case emergency traffic has to break in.

Try to keep messages short and concise to avoid tying up the radio channel for too long. For example, "10

REDUCERS INCH AND A HALF TO ONE INCH, 'BREAK." (Pause) Then start up again "100 FEET OF INCH AND A HALF HOSE, etc." The receiver should reply with "COPY" to let you know they have heard the message sent.

Third party messages:

When receiving a message which you are to repeat to another person, you should first write it down, then repeat the message to the third party. Writing it down will help eliminate the chance of the message changing, which often happens if you try to repeat a message from memory only.

Answering a call:

- Answer the calling station as you would initiate a call to them.
- Identify the originator of the message and enough of the content of the message to let the caller know you heard and understood the message.
- Try to avoid overuse of pleasantries.
- Always try to be patient, in particular when the person on the other end is very tense or excited.
- Offer assistance if someone seems to be having problems contacting another party. You may ask for assistance from someone to help you in contacting another party.
- Do not change a single word in a formal relay message - record and transmit it "as is".
- Monitor (if possible) a message that is being relayed by another for you.
- Do not acknowledge a message if you are unsure of its contents - do not pass on unclear information.
- If you need help in copying a message, use the phrase "repeat."

APPENDIX E

INJURY NOTIFICATION PROTOCOL FOR THE ICC

Contact the Medical Unit Leader (MEDL) in all injury situations. DO NOT use the name of the injured individual over the radio. In the event of a minor injury, as noted by the person calling in the medevac, so state when relaying information so a false sense of urgency is not produced.

MEDEVAC INFORMATION

# of injured personnel: _____ (if more than one, complete separate form for each.)

TYPE OF INJURY

_____

Is the injury: critical (Level 1) _____ serious (Level 2) _____ minor (Level 3) _____
(Level should be determined by EMT, ALS, or ground person in charge of patient.)

Is the patient conscious? Yes ____ No ____

Is a helicopter needed for evacuation? Yes ____ No ____
(If a helicopter is needed, another RADO should immediately contact Air Operations for availability.)

Is an EMT giving treatment OR is an EMT needed? Need an EMT: Yes ____ No ____
Is ALS (Adv. Life Support) needed? Need ALS: Yes ____ No ____

Name & position of radio contact:

_____

Specific location (lat/long, grid, feature name, etc.): _____

_____

RADIO PROCEDURES

1. Clear that radio frequency for emergency use.
   "All units, there is a medical emergency, please clear this frequency."

2. Immediately notify MEDL on duty. (Have another RADO do this). The MEDL will coordinate treatment and evacuation in conjunction with Operations and/or Air Operations.

3. If air transportation is required, have another RADO request flight availability in the following order:
   1. Air Operations Branch Director
   2. Air Support Supervisor
   3. Helibase Manager

4. **Notify the Safety Officer and/or Operations Section Chief.** They may be on the frequency and already know, but make sure. This is secondary to obtaining the above information.

5. **Clear the frequency for normal use, when the emergency is over.**

APPENDIX F

MEDEVAC OPERATIONS INFORMATION

NOTE: *This operational information should come from the MEDL and be agreed upon by the MEDL and COML. The COML should brief the ICC staff with this information. The* **INJURY NOTIFICATION PROTOCOL FOR THE ICC** *form should be used in conjunction with this information.*

1. Incident/Accident

   - Location
   - Type of incident/accident
   - Number of personnel involved
   - EMT location (who is closest, is there one on scene)

2. Medical Unit Emergency Medical Technician (EMT) sent to assess/assist if required.

3. Scene EMT gives patient(s) status and request special needs/resources from the ICP MEDL (through the ICC).

4. Patient Categories:
   Obtain this information from the EMT on site.

   LEVEL 1: **Critical/Potential Critical** - Medevac by air
   Patient(s) transported to hospital by incident helicopter or arrangements are made for closest area lifeflight. Phone number for lifeflight:_____

   LEVEL 2: **Serious** - Medical Transport
   Patient(s) transported to nearest hospital by incident helicopter (for convenience/patient comfort) or ambulance.

   LEVEL 3: **Non-Critical** - Medical Transport
   Patient(s) transported by ground and/or helicopter with normal shuttle.

APPENDIX G

RADIO STATION LOG - MEDIVAC EXAMPLE

BOISE INTERAGENCY LOGISTICS CENTER

DATE: XX/XX/XX POD: X DISPATCHER: You

TIME	UNIT	LOG
XXXX	You / T-151	In contact w/Payette Dispatch, close out w/us.
XXXX	Mick PAF / You	Confirm you have T-151; yes. We'll close out.
XXXX	You / Berry	Timber mark stung by a bee, need medical assistance.
		½ mile north of Boiling Springs Campground. 10 mins ago.
		Age - 24 - male Where stung - leg above knee Allergic? - don't know
		Patient breathing? - yes EMT present.
XXXX	State Comm Frank / You	W/above info, requested ambulance.
XXXX	You / Mick	T-151 returning to Boise, load & return. ETE 35 min.
XXXX	Dean AB / You	W/above
XXXX	Berry / You	State Comm dispatching an ambulance. Will notify
		you w/ ETA soon. Patient status unchanged.
XXXX	You / Frank State Comm	Ambulance inroute from Garden Valley ETE 30 mins.
		Patient taken to St. Al's.
XXXX	Berry / You	W/above.
XXXX	Mitt / You	Patient coming into St. Al's by ambulance w/ bee sting.
		Will contact you w/ETA.
XXXX	You / T-151	Over Cascade, switching over to us.
XXXX	Mick PAF / You	We have T-151
XXXX	You / T-151	In contact with Tower, closing out.
XXXX	You / 6VS	Off Boise, Inroute to incident # E340.
XXXX	You / Berry	Ambulance has arrived.

BOISE INTERAGENCY LOGISTICS CENTER

DATE: XX/XX/XX POD: X DISPATCHER: You

TIME	UNIT	LOG
XXXX	You/Dean HTB	T-151 on ground, refueling + reloading
XXXX	You/Helitack	Chase out of yard, in route to F340
XXXX	You/Berry	Ambulance departing, ETE 1½ hours
XXXX	Milt/You	W/above; He will meet patient at hospital.
XXXX	You/IDIS	At Twin Buttes 42 41.15 X 115 11.26, DPS normal
XXXX	You/86F	Over Frasier Reservoir 43 08.53 X 115 51.56, DPS normal.
XXXX	You/Dean HTB	T-151 off Boise in route to Clover Creek fire ETE 25min.
XXXX	IDIS/You	W/above. 86F on incident.
XXXX	You/EastFork IC	Individual struck by rolling log. Requests life flight. 5mins ago; 2MT present; She is conscious + breathing. Age 21. Place to land heli is being improved.
XXXX	Nampa State Comm/You	Passed above info, along w/ Lat + Long of location and frequency + contact.
XXXX	EastForkIC/You	We have mobilized heli, will let you know of ETA asson as we get it. Victim is Stable.
XXXX	You/Stan@	Channel 2 Head Of fatality. Neg - explained it is an injury, no more info available. Notified CMD.
XXXX	You/Stan@	Off Boise ETE 20 minutes. Where was she hit? Breathing? Conscious? Fluid draining from ears/head? Yes breathing, hit in head.
XXXX	E.FkIC/You	Fluid from ears or head? NO. ETA 20mins.
XXXX	Nampa St Comm/You	W/above.

BOISE INTERAGENCY LOGISTICS CENTER

DATE: XX/XX/XX POD: X DISPATCHER: You

TIME	UNIT	LOG
XXXX	You/T-151	5 miles out, in contact w/ GVS. Closing out.
XXXX	You/GVS	Tanker returning to Boise for a hold. ETE 20 mins.
XXXX	Dan ATB/You	Whabove.
XXXX	You/S.Frk.JC	lifeflight has arrived a loading patient.
XXXX	You/T151	In contact with approach. Closing out.
XXXX	You/S.Frk.JC	Life flight is lifting off, heading for St. Al's.
XXXX	You/GVS	Returning to Boise, ETE 30 mins.
XXXX	You/Dan ATB	T-151 inground. Shutdown.

RADIO STATION LOG - MEDIVAC EXAMPLE
CONTINUATION

TELEPHONE CALL REGISTER - EXAMPLE

Obtain caller's name and location.
Obtain phone number from caller.
In column 7, put the estimated duration of the call.

AD - 102
(3-56)

TELEPHONE TOLL-CALL REGISTER AND CERTIFICATE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGENCY

LOCATION

ORGANIZATIONAL UNIT

LINE PHONE NO.

INSTRUCTIONS

COL. 4—*Check appropriate boxes.* P = Person-to-Person, S = Station-to-Station, C = Collect Call.

COL. 6—When use of this column is prescribed by the agency, each employee signing therein certifies that the telephone call described opposite his signature was necessary, was official business, was not personal, and was in the interest of the Government.

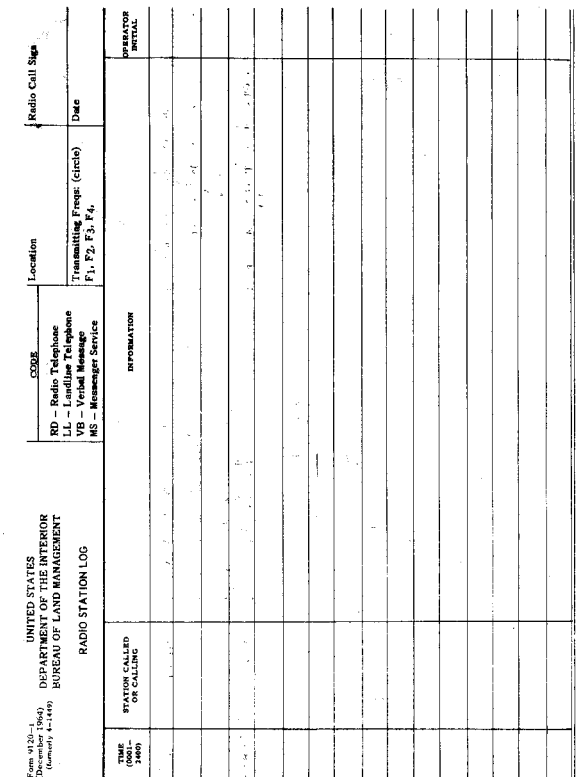
(1) DATE	(2) PLACE CALLED/CALLING	(3) NAME OF PERSON/NUMBER CALLED/CALLING	(4) TYPE CALL P	S	C	(5) COST (*For Optional Use*)	(6) SIGNATURE OF PERSON APPROVING CALL	(7) ACTIVITY BENEFITING

I certify that the telephone toll-calls described above were necessary, were official business, were not personal, and were in the interest of the Government.	SIGNATURE	TITLE	DATE

APPENDIX I

RADIO STATION LOG - EXAMPLE

Location: incident base/ICP, staging area, camp
Radio call sign: CMD, ICP, commo, communications
Time: initial call time
Station calling: Division A, (name), Clear Staging
Information: write legibly, ALL pertinent details
Operator initials: be sure to initial here just in case there are questions.



Form 9120–1
(December 1964)
(formerly 9-1448)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RADIO STATION LOG

CODE
RD – Radio Telephone
LL – Landline Telephone
VB – Verbal Message
MS – Messenger Service

Location

Transmitting Freqs: (circle)
F_1, F_2, F_3, F_4

Radio Call Sign

Date

TIME (0001–2400)	STATION CALLED OR CALLING	INFORMATION	OPERATOR INITIAL

ICS 205 - INCIDENT RADIO COMMUNICATION PLAN

This is a key reference document which is found in the Incident Action Plan (IAP). The COML creates this document.

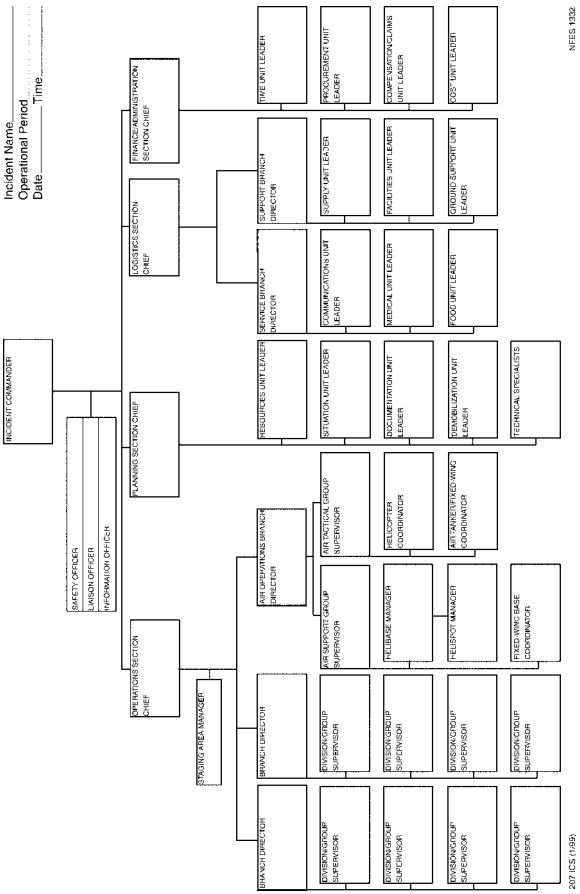
INCIDENT RADIO COMMUNICATIONS PLAN			1. INCIDENT NAME: Hilltop	2. DATE/TIME PREPARED: 8/20 1200	3. OPERATIONAL PERIOD DATE/TIME: 8/21 0600-1800
4. BASE RADIO CHANNEL UTILIZATION					
SYSTEM/CACHE	CHANNEL	FUNCTION	FREQUENCY/TONE	ASSIGNMENT	REMARKS
NIRSC	A2/King	Tactical	166.725	Div A	
■	A2/King	Tactical	166.775	Div B	
■	A2/King	Tactical	168.250	Div C	
NIRSC	A5/King	CMD/Repeat	167.100 RX 169.750 TX	Fireline to ICP	
NIRSC	A8/King	Air Ground	168.625	Ground to Air - Emergency	
■		Air operations	128.025	Flight following	
5. PREPARED BY (COMMUNICATIONS UNIT)					

206 ICS (9/86) NFES 1330

APPENDIX K

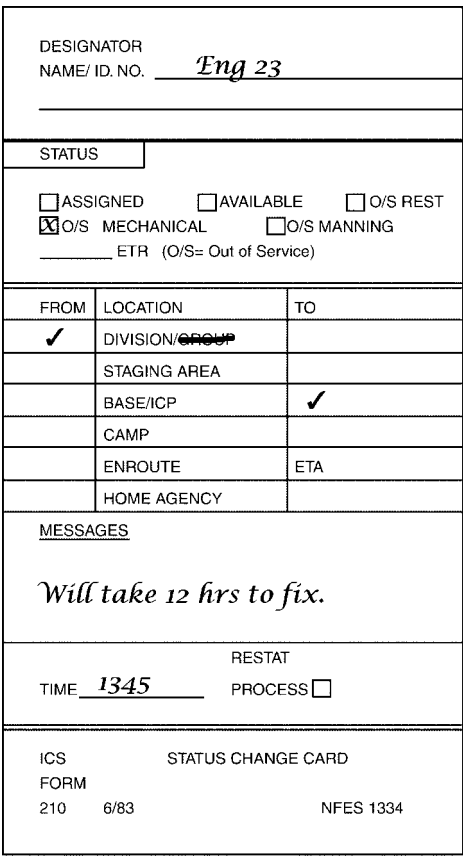
ICS 207 - ORGANIZATIONAL CHART

This chart should be posted in the ICC. Attach names to the positions on the chart for reference . The INCM or RADO can produce this chart using the ICS 203, Organization Assignment List from the IAP.



ICS 210 - STATUS CHANGE - EXAMPLE

The purpose of this form is to record status change information received on resources assigned to the incident. The compiled information is used by the communications unit, RADO, and the resources unit.



DESIGNATOR
NAME/ ID. NO. *Eng 23*

STATUS

☐ ASSIGNED ☐ AVAILABLE ☐ O/S REST
☒ O/S MECHANICAL ☐ O/S MANNING
_____ ETR (O/S= Out of Service)

FROM	LOCATION	TO
✓	DIVISION/~~GROUP~~	
	STAGING AREA	
	BASE/ICP	✓
	CAMP	
	ENROUTE	ETA
	HOME AGENCY	

MESSAGES

Will take 12 hrs to fix.

TIME *1345* RESTAT PROCESS ☐

ICS FORM 210 6/83 STATUS CHANGE CARD NFES 1334

The form is completed by radio/telephone operators who receive status change information from individual resources, task forces, strike teams, and division group supervisors. Status information could also be reported by staging area, helibase managers, and fixed-wing facilities.

The distribution of the status change card is a two-part form. The original copy is given to the resources unit and the second (pink) copy is retained by the communications unit.

Instructions for filling out the form:

- Designator: enter the appropriate name/ID number designator for the kind of resource (Engine 23, Prescott IHC, etc.)
- Status: determine the current status of resource. If out-of-service status is checked enter the estimated time when the resource will return to service (ETR).
- From/location/to: place a check mark in the *from* column indicating the current location of the resource (where it came from). Also place a check in the *to* column indicating the assigned location of the resource. When more than one division, staging area, or camp is used, identify the specific location (Division A, Redfern Staging Area, Camp Hood).
- Message: enter any special information provided by the resource or dispatch center such as individual designators of strike teams and task forces.
- Time: enter the time of the status change (24-hour clock, Appendix L, page 57).
- Process: this box is checked by resources unit personnel after the unit has transferred the information to a resource status card (ICS 219, Resource Status).

*U.S.GPO:1992-0-790-801

GENERAL MESSAGE

TO:	POSITION
FROM	POSITION
SUBJECT	DATE

MESSAGE:

APPENDIX M

Supply
Communications INCM
Supply order-Div B 08/20 0900

Need

SIGNATURE/POSITION

REPLY

Smith

DATE	TIME	SIGNATURE/POSITION

213 ICS 179
NPES 1336

PERSON RECEIVING GENERAL MESSAGE KEEP THIS COPY

(SENDER:) REMOVE THIS COPY, FOR YOUR FILES

The purpose of this form is to record incoming messages which cannot be orally transmitted to the intended recipients; transmit messages to the incident communications center for retransmission via radio or telephone to the addressee; send any message or notification to incident personnel which require hard copy delivery.

APPENDIX N

24-HOUR CLOCK

12 Hour		*24 Hour*	*Pronounce*
1	AM	0100	Zero-one hundred
2	AM	0200	Zero-two hundred
3	AM	0300	Zero-three hundred
4	AM	0400	Zero-four hundred
5	AM	0500	Zero-five hundred
6	AM	0600	Zero-six hundred
7	AM	0700	Zero-seven hundred
8	AM	0800	Zero-eight hundred
9	AM	0900	Zero-nine hundred
10	AM	1000	ten hundred
11	AM	1100	eleven hundred
12	NOON	1200	twelve hundred
1	PM	1300	thirteen hundred
2	PM	1400	fourteen hundred
3	PM	1500	fifteen hundred
4	PM	1600	sixteen hundred
5	PM	1700	seventeen hundred
6	PM	1800	eighteen hundred
7	PM	1900	nineteen hundred
8	PM	2000	twenty hundred
9	PM	2100	twenty-one hundred
10	PM	2200	twenty-two hundred
11	PM	2300	twenty-three hundred
12	Midnight	2400	twenty-four hundred

Notice that you add 12 to the PM time to get the first two numbers of the hour, i.e. 8 PM is twenty hundred (8 + 12 = 20).

PHONETIC ALPHABET

Use the phonetic alphabet to spell out names or parts of names, and when communicating with aircraft.

A - Alpha	J - Juliett	S - Sierra
B - Bravo	K - Kilo	T - Tango
C - Charlie	L - Lima	U - Uniform
D - Delta	M - Mike	V - Victor
E - Echo	N - November	W - Whiskey
F - Foxtrot	O - Oscar	X - X-ray
G - Golf	P - Papa	Y - Yankee
H - Hotel	Q - Quebec	Z - Zulu
I - India	R - Romeo	

Dispatching names can be accomplished accurately by:

1) Pronouncing the complete name. ***Jim Smith***

2) Spelling the first name, give the first letter of the name phonetically.

   J - JULIETT, I - INDIA, M - MIKE ***Jim***

3) Pronouncing the last name, and then spelling it phonetically.

   S - SIERRA, M - MIKE, I - INDIA,
   T - TANGO, H- HOTEL ***Smith***

4) Pronouncing the whole name again. ***Jim Smith***

Proper identifiers help assure you are transmitting to the proper station.

APPENDIX P

WORDS AND PHRASES
Clear Text

Words and Phrases	*Application*
AFFIRMATIVE	Yes
AVAILABLE	Used when a unit is ready for a new assignment or can return to quarters.
AVAILABLE AT SCENE	Used when a unit is still committed to an incident, but could be dispatched to a new emergency if needed.
AVAILABLE AT RESIDENCE	Used by administrative personnel to indicate they are available and on-call at their residence.
AT/ON SCENE	Indicates units have arrived at the scene of an incident.
BURNING OPERATION	Self explanatory
CALL _____ BY PHONE	Self explanatory
CAN HANDLE	Indicates that the resources on scene of the incident are adequate.
COPY, COPIES	Used to acknowledge message received. Example: "ENGINE TWELVE, TWELVE COPIES."
DISREGARD LAST MESSAGE	Self explanatory

EMERGENCY TRAFFIC	Term used to gain control of radio frequency to report an emergency or an emergency in progress. All other users will refrain from using that frequency until cleared for normal use.
EN ROUTE	Normally used by personnel to designate destinations. En route is NOT a substitute for responding.
FIRE CONTAINED	Time/Date the fire is contained within boundaries of constructed firelines.
FIRE CONTROLLED	Time/Date the fire is declared controlled and no longer susceptible to escaping control lines.
FIRE STATUS UPDATE	Update on the current conditions and work progress on the incident.
HEADQUARTERS	Used to indicate a unit has arrived at the headquarters office. This could also indicate the unit is back at quarters if the personnel have their duty station located there.
IN-SERVICE	Out-of-service unit is now operational.
_____ IS AVAILABLE FOR A PHONE CALL	Self explanatory
LOUD AND CLEAR	Self explanatory
NEGATIVE	No

OUT-OF-SERVICE	Indicates a unit is out-of-service. The unit could have mechanical problems or understaffed. This could also indicate the unit is out-of- service for the shift.
REPEAT	Self explanatory
RESPOND, RESPONDING	Used during a dispatch - proceed to or proceeding to an incident.
RESUME NORMAL TRAFFIC	Opens a frequency to routine transmissions.
RETURN TO _____	Normally used by a dispatch center to direct units to return to their original location. For example: "ENGINE 6271, RETURN TO STATION."
STANDBY	Indicates a need to wait for further information by either the sending or receiving party.
STOP TRANSMITTING	Self explanatory
UNREADABLE	Used when the signal received is not clear. In most cases, try to add the specific trouble. EXAMPLE: "UNREADABLE, BACK GROUND NOISE".
WEATHER	Self explanatory
WHAT IS YOUR LOCATION?	Self explanatory

GLOSSARY

Action Plan	Any tactical plan developed by any element of ICS in support of the incident action plan.
Air Transportable Modular Unit (ATMU)	A weather data collection and forecasting facility consisting of seven modules, weighing a total of 355 pounds and occupying 34.2 cubic feet of space when transported. Require a supplemental order of helium, procured locally.
Back Haul	Excess supplies, equipment or trash returned from a location on an incident.
Base	The location at which primary logistical functions for an incident are coordinated and administered. There is only one base per incident. The incident command post (ICP) may be collocated with incident base.
Bladder Bag	A collapsible backpack made of neoprene or high strength nylon fabric that carries approximately five gallons of water fitted with a hand pump.
Booster Pump	An intermediary pump for supplying additional lift in pumping water uphill past the capacity of the first pump.

Compressed Air Foam System	A generic term used to describe foam systems consisting of an air compressor (air source), water pump and foam solution.
Coyote Tactics	A progressive line construction technique involving self-sufficient crews which build fire line until the end of the operational period, remain at or near that point while in an unavailable status and begin building fireline at that point at the start of the next operational period.
Double Doughnut	Two lengths of hose rolled side by side or a single length rolled into two small coils for convenient handling.
Doughnut Roll	A 50 or 100 foot length of hose rolled up for easy handling.
Drum Lifter	A device used to transport a 55 gallon drum via a sling on a helicopter.
Durable Foam	Foam products which when mixed at 1 % or less will remain effective at preventing ignition for 12 hours. Works with current class A foam delivery systems.
Fire Cache	A supply of fire tools and equipment assembled in planned quantities or standard units at a strategic point for exclusive use in fire suppression.
Fire Foam	An extinguishing agent, chemically and/ or mechanically produced, that blankets and adheres to the fuels to reduce combustion.

Foam Concentrate The concentrated foaming agent as received from the manufacturer which, when added to water creates a foam solution (fire foam).

Gray Water (Grey) Used water from the kitchen and shower units.

Hazardous Material Substances that are identified, classified and regulated in the Code of Federal Regulations, Title 49 and Hazardous Materials Regulation 175. A hazardous material is substance or material which has been determined by the Department of Transportation to be capable of posing an unreasonable risk to health, safety and property when transported in commerce and which has been so designated.

Head (water pressure) Pressure due to elevation of water. Equals 0.433 pounds per square inch per foot of elevation.

Heat Probe Apparatus (Probeye) to detect heat.

Helibucket Specially designed bucket carried by a helicopter like a sling load and used for aerial delivery of water or fire retardants.

Helitorch An aerial ignition device slung beneath a helicopter to disperse ignited lumps of gelled gasoline (Alumigel).

Hot Food/ Drink Cans Nonreusable cans that are used to ship hot or cold drinks and food to remote locations.

Hoverfill Tank	Large, portable tank from which helitankers can hoverfill.
Impeller	Rotating part of a centrifugal pump which imparts energy to the liquid to be moved. For shearing purposes, the impeller is on a rotating shaft within the body of liquid.
Incident Action Plan (IAP)	Contains objectives reflecting the overall incident strategy and specific control actions for the next operational period. The plan may be oral or written.
Incident Overhead	All supervisory positions described in the incident command system (ICS).
Increaser	Increasing coupling used on hose, pump or nozzles to permit connection of a larger size of hose.
Inductor	A control mechanism that allows a regulated quantity of foam concentrate to be introduced into the main hose line.
Infrared	A heat detection system used for fire detection, mapping and heat source identification.
Inmate Crew	Any fire crew composed of prison inmates.
Inside Diameter	The internal diameter of a tube, conductor or coupling as distinguished from the outside diameter. Fire hose sizes are classified by a nominal internal diameter.

Iron Pipe Standard Thread	Standard system of thread for connecting various types of rigid piping. These threads are much finer and more difficult to connect in the field than National Standard threads.
Lead Line	Line or set of lines made of rope, webbing or cable and used in helicopter external load operations. Placed between a swivel or the cargo hook and the load.
Lead Plane	Aircraft with pilot used to make trial runs over the target area to check wind, smoke conditions, topography and lead air tankers to the target.
Light Helicopter	A helicopter with a maximum certificated gross weight for takeoff and landing of 6000 pounds or less.
Lined Fire Hose	Fire hose with a smooth inner coating of rubber or plastic to reduce friction loss.
Liquid Concentrate	Liquid phosphate fertilizers used as fire retardants, usually diluted three to five times prior to application.
Live Line	Hose line or reel on a fire engine, carried connected to the pump, ready for use without making connection to pump or attaching nozzle.
Load Calculation Form	An agency form used to calculate helicopter load weight.

Local Agency	An agency having jurisdictional responsibility for all or part of an incident.
Longline	A line or set of lines, usually in 50 feet increments, used in external load operations that allow the helicopter to place loads in areas which the helicopter can not land.
Loran	An electronic navigation and position determining system.
Male Coupling	The threaded hose nipple which fits in the thread of a female swivel coupling of the same pitch and appropriate diameter.
Mattock	Hand tool with a narrow hoeing surface at one end of the blade and a pick or cutting blade at the other end.
McLeod	A combination hoe and rake with or without removable blades.
Medium Helicopter	A helicopter with maximum gross takeoff and landing weight from 6001 to 12,500 pounds and capable of carrying 6 to 14 passengers.
Mix Ratio	The ratio of liquid foam concentrate to water, usually expressed as a percent.
Monitor	Turret type nozzle usually mounted on an engine.
Multicom	A VHF/AM aircraft radio frequency (122.9 MHz) assigned by the FAA for use in air-to-air communications.

NICC	National Interagency Coordination Center at Boise, ID.
NIFC	National Interagency Fire Center at Boise, ID.
Nomex™	A fire resistant synthetic material used in the manufacturing of flight suits, pants and shirts for firefighters.
Nozzle Aspirated Foam System	A foam generating device that mixes air at atmospheric pressure with foam solution in a nozzle chamber.
Payload	Weight of passengers and/or cargo being carried by an aircraft.
Pin Lug Coupling	Hose coupling with pin shaped lugs.
Ping Pong Ball System	Mechanized method of dispensing delayed aerial ignition devices at a selected rate. The polystyrene balls are 1.25 inches in diameter, containing potassium permanganate. The systems is generally mounted in a helicopter. The polystyrene balls are fed into a dispenser and injected with a water-glycol solution and dropped to the ground where they ignite in 25 to 30 seconds.
Piston Pump	Positive displacement pump with 2, 4, and 6 reciprocating pistons to force water from the pump chamber in conjunction with appropriate action of inlet and discharge valves.

Proportioner	A device that adds a predetermined amount of foam concentrate to water to form a foam solution.
Red Card	Fire qualification card issued to personnel showing their qualifications to fill specific fire positions.
Reel	A frame on which hose is wound (.75 to 1 inch hose) supplied by a water tank on the apparatus.
Relay Tank	A tank, usually collapsible, used as a reservoir in the relay of water from one fire pump to another.
Resource Order	The form used by dispatchers, service personnel and logistics coordinators to document the request, ordering or release of resources and the tracking of those resources on an incident.
Respirator	A simple filter mask for individual protection against smoke and fumes for use on wildland fires.
Retardant	A chemical having a retarding action on fire, usually applied with an air tanker.
Retrograde	Reversal of an order; shipping supply items from the incident back to the cache or to another incident.
Rocker Lug Coupling	Hose coupling in which the lugs used for tightening or loosening are semicircular in shape and designed to pass over obstructions.

Stocking Levels	Minimum levels of supplies kept on hand at a fire cache.
Strainer	A wire or metal guard used to keep debris from clogging pipe or other openings made for pumping water. Placed on suction hose it will protect pumps from foreign materials.
Surfactant	A surface active agent. A formulation which, when added to water in proper amounts, will reduce the surface tension and increase penetration capabilities of the water.
Thread	The specific dimensions of screw thread employed to couple fire hose and equipment. American National Standard Hose Thread has been adopted for fire hose couplings.
Wet Water	Water with added chemicals, called wetting agents, that increase water's spreading and penetrating properties due to a reduction in surface tension.
Wetting Agent	A chemical that, when added to water, reduces the surface tension of the solution and causes it to spread and penetrate exposed objects more effectively than untreated water.

ACRONYMS - NOMENCLATURE

A/C	Aircraft, fixed or rotor wing.
AD	Administratively Determined (rates and pay plan for emergency workers.)
AGL	Above Ground Level, altitude expressed in feet above the ground.
AIDS	Aerial Ignition Devices - usually refers to a ping pong ball machine or a helitorch.
Air Contact	Particular aviation resource to contact when reporting to a fire.
Air Show	Multiple aircraft over a fire, usually including air tankers.
Air Tactical	ICS position within the operations section. Air Tactical Group Supervisor (ATGS), (synonymous with air attack).
Air Tanker	Fixed wing aircraft capable of delivering fire retardant (liquid and foam).
Alumigel	Jelly like substance produced by mixing gasoline and alumigel powder. It is then applied with a helitorch to ignite fires.
ATA	Actual Time of Arrival.
ATD	Actual Time of Departure.
ATMU	Air Transportable Modular (Mobile weather) Unit, a portable weather observation station that includes a satellite uplinks for communication, a computer terminal, weather forms, etc.

Av Gas	Fuel for aircraft with internal combustion engines (reciprocating engines).
Azimuth	The horizontal distance in angular degrees in a clockwise direction from the north point.
Bearing	Position of an object with reference to a point on a compass.
Casual	An employee who is picked up temporarily for a fire emergency, see AD.
Chief of Party	Person in charge of passengers while traveling.
Commo	Communications
Coordination Center	Regional/Zone/State level center for mobilizing resources (dispatch).
Crew	Hand Crew - usually consists of 18 -20 persons including a crewboss.
CSJRL	Cotton-Synthetic Jacketed, Rubber Lined hose.
Cubie	Cubitainer, a 5 gallon container used to deliver drinking water. In the NFES catalog, etc., look under Container, 5 gallon.
Demob	Demobilization, process of removing resources, usually off incidents.
DJRL	Double Jacketed Rubber Lined hose
Dispatch	Dispatch Center - a facility from which resources are assigned to an incident.

Division (letter)	Incident Division (A, B, C, etc.)
Division Sup	Division Supervisor (referred to by division or name)
Dozer	A tracked vehicle with a front mounted blade used for building fire line; bulldozer
Dozer tender	Bulldozer service unit
Engine	The ICS term used when discussing a truck with a pump and a tank on it that is used to fight fires. (Not tanker, pumper, etc.)
EMS	Emergency Medical Service
EMT	Emergency Medical Technician
ETA	Estimated Time of Arrival
ETD	Estimated Time of Departure
ETE	Estimated Time En Route.
Expanded Dispatch	The organization that arises when a dispatch office is overloaded beyond its capabilities. The expanded dispatch manages the project fires so that the local dispatchers can continue with their normal initial attack responsibilities.
FAA	Federal Aviation Administration.
FBO	Fixed Base Operator.

Fill or Kill	Policy designed to indicate ability to fill an order or if it can not be filled within a reasonable amount of time (1 hour is standard), then “kill” it. Determine whether to reorder at a later time or cancel the order. This policy is referenced in the National Interagency Mobilization Guide.
Fireline Handbook (410-1)	A field reference guide for personnel of wildland fire agencies using the Incident Command System in the control of wildland fires.
Fixed Wing	Aircraft with stationary wings; an airplane.
FLE	Fire Line Explosives, used for rapid construction of fire line with a small number of specially trained personnel.
FMO	Fire Management Officer
Foam	An aeriated solution created by forcing air into a mixture of water and foam concentrate. This solution has good coverage and viscosity when applied to the fuel bed.
FTS	Federal Telephone System
GHT	Garden Hose Thread, 3/4 inch hose fittings
Gorman Rupp	Small, portable water pump
Greenwich Mean Time	The time at “0” longitude, Greenwich England.

Grey Water	Waste water (shower and kitchen units)
Helitorch	A device that dispenses ignited gelled gasoline mixture from a helicopter, which ignites fuels for backfires, burnouts or prescribed fire projects.
Hot Shots	Specially trained seasonal hand crew
IA	Initial Attack, first effort to suppress a fire
IC	Incident Commander
ICS	Incident Command System
IMSR	**Incident Management Situation Report (Sit Report)**. Daily report giving the current fire situation in the United States and Canada.
Incident	An event (fire, flood, earthquake)
IPT	Iron Pipe Thread, for hose fittings. Standard system of thread for connecting various types of rigid piping.
IR Scan	Infrared survey of a fire
Kamlock	Type of fitting that provides quick connecting/disconnecting hose.
Loadmaster	Specially trained person who loads and unloads cargo on aircraft, taking into consideration the weight and balance limitations of a that particular aircraft.
Logistics	Support of on-going fires, transporting and supplying personnel and equipment

MAC	Multi-Agency Coordinating Group
MAFFS	Modular Airborne Fire Fighting System, the military's air tanker program (used when more tankers are needed than there are available on contract.)
Mark III	Small portable water pump
Mark 26	Portable water pump (smaller than a Mark III)
Medevac	Emergency medical evacuation
Misery Whip	Crosscut saw
Mob Guides	Reference used to facilitate the mobilization of resources. Includes policies, procedures, and where to find the resources.
Mop Up	Extinquish or remove burning material near control lines after an area has burned to secure the fire or to reduce residual smoke.
MRE	Meals Ready to Eat, light weight, packaged food used on fires
Mud	Fire Retardant
NFES	National Fire Equipment System
NH	National Fire Hose, coupling threads used for fire hose 1 1/2" and larger.

NFES Catalog	Refered to as the National Fire Equipment System Catalog. This catalog is used to order equipment and supplies from fire caches.
NPSH	National Pipe Straight Hose Coupling Threads (straight pipe threads for hose couplings and nipple).
NPT	National Pipe Threads/American Standard Taper pipe threads
NTE	Not to Exceed
Operations	An ICS section that is usually lead by an operations section chief on extended attack incidents.
PAX	Passengers
PC	Paracargo, cargo delivered by means of fixed wing aircraft and parachutes specialty packed and rigged, usually by smokejumper paracargo specialists.
PG	Personal Gear bag
Phoschek	Long term red colored fire retardant
PIC	Pilot in Command
PSD	Plastic Sphere Dispenser - refers to a machine installed in a helicopter that dispenses plastic spheres (ping pong balls) filled with potassium permanganate. The machine injects a small amount of ethylene glycol into each sphere and then dispenses them out of the helicopter. The exothermal reaction of

	the two chemicals creates enough heat to ignite the plastic sphere, which in turn ignites the fuel bed.
PTO	Power Take-Off, a supplementary mechanism enabling the engine power to be used to operate non-automotive apparatus (such as a pump).
Probeye	Infrared scanning device that picks up hotspots on fires.
Ramp	Parking area for aircraft adjacent to a runway.
Resource	Any person, aircraft, supplies or equipment available for assignment to an incident.
Resource Order	Form/system used to order and track resources mobilized to an incident.
Requisition	A form/procedure for purchasing supplies
RH	Relative Humidity, a measure of moisture in the air.
Rotor Wash	The air turbulence caused by the movement of the rotor blades of a helicopter.
Rotorwing	Aircraft with a rotor system that rotates about an axis to provide lift and/or thrust for a helicopter.
SIPT	Straight Iron Pipe Thread
Slurry	Fire retardant

SMJ or SJ	Smokejumper, fire suppression personnel who parachute to fires via fixed wing aircraft.
SOP	Standard Operating Procedures
Spotter	Smokejumper supervisor in charge of a jumper load; performs navigation, communication and paracargo duties.
Swamper	Assistant to an equipment operator
T&A	Time and Attendance
Tail Number	FAA number used to identify aircraft, located on the tail of the ship. American aircraft tail numbers begin with the letter N (N543TY, N67344, etc.)
Tanker	Air tanker
TFR	Temporary Flight Restriction. This airspace restriction is obtained through the FAA. It is an area of airspace over an incident that is defined both (laterally and vertically) which has been temporarily or partially closed to nonessential aircraft for a specific period of time.
Trash Pump	Medium sized pump used for moving large amounts of liquids (grey water, retardant, etc.)
Water Buffalo	Collapsible liquid storage unit
Water Tender	Water Tank Truck, 1,000 gal minimum

WFSA	Wildland Fire Situation Analysis, a form filled out when a fire escapes initial attack status.
WX	Weather
Xedar	Type of heat seeking video display unit that identifies hot spots during mopup.
Zulu time	See Greenwich Mean Time
100 hour	Mandatory maintenance done to aircraft every 100 hours (there is also a 50 hour, 1000 hour, etc.)