NORTHERN ROCKIES
INCIDENT MANAGEMENT TEAM

AIR OPERATIONS BRANCH OPERATING PLAN

v. Mar. 31, 2016

This version supercedes previous editions

PROVIDE TIMELY AND COURTEOUS
SERVICE AND SUPPORT TO
OUR CUSTOMER
THE LINE FIREFIGHTER

This plan is offered for IMT Air Operations in the Northern Rockies area as a supplement to the Red Book – Chapter 16, and Chapter 10 - Air Operations of the *Fireline Handbook*, NWCG Handbook 3. As such, it is intended to complement but not to replace existing operating procedures, guidelines, or direction expressed in other NRCG member agency manuals, handbooks, guides, or unit aviation plans. Please bring any corrections, improvements, or conflicts with agency direction to the attention of the Northern Rockies Team Air Branch Group.

10 STANDARD AVIATION ORDERS

1. Ensure Pilot and aircraft are approved for the planned flight.

2. Obtain weather forecasts. Winds and visibility are within prescribed limits.

3. Determine flight plan is complete, filed with agency, flight following procedures established and flight following operational.

4. Use only personnel trained and qualified for the mission and follow agency standard operating procedures.

5. Ensure weight and balance calculations are completed and being adhered to by the pilot.

6. Pilot briefed by personnel on intended mission and hazards.

7. Obtain hazard map and review for low-level flight.

8. Provide aircraft safety briefings to all passengers.

9. Determine pilot flight/ duty limitations are not exceeded.

10. Stay alert, be calm, think clearly and act decisively.

Northern Rockies Incident Management Team Aviation Breakout team meeting process:

A lead and co-lead facilator will coordinate the aviation breakout at the IMT spring IMT meeting. At the end of the meeting, the co-lead will become the lead for the next year's IMT aviation breakout and a new co-lead will be identified. In this manner, continuity will be maintained from one year to the next, and advance notification will allow the meeting agenda to be organized and coordinated with other functions. **Identified Facilitators for 2017: J.McKee/?**

Facilitator history: 2016: J.Best/J.McKee/S.Croy; 2015: D.Bitterman/J.Best; 2014: K.Brown; 2013: D.Morton; 2012: D.Bitterman

AIR OPERATIONS BRANCH- OPERATING GUIDE

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GENERAL AIR BRANCH INFORMATION

Objective

Our objective is to conduct Incident Management Team air operations safely, efficiently, and effectively by the cooperation of all regular and assigned team members, and the use of the following procedural guidelines.

The use of comprehensive Risk Management (hazard identification, risk assessment and control procedures, see p.9), coupled with sound decision-making, adherence to policy and supervision, will accomplish this objective.

Doctrinal Decision Making:

Risk management and Aviation Doctrine are very closely associated. A key component of implementing Aviation Doctrine is verification of and concurrence with the risk management process. This is achieved through notification to Aviation Management—generally through the helibase—for any decision made that may conflict with other instruction or policy under the doctrinal guidelines. For time critical operations, the Risk Management process can be completed while in flight, with notification to Aviation Management via radio on the appropriate FM frequency. For non time-critical operations, the Risk Management should be documented in a written format and attached to the flight request or otherwise delivered to Aviation Management. The intent of this **doctrinal** process is to assure that the proper notifications/authorizations are made commensurate with the level of risk being undertaken while still allowing the pilot and flight manager the flexibility to perform their own risk-assessments and to exercise good judgement in the performance of incident support missions.

Air Operations Positions

Air Operations Branch Director (AOBD) - is responsible for all incident aviation activities. The AOBD is responsible for providing, supervising, and briefing the ASGS and ATGS positions; or in the absence of those positions, fulfilling their roles. **In the absence of the AOBD position, this role is the inherent responsibility of the OSC.**

Air Support Group Supervisor (ASGS)- is responsible for supporting and managing helibase and helispot operations and for maintaining liaison with fixed-wing air bases. The ASGS provides, supervises and briefs the HEBM and FWBM. This includes management and coordination of incident personnel enplaning and deplaning at sites removed from the incident when established management is not already being provided by the local unit. Consideration should be given to providing a FWBM at local airports serving incident mobilization/de-mobilization activities.

In the absence of the AOBD, the Operations Section Cheif may delegate logistical responsibilities of the Air Operations Branch to the ASGS.

Air Tactical Group Supervisor (ATGS) - is responsible for directing the air-to-ground tactical use of aircraft, and coordination of all aircraft within incident airspace. The Team ATGS is also responsible for the supervision and briefing of additionally assigned ATGS, HLCO (Helicopter Coordinator), and ATCO (Air Tanker Coordinator- Leadplane).

In the absence of a dedicated team ATGS, the AOBD is responsible for assuring this coordination or assigning a lead from available ATGS's assigned.

Fixed-Wing Base Manager (FWBM) - ensures the efficiency and safety of fixed wing operations by providing supervision, support, and logistical management at the fixed-wing base assigned to the Incident, when established local management is not already being provided. The FWBM coordinates with airport management, ATGS, ATB manager, and unit aviation personnel.

Helibase Manager (HEBM) - ensures the efficiency and safety of helibase operations by providing supervision, support, and logistical management at the helibase. The HEBM conducts briefings/debriefing of helibase and vendor personnel, and plans and assigns helicopter missions supporting the incident.

Line Officer Briefing and Review of WFDSS

The Line Officer briefing should convey critical information that may be incorporated into Air Branch planning such as: management objectives, priorities, sensitive features, local resources, initial attack responsibilities, and cost apportionment.

Review of WFDSS

It is an AOBD responsibility to provide feedback to the IC and OSCs regarding the Wildland Fire Support System (WFDSS). This should be accomplished at the initial briefing, and on a daily basis thereafter.

Additionally, the AOBD shall ensure that the WFDSS information and any changes are provided to both the ATGS and ASGS for review and use in briefings.

Unit Aviation Briefing

If not provided at the Line Officer Briefing, it is important that the AOBD should also be briefed by the Unit Aviation Officer (or acting) on local aviation operations, restrictions, and available aviation resources. Copies of the *Unit Aviation Operations & Safety Plan*, flight hazard maps, and local aviation organization and phone contact lists should be obtained.

Local procedures and authority for ordering and use of medevac aircraft **must** be determined before team air operations are conducted.

Operational Briefings

Comprehensive briefings and debriefings by the ASGS at helibases and fixed-wing bases are critical to safety and success. The ATGS should also ensure that information related to Incident activity is provided during briefings at other fixed-wing bases supporting the Incident. When available, the Helibase Briefing Board (or similar briefing board) will be utilized at all helibases.

Incident Action Plans (IAP)

The Documentation Unit is responsible for providing "short" Incident Action Plans for flight crews in the numbers identified on the ICS-220. At a minimum these will consist of the ICS-220, communications plan, and incident map(s). In particular, the SITL should be provided a sample map and encouraged to produce maps that are appropriate for use within the cockpit. The ASGS is responsible for ensuring that an adequate number of IAP (or flight crew) copies are daily faxed or delivered to the Unit Aviation Officer, local aircraft dispatch center, Helibase, Fixed-Wing Base, Air Tanker Base, or other airports where flight crews may be remotely based.

Human Factors

Time-outs - The use of short (5-10 minute) "time-outs" over the course of a day's operations is strongly encouraged. The purpose of the time-outs is to have individuals involved in aviation management suspend operations temporarily, to the extent practicable, to reevaluate strategy, objectives, and tactics with particular emphasis on safety and efficiency. Time-outs can be as simple as talking briefly with an individual at a helibase or helispot, or may involve a full helibase briefing during the course of an operation. Time-outs can also effectively interrupt a developing accident sequence by ***breaking the chain.*** The purpose of time-outs should be explained at the initial avaition operations briefing and subsequent follow-up as needed.

Mission Focus- Occasionally, incident personnel may become too focused on the mission and overlook other factors or issues which can become problems that eventually affect operational safety and effectiveness. **The air operations branch encourages frank, constructive feedback from all levels of the organization, including vendor pilots.** This can be accomplished by encouraging open interaction during briefings and discussions with all air branch personnel.

Check-in

The ASGS will maintain an Air Branch check-in ICS-211 utilizing Helicopter Information Sheet (HCM-6) and Heli- Crew Information Sheet (HCM-7). The ASGS should ask for, and review "red cards" of all personnel for training opportunities and filling positions. FWBM, ATGS or ASGS will check-in fixed wing aircraft and personnel from remote locations when personnel can not get to the normal incident check-in.

Ordering Air Branch Resources.

To avoid duplication of orders for personnel, equipment and supplies, the following procedures will be used:
All orders must go through Supply* utilizing the General Message Form. Orders should contain information found on the Resource Order:

- Ordered Date/Time
- # of Items Needed
- NFES # (if applicable; consult IHOG Appendix K for NFES #s of commonly ordered helibase and aircraft equipment.
- Resource(s) Requested
- Needed Date/ Time
- Deliver To (Location)
- Explanatory remarks if necessary
- Ordered by and contact person

*Individual team procedures may allow direct ordering of specific items (aircraft and personnel) direct to dispatch by the AOBD or ASGS. Check with the specific IMT procedures.

Ordering Aircraft.

All aircraft shall be ordered by the AOBD with the following possible exceptions: airtankers ordered by the ATGS direct to Dispatch, Infrared and FLIR flights ordered by PSC/SIT. Specific aircraft ordering responsibilities must be confirmed with each IMT. The AOBD will maintain and update copies of all aircraft resource orders. The AOBD is responsible for obtaining timely confirmation (ETD/ETA) on ordered aircraft resources. Ordering of EMS or medevac aircraft is addressed on page 11 under Air Medevac Coordination and Use. When the following-day need is anticipated, airtankers will be requested each night through Dispatch by the AOBD or ATGS and confirmed before requested time the next operational period..

Ordering Personnel.
It is critical to avoid duplication of orders for personnel. All orders for personnel will be submitted by Helibase Managers to the ASGS. The ASGS then becomes responsible for tracking all personnel ordered.

Ordering Air Branch Equipment and Supplies.
Helibase Managers and FWBM may order equipment and supplies, but **all** orders need to be reviewed and approved by the ASGS. The Helibase Manager, FWBM and ASGS become responsible for tracking all equipment and supplies ordered.

Ordering Equipment and Supplies to be delivered by Air.
Air Operations and Logistics have developed a system to track logistical orders placed from the line to insure orders are correctly processed. On larger incidents, the HEBM will assign a DECK, LOAD, or other helibase individual to assist the Supply Unit in facilitating line orders to be delivered by air. Assigning a supply person to the helibase may also be efficient.

1. Logistical orders to be delivered by air will be placed to Supply Unit via radio (through commo), phone or General Message Form.
2. The following information, at a minimum, will be required. The DIVS or line person in charge is responsible for providing the information.

- Name/Title of person providing order
- Type and amount of equipment/supplies ordered
- Delivery time
- Location order is to be delivered by grid, lat/long, helispot #, etc.
- Ground contact, Branch/Division.
-  Longline length (if required).

Use of Private Land, Water and Privately-Owned Facilities.
The Procurement Unit Leader should be notified immediately if use of private land, water or privately-owned facilities is occurring (i.e., from initial attack or previous management of the incident) or is anticipated. Where possible, such use should be anticipated and negotiated in a timely manner.

An agreement will be made between Procurement, AOBD and the local agency on responsibility for determining land status, ownership, and implementation of an agreement. AOBD will submit a Resource Order for rental of land or other appropriate service on a General Message form to Finance with an S# from Ordering. AOBD will follow-up to ensure agreement is in place. However, the AOBD is not authorized to determine land status ownership, negotiate procurements, or enter into agreements.

The ASGS will devise methods to monitor Incident air resource utilization of land, water, or other commodities/facilities when documentation is required for replacement, fiscal reimbursement, or payment purposes.

Airspace Coordination.
The Interagency Airspace Coordination Guide (IACG) and local dispatching protocols should be consulted for pertinent guidance in airspace coordination situations. See R1 Mob Guide Chapter 80 , Temporary Flight Restrictions 91.137
The AOBD will contact Dispatch on a regular basis to confirm the status of Temporary Flight Restrictions (TFRs) and/or for deconfliction of Military Training Routes (MTRs).

Airspace Conflicts and Intrusions….and UAS
Airspace Conflicts and Intrusions.
All flight crews are responsible for immediately reporting airspace intrusions to the ATGS or Helibase in the absence of an ATGS. The ATGS will immediately contact the Air Route Traffic Control Center (ARTCC) or local Dispatch Office to relay report of the intrusion to the (ARTCC). The ATGS or AOBD will also notify the Unit Aviation Officer, and initiate a Safecom report for airspace intrusions and near mid-airs (INMAC, Incident of Near midair Collision, filed with FAA). Airspace conflicts within military and FAA controlled areas need to be brought to the attention of the Airspace Coordinator or controlling authority. Airspace intrusions should be documented in the ICS-214 Unit Log. Unmanned Aerial Systems (UAS): see info from the Interagency Safety Alert 14-03. Recreational UAS use is restricted to 1) outside of TFR's; 2) outside of the 5 mile radius from airports (unless airport permission has been secured); 3) less than 400' AGS. Report UAS intrusions at http://www.faa.gov/contact/safety_hotline/, as well as through the RASM and with the SAFECOM system.

Military Use
Prior to use of Miltary resources, the AOBD and ASGS will coordinate with Military Aviation Operations Liaison at Area Command on Incident needs, deployment, etc. Use of the Military Use Handbook NFES 2175, Chapter 70 will be essential.

☞**GPS Use, Lat/ Longs, Datums**
Use of GPS recievers for locating fires, helispots, dipsites, etc. is now considered standard procedure. Per the standard aviation protocol and Region 1 policy, Lat/Longs will be reported in Degrees, Minutes and tenths (also known as Degrees, Minutes decimal Minutes, dd mm.mm), written as: 48º 24.78' x 114º 56.12'. When relaying verbal or written Lat/Long coordinates, ensure the receiving unit understands the format you are using, ie. Dd mm.mm When writing coordinates use proper punctuation, ie. Degree symbol (º)and minute symbol (').

Aircraft GPS recievers can not be easily changed from dd mm.mm format. Do not attempt to convert format on an aircraft GPS use your portable GPS unit or have dispatch convert the coordinates if necessary.
Aircraft GPS recievers default to the WGS 84 datum. Using a different datum in a map program or GPS can alter the location substantially. Use WGS 84 as the standard datum. Datums can be changed in the setup menu of GPS recievers or in the perference menu of map programs.

HELICOPTER OPERATIONS

Procedures in the Interagency Helicopter Operations Guide (IHOG) will be followed. Air Support Group Supervisors, Helibase Managers, and Helicopter Managers (both exclusive-use and CWN) are responsible for implementation of these procedures and for monitoring compliance.

Helicopter Managers.

Each Helicopter Manager is responsible for coordinating with the Helibase Manager with respect to crew duties, missions, assignments, etc. Prior to utilization on an incident, the entire crew and vendor crew will be briefed by the Helibase Manager or ASGS. Prior to utilization, the Helicopter Manager will submit a Load Calc (OAS-67/FS 5700-17), Helicopter Information Sheet (HCM-6) and, Helicopter Crew Information Sheet (HCM-7) to the Helibase Manager.

Helibase Management.

The Team ASGS will function as Helibase Manager until such a time as a Helibase Manager is obtained through the ordering system. All procedures for helibase management as contained in the IHOG will be followed. Helibases must be located a sufficient distance from populated areas (including ICP, basecamps, homes, ranches, and remote camps) to avoid overflight. The ASGS and HEBM should coordinate with the Facilities Unit Leader in planning the helibase site, flight routes, and identification of hazards and facility needs. Risk assessments that result in a low risk level will be managed by the Helibase Manager. If the inherant risk is medium or higher, the ASGS or AOBD need to coordinate with operations and/or the IC for approval to go ahead with the mission.

Helibase Communications

Helibase communications should have a Ground Aircraft Radio Link Kit for VHF-AM communications, including flight following, TOLC and monitoring air to air. Use a VHF-FM base radio or hand held for FM communications including air to ground, Deck and command. A Logistics UHF-FM can be used for communications with the Supply Unit and Incident Communications.
All incident air personnel will use the phonetic alphabet and clear text to insure efficient and effective communications.

Aircraft Crash, Search & Rescue (ACSR) Plan

An ACSR Plan utilizing the IHOG Ch. 12, Unit ACSR Plan, & Agency ACSR Plans for planning and direction will be developed and implemented for each helibase. C/R & downed a/c training scenarios should be conducted with Helibase personnel, Medical Unit, C/R-ARFF, and Commo Unit. Special attention should be given to training, responsibilities, preparedness and procedures. Key elements, equipment identified, and/or individual assignments should be modified within the plan to serve appropriate needs as the operation is expanded or reduced.

Aerial Ignition

Aerial Ignition on Incidents will use an Air Operations Plan for Aerial Ignition (Appendix K- NR National IMT Operating Principles) and the Interagency Aerial Ignition Guide in planning and execution of all aerial ignition. Implementation of the Aerial Ignition Plan may require local line management or unit aviation officer review or approval.

Helibase Supply Cache.

The Helibase will maintain a supply of emergency and standard fireline supplies at the helibase. The Supply Unit may furnish a Supply person to work at the helibase. The helibase may furnish a helibase person to work in supply to perform the following:

- Ensuring orders for materials to be transported by helicopter are communicated to Supply in a timely manner.
- Assisting supply in packaging supplies properly weighing supplies, and marking them legibly as to item description, destination, etc.
- Assisting the Ground Support Unit in arranging transportation of supplies to the helibase in a timely manner (a stake bed truck should be assigned to the helibase permanently).

CWN Helicopters.

Pre-use inspections of CWN helicopters should be be accomplished before the helicopters are assigned to the Incident. Confirmation of this is a Helicopter Manager responsibility, but shall be double-checked by the Helibase Manager and ASGS to assure compliance with all required resource protection needs (fueling procedures/locations, aquatic invaders prevention, etc).

CWN Modules.

IHOG requirements for CWN staffing must be met, including the off-site marry-up procedures. On occasion, CWN modules or qualified individuals within a module may be reassigned to another aircraft on a temporary basis for interim management or on a permanent basis for demobilization.

Helispot Construction.
All helispot construction and/or significant improvement shall be approved by the AOBD or ASGS. The AOBD/ASGS will normally consult with the Resource Advisor on new construction or significant improvements proposed. Helispots will be rehabilitated by the helibase organization according to IHOG and/or local guideline

Base Camp Helispot.
Helispots located adjacent to the camp, including those for OSC recon or medivac purposes only, must meet applicable helispot safety standards, including adequate separation and avoidance of overflight of other activities. Close coordination by the Facility Unit Leader and Logistics Section Chief (LSC) with the AOBD/ASGS is required to meet this objective.

Helispots, Longline Points and Dip Sites
All helispots, longline points and dip sites will have applicable supervision, resources and staffing during use.
In coordination with the Helibase Manager(s), the ASGS is responsible for numbering helispots, longline points and dip sites and updating the Situation Unit nightly. Helispots will be prefixed by "**H**-" , Longline Points prefixed by "**LP**-". Dipsites and Helibases will be named. In order to facilitate pilot recognition of helispot locations (i.e., a sequential numbering around the incident), helispots and longline points will be assigned numbers according to the following (some at the end of a Division's sequence might never get assigned): This sequence may be altered to accommodate incidents with a larger number of divisions.

DIVISION	HELISPOT #	DIVISION	HELISPOT #	DIVISION	HELISPOT #
A- Alpha	1-9	J- Juliet	90-99	S- Sierra	180-189
B- Bravo	10-19	K- Kilo	100-109	T- Tango	190-199
C- Charlie	20-29	L- Lima	110-119	U- Uniform	200-209
D- Delta	30-39	M- Mike	120-129	V- Victor	210-219
E- Echo	40-49	N- November	130-139	W- Whiskey	220-229
F- Foxtrot	50-59	O- Oscar	140-149	X- X-ray	230-239
G- Golf	60-69	P- Papa	150-159	Y- Yankee	240-249
H- Hotel	70-79	Q- Quebec	160-169	Z- Zulu	250-259
I- India	80-89	R- Romeo	170-179		

Mobile Retardant Plants
When ordering a mobile plant, ensure the retardant type is approved for fixed-tank helicopters on the incident. Use extreme caution when setting up and using mobile retardant bases near any water. Utilize a 300' buffer on either side of the water. Assure resource advisor concurrence prior to set up.

Resource Status and Updates.
The ASGS is responsible for updating the Resource Unit as resources arrive. A combination of an Incident Check-in List at the helibase and the Helicopter and Crew Information Sheets outlined in Appendix A of the IHOG will be used. Helicopter Managers should ensure that all information on the Helicopter and Crew Information Sheets is complete and accurate. Incomplete Helicopter and Crew Information Sheets will be returned to the Manager for completion. By the end of the second operational period a summary of all aircraft, personnel, equipment, and supplies will be completed by the ASGS and provided to the AOBD.

Mission Ordering.
All tactical missions may be requested by the ATGS direct to the Helibase, or, if unable to contact, to the AOBD or ASGS. Miscellaneous orders (reconnaissance, communications unit needs, transport of individuals to and from the line, medivac requests,etc.) will be ordered through Communications. Personnel transports need to be approved by the IC or OSC. See Recon Flights by Government and Non-Government Personnel, below. Form HBM-6, Helibase Mission Request Log, will be used to document all mission requests and assignments. The Aircraft Base Radio Operator (ABRO) and/or Timekeeper are responsible for ensuring that this occurs. The ICS-220 in the IAP, with its initial list of missions and priorities, should be utilized to start the Helibase's Mission Request Log.

☞**Helicopter Coordinator- HLCO**
The HLCO is essential to safety, efficiency and cost effectiveness during large helicopter bucket/ helitanker operations. HLCO should not be used for recon, transport or other missions that will detract from helicopter aerial supervision.

Conflicts in Missions.
If an insufficient number of aircraft is available to perform missions within identified time-frames, the Helibase Manager will inform either the ASGS or AOBD, who shall either make a decision regarding priorities, if within the scope of their responsibility, or shall obtain a priority from the OSC.

Flight Following.
Flight following procedures as defined by the IHOG (Ch. 4) will be used. Form HBM-5, Helibase Flight Following Log, will be used for helibase flight following of aircraft.

Recon Flights by Government and Non-Government Personnel

All operational recon aircraft flights for Government personnel will be approved by the Line or Base OSC and confirmed to the ASGS or HEBM via radio, phone or General Message. All other (observation, non-operational, etc.) flights for Government personnel will be approved by the I.C. and confirmed to the Line or Base OSC. All flights for Non-Governmental personnel will be approved using Day Trip Authorization, FS-5700-12 form approved by the I.C. Approval will be confirmed to the ASGS or HEBM via radio, phone, and General Message. Requests should be made to ASGS or AOBD prior to 1500 for inclusion into the pre-planning meeting, next day shift I.A.P. and air group morning briefing.

Media Aircraft: Media Trips Aboard Government Aircraft.

Using the "Media Aircraft Flight Request", the Fire Information Officer will relay all requests for media aircraft to enter incident airspace through the Incident Commander. The IC will then contact the AOBD/ATGS. In most cases, requests will be honored, though possibly not at the times desired by the media. Media trips aboard government aircraft will be authorized by the I.C., using Day Trip Authorization, FS-5700-12 form.

FIXED WING OPERATIONS.

Fixed wing operations will follow appropriate agency policy. Air Support Group Supervisors, Helibase Managers, and Helicopter Managers (both exclusive-use and CWN) are responsible for implementation of these procedures and for monitoring compliance. Risk assesments that result in a low risk level will be managed by the Fixedwing Base Manager. If the risk level is medium or higher, the ASGS or AOBD need to coordinate with operations and/or the IC for approval to go ahead with the mission.

Air Tactical Resources.

ATGS coverage will be provided as needed. The goal of the ATGS is to provide safe and cost effective aerial supervision services in support of the incident. However, since coverage may be limited by daylight hours, the availability of aircraft or ATGS, visibility, weather, fuel and flight hour limitations, or other factors, line safety must not be totally reliant on the ATGS to serve as an aerial lookout. .

The Air Tactical Group Supervisor is responsible for obtaining adequate resources to meet the existing need. This may involve requesting additional non-assigned air tactical aircraft or aerial supervision resources on an “as needed” basis. The Team will recognize the local unit's needs by coordination in the utilization of local unit and incident aircraft resources. The AOBD will order additional aircraft to be assigned to the incident through the Supply Unit and dispatch.

On a large or complex incident, two Air Tactical Group Supervisors (ATGS) and at least one ATGS Trainee should be ordered. Two fixed-wing ATGS aircraft that are each approved for Air Attack missions (with capability to program and monitor multiple FM frequencies, Air Guard, and 2 AM frequencies) will be ordered. Additional aircraft features (such as airspeed, twin-engine, pressurized cabin, additional avionics or seating, etc.) should be considered in obtaining aircraft suitable for the specific environmental mission or performance requirements. Refer to National Mob Guide Ch. 80 for Air Tactical Avionics typing. Consideration, when appropriate, should be given to utilizing a rotor-wing platform.

When multiple ship or extensive Type I and Type II bucket support utilization is anticipated, consideration will be given to ordering a Helicopter Coordinator with light helicopter, to insure safety and cost effectiveness. Refer to Helicopter Operations- Helicopter Coord. HLCO.

ASM- Aerial Supervision Modules

The ASM is a fixed wing platform that utilizes two crewmembers to perform the functions of traditional air attack and low-level lead plane operations. BLM ASMs are National Shared Resources; do not depend on an ASM for Air Tac--order a replacement ATGS & platform. Refer to the Aerial Supervision Guide for specifics on ASM.

Tactical Decisions

ATGS will base tactical decisions on his/her daily briefing from the Operations Chief (OSC) and Incident Action Plan. If fire activiity dictates a change in priorities during a shift, ATGS will make **every** effort to contact the AOBD and/or the OSC for instructions.

Retardant Use

Utilize the 10 Principles of Retardant Application and The Guidelines for Aerial Application of Retardants and Foams in Aquatic Environments during all retardant operations. Use extreme caution when applying retardant near any water. Utilize a 300’ buffer on either side of the water unless firefighter or public safety are threatened, notify the operations section chief and local aviation management, document any drops in buffers or exclusion zones.

Air Tanker Base Operations

Operational procedures in the Interagency Air Tanker Base Operations Guide (IATBOG) will be utilized. The ASGS will be the liaison to all air tanker bases supporting the incident. A Fixed Wing Base Manager or Air Tanker Base Manager may also be ordered to take this responsibility. The ATGS may often be based at the nearest air tanker base, and may be able to provide additional liaison, as well as facilitating the completion and return of the standard Fixed-Wing Daily Use and Cost Summary (ATB-9) to the AOBD.

Check-in and Flight Following

The ATGS will make radio contact with the OSC, AOBD, or Helibase when arriving or departing the incident scene. The ATGS will keep OSC informed with scheduled fire status check-ins, as determined by OSC.

When the ATGS arrives or departs the incident , the ATGS will also check-in with the Branch Directors, or Division/ Group Supervisors. This is particularly important during periods of critical line operations and/or when ATGS is functioning as a primary communications link.

The ATGS shall flight follow with the incident (helibase) or local agency dispatch at all times.

The ATGS also has the responsibility of monitoring and reporting other fixed-wing aircraft within the incident airspace.

Briefing and Debriefing

In most situations, a minimum of one ATGS should travel to ICP each morning and evening. This person will brief with OSC, AOBD, and Division Group Supervisors. That ATGS will also hand-carry IAP copies for the day to the fixed-wing base. This duty should alternate daily between ATGS's.

In the event that ATGS driving time exceeds 1 hour (one-way) or travel to the ICP is otherwise precluded, the following procedures will be used to insure good communication between ATGS and OSC/AOBD:

1) The AOBD will FAX, email or post on the web a copy of the IAP, (or as a minimum, the "short" Plan) to the fixed-wing base prior to the ATGS being on duty each day.

2) The AOBD and/or OSC will phone ATGS before flight each day, brief on any changes to the Incident Action Plan, objectives, or frequencies, and clarify any other operational questions.

3) It is important that the AOBD and ATGS are also kept informed of assigned air-ground and air-air frequencies of adjoining units, incidents, and/or TFRs.

Air Tactical Support Ordering Process

DIVS can order air tactical support direct to ATGS. In the absence of ATGS, DIVS can request tactical bucket support through helibase and fixed-wing retardant will be ordered through Line OSC. In the absence of ATGS, AOBD will monitor and provide coordination for tactical requests. The ATGS shall advise the use of air tactical support to a DIVS, Branch Director or OSC, whenever deemed necessary in the judgement of the ATGS.

When both an ATGS and Helicopter Coordinator are airborne, air tactical support will be placed through ATGS. ATGS will then make assignments to the Helicopter Coordinator.

Coordination between ATGS's

When possible, a newly assigned ATGS or HLCO before becoming operational, will accompany an ATGS familiar with the incident on at least one briefing flight over the incident. It is preferable to conduct this flight in a fixed-wing aircraft. At a minimum, an extended transition briefing should occur between the new and familiar ATGS's.

Examples of critical periods which could be adversely affected by transition in aerial supervision are: during active fire behavior; when ground operations are being closely supported by air resources; or while conducting retardant drops, aerial ignition, or medivacs. The ATGS will develop a transition plan prior to operating that will; provide in-air change out of ATGS, minimize impacts to ongoing fire operations, and maintain aerial supervision.

SEAT- Single Engine Air Tanker Operations

Federal SEAT operations will utilize the Interagency SEAT Operations Guide(ISOG) for planning and operations. SEATs may be operated from established air tanker bases or from other airports closer to the fire. SEAT Managers (SEMG) are responsible for managing crew duties, missions, cost accounting, assignments, etc. of SEATs operating under OAS contracts. The SEMG is directly supervised by the ASGS, unless assigned to an air tanker base or fixed-wing base, and would then be directly supervised by the ATBM or FWBM. Prior to utilization on an incident, the manager and vendor crew will be briefed by the ATGS/ASGS.

State SEAT operations may differ considerably from Interagency SEAT standards. These will usually not have SEMG assigned to manage the aircraft.

Para-cargo Operations.

Para-cargo operations may be utilized to supply remote camps. When possible, at least 12 hours lead time should be given to the supplying cache. ASGS should contact supplying cache to discuss availability, timing and other logistical and operational needs. When extensive para-cargo operations are anticipated, consideration should be given through OSC of utilizing smokejumpers as cargo retrieval

teams. The ATGS provides aerial supervision during para-cargo and smokejumper operations. When an ATGS is not available, supervision and planning will be handled by the AOBD or ASGS.

Fixed-wing Aircraft.
It is the responsibility of the FWBM (or the ASGS if one is not assigned) to ensure that aircraft used at temporary Fixed-wing Bases are approved for appropriate mission use.

Fixed-wing Facilities.
Exhibits available the Fixed Wing Operations Guide provide samples of various fixed-wing operations facility checklists. These should be consulted to identify base lay-out, operational, and monitoring needs.

AIR MEDEVAC COORDINATION AND USE

It is important that the Team Air Operations staff, Safety Officer, MEDL, and Communications Unit Leader develop a coordination plan for air medevac immediately upon arrival at the incident. The ATGS is responsible, when possible, for assisting air medevac in coordination with the MEDL and on scene manager (DIVS/OSC). If the ATGS is unable to assist, air medevac coordination will be managed by ASGS or AOBD.
Utiilize Team specific *Accident Response Plan* and *Incident within an Incident Plan* for roles, responsibilities & protocols.
Form HJA-4, Helibase Emergency Rescue Plan, will be completed by the AOBD and posted at the helibase. Form HJA-4A Emergency Rescue Information will be completed by the ASGS and furnished to the MEDL for inclusion in the IAP.
The ASGS is responsible for ensuring Medical Unit personnel are provided a briefing on helicopter safety and medivac procedures. In most cases, EMTs and/or paramedics should be stationed at the helibase or other location that is readily accessible for helicopter transport.
Form HJA-4B, Emergency Medevac Transport Request, should be used by the Helibase Radio Operator when receiving requests for medevac services when the pickup location is not an identified helispot.

Incident Aviation Medevac Protocol
Incident Medical specialists are tasked with providing medical assistance to Incident personnel. Incident Aviation operations personnel are tasked with managing incident aviation activities in the safest possible manner, while providing aviation support to incident activities. The following procedures are intended to assist us in meeting our commitment, while at the same time providing the greatest margin of safety for all involved.

Ready Alert Aircraft and Medical Personnel
A Primary Incident medevac helicopter (Ready-Alert A/C), with manager, medical personnel, and equipment will be identified in the IAP for each operational period. A second Ready-Alert helicopter should be designated with appropriate personnel and equipment, if needed.
Incident helicopters responding to a medevac will have the helicopter manager or other well qualified helitack personal on board. Incident Medical personnel assigned to aviation medevac duty will be clothed for helicopter flight, briefed prior to flight, and as required, be fireline qualified.
Early in the incident, a medevac training scenario should be conducted with the Medical Unit, Communications Unit, identified incident based medevac pilot, helicopter manager, and helibase manager participating.

EMS Aircraft
Incident aviation medevacs can be accomplished by incident assigned aircraft, EMS helicopters, Military aircraft, or non incident agency aircraft. Contact should be made with the local EMS aircraft provider to determine the type of aircraft available and any flight restriction or special operational procedures that may exist. As example, some EMS aircraft will not fly into remote sites at night or in bad weather, other EMS aircraft may be equipped with night flying equipment such as night vision goggles. Information provided to the EMS service should include: frequencies, Air Tactical contact, general area Lat and Long, and IAP Medical Plan.

Military EMS Aircraft
Military units such as the National Guard, Reserve Units, and Regular Military may be equipped with special equipment to aid in patient extraction from remote sites. In some cases, these units can take time to mobilize and have special communications, operational, and procedural constraints. As an example some regular military units must have written assurance that no private vendor can supply the needed service before they can respond. Military units with extraction equipment such as winches may have special fueling requirements or operational limitations on the use of such equipment. If the use of military units is likely a conference call between the Medical Unit Leader, Senior Air Operations Person, Local Agency Dispatcher, and the Military Unit will go a long way toward identifying and solving these types of issues.

Non-Incident Agency Aircraft
Resource agency aircraft and personnel may have special capabilities which are useful in medical emergencies. These capabilities include short haul, rappelling, and smokejumping. Each of these have unique requirements and personnel may have special training and or equipment for medical emergencies. If you have this type of resource in proximity to your incident the Medical Unit Leader, and Senior Air Operations person should make contact with the unit to determine their capability to respond to incident medical emergencies.

EMS Mission Risk Management

It is important that the Medical Unit Leader, the senior Air Operations person and other team members collectively plan appropriate responses to various injury scenarios. Procedures, trigger points, and appropriate responses need to be agreed upon in advance. Bottom line is to make the response appropriate to the injury.

EMS mission risk management and evaluation should be done as a group (AOBD/ASGS/HEBM/MEDL) etc. Medevac response to an accident/injury will be based on the severity of the injury as follows.

☞ ***Non-Emergency Ground transportation-*** *Minor and non-life threatening serious injuries. Vehicles may transport from the scene or from ICP.*

☞ ***Non-Emergency Medical Transport****- Minor and non-life threatening serious injuries in remote areas without roaded access. Helicopter transport.*

☞ ***Emergency Air Medevac*** *- any life or limb threatening injury or illness. Critical and life threatening serious injuries. Helicopter transport.*

General Procedures for all Aviation Medevacs

Rappellers and short-haul personnel can be used when necessary to insert EMTs, build helispots or with short-haul, medevac personnel out. As always, use a risk management process to determine the best tool and response.

'Medevac' sites and construction. It is very easy to become caught up in the urgency of a rescue mission, especially those involving life-threatening situations. Regardless of the degree of emergency, never forget to utilize basic helicopter procedures. Both the pilot and the senior helitack person on board will agree that the landing site is adequate prior to landing. In all cases a high-level recon of the helispot will be conducted to insure the landing site is adequate and that ground personnel are clear of the area. Medevac sites fall under the category of "unimproved landing areas" if they do not meet IHOG standards for a helispot. If they do meet IHOG standards, they will be referenced as a Helispot. Unimproved landing areas and 'medevac' sites are not generally denoted on maps or as part of operations. Only approved Helispots are denoted on maps for planned operations.
Incident aircraft will follow standard Incident flight following and communications procedures with Air Tactical.
The Air Tactical Group Supervisor will coordinate medevac aircraft to and from rescue helispot.

Instructions to Non incident medevac aircraft:

The request for the medevac helicopter will include coordinates for a rendevous point (generally the incident helibase, but could be any established, staffed landing zone) to allow an opportunity for direct contact with the responding air crew in the event radio communication fails or does not occur. Other information delivered with the request will be the contact frequencies (both AM and FM) and procedures for initiating contact with the ordering unit. Once positive communication with the responding medevac helicopter occurs, new instructions (such as a divert to the accident scene, transfer of contact, continue to rendevous point, or cancellation of request) can be delivered based upon the latest requirements of the emergency incident. Standard protocol will be to facilitate contact between the ATGS and the responding medevac aircraft for relay of specific instructions.

Air Tactical will provide coordinates of medevac helispot, secure airspace, and as required provide a communication link. In the absence of an ATGS, the helibase will assume listed responsibilities.

Frequencies for contact to the host agency and for EMS services in the area of operations will be listed as part of the communications plan and available for use by any ground or air unit involved in a medical emergency.

AIR FINANCES & FIRE BUSINESS MANAGEMENT

Shift Tickets.

Each Helibase Manager and Fixed Wing Base Mgr. is responsible for ensuring equipment shift tickets (engines, water tenders, dust abatement, porta-toilets, trailers, etc.) are submitted on a daily basis to the ASGS for submission to Finance. It is advisable to make this a duty of the Aircraft Timekeeper.

Crew Time Reports/ Hazard Pay.

Individual overhead and exclusive use/CWN helitack crews are responsible for ensuring crew time reports (CTR's) are submitted on a daily basis to the ASGS for submission to Finance. It is advisable to make this a duty of the Aircraft Timekeeper.

The Interagency Incident Business Handbook (IIBH) as interpreted by the Finance unit will be utilized for all hazard pay determinations. The ASGS is generally responsible for signing any aviation personnel CTR's on which hazard pay appears. It is the responsibility of the helicopter manager to insure that there is a justification statement (as listed in the IIBH) for hazard pay documented in box 11 of the crew time report. Currently, justifications include: "Work under hovering helicopter"; "Work on uncontrolled fireline"; "Limited Control Flight" (examples of limited control flight include some GPS mapping flights, Aerial Ignition, Helicopter Coordinator).

Aircraft Use Reports (6500-122s/OAS-23s).

Helicopter Managers are responsible for insuring accurate completion per IHOG instructions. ATGS is responsible for insuring accurate completion of Aircraft Use Reports for fixed wing ATGS aircraft. Questions concerning whether an aircraft manager should complete an

OAS-23 or FS 6500-122 should be referred to the AOBD. Do not automatically assume that since a fire is on one agency's land, then that agency's format or charge codes will automatically be used.

Airtanker/ Leadplane Costs.
The ATGS and/or Fixed Wing Base Mgr. is responsible for ensuring Form ATB-9 (Fixed-Wing Base Costs) in the IATBOG is faxed or relayed by phone to the ASGS prior to 2100 local each night. On the first day of the team's assignment, costs from incident start to team arrival will be gathered and submitted as a separate attachment with the first day's summary. The Team ATGS will track as possible airtankers, ATGS aircraft, loads and bases and fax or phone that information to the ASGS.

Air Tactical Costs.


The Team ATGS is responsible for ensuring a flight use summary is submitted for all air tactical fixed wing aircraft utilization.

Cost Estimates for ICS-209.


The AOBD will work with the Cost Unit Leader to estimate costs for the Planning Section/ SITL by 1630 daily.

Individual Aircraft Summary/ Helibase Summary.
Aircraft Managers are responsible for submitting the report immediately after the nightly debriefing and prior to going to dinner. Helibase Managers should utilize the Helibase Aircraft Timekeeper to collect Form HCM-15's (Individual Helicopter Summary) from each Helicopter Manager after the nightly debriefing and collate them onto Form HBM-11 (Helibase Summary). Cost of dust abatement should be added on the day of application. Cost of foam should be added to each helicopter's individual summary.

Total Air Operations Daily Use/Cost.
The ASGS is responsible for generating the Air Operations Daily Use and Cost Summary by collating all actual use and costs from the air tanker bases and helibases onto the Air Operations Daily Use and Cost Summary and submitting it to Plans and Finance by 2200, with a copy to the AOBD. These include lead planes, air tankers, jump or paracargo aircraft, recon/air tactical aircraft, IR/FLIR aircraft (unless tracked by SITL), landing fees, misc. aircraft costs and helicopters. Submission of the report no later than 0800 the following morning is acceptable.

Cost Apportionment.
The AOBD will coordinate with the Cost Unit Leader and the Cost Apportionment Team on cost apportionment guidelines and reporting requirements. AOBD will brief air branch on mission and cost tracking needs. Individual aircraft managers are responsible for tracking missions and costs as needed for cost apportionment**.** Both the ATGS and ASGS are responsible for apportioning costs on a daily basis for aircraft under their control.


Work/ Rest Requirements.
The ASGS is responsible for
(1) Tracking the 14 day tour for all air branch personnel.
(2) Determining which individuals need to be rotated off the fire back to their home unit (not available for reassignment).
Daily schedules must consist of work and rest in a 2:1 ratio, respectively. That is if a person or crew works 16 hours, they must have a minimum of 8 hours rest. The ASGS is responsible for monitoring this for helicopter crews and single resource personnel especially at the beginning of the Team's assignment to an incident.
Every effort will be made by the Team Aviation Branch to provide rested modules and individuals back into the system.

Pilot Rest.
Every effort will be made to house pilots and vendor crew in motels or other available lodging. When this is not possible due to distance or other factors, consult the IHOG for guidelines on rotating air crews into motels.
Consideration will be given to implementation of Interim Flight & Duty Limitations if imposed by geographic area, or if the need is recognized within the incident operation.

Motel and Meal Policy for Government Air Operations Branch Personnel.
Unless otherwise specifically authorized by the AOBD, government employees assigned to the the air branch are specifically prohibited from staying in motels or other lodging away from the incident camp or helibase. Government employees assigned to the air branch are also prohibited from claiming meals (when meals are provided by the government). Travel to and from the incident assignment are excepted.

Personnel Demobilization.
All demobilization of personnel not attached to an aircraft must be approved via General Message Form by the AOBD. The ASGS is responsible for coordinating with the Demob Unit Leader regarding personnel demob, the demob process and travel itineraries, etc.

Aircraft Demobilization.
All aircraft being demobed shall be approved by the AOBD. For demobilization of aircraft, the AOBD will develop a demob plan and deal directly with the appropriate dispatch center, with courtesy and documentary copies of all actions taken to the Supply Unit and Plans.
In most cases, CWN modules will be demobilized with the same aircraft that they were ordered with. However, there may be situations where this is not possible.
Standard demobilization procedures will be followed by all resources. Form HBM-9 (Helicopter Demobilization Sheet) will be used to demob all helicopter resources.

A copy of the Demobilization Sheet with completed flight plan and ground route for the chase and fuel vehicles will be furnished to Demob Unit Leader and the appropriate dispatch center at least one hour prior to departure. Helicopter Managers are responsible for obtaining all information on this sheet and returning it to the Helibase Manager or ASGS in a timely manner.

SAFETY AND RISK MANAGEMENT

Safety of Incident Personnel (including pilots, fuel truck drivers, mechanics, etc.) and the public is the highest priority. Every action taken should reflect that in planning and operations. Risk Management should be used to evaluate actions to insure safety. Risk assesments that result in a low/medium outcome will be managed by the Helibase Manager/Fixedwing Base Manager with concurrance of the ASGS/AOBD as practical. Higher risk outcomes require approval from the AOBD and coordination with OPSC and/or the IC to go ahead with the mission.

STAT Teams
Visits by Safety Technical Assistance Teams should be anticipated and coordinated. These teams may also be requested to provide safety assistance.

SAFECOMS- Incident Reports.
SAFECOMS (Safety Communiques) may be submitted by anyone observing or involved in an unsafe or hazardous aviation operation. Copies of the SAFECOM form are available from the Team air operations staff. Copies should be submitted to the Team ASGS, who will forward to the AOBD/Unit Aviation Officer and routed according to the guidelines of the agency with jurisdiction for the incident. Any corrective action needed should be taken immediately and documented. Copies of Safecoms involving contract aircraft should be forwarded to the aircraft COR. **Shutting down an air operation is ALWAYS an option.** Incidents with potential to cause an accident must be reported immediately.

Aircraft Accidents.
The ATGS, if not involved in the accident, will assume aerial coordination of the medivac. See Team guidelines for "*Accident Response Plan*" and "*Incident within an Incident Protocols*".

Aviation and Aircraft Security
Security should be provided for incident aircraft parked or staged at remote and/or developed sites according to agency protocols. This generally requires dedicated night security personnel. The ASGS shall consult with Logistics regarding security options to be practiced for incident field bases. The ASGS shall consult with the local unit regarding security options at local air bases.

Risk Management
Risk Management (RM)should be incorporated into every air branch mission and task. Document risk management processes and decisions. The REMARKS block of form ICS-220 is the primary tool available for documenation and sharing of RM mitigations/decisions.
Risk management is the process of identifying and controlling hazards. It is applicable to any mission and environment. The 5 steps are:

1. IDENTIFY HAZARDS	Identify hazards, consider all aspects of current and future situations, environment, and known historical problem areas.
2. ASSESS HAZARDS	Assess hazards to determine risks. Assess the impact of each hazard in terms of potential loss and cost based on probability and severity.
3. DEVELOP CONTROLS, MAKE A RISK DECISION	Develop control measures that eliminate the hazard or reduce the risk. As control measures are developed, risks are re-evaluated until all risks are reduced to a level where benefits outweigh potential costs.
4. IMPLEMENT	Put controls in place to eliminate the hazards or reduce their risk.
5. SUPERVISE & EVALUATE	Enforce standards and controls. Evaluate the effectiveness of controls and adjust/update as necessary.

Risk Management: Definition of Terms

HAZARD: Any real or potential condition that can cause injury, illness, or death of personnel, or damage to or loss of equipment or property.

RISK: Chance of hazard or bad consequence; exposure to chance of injury or loss. Risk level is expressed in terms of hazard probability and severity.

EXPOSURE: The frequency and length of time subjected to a hazard.

PROBABILITY: The likelihood that an event will occur.

SEVERITY: The expected consequence of an event in terms of degree of injury, property damage, or other mission-impairing factors that could occur.

CONTROLS: Actions taken to eliminate hazards or reduce their risk.

RISK ASSESSMENT: The identification and assessment of hazards (first two steps of risk management process).

RESIDUAL RISK: The level of risk remaining after controls have been identified and selected for hazards that may result in loss. Controls are identified and selected until residual risk is at an acceptable level or until it cannot be practically reduced any further.

RISK DECISION: The decision to accept or not accept the risk(s) associated with an action; made by the IC, manager, or individual responsible for performing that action.

12 AVIATION WATCHOUTS

1. Any deviation from assigned flight plan or mission, you are driven by an overwhelming sense of urgency.
2. It is unclear who is in charge of the mission.
3. Not informed of strategy, tactics or hazards.
4. Instructions and assignments not clear, conflicting priorities.
5. No communication link with ground crewmembers/supervisors and communication is getting worse.
6. Other aircraft operating/ assigned to the area.
7. There is a better type aircraft for the mission or a better way to do it.
8. An escape route has not been planned for.
9. Cargo has not been checked or secured.
10. Required survival equipment is not available.
11. Required PPE is not available or worn.
12. Agency rules or Standard Operating Procedures are being broken.

Supply Order

Date: _____
Time: _____
Ordered By: _____ Phone # _____

Delivery

Date: _____
Time Needed By: _____
Contact: _____ Phone # _____

Deliver By:

Ground Support _____
Air Operation _____
Pickup at ICP _____
* NOTIFY HELIBASE OF ALL PENDING ORDERS

Deliver To:

Lat/Long ___|_____
DP # _____
Other _____

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Approved By: _____

(Insert IMT specific aviation protocols here)


SAFE ATTITUDE
The ONLY Way WE Fly!