

13 - Aviation Operations

Introduction

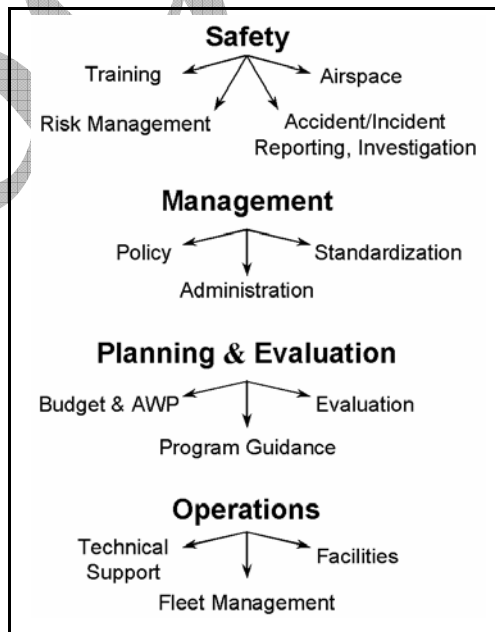
Purpose and Scope

Aviation managers have leadership responsibility for resource missions which depend on aircraft for support. Standards and prerequisite qualifications assure that aviation services are practical, low risk, benefit to the Bureau and the public.

Aviation is used in most BLM programs. Every person in the aviation organization provides a service for the customer, whether the customer is the user of public resources or an operating function within the organization.

Clear direction and good management practices can reduce risks inherent to aviation missions. The aviation program formula for success increases with planning, high standards training and commitment to the safety for each mission.

The four major emphasis areas of aviation management are Safety, Management, Planning and Evaluation, and the mission. Refer to the chart above for an illustration of these components and their sub-components.



Roles and Responsibilities

Office of Aircraft Services The Office of Aircraft Services (OAS) is responsible for Departmental policy related to aircraft services and facilities but has no operational responsibility. OAS provides departmental level aviation safety and accident investigation, aircraft and pilot inspection, procurement of aircraft, and policy development. Refer to 112 DM 12 for a complete list of responsibilities.

National Office Level The mission of the BLM National Aviation Office (NAO) is to develop Bureau-wide policy, procedures, and standards and to maintain functional oversight and interagency coordination for all aviation activities. The primary goals are safety and cost-effectiveness. NAO promotes accident prevention efforts and provides aviation management services in support of all Bureau functions and missions, including fire suppression. Refer to Manual 9400 for further information on aviation policy and procedures.

State Office Level State Aviation Managers (SAMs) are in place in all BLM State Offices. SAMs are responsible for implementing aviation program objectives and directives in support of the BLM mission and as appropriate for each State's goals. Several States have additional support staff, aircraft dispatchers, and/or pilots assigned to support aircraft operations and to provide technical expertise. A State Aviation Operations and Management Plan is required in each State to outline long-range goals of the State's aviation program and to identify State-specific policy and procedures.

Important Note: Manual 9400 specifies that a State cannot be more restrictive in policy and procedures (e.g., flight following) than the national policy unless such policy or procedure is approved by the Director, Fire and Aviation. This was done purposefully to encourage Bureau-wide standardization of operations.

Local Level Field managers staff and manage their programs as necessary to conduct their aviation operations safely. While many Districts have aviation management as a collateral duty, during periods of intense fire activity, it is still absolutely critical and necessary that aviation oversight be maintained. Assistance from the State Office, cooperators, resource ordering in assistance, Aviation Safety Assistance Team (ASATs)—are all resources that should be considered when other duties interfere with aviation management.

Aviation Information Resources

There is a significant amount of aviation reference material available to BLM aviation managers and users. Agency and interagency manuals, handbooks, and guides exist that provide both broad policy guidance and specific procedural requirements. Note: In all cases Departmental policy (DM's, OPM's and Bureau policy will take precedence.

In addition, Safety Alerts, Instruction Memoranda, Information Bulletins, Incident Reports, and other guidance or information is issued frequently as the need arises.

It is incumbent on each State and District Aviation Managers to maintain an up-to-date reference library with all aviation policy and procedural references. Tactical aircraft bases and other fire users of aviation resources (e.g., air tactical group supervisors) should maintain those applicable portions of the overall aviation reference library.

Aviation Safety

Risk Assessment and Risk Management

Risk must be managed based on acceptable limits. All aviation missions have some inherent risk. The key is risk management within acceptable BLM standards. Risk management is a five-step process:

- 1 Identify Hazards
- 2 Hazards Analysis: determine (1) the effect on personnel and equipment should the hazard be encountered, and (2) the probability that the hazard will be encountered.
- 3 Risk Decision: risk is weighed against the benefit of performing the mission.
- 4 Implementing Controls: risk is mitigated by establishing and implementing controls. Control may be as substantial as writing a special-use plan or as simple as conducting a safety briefing.
- 5 Supervision: Supervision by qualified personnel is critical to successful risk management.

Risk assessment is part of the risk management process, and can range from simple to complex. Assessing risk allows personnel to identify hazards, the degree of risk associated with each, and place hazards in perspective relative to the mission. This enables managers to determine whether or not to cancel a mission. A decision made to conduct the mission, requires those controls be in place to ensure success. Risk assessment must be conducted by those individuals qualified by training and experience.

Methods for aviation hazard assessment and implementation control can be found in the Interagency Guides relating to Airspace Coordination, Air Tanker Base Operations, Helicopter Operations, Lead Plan Operations, and Air Tactical Operations.

Refer to Chapter 3 of the Interagency Helicopter Operations Guide (IHOG), for a detailed discussion of the risk management process.

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Aviation Safety Assistance

During high fire activity on a local or statewide basis, it is advisable to request the following National Aviation Safety Assistance for Helicopter or fixed-wing operations:

- Aviation Safety Manager
- Operations Technician
- Pilot Inspector
- Maintenance Inspector (optional)
- Avionics Inspector (optional)

Aviation Watch Out Situations

As part of the risk management, especially during high activity fire, each aviation manager and employee should ask the following questions:

- Is flight necessary?
- Who is in charge?
- Are all hazards identified and have you made them known?
- Should you stop the operation or flight due to change in conditions?
 - Communications?
 - Confusion?
 - Personnel?
 - Weather?
 - Turbulence?
 - Conflicting priorities?
- Is there a better way to do it?
- Are you driven by the task and an a sense of urgency?
- Can you justify your actions?
- Are there other aircraft in the area?
- Does the pilot accept the mission?
- Are there any rules being broken?
- Are communications getting tense?
- Are you deviating from the assigned operation or flight?

Mission Planning/Hazard Mitigation

Pre-flight planning will reduce the risk inherent to any aviation mission to acceptable levels. During flight planning and scheduling, at a minimum the following must be addressed (additional items may be addressed as needed):

- Completion/Submission of the Aircraft Flight Request/Schedule
- Cost analysis
- Assessment and mitigation of hazards
- Selection of aircraft
- Scheduling of aircraft with vendors or agency pilots
- Pilot and aircraft approvals checked
- Pre-flight briefings

Aircraft and Pilot Carding

The OAS has responsibility for the approval and carding of pilots and aircraft used by BLM. With the exception of life-threatening situations or undercover law enforcement missions, personnel shall not fly with pilots or in aircraft that have not been approved (carded). Note that some State agency aircraft and pilots are approved by State and Private Forestry, USDA Forest Service. They may or may not carry a card; but they must have a letter of approval.

Use of Military or National Guard Aircraft and Pilots – The Military Use Handbook (NFES #2175) is the reference that should be used when planning or conducting aviation operations involving military aviation assets. All ordering of military assets is done through the NICC; all ordering of National Guard assets is done through the Governor of the State that owns the Guard resources.

Dispatchers or Aviation Managers are responsible for verifying pilot and aircraft carding during mission planning and aircraft procurement. Prior to any flight, it is the responsibility of the Helicopter Manager, Flight Manager, or employee to check for pilot and aircraft cards or letters of approval.

Field personnel have no authority to suspend or revoke a Pilot's card. Only the agency Contracting Officer or other agency-designated official may suspend or revoke a card. However, other individuals (e.g., Helicopter Managers, Helibase Managers) can suspend operations that are being conducted improperly.

Any employee can refuse to participate on a flight that the employee deems unsafe.

Aviation Safety Briefing

Every BLM passenger will receive a briefing prior to each flight. The briefing may be conducted by the pilot, Flight Manager, Helicopter Manager, Fixed Wing Base Manager, or an individual with training and experience to conduct an adequate briefing. The briefing should include (but is not limited to):

- Personal Protective Equipment (PPE): for special-use airplane missions and all helicopter flights, all passengers, pilot(s) and air crew members must wear the following: flight helmet or hard hat (including chin strap); flame resistant clothing; ear and eye protection; boots; other survival equipment as applicable. For point-to-point flights, no PPE is required.
- Approach and departure paths: the desired route for personnel to and away from the aircraft (e.g. always approach and depart from the down slope side of helicopters parked on uneven terrain); approach and depart helicopters in a crouch; stay in pilot's view; stay clear of landing areas/taxiways while aircraft are approaching or departing; never go near the tail of helicopters, do not approach airplanes from the front.
- Tools and Equipment: the proper securing of tools and equipment while awaiting aircraft transport; proper methods for carrying tools to and from the aircraft; assignments for individuals loading tools/equipment.
- Seating in Aircraft: seat belt fastened at all times; no movement between seats unless authorized by pilot; unbuckle only when directed by the pilot, air crew member, or helitack personnel; follow the instructions of the pilot at all times; know the location of first aid kit, survival kit, fire extinguisher, Emergency Locator Transmitter (ELT), fuel/battery shutoff switch, radio operation, oxygen (if available).
- Security of equipment: secure any loose items; all baggage secured in aircraft or in cargo compartment; never throw any object from or around any aircraft, never reach up or dart after any object that has become unsecured.
- Smoking: No smoking in or around aircraft and fuel sources.
- Emergency Exits: know the location and use.

Low-level Flight Exemptions

BLM operates air tankers and can drop retardant in congested areas under the authority in FAR Part 137.5. The following are requirements for dropping retardants in congested areas:

- Aircraft engaged in the aerial application of fire retardants or water may operate without regard to these restrictions, provided the following procedures are implemented.

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Deviation is limited to fire operations for cargo dropping, and Leadplane operations associated with the aerial application of water or fire suppressants or retardants conducted by or for DOI, subject to the following provisions:

- 1 A thorough air survey for obstacles, and check for air conditions in each operating area, shall be made prior to low-flight operations.

- 2 All flights below 500 feet altitude shall be confined to immediate areas being treated or where operational requirements make such low flights essential.
- 3 All aircraft are to follow planned flight course.
- 4 Low-flight operations are to be under VFR conditions and during daylight hours — ½ hour before sunrise to ½ hour after sunset. (See Local Sunrise/Sunset Chart for actual times.)
- 5 Prior clearance is to be obtained from the appropriate air traffic controller before any flight to be made in controlled air space.
- 6 Pilot will avoid creating any hazard to passengers or to persons or property on the ground.
- 7 Aerial applications of fire retardants in congested areas shall be avoided in normal situations. Where such operations are considered necessary, owing to special circumstances, they may be authorized subject to these special limitations:
 - a Airtanker operations in congested areas may be conducted at the special request of the responsible agency (city, rural fire department, county, State, or Federal fire suppression agency).
 - b A qualified Airtanker Coordinator (Lead Plane Pilot) will be ordered immediately on identification of the congested area and will directly supervise all airtanker drops.
 - c The FAA office (Air Traffic Control Center, Tower, or Flight Service Station) responsible for airspace control in the vicinity of proposed airtanker operations will be notified prior to or as soon as possible after the beginning of the operation and an appropriate airspace restriction will be requested by the responsible fire agency prior to or as soon as possible after beginning airtanker operations. (Request all Temporary Flight Restrictions from the ATC, but notify local Tower and FSS.)
 - d No operation shall be conducted until a positive communication link has been established between the Airtanker Coordinator or Air Attack Supervisor, airtanker pilot(s), and the official directly supervising fire suppression for the responsible fire suppression agency.
 - e The official supervising fire suppression for the responsible fire agency or designee shall advise the Airtanker Coordinator that all nonessential people and movable property have been cleared from the

area to be treated by airtankers prior to commencing airtanker operations.

- f The Airtanker Coordinator shall be personally satisfied that no nonessential people or movable property will be placed in hazard by the proposed airtanker operation prior to ordering any airtanker drops.
- g The first retardant pass of each series (repeated retardant drops using the same pattern) shall be preceded by a dry run flown on the same pattern as the planned retardant drops.

Aviation Hazards

An aviation hazard is any condition, act, or set of circumstances that compromises the safety of personnel engaged in aviation activities. These hazards may address, *but are not limited to*, such areas as:

- Deviations from policies, procedures, regulations and instructions as contained in manual and handbook releases, interim directives, standard operating guides, etc.
- Hazardous materials handling and/or transport
- Flight following
- Deviation from planned operations, flight plan, type of use (e.g., general to special-use)
- Failure to utilize Personnel Protective Equipment (PPE) or Aviation Life Support Equipment (ALSE)
- Inadequate training, or failure to meet training requirements
- Failure to utilize load calculations and/or manifests correctly
- Weather conditions
- Ground operations
- Pilot procedures
- Fuel contamination
- Unsafe actions by pilot, air crew, passengers, or support personnel.

Aviation hazards also exist in the form of aerial hazards such as wires, low-flying aircraft, and obstacles protruding beyond normal surface features. Known aerial hazards must be identified. This is particularly crucial when aircraft are planned to

be in the special-use profile of low-altitude flight. Each Office will post and maintain a "Known Aerial Hazard Map" for the local operations encompassing areas where aircraft are operated (regardless of agency land ownership), and will be posted in dispatch centers and permanent helibases, air tanker bases, air attack bases, etc.

All aviation operations personnel are responsible for hazard identification and mitigation. This includes pilots, flight crew personnel, aviation managers, incident air operations personnel and passengers.

An aircraft incident is an unplanned event that results in damage which meets less than serious aircraft incident criteria, or injury not requiring medical attention (first aid only). Examples of incidents are:

- Injury to personnel requiring only first aid
- Damage to aircraft (less than accident criteria)
- Forced landing necessitated by failure of engines, systems or components
- Precautionary landing necessitated by apparent impending failure of engines, systems or components or incapacitation of the flight crew
- Aircraft ground mishap (mishap in which there is no intent to fly)
- Ground damage to aircraft (damage is incurred requiring repair or replacement before flight)
- Near Mid-Air Collision (when airborne aircraft encroaches within 500 feet of another airborne aircraft or a pilot or crew member determines that a collision hazard existed)

Accidents

The definition for aircraft accident is lengthy and fairly technical. An investigation team will make the final determination as to classification. In general, if an occurrence was more serious than those described under the definition of "incident" above, then the occurrence should be treated as an accident.

SAFECOM –Incident/Hazard/Maintenance Deficiency Reporting

The Department of the Interior agencies and USDA Forest Service have adopted a common incident/hazard reporting form. It is called the SAFECOM (Safety Communiqué). The local aviation management staff or designated individual is responsible for immediate completion and transmittal of the form. In their absence, any responsible agency individual with knowledge of the accident should make the report. The form is routed immediately to OAS, the agency's headquarters office, State Aviation Manager, and National Aviation Safety Manager.

The report shall be forwarded by electronic mail or telefax to the State Aviation Manager within 72-hours after occurrence. Notify OAS and BLM aviation safety managers whenever an aircraft mishap involves damage or injury. Use the hot line or the most expeditious means possible. Call 1-888-464-7427.

The objectives of the form are:

- To report any damage or injury less than accident criteria and any condition, act, observance, maintenance deficiency or circumstance which has potential to cause an aviation-related accident.
- To document all aviation hazards and incidents.
- To perform trend analyses for short- or long-term changes in policy and procedures, identify areas needing training, etc.
- To provide accountability for aviation mission participants and employee safety.

It is the responsibility of any individual (including contractors) who observes or who is involved in an aviation mishap to report the occurrence immediately to local aviation management staff. The local Aviation Manager is responsible for reviewing the report and forwarding it through agency channels. Within 48 hours after an aircraft incident, aviation hazard, or maintenance deficiency, the local aviation manager or participant in the flight shall complete and submit the SAFECOM Form. Timely reporting is essential in problem identification and accident prevention.

The agency with operational control of the aircraft at the time of the occurrence is responsible for completion of the SAFECOM and to submit it through its agency channels.

Under 49 CFR 830 the operator is responsible for notifying the National Transportation and Safety Board (NTSB) of any accident.

Operations

Due to the volume of reference material contained in aviation policy and procedures documents, as well as their continual updating, specific procedures or guidance are not addressed below for fear of omitting some item of critical information.

It is the responsibility of aviation managers and associated personnel (pilots, dispatcher, fire managers, etc.) to avail themselves of the necessary documents and acquire a working knowledge of their contents.

The Departmental Manual 350-354 DM and Manual 9400 Aviation Management are the umbrella documents for aviation policy and operations in the Bureau. See Chapter 7, Suppression Resources, for more operational procedure information for tactical aviation resources.

PPE Requirements As stated in the IHOG, for firefighters “the only acceptable situation where a hard hat may be substituted for a flight helmet is as follows: passenger transportation between an established, managed helispot/helibase and an established, managed helispot/helibase.” Firefighters in this case are defined as hotshot crews and other hand crews being shuttled to and from camp, primarily on large project type fires. All other firefighters, e.g., initial attack helitack crews, miscellaneous fire overhead for recon and scouting, will be required to wear full PPE, including a flight helmet.

Helicopter Operations

The Interagency Helicopter Operations Guide (IHOG) is the primary document to be referenced by BLM personnel conducting helicopter operations. The Interagency Heli-Rappel Guide (IHRG) is the reference source for helicopter rappel operations; all fire rappel operations must be in compliance with the IHRG and approved by Director, Office of Fire and Aviation. The Interagency Aerial Ignition Guide (IAIG) is the reference source for all aerial ignition activities.

These guides (IHOG, IHRG, and IAIG) were developed to define and standardize national interagency operating procedures for all helicopter operations, both fire and non-fire; facilitate the exchange of personnel from other agencies during periods of high fire activity (through standardization); provide a common interagency approach in the Government's relationship with helicopter contractors; provide checklists, operational requirements, and special instructions for personnel at helibases; and provide a framework within which each government helibase with contract helicopters can provide supplemental site-specific guidance.

All personnel conducting rotor-wing operations should be knowledgeable of the contents of this document and have it readily available.

Helicopter Crew Personnel Chapter 2 of the IHOG contains required experience, training, and qualification requirements for each helicopter crew position. Refer to Chapter 7 of this document for additional information.

Rappelling The (Draft) Interagency Heli-Rappel Guide (IHRG) is the standard and reference source for BLM helicopter rappel operations. All BLM fire rappel operations must be in compliance with the IHRG and with those standards found in Chapter 7 of this document.

Aerial Ignition The (Draft) Interagency Aerial Ignition Guide (IAIG) is the reference source for BLM aerial ignition operations. All BLM aerial ignition operations must be in compliance with the IAIG.

Minimum Aerial Ignition Standards

Code	Position	Prerequisites	Training
HTMG	Helitorch Manager*	Helicopter Manager Helicopter Crew Member Helibase Manager Type II*	S-371 Helibase Manager [‡] Helicopter Safety
HTPT	Helitorch Parking Tender**	Helicopter Crew Member	S-217 Interagency Helicopter Training
HTMM	Helitorch Mixmaster**	Helicopter Crew Member	S-217 Interagency Helicopter Training
HCRW	Helitorch Crew Person	Firefighter (FFT2) [‡]	Helitorch Training (OJT) Basic Helicopter Safety Trg.
PLDO	Plastic Sphere Dispenser Operator*	Helicopter Crew Member Firefighter	S-217 Interagency Helicopter Training PSD Operator

* Initial certification: Training consists of an 8-hour session for each type of equipment used; the training, qualifications, and experience requirements are outlined in the IAIG Chapter 2, II B, C, D, & E. Each position requires annual certification and satisfactory performance in that position. An assignment is required within three years; if not, an individual must attend initial certification training.

** This qualification (or position) is required when multiple helicopters are used.

‡ Recommended training, not required.
Entering updated training and certification in the Incident Qualification and Certification System (IQCS) is the responsibility of the State Aviation Manager.

Air Tanker Base Operations

Large air tankers are procured under National contracts. The management of these resources is governed by the requirements of the Departmental Manual, BLM Manual 9400, and the Interagency Air Tanker Base Operations Guide (IATBOG). Air tankers are operated by commercial vendors in accordance with Federal Aviation Regulation Part 137.

The IATBOG is the reference source for all air tanker base operations. This guide was developed to define and standardize national interagency operating procedures at all air tanker bases; facilitate the exchange of personnel from other agencies during periods of high fire activity (through standardization); provide a common interagency approach in the Government's relationship with air tanker and retardant contractors; provide checklists, orientation outlines, and special instructions for personnel at air tanker bases; and provide a framework within which each air tanker base can provide supplemental site-specific guidance.

All personnel conducting air tanker base operations should be knowledgeable of the content of this document and have it readily available.

The Startup/Cutoff times as outlined in the (Draft) Interagency Leadplane Operations Guide (ILOG) shall be followed. (These require air tactical or leadplane supervision of air tanker operations prior to or after sunrise and sunset.)

Air Tanker Base Personnel The IATBOG identifies a generic Table of Organization and recommended staffing level for air tanker bases. This Guide also describes the duties associated with the various positions used at air tanker bases. There is currently no identified training for the positions at air tanker bases, however the IATBOG contains a chart identifying recommended training for each position. It is also critical that reload bases staff up commensurate with the need during periods of moderate or high fire activity at the base.

Single Engine Air Tanker (SEAT) Operations

An Interagency SEAT Operating Guide (ISOG) has been developed and approved as policy by both the BLM & USFS, and published (NFES # 1844).

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Since a SEAT Manager is now required to be assigned to SEAT operations, a SEAT Manager Course has been developed.

Leadplane Operations

The (Draft) Interagency Leadplane Operations Guide (ILOG) is adopted by the Office of Fire and Aviation as operating procedures for BLM leadplane operations. Unless for reasons of safety, any deviation from the policies or procedures contained in the ILOG must be approved in writing by the Director, Office of Fire and Aviation. Refer to Chapter 7 for policy.

The only approved low-level (below 500' AGL) operation in fire suppression activities are leadplane and paracargo missions with approved pilots, aircraft, and aircrew.

The ILOG is the reference standard for leadplane operations. This guide was developed to define and standardize national interagency operating procedures for lead planes; facilitate the exchange of personnel for other agencies during periods of high fire activity (through standardization); and provide checklist, orientation outlines, and special instructions for lead plane pilots.

All personnel conducting or involved in lead plane operations (e.g., ATGSs) should be knowledgeable of the content of this document and have it readily available.

Air Tactical Operations

The Air Tactical Group Supervisor (ATGS) is primarily responsible for coordination of aircraft operations when fixed and/or rotor wing aircraft are operating on an incident. Specific duties and responsibilities are outlined in the Fireline Handbook (PMS 410-1). Coordination of airborne resources is performed by the ATGS. The ATGS reports to the Air Operations Branch Director (AOBD), or in the absence of the AOBD, to the operations section chief, or in the absence of the operations section chief, to the Incident Commander. **When airborne, the ATGS works for the IC or operations chief, depending on the size of the incident.** When the positions are in use on an incident, the Air Tanker Coordinator (ATCO) and Helicopter Coordinator (HLCO) will be supervised by the ATGS.

The (Draft) Interagency Air Tactical Group Supervisor Guide is adopted by the Office of Fire and Aviation as operating procedure for BLM air tactical operations. Unless for reasons of safety, any deviation from the policies or procedures contained in the ATGS Guide must be approved in writing by the Director, Office of Fire and Aviation.

The Interagency Air Tactical Group Supervisor Guide has been developed in order to develop and maintain an effective national interagency ATGS program, high standards in training, certification, operating procedures, equipment, and program safety. This document will be the reference for BLM personnel using air tactical group supervisors or functioning in that role on an incident.

All personnel conducting or involved with air tactical operations (e.g., leadplane pilots, helicopter coordinators) should be knowledgeable of the content of this document and have it readily available.

Smokejumper Operations

The Smokejumper Operations Guide has been developed and is available from AFS or NIFC. Also see "Suppression Resources," Chapter 7.

Other Guides

There are various other operational guides used to standardize field operations e.g. Interagency Smokejumper Pilot Operations Guide (ISMOG). These guides are in different stages of development. As they are completed, they will be added to the Standards for Fire Operations.

Agency-Owned Aircraft Operations

The Office of Fire and Aviation has developed Standard Operating Procedures for agency-owned fleet aircraft operations and maintenance. These are adopted as policy by the Office of Fire and Aviation.

Search and Rescue

There are two basic scenarios for BLM personnel and/or aircraft involved in Search and Rescue (SAR) operations:

- 1 the search is initiated by BLM in an attempt to locate or rescue BLM personnel and/or aircraft;
- 2 the search or rescue operation is initiated by a cooperating agency and BLM assistance (in the form of personnel and/or aircraft) is requested by the cooperator.

In either case, actual search operations may not be coordinated by the BLM, they may be coordinated by another agency (such as the local sheriff's department, state police agency).

Search and Rescue is not the BLM's mission.

Regardless of who coordinates the physical search operations, it is the responsibility of each Office to develop and maintain a local Search and Rescue Plan. The following items are recommended for inclusion in a local SAR Plan (other items may also be included as appropriate):

- General Information
- Overdue Aircraft Procedures
- Missing Aircraft Procedures
- Downed Aircraft - Away from Crash/Fire/Rescue Equipped Airport
- Downed Aircraft - Within Crash/Fire/Rescue Equipped Airport's response area
- Initial Action Checklist instructions to rescue personnel
- Crash, Search, and Rescue Plan checklist
- Telephone Directory
- Hazard Map Instructions
- Request Information for Air Ambulance
- Preparing for the arrival of the Investigation Team

(Most dispatch offices have a current Pre-accident Plan with contacts, telephone numbers, etc)

Search and rescue missions often involve specialized flight environments, such as:

- Reconnaissance
- Low-level flight
- Infrared scanning
- Hovering Out of Ground Effect (helicopter)
- Rappelling (helicopter)

- Cargo Letdown (helicopter)

These types of operations must emphasize safety requirements and considerations, and be performed with approved pilots, air crew and aircraft. During complex operations, it may be advisable to use the Incident Command System aviation structure. For multiple aircraft operations, it is recommended that an Air Tactical Group Supervisor (ATGS) be assigned to perform airspace coordination duties. This individual can operate from either a fixed-wing aircraft or a helicopter. The requirements of FAR 91.119 regarding maintenance of minimum safe altitudes from persons or property on the ground apply. Standard agency procedures for flight following, resource tracking, and communications, shall be followed during SAR operations.

Aircraft of other Federal, State and local agencies, military components, and private industry cooperators used by SAR entities that are not currently under contract or agreement should only be used until approved aircraft and pilots can be obtained. In some cases, a Letter of Agreement or Memorandum of Understanding may exist which allows use of other-agency or military aircraft.

BLM employees involved in SAR operations are authorized to use unapproved aircraft and pilots during the emergency phase of the operation when, in the Incident Commander's (person in charge of SAR operations) best judgement, it is deemed necessary to do so to save a life.

The following policies shall govern emergency situations:

- Authorization will be given on a case-by-case basis by the responsible employee in charge or Incident Commander (it is recognized that this cannot always be accomplished before the fact);
- A written justification statement shall be prepared by the employee and attached to a SAFECOM (Form OAS-34), and submitted to the appropriate aviation manager within 24 hours of the completion of the mission.

When injured personnel are being transported, the following procedures should be used:

- Use the most qualified available medical attendant.
- Secure oxygen tanks.
- Carry latex gloves for protection from patient body fluids and blood-borne pathogens.
- Secure patients to litters; secure litters to the aircraft.
- If injuries would be aggravated by use of Personal Protective Equipment (PPE) or the time involved in clothing the patient in PPE, then PPE requirements are exempt.

Refer to the Interagency Helicopter Operations Guide (IHOG), the Interagency Airspace Coordination Guide, and local Search and Rescue Plans for more specific information and regulations.

Airspace Coordination

The Interagency Airspace Coordination Guide (IACG) is adopted by the Office of Fire and Aviation as mandatory policy and operating procedure for BLM airspace coordination. Unless for reasons of safety, any deviation from the policies or procedures contained in the IACG must be approved in writing by the Director, Office of Fire and Aviation.

The IACG is the primary document to be used by BLM personnel (i. e., dispatchers, aviation managers, pilots, and air tactical group supervisors) when dealing with airspace issues. This IACG, adopted as policy by both the Director of OAS and the Director, Fire and Aviation, USDA Forest Service promotes aviation safety by establishing safe, consistent, and standardized approaches to issues involving airspace and Federal land management responsibilities.

Airspace Coordination Specialists All BLM States have an assigned Airspace Coordination Specialist (ACS). These individuals are a ready source of assistance during fire activity, particularly in coordinating fire activity with the FAA and Department of Defense bases. Other individuals are available from BLM and other agencies and are trained to function as an ACS to provide local or statewide assistance.

State Aviation Manager (SAM) are the primary contacts for airspace management issues.

Flight Management/Flight Following

The 9400-1a: The Aircraft Request/Flight Schedule form will be used for approval and flight planning. This form will be completed between the chief dispatcher and flight manager for the mission. The flight manager will use this form to brief the pilot on the mission. Outlined below are the basics relating to flight planning, pre-flight briefing, and flight following.

Special-Use Plans: Special-Use flights require approval by the immediate supervisor and final approval by the local line manager.

Policy

Types of Flights

There are two basic types of flights: **point-to-point** and **Special Use**.

Point-to-point flights typically originate at one developed airport or permanent helibase, with the flight route being direct to another developed airport or permanent helibase. Point-to-point flights are conducted solely for the purpose of transportation of personnel or cargo, and do not involve Special Use-type flight.

Special Use flights are defined by exclusion as all flights not meeting the definition of "point-to-point" flight. As such, Special Use flight requires work to be performed in the air (e.g., retardant or water delivery, fire reconnaissance, smokejumper delivery), or through a combination of ground and aerial work (e.g., delivery of personnel and/or cargo from helibases to helispots or unimproved landing sites, rappelling or cargo letdown, horse herding). Special Use flight inherently require greater planning due to the greater number of hazards and consequent higher degree of risk commonly involved in non-point-to-point flights. These Special Use flights require approved pilots, air crew and aircraft.

A point-to-point flight is conducted at greater than 500 feet AGL (above ground level), with no descent at any time below 500 feet AGL. By exclusion, all other flights are special use.

Fixed-wing Aircraft

Point-to-point Flights All BLM Flights shall be approved using an Aircraft Request/Flight Schedule, BLM Form 9400-1a. This form is the primary document used to plan and track point-to-point flights.

Bureau policy requires the designation of an Flight Manager for each fixed-wing point-to-point flight transporting personnel. The basic duties and responsibilities of the Flight Manager are:

- 1 Pilot's Card: check that pilot is qualified and current for aircraft type
- 2 Aircraft Card: check that aircraft is approved for mission, card current
- 3 Flight Plan/Flight Following: filed with FAA or Agency, facilitate as needed (Filing, opening, and closing the FAA flight plan is the responsibility of the pilot.)
- 4 Pilot Briefed on flight route/mission objective
- 5 Pilot Briefing to passengers is given
- 6 Passengers: have received and understand briefing; all personnel on board are either air crew members, authorized or official passengers

- 7 Fiscal Documents: ensure flight payment paperwork is accurate and signed where appropriate

Tactical/Special-Use Missions Tactical flight missions are aircraft operations associated with initial attack of wildfires and large fire support. For wildfire suppression, these missions are requested and documented on the Aircraft Resource Order form, **not** the Aircraft Flight Request/Schedule.

Personal Protective Equipment (PPE) is required for a special-use mission.

All personnel will meet training and qualification standards required for the mission.

Special-use flight for fixed-wing aircraft includes the following flight missions:

- Flights conducted within 500 feet of the surface
- Water or retardant application
- Parachute delivery of personnel or cargo
- Air tactical group supervisor operations
- Air tanker coordinator operations
- Takeoff or landing requiring special techniques due to hazardous terrain, obstacles, pinnacles, or surface conditions
- Fire Reconnaissance (Precision Recon)

Helicopters

Tactical/Special-Use Missions When dispatching contract or CWN helicopters for initial attack or other tactical missions, the 9400-1a is **not** required. In that case, Special Use requirements are already met with existing unit operating plans or resource orders. The Flight request Form 9400-1a is only used when requesting helicopters for non-tactical, non-fire missions.

Special-use helicopter flights include the following flight missions:

- Flights conducted within 500 feet of the surface
- Water or retardant application
- Helicopter coordinator and air tactical group supervisor operations
- Aerial ignition activities
- External load operations
- Night vision goggle operations
- Hoversite/Autosurvey
- Rappelling
- Aerial capture, eradication, and tagging of Animals
- Offshore vessel or platform landings
- Toe-in, single-skid and step-out landings (prior authorization or exemption required)
- Takeoff or landing requiring special techniques due to hazardous terrain, obstacles, pinnacles, or surface conditions

- Free fall cargo

The use of Personal Protective Equipment (PPE) is required for both helicopter flight missions and ground operations. The specific items to be worn are dependent on either the type of flight, the function an individual is performing, or the type of ground operation being conducted. Refer to the tables in Chapter 9 of the IHOG for specific requirements.

Flight Following

Flight following is the responsibility of the scheduling office and will remain so until transferred through positive hand-off to another facility or office. This hand-off shall be documented. Flight-following reports from the aircraft are the responsibility of the Pilot-in-Command (PIC) in accordance with 14 CFR. Violation of flight following standards requires submission of Form OAS-34 per the Departmental Manual.

For tactical aircraft that cross dispatch area geographic boundaries, the receiving unit is responsible for confirming arrival of the aircraft via telephone to the sending unit, via dispatch channels.

Flight Manager: Will brief the pilot using the 9400-1a. The Flight Manager is responsible for the welfare of the Bureau employee(s) while on the mission.