

AVIATION SAFETY PROGRAM

Revised 9/25/2007

PURPOSE AND SCOPE:

The purpose of this program is to insure that all USGS/BRD Pacific Island Ecosystems Research Center (PIERC) employees who work in and around helicopters as part of their research programs do so in a safe manner so as to avoid any injuries or death and to stay within the guidelines for aircraft safety as set forth by the National Business Center Aviation Management (AM).

This program applies to all federal and state employees, interns, volunteers, guests, and personnel from private contractors who will ride or work around aircraft that is on contract to an employee of PIERC.

All scientists, volunteers, and other field personnel in the US Geological Survey who use aviation for mission field work will know and follow all applicable DOI and USGS policy and regulations pertaining to aviation activities as per the following documents:

- [DOI Departmental Manual 350-354DM](#);
- [AM Operational Procedures Memoranda](#);
- [AM Handbooks](#);
- [USGS Safety Manual SM445-2-H, Chapter 27, Aviation Safety](#)

This program applies for any flight that is not a Point-to-Point or General Use flight.

RESPONSIBILITY:

The Aviation Manager is responsible for administering the Aviation Safety Program. The duties included in the administration of this program are:

- a. Reviewing and updating the program as needed
- b. Arranging for training.
- c. Maintaining records.
- d. Insuring that this program is followed.
- e. Draw up a Project Aviation Plan with information supplied by project leader or employee.
- f. Conduct a risk analysis for all special-use flights.
- g. Arrange for a flight following person and provide that person with a flight plan, flight following schedule and an Overdue Aircraft plan.
- h. Making certain that employees have the necessary aircraft training for the job that they are required to perform.
- i. Making certain that all supervisors, who have aviation users in their chain of command, complete the Aviation Management Training for Supervisors (M3).

- j. Ensuring required personal protective equipment is available and in save working condition.
- k. Ensuring vendor completes records as required by procurement document.
- l. Ensuring a preflight passenger briefing by the pilot.
- m. Ensuring for the safety and welfare of all personnel involved in the helicopter operations.

Project leaders are responsible for:

- a. Following the guidelines as defined in this program.
- b. Coordinating flight planning with pilot, Aviation Manager and users.
- c. Assuring necessary equipment is available.
- d. Obtaining required approval or authorization for the flight.
- e. Procuring the aircraft.
- f. Ensuring required personal protective equipment is utilized.
- g. Performing preflight briefing.

The pilot is in charge of the aircraft and is responsible for the over all safety of the flight.

All personnel who will be working in and around helicopters are required to read, understand, and abide by the contents of this program. If something is not clear or understood within this program, the Safety Officer should be asked for a clarification.

All passengers should discuss with the pilot any concerns they have with agency policy or anything that appears to be of issue. Passengers should not put pressure on the pilot to fly missions that may be unsafe.

If any passenger in a helicopter feels that the pilot is operating the aircraft in an unsafe manner or in violation of AM or USGS policy, they should terminate or cancel the flight immediately and contact the Safety Officer.

USGS personnel may elect without fear of reprisal not to fly under any condition they consider to be unsafe. These situations shall be reported as soon as possible to the Safety Officer, employee's Supervisor, and, when warranted, to AM.

Many private life insurance policies contain exclusionary clauses for such activities as SCUBA diving, skydiving, and participation as pilots, aircrew members, or passengers on Government aircraft (not scheduled air carriers such as Delta, United, etc.). Identification of any exclusionary clauses is the responsibility of the employee.

Research work orders, cooperative agreement, support services contracts, grants, etc. that involve the use of flight services must contain language that all persons onboard aircraft under the operational control of USGS are subject to the directives the USGS Aviation Handbook.

The DOI Department Manual 350-354 series does not apply to international DOI operations (except for fleet operations). All employees should attempt to follow DOI aviation policies to the extent practical. In all cases, employees are expected to use good judgment and common sense.

Required documentation for flight activities must be retained for 2 years. This regulation stipulates recording aircraft registration number, purpose of flight, route(s) flown, flight dates and times, name of all travelers, names of pilot and aircrew. Data not collected by Aviation Management via the AMD-23 Form must be collected and maintained by project management.

Non-revenue flights must be reported on an AMD-23 form and file with AM.

The following categories of personnel are Official Passengers:

- a. Officers and personnel of the Federal Government traveling on official business.
- b. Members of congress and their staffs whose work relates to DOI or USGS programs.
- c. Non-Federal passengers when engaged in missions which enhance accomplishment of a USGS program such as personnel of cooperating state, county, or local agencies; representatives of foreign governments; and contractors' representatives, including those employed by such agencies and private citizens.
- d. Space-available passengers authorized and approved in accordance with OMB Circular A-126.
- e. Space-available travelers approved by the Secretary of the Interior on a trip-by-trip basis.

All passengers who are not official passengers shall be considered unauthorized passengers and are not authorized to be transported in any aircraft owned or operated by or on behalf of the Department/USGS. A person who is otherwise an official passenger could become unauthorized by performing a function for which that person is not authorized (e.g., a passenger performing pilot duties without proper authorization).

TRAINING:

- a. Basic Safety Courses
 - o B3 - Aviation Safety -- Required for everyone who will be working around or flying in a helicopter.
- b. Specialized Courses.
 - o A-312 - (A-312CL Classroom & A-312EX Exercise) - Water Ditching & Survival -- Required for anyone who will be flying over water.
 - o A-219 – Helicopter Transportation of External Cargo -- Required for anyone loading, transporting and unloading cargo in helicopters.
 - o A-110 - Transportation of Hazardous Materials -- Required for anyone who will be responsible for transporting (internally or externally) hazardous materials (including propane and gasoline) in helicopters or fixed wing airplanes.
 - o STEP – Special Technique Landings
- c. Management Courses:
 - o M3 - Aviation Management Training for Supervisors -- Required for supervisors who are directly responsible for employees who utilize aircraft in performance of their duties.
 - o S-372 - Interagency Helicopter Managers -- Required for people who will be designated as the Helicopter Manager.

PILOT AND AIRCRAFT APPROVAL:

- o Aircraft and pilots must meet AM standards for the mission being flown.
- o Pilot and Aircraft approval documents should be checked prior to use.
- o Documents must be current and match pilot and aircraft (tail number).

ORDERING FLIGHT SERVICE:

Services under the AM Aircraft Rental System may only be procured from vendors approved under the Basic Ordering Agreements (BOA). Orders may be placed through the appropriate AM Flight Coordination Center or directly with an approved vendor. Payments for orders placed directly with an approved vendor shall be processed through the AM payment system using the form AMD-23. Bureau personnel placing orders must have a bureau authorization.

When placing an order directly with a vendor, the ordering official shall ensure that:

- a. The vendor and aircraft being considered are on the AM Source List.
- b. Pilot and aircraft offered by the vendor are approved for the mission to be flown.
- c. Competition (cost comparison) is documented in accordance with Federal Acquisition Regulations Part 13 requirements in selection of the vendor. Pricing information contained in the AM source list may be used for this purpose. Documentation supporting the selection should be retained by the ordering office.
- d. Bureau users are instructed to verify by visual inspection that the pilot has a DOI-approved Pilot Qualification Card and the aircraft contains an Interagency Aircraft Data Card authorizing the mission to be flown.
- e. Instructions for placing order (contained on the source list) and documenting services (contained in the Aircraft Use Report, Form AMD-23, booklet) are followed.

GROUND SAFETY:

- a. Keep well clear of helicopter rotors and airplane propellers.
- b. Always get the approval of the helicopter pilot before approaching a starting or operating helicopter. Only approach and depart as directed, in a slightly crouched position and in full view the pilot.
- c. Keep seat belt and shoulder harness fastened until instructed by the pilot to unbuckle.
- d. Wear eye and ear protection when working around helicopters.
- e. Aircraft must be loaded by qualified personnel only.
- f. No smoking within 100 feet of an aircraft.
- g. Do not throw objects to or from an aircraft.

AIR SAFETY:

- a. No smoking within the aircraft.
- b. Keep clear of aircraft controls.
- c. Large objects such as pack packs must be secured while the helicopter is in operation. If they cannot be secured, they must be flown in a cargo net.
- d. Hold small loose objects (i.e., camera, GPS unit) securely while in flight
- e. Keep alert for hazards, particularly towers, electrical transmission lines, and other aircraft. Inform the pilot of their presence.
- f. Avoid unnecessary talk with the flight crew.
- g. Keep seatbelt and shoulder harness fastened until instructed by the pilot to unbuckle.

HAZARDOUS MATERIALS (HazMat):

These are items which many agencies use that have been classified by the Department of Transportation as Hazardous Materials. Transportation of these materials by air is regulated by laws that require special containers, specific labeling, special handling, etc. Some of the more common hazardous materials are:

- Explosives
- Diesel Fuel
- Solvents
- Fusees
- Propane
- Jet Fuel
- Blazo
- Kerosene
- Wet Cell Batteries
- Gasoline
- Aerosols
- Pressurized Containers

Anyone who transports hazardous materials aboard mission aircraft will complete the Aviation Transport of Hazardous Materials training.

The pilot of the aircraft must be notified of hazardous materials before they are loaded into the aircraft or hauled in a cargo net.

PERSONAL PROTECTIVE EQUIPMENT:

Personnel who ride in or work around helicopters must wear the appropriate personal protective equipment. When in doubt as to what is required, wear it.

- a. Above-the-ankle leather boots and no metal against the skin. In certain situations where the landing zone is in a wet area, rubber boots with wool or cotton socks are permitted.
- b. Nomex pants and shirt or flight suit buttoned or zipped to the top, collar turned up, sleeves rolled down, and pants covering the boot tops.
- c. Nomex or leather gloves.
- d. Non-synthetic (cotton, wool) outer and undergarments.
- e. When working on the ground crew around helicopters, hard hats with chinstrap or flight helmets are required. When flying, flight helmets are required.
- f. Approved Personal Floatation Devices (PFD) are required to be worn on board all aircraft operated over water or beyond power-off gliding distance to shore.

HELICOPTER LANDING AREA:

When choosing a landing area:

- a. Locate a reasonably flat area.
- b. Choose an area clear of people, vehicles, and obstructions such as trees, poles and especially overhead wires. The area must be free of stumps, brush, posts, large rocks or anything over 18 inches high.
- c. Consider wind direction. Helicopters land and takeoff into the wind. Choose an approach free of obstructions. Any obstruction should be relayed to the helicopter crew on initial radio contact.
- d. Remove or secure any loose items in and around the landing area such as trash bags, blankets hats, teach or equipment.
- e. Wet down the landing area if dusty conditions are present.
- f. Toe-in, single-skid, step-out landings are prohibited unless specifically approved by the AM director.
- g. Stay well clear of landing or taking-off helicopters. Situate yourself so that you are visible to the flight crew on landings and take-offs. Avoid the area behind a helicopter.
- h. Always get the approval of a flight crewmember or the pilot before approaching a starting or operating helicopter. Only approach and depart as directed, in a slightly crouched position, and in full view of a crewmember.
- i. When approaching or departing, do not hold equipment overhead.

FLIGHT OPERATIONS:

Hours of Operations:

Helicopter operations shall be conducted during daylight hours only. Daylight hours are defined as 30 minutes before official sunrise to 30 minutes after official sunset.

Flight Plans:

Pilots shall operate on FAA, ICAO or a DOI bureau-approved flight plan. Vendor flight plans are not acceptable. Flight plans shall be filed with the Safety Officer or his/her appointed representative prior to takeoff when possible.

Flight Following:

Pilots are responsible for flight following with the FAA, ICAO, and/or in accordance with the USGS bureau-approved flight following procedures. USGS flight plans and flight following must specify route of flight, estimated time of arrival, aircraft tracking during flight, and emergency response procedures. USGS flight following must provide for position reports to be documented at predetermined intervals (usually not more than 1 hour), and provide enough information so that an aircraft can be easily located should it become overdue or missing. The Project Leader shall file a flight following procedure with the Aviation Officer or his/her appointed representative with flight following duties prior to any helicopter operations. The Aviation Officer or her/his appointed representative for flight following duties shall be familiar with appropriate actions to take in the event of an overdue aircraft, aircraft mishap, etc.

Vendor flight following must be approved by Aviation Management.

The pilot or a designated passenger must request the local FAA Flight Service Station or person with local flight following responsibilities to close the flight plan within 30 minutes after landing.

Briefing:

Before each takeoff, the pilot shall insure that all passengers have been briefed with the location of:

- Emergency Locator Transmitter (ELT)
- Aviation life support equipment
- First aid kit
- Fuel shut off switch

In those instances where multiple short flights are made, the pilot briefing does not need to be repeated unless new passengers come aboard.

Weight and Balance:

The Project leader or her/his designated assistant will be responsible for load calculations and weight distribution for loading cargo nets. This information will be kept in a weight and balance book and consist of the following information:

- a. Equipped weight of aircraft, as configured
- b. Passenger configuration(s)
- c. Cargo weight and distribution limits
- d. Center of gravity limits
- e. Maximum takeoff and landing weights
- f. Charts for computing weights and CG location.
- g.

This information must be submitted to the pilot prior to flight activities.

Manifesting:

The Project Leader or her/his designated assistant shall provide the helicopter pilot with a manifest of all passengers scheduled to be on board during a helicopter operation. When a Helicopter operation consists of external cargo load and passengers, the Project Leader or her/his designated assistant will supply the pilot with a written schedule listing the order of events. Passengers are prohibited from riding in a helicopter that is being used for hauling external loads.

Communications:

In instances where multiple short flights are made transporting personnel, gear or material, the Project Leader or her/his designated assistant will have direct radio communications available with the pilot at all times.

Cooperator Aircraft:

Whenever PIERC personnel are involved in helicopter operations involving aircraft owned or leased by agencies other than DOI, the aircraft must be appropriately equipped for the mission as defined in 351 DM 2.2 and all personnel shall wear personal protective equipment as defined in the above paragraph in this program when flights are to engage in special use activities.

PIERC employees who will be flying with other agencies must notify the Safety Officer of their intentions.

Aviation Mishap Information System (AMIS) and SAFECOM:

All project personnel who will be involved with activities using helicopters should be familiar with the procedure for reporting any unsafe conditions via the AMD website.

AMIS is an electronic data system encompassing all aspects of aviation mishap reporting within DOI. Categories of reports include aircraft mishaps, aviation hazards, aircraft maintenance deficiencies, and airspace intrusions. The system uses SAFECOM to report any condition, observance, act, maintenance problem, or circumstance(s) which have potential to cause an aviation-related mishap.

Submitting a SAFECOM is not a substitute for "on-the-spot" correction(s) to a safety concern; rather, it is a tool used in the documentation, tracking, and follow-up corrective action(s) related to a safety issue.