



Regional Summary of Procedures for Monitoring Low Level Aerial Survey Operations

Revised December 31, 2009

Clearwater Region
Idaho Department of Fish and Game
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PRIOR TO FLIGHT

The individual responsible for initiating the survey requiring low altitude flying is required to complete the following actions before the flight is conducted.

1. Arrange for flight-following.

Automated flight following (AFF) should be used whenever possible. Idaho State Communications is recommended due to their professionalism, availability, and diligence in monitoring flights on AFF. If AFF is not available, the U.S. Forest Service or BLM dispatch is highly recommended to conduct flight-following. If these agencies are unable to provide flight-following, other professional organizations (Sheriff Offices, Emergency Medical Services, etc.) may be used. However, if coverage is inadequate or if potentially suitable agencies have competing demands (wildfire coordination, etc.) a Department employee should be assigned to conduct flight-following. The Department employee will have flight-following duties as his primary assignment and be located at an office where he has access to necessary radio and telephone resources to accomplish all communications with the aircraft and notification to emergency services.

2. Select observers.

- (a) Qualified to collect necessary biological information,
- (b) Have completed low altitude flight safety training,
- (c) Are knowledgeable in the use of ELT's, satellite phones, GPS units, IDFG radios, and other specialized equipment as necessary.

3. Prepare a flight plan and maps of the area to be flown.

The flight plan will include at least:

- (a) Name and phone number of the aircraft contractor,
- (b) Pilot's name,
- (c) Make/model of aircraft,
- (d) Aircraft Identification number (N#),
- (e) Color of the aircraft,
- (f) Radio frequencies that will be used to flight-follow and other frequencies programmed into the aircraft radio,
- (g) List of observer's names,
- (h) Phone number of the primary and secondary on-flight satellite telephones,
- (i) Brief summary of the area that you plan to fly,
- (j) Approximate duration of the flight,
- (k) Point of departure and the final point of arrival,
- (l) Locations of refueling stops (if any),
- (m) County(ies) you will be flying in, and
- (n) Detailed maps of the areas to be surveyed, including outlined subunits or drainages to be surveyed.

4. Make arrangements for either AFF or personnel flight-following.
 - (a) Must be done at least two days prior to conducting the flight. Regional Supervisors must approve any flight scheduled with less than two days notice.
 - (b) Discuss your flight plans and flight-following procedures with the person or agency that will be doing the flight-following.
 - (c) Send a copy of your flight plan and maps of the area where your work is planned to the person or agency doing the flight-following.
 - (d) If Department personnel are conducting flight-following, they must be well trained in their responsibilities and have a copy of this procedure manual with them while flight-following.
 - (e) Check-ins must be documented and provide enough information so the aircraft can be easily located if it is overdue or missing. Fire dispatch prefers that locations be in latitude-longitude and bearing in degrees. Additional information such as the drainage you are flying in and the estimated time you will be in the immediate area can also be included in your location information. "The time required to rescue a survivor is directly related to how accurately your position can be determined. If you have filed a flight plan, stayed on course, and updated your progress with frequent position reports, your chance of rescue is greatly enhanced." (NFES 1373 page 15)
5. If the flight operations occur in any military training area or travel route, contact the appropriate military scheduling officer to schedule your flight activity a minimum of 2.5 hours before flying in the area (preferably a day in advance) to avoid conflict with military training flights.

<i>Area</i>	<i>Military Route</i>	<i>Route Sections</i>	<i>Phone Number</i>
<i>No military routes in the Clearwater Region.</i>			
<i>Consult Great Falls Sectional Aeronautical Chart for details on IR and VR routes.</i>			

6. Discuss your flight plans with the pilot, the purpose of the flight and the flight-following procedures that will be used. Tell the pilot of any flight hazards that you know occur in the area and unpredictable environmental conditions (turbulent winds, clouds/fog, etc.) that have been experienced in the area on previous flights.
7. If flight-following will involve more than one agency, establish with each agency how flight-following will be transferred from one jurisdiction to another jurisdiction. Identify all jurisdictions, who will be the contact person, the telephone number(s) at each jurisdiction and radio frequency(ies) that each jurisdiction will use.

FLIGHT-FOLLOWING RESPONSIBILITIES FOR DEPARTMENT PERSONNEL

Your primary responsibility is to maintain contact with aircraft conducting low altitude surveys and having enough information to initiate an effective search and rescue effort if you cannot contact the aircraft 30 minutes after its last scheduled report.

Before the Flight

1. The responsibilities of flight-following are your primary responsibility. If any other tasks start to interfere with this responsibility, immediately have someone else take over those tasks.
2. Review the contents of this manual.
3. Make sure that you have a properly completed flight plan from the person responsible for conducting the flight.
4. Make sure that you have a Flight-Following Log form with all the necessary information and that you know how to record the necessary information.
5. Discuss check-in procedures including time and locations, how flight locations will be reported (drainages and mountains, subunits, UTM's, latitude-longitude, etc.).
6. Verify the radio frequency(ies) that will be used.
7. Verify that you will contact the aircraft at intervals of 30-minutes or less when the aircraft is airborne.
8. Discuss how contact will be conducted during the periods when the aircraft has landed (e.g. refueling, forced environmental landings, etc.).
9. If flight-following responsibilities will be transferred from, or to, another agency, establish how transfer will be done, identify all jurisdictions, who will be the contact person, the telephone number(s) at each jurisdiction and radio frequency(ies) that each jurisdiction will use.
10. Discuss how the flight plan and flight-following will be closed.
11. Know what procedure to follow if contact is lost with the aircraft (who to contact and what your responsibilities are; see page 6).

During the Flight

1. Record the information received from the aircraft:
 - (a) Time,
 - (b) Subunit, drainage, or location and direction of travel,
 - (c) Any comments from the aircrew.
2. The aircrew will contact you whenever they move into a new subunit or drainage.
3. Initiate contact with the aircraft at least every 30 minutes.
4. Repeat process until the flight is terminated for the day.

IDAHO DEPARTMENT OF FISH AND GAME

Policy No.: A-17.04

Policy Title: CHARTER OR RENTED AIRCRAFT AND PILOTS OPERATING
REQUIREMENTS AND LOW ALTITUDE AIRCRAFT
PROCEDURES AND SAFETY POLICY

Revision Date: February 1, 2007

I. PURPOSE:

This policy is established to provide guidance and direction to all employees engaged in low-altitude flying required by Department programs involving, but not limited to, wildlife surveys, radio tracking, animal capture/transporting, redd counts, and high mountain lake fish planting. Low-altitude flights, for the purpose of this policy, include all flights, both fixed wing and helicopter, where work is performed below 500 feet above ground level.

The policy covers the basic aspects required in the procurement of aircraft/pilot services, accepted safety precautions, and the use of safety apparel and equipment. The safety equipment and apparel are not required to be used by employees when the flight is not low altitude in nature and is for transporting personnel only between two specific terminal points. This policy does not include enforcement night flying.

Close adherence to this policy will assure optimum safety for both employees and aircraft operators and minimize potential liability claims against the Department.

Willful disregard of any portion of this policy will be grounds for disciplinary action up to and including dismissal. All employees who fly must review this entire policy A-17.04, and sign form (Appendix C). **No employee will be allowed to fly until this memo is signed and in the possession of his/her supervisor.**

A. General Requirements

All aircraft operations involving the transportation of passengers from point to point, both intrastate and interstate, in any aircraft operated by the State of Idaho, shall be according to all applicable rules set forth in Federal Aviation Regulation, 14 CFR part 135 ("FAR"). State-employed pilots shall meet all training and proficiency requirements of FAR part 135, and state-operated aircraft shall be maintained in accordance with the appropriate parts of FAR part 135.

All aircraft operations involving aerial surveys, game counts, aerial photography, and all other aircraft use not involving aerial transportation of state personnel in point-to-point operations in the furtherance of State of Idaho objectives shall meet, at the minimum, the requirements of the rules of 14 CFR part 91. Further, all charter operations for such activities shall be conducted either in state aircraft operated by the Idaho Transportation Department, Division of Aeronautics, or by duly qualified and certificated air charter organizations.

Further, all passenger or freight charter aircraft operations by state agencies will be only by Federal Aviation Administration (FAA) certificated Air Carrier Operators who hold current FAR part 135 or FAR part 121 Air Carrier Operations Certificates and are authorized by appropriate operations specifications to perform the operations for which they have been chartered.

II. PROCUREMENT OF AIRCRAFT SERVICES

A. Helicopter Aircraft Services

1. All helicopter services for census, transport, or capture in which a Department employee flies shall be contracted through the U. S. Department of Interior National Business Center, Aviation Management (AM). All capture work done by an outside source (non-department personnel) shall be through a state contract.
2. All helicopters and helicopter pilots utilized by the Department must be carded by AM to perform the flying requirement. The pilot shall, upon request, present his/her AM pilot card which denotes approval for the planned use.

A current Department of Interior aircraft data card (No. OAS-47 for general use or No. OAS-36 for special use) must be displayed in a conspicuous location in the aircraft.

3. The following categories are considered special-use activities by AM and have pilot and helicopter requirements, in addition to those needed for general use:
 - a. Flights with external loads.
 - b. All flights below 500 feet above ground level.
 - c. Deep snow operations.
 - d. Mountain flying.
 - e. Mountainous terrain takeoffs and landings above 5,000 feet density altitude.
 - f. Animal marking and capture.
 - g. Other:
 - ☐ Net-gunning operations,
 - ☐ Capture-darting, and
 - ☐ Drive-netting
4. It is the Department employee's responsibility to assure that the pilot and helicopter are carded to perform the flying requirements prior to the flight.

B. Fixed-Wing Aircraft Services

1. All fixed-wing aircraft services will be through the Idaho Department of Aeronautics or by the use of price agreements with private operators. The Department will not use AM rental agreements for this service.
2. The following categories are considered special-use activities for fixed-wing aircraft and pilots and have requirements in addition to those needed for general use.

- a. Airplane operations requiring changes to the airplane that invalidate the standard airworthiness certificate (radio tracking required external antennae)
 - b. All flights below 500 feet above the surface, and
 - c. Mountainous terrain takeoffs and landings above 5,000 feet density altitude.
3. It is the Department employee's responsibility to assure that the pilot and fixed-wing aircraft are carded to perform the flying requirements.

C. Procurement Procedures for Field Personnel

1. Helicopter Aircraft Services

- a. Employees will complete the front side of the Helicopter Flying Request Form and forward, through their supervisory chain, to the Bureau of Wildlife. The Bureau of Wildlife will review the request and if approved, assign a flight number. The Bureau of Wildlife will return the request along with the following procedure for procuring the flight.
- b. Employees then visit the AM website and select a vendor and aircraft model. The website is located at <http://www.oas.gov/apmd/seat/seat.htm>. At this website employees select the IDFG contractor list and pricing information. Once selected, employees can view aircraft and pricing. Employees must contact each vendor fitting their needs and discuss the flight. Use the Aircraft Vendor Request form (on reverse of Aerial Flight Record) to complete the estimated cost figures and compute a total estimated cost for each vendor. Include all costs including truck mileage, per diem, etc. If, during the conversation, a vendor says he cannot fly your requirement, document that fact in the comments section. Employees need not complete the cost figures for a vendor who says he cannot fly your requirement. Rates are established by bid or federal rule and are not negotiable.
- c. After completion of all cost figures, employees must call the lowest cost vendor and schedule the flight. Complete the "Vendor Selected" block, sign and date the form. Any time a vendor other than the lowest cost vendor is selected, the circumstances must be fully justified in the comments section of the form.
- d. When the flight is completed, the vendor will prepare the OAS 23 Form. Employees must complete the areas as follows:
 - 1) Billee Code: 91 WO
 - 2) User Organization and Charge Code: Flight Number and PCA
 - 3) Signed Received: Employees Initials.
 - 4) Certification: Signature, Printed Name, Agency, etc.
- e. In order to improve the speed at which the vendor gets paid, send the signed white copy directly to AM. You may ask the vendor to forward the signed white copy to AM, but this may delay payment. Send yellow copy of the OAS 23, Aerial Flight Record Form BA-42, and Aircraft Vendor Request forms to the Wildlife Bureau. Keep a copy for your records. In an emergency, requests may be faxed, emailed, or handled by phone, with the written documentation to be prepared later.

2. Fixed-Wing Aircraft Services

3. Trainers must coordinate with the statewide flight safety officer for any additional training, such as net gunning, darting, hover landing training, etc. to assure compliance with AM and Department requirements.
4. Trainers will work with regional flight safety officers to assure equipment needs, training needs, and other flight requirements are adhered to.

E. Flight Safety Training

1. Employees who will be flying in low-elevation helicopter or fixed-wing aircraft for any Department work are required to take the in-person flight safety training (B3 Certification) every 3rd year; the in-between years require computer training located at: <http://iat.nifc.gov/>. Employees need to complete modules A-101, 105, 106, 108, and 113, and take the tests at the end of each. Employees must let their regional flight safety instructor and/or supervisor know that they have completed the training.
2. In addition to the above flight safety training requirements, each employee who will be flying must read this Flight Policy 17.04 in its entirety and sign the certification that they have read and understood the policy (Appendix C). This certification memo must be documented and forwarded to their supervisor and regional flight safety officer.

IV. COMMUNICATIONS AND FLIGHT PLANNING

A. Flight-Following Service

1. For all low-altitude flights, the Department employee in charge of the flight will arrange for flight-following services. Flight-following services can usually be arranged through the local Forest Service or Bureau of Land Management offices, county sheriff's offices or Regional IDFG office. Idaho State Communications in Meridian can provide 24hour/7day a week flight following availability by either Radio Check-in/Check-out flight following or through the use of the Automated Flight Following (AFF). Flight-following services should be coordinated through the region/bureau flight safety officer. Flight following is a check-in procedure, whereby radio contact and aircraft position are established at least once every 30 minutes.
2. A flight plan containing the following information must be communicated to the flight follower at least 15 minutes prior to takeoff: whether the flight is AFF or radio check-in, tail number, aircraft type, departure point and route of flight, people on board, purpose of flight, radio frequencies to monitor, fuel status, etc.
3. Flight follower must be contacted when taking off and at least every 30 minutes following, or whenever a major change in flight location is taking place. Flight follower must be informed of every landing and takeoff unless other arrangements have been made. Flight follower must be contacted when flight is terminated. If the aircraft fails to make contact within one-half hour of the scheduled time, the flight-following service will initiate a search and rescue operation by notifying **Idaho State Communications at (800) 632-8000**. Idaho State Communications will page the Idaho Department of Transportation, Aeronautics Division and follow procedures listed in regional flight manuals.

B. Flight Plan

A verbal flight plan of your scheduled flight will be provided to the flight-following agency for all flights. A written flight plan and maps of the sub-units should be left with the flight-following service. Digitized maps or software with unit boundaries should be made available for use by flight followers instead of hard copies if they are available. Idaho State Communications has these maps.

C. Pilot-Observer Briefing

1. The Department employee in charge will initiate a discussion of the mission requirements and safety procedures prior to going out to the aircraft. This is an excellent flying safety procedure and is a firm requirement, regardless of the number of times the mission has been flown previously.
2. The briefing and discussion should include:
 - a. Mission requirements and objectives and flight-following procedures;
 - b. Area to be flown. Use sectional aeronautical charts or U. S. Geological Survey topographic maps so that ground elevations in the area are known. It is recommended you leave a marked map showing areas to be flown and the flight plan with ground personnel involved with the flight (fuel truck driver, relief flying personnel, etc.).
 - c. A review of the regional hazard map;
 - d. Weather briefing information from Federal Aviation Administration (FAA), including temperature, winds, visibility, and turbulence forecast for the area;
 - e. The pilot computing and discussing density altitudes, aircraft gross weight, and aircraft performance;
 - f. Emergency procedures and emergency equipment on board the aircraft, including radio or AFF procedures, PLB location, satellite phone use, first aid gear, etc.; and
 - g. Coordination of radio frequencies and operational ability.

D. Radio Communications

1. On-Board Aircraft Radio

All aircraft under Department rental agreement(s) shall have an on-board, VHF/FM-capable radio with Idaho Department of Fish and Game, U. S. Forest Service, Bureau of Land Management, local sheriff's office frequencies, and/or other appropriate flight-following frequencies such as Idaho State Communications (155.280 Mhz (F2) as primary and 155.340 Mhz (F1) as a backup). This on-board radio will be used for flight-following services.
2. Portable Radios

A Department portable radio will be carried on each low-altitude flight. Although the Department now requires satellite phones on all flights, the radio may assist ground searchers or direct ground to air communications that cannot be achieved with satellite phones. Each portable radio will be programmable and carry a minimum of the Department frequencies and be capable of using Department repeaters. These radios should, if possible, be capable of having the frequencies of other agencies programmed into the system. This would include, where applicable, the U. S. Forest Service, the Bureau of Land Management, State Communications, and the local sheriff's

office, etc. Each portable radio will have spare batteries and should be carried in a crush-resistant container, if one is available.

3. Personal Locator Beacons (PLB)

Department personal emergency locator beacons with GPS will be carried on each low-altitude flight; at least one carried by a passenger and a second in the emergency kit or carried by another passenger.

All aircraft under Department rental agreements or contract shall have on board a functional PLB.

4. At least one satellite phone is required on each IDFG fixed wing flight. On helicopter flights, one satellite phone must be carried by a passenger and a second must be either carried by another passenger or stowed in the emergency kit.

F. Automated Flight Following (AFF)

AFF is now the Department standard and should be incorporated on all flights when possible.

There are two types of flight following:

Automated Flight Following (AFF) is a satellite/web-based system. The dispatcher can “see” an aircraft icon on a computer screen and view, real time; its location, speed, heading, altitude, and flight history.

Radio Check-in / Check-out flight following requires verbal communication via radio at least once every 30 minutes. Automated flight-following requires the dispatcher to check the computer screen at least once every 30 minutes in lieu of a verbal check-in. The dispatcher logs the aircraft call sign, location, and heading at each check-in (radio or computer).

NOTE: An agreement between the pilot and dispatcher must be made on which type of flight following will be used, preferably by phone 10-15 minutes prior to takeoff, but may be done via radio if a telephone is not available or operational (contact by radio is discouraged unless it is the only option). Radio procedures will be used along with AFF the first time an AFF unit is used in an aircraft. AFF must be used when equipment is available and functioning for flight following when using a helicopter, and is preferred for fixed wing flights.

1. Automated Flight Following (AFF) reduces the requirement to “check in” via radio every 30 minutes, and provides the dispatcher with information on the flight, airspace, and other data pertinent to the flight. This reduces pilot and observer workload, clears overloaded radio frequencies, and provides the dispatcher with much greater detail and accuracy on aircraft location and flight history.

a. Requirements to Use AFF:

- 1) Procedures for flight requests and flight plans etc., are the same as radio check-in procedures.
- 2) The aircraft must be equipped with the necessary hardware (transmitter and antenna).

- 3) The dispatch office responsible for the flight following must have a computer connected to the Internet immediately available to them in the dispatch office. Dispatch office(s) responsible for flight following shall be staffed for the duration of the flight.
- 4) Training: The flight following dispatcher must have a working knowledge of the AFF program (Webtracker) and must have a current username and password for the AFF system.
- 5) Automated Flight Following does NOT reduce or eliminate the requirement for aircraft on mission flights to have FM radio capability, and for the aircraft to be monitoring appropriate radio frequencies during the flight.

b. Procedures for Using AFF :

- 1) When a user requests flight following from a dispatch office, parties must agree at least 48 hours in advance of expected flight, and then again 10-15 minutes in advance of departure, that AFF will be used.
- 2) The following information must be communicated to the dispatch office: tail number, aircraft type, departure point and route of flight, people on board, purpose of flight, radio frequencies to monitor, known flight hazards, fuel status, etc. (no change from radio check-in procedures).
- 3) The dispatch office must log on to the AFF web site (www.aff.gov), verify that the aircraft icon is visible on the screen, and be able to quickly monitor this page at any time during the flight.
- 4) When aircraft is initially airborne, a radio call must be made to the flight following dispatch office stating "Nxxxx off (airport or helibase name) AFF", dispatch office shall respond "Nxxxx, (dispatch call sign) AFF". This is required to positively verify that both the aircraft and the dispatch office are using AFF, radios are operational, and that the dispatcher can "see" the aircraft on the computer screen. If there is a problem at this point, revert to normal radio 30 minute check-in procedures until the problem is resolved.
- 5) The dispatch office then sets a 30 minute timer and, at a minimum, monitors the computer at 30 minute intervals for the duration of the flight.
- 6) When the aircraft has completed the flight and landed, the pilot or passenger (observer, Chief of Party, ATGS, etc.) must contact the dispatch office via radio or telephone informing them that they are on the ground. It is the responsibility of the primary observer or Fish and Game flight leader to make sure this call is made.

c. Procedures for Pilot/Primary Observer:

- 1) Contact dispatch with request to use AFF (preferably via phone at least 10-15 minutes prior to flight).
- 2) Provide Dispatch with appropriate flight information (same as procedure as for radio check-in as per IDFG flight manuals).
- 3) Whether dispatch agrees to monitor using AFF or radio flight following, assure appropriate FM frequencies and tones will be monitored during flight and then brief dispatch on radio call procedure you will use and what response is expected (this should not differ from IDFG radio flight following manual and policy).

- 4) Shortly after take off, contact dispatch via radio stating "Nxxxx off (airport or helibase name) AFF".
- 5) If radio contact is not made with dispatch office, return to airport/helibase.
- 6) If radio contact is made, and AFF is verified by dispatch office, monitor assigned frequencies, for duration of flight
- 7) If a deviation from planned and briefed flight route occurs, contact dispatch office via radio with the change.
- 8) If AFF capability is lost at the dispatch office, or the signal is lost during the flight, flight following will revert to 30 minute radio check-in procedures.
- 9) Monitor the appropriate radio frequencies at all times during the flight.
- 10) It is very important to inform dispatch upon landing that you are on the ground each and every time you land. Also, dispatch must be told when you have terminated the flight and flight following.

d. Procedures for Aircraft Dispatcher:

- 1) When AFF is requested, ensure AFF program access is available and request standard flight information from the pilot/Chief of Party (COP). Document using existing dispatch forms and logs.
- 2) Provide pilot/observer with appropriate frequencies to monitor during the flight (Dispatch frequency, National flight following, etc.). Ensure these frequencies are monitored during duration of flight.
- 3) Brief with pilot/observer on radio calls expected and responses you will provide (these should be similar to the IDFG flight following policy and manual).
- 4) Check AFF system to ensure icon for the aircraft is shown.
- 5) Shortly after take off, pilot/COP will call via radio stating "Nxxxx off (airport or helibase name) AFF". Check aircraft Icon color and verify time and date. Respond to the radio call, stating "Nxxxx, (dispatch call sign) AFF".
- 6) Keep the AFF system running on your computer during the entire flight.
- 7) Set 30 minute timer, and check flight progress as appropriate during the flight. Document using existing forms and logs.
- 8) If the icon turns RED, it means the signal has been lost. Immediately attempt contact with the aircraft via radio and follow normal lost communication, missing aircraft, or downed aircraft procedures as appropriate. IDFG flight following manual has procedure and phone numbers to use to initiate response.
- 9) If radio contact is made after a lost signal, flight will continue using 30 minute radio check-ins for flight following until AFF is resumed.
- 10) Use same procedure if computer system goes down during flight.

V. SAFETY EQUIPMENT

All equipment used for flying and flight safety must be inspected for any defects, deficiencies, or compliance with policy on a monthly basis. Any deficient equipment that will interfere with flight safety will be noted and repaired or replaced by the regional flight safety officer.

A. Clothing