

Memorandum of Understanding (MOU)
between the
United States Department of the Interior (DOI) Office of Aviation Services (OAS)
and the
United States Department of Agriculture (USDA) Forest Service (FS)

Subject: Interagency Fire Helicopter Standards

I. Introduction

The U.S. Forest Service and those Department of the Interior Bureaus with wildland fire management responsibilities share the common goals of reducing the wildland fire threat to human life and property and protecting our national resources. Because fire recognizes no boundaries, agencies must strive for more productive cooperation and efficient operations. Within the Department of the Interior, the Office of Aviation Services is DOI's single source for commercial aviation services and enters into this agreement on behalf of the department and those bureaus represented on the National Interagency Aviation Council (NIAC). The signatory agencies to this agreement recognize that each agency shares an interest in aviation resources for fire suppression activities and other land management activities, and that each agency's mission can be better accomplished through cooperative efforts and sharing of talents, information, and resources. Therefore, they agree to work together and support each other in the development and maintenance of interagency fire helicopter standards.

This collaborative effort will benefit the signatory agencies and the wildland fire community by reducing duplication and providing consistent standards. Benefits include, but are not limited to, the following:

- A. Interagency cooperation, which yields better communications, improves the depth of organization for subject matter expertise and user support, and fosters goodwill between the agencies.
- B. The opportunity to develop standardized elements, as appropriate and practical, to be utilized consistently throughout the fire community.
- C. User support that is consistently available and applicable across agency boundaries.

II. Authorities

- A. Department Manual Release No. A1549, issued by the Secretary of the Interior on June 20, 1973, under the authority granted in Reorganization Plan No. 3 of 1950. (OAS)
- B. National Forest Management Act of 1976 (P.L. 94-588), as amended. (FS)

III. Purpose

The purpose of this MOU (agreement) is to provide a general framework for cooperation and coordination among the agencies to establish and document interagency fire helicopter standards covering the present and future determination of:

- A. Equipment that constitutes an aircraft eligible for approval as an interagency fire helicopter; and
- B. Eligibility of pilots for approval as interagency fire helicopter pilots.
- C. This MOU does not include optionally piloted helicopters.

IV. Responsibilities

The signatory agencies, within the scope of this agreement and the above-referenced authorities (paragraph II), will coordinate their respective efforts in regard to managing the interagency fire helicopter standards, which are attached as the Exhibit and are by reference hereby incorporated and made a part of this MOU. Additional responsibilities may be identified in subsequent modifications to this MOU as necessary.

The signatory agencies agree that:

1. All aircraft and pilots to be approved for interagency fire suppression and other fire-related missions will meet the same standards for both agencies.
2. Inspection of aircraft and pilots will be to the same standards.
3. Procurement for aviation resources to be used under this agreement will have standard technical specifications.
4. Except where legal requirements prevent it, standard forms will be used for inspections, approval, and disapproval of aviation resources used under this agreement.
5. Aircraft and pilot inspectors will be accepted by both agencies as authorized interagency inspectors.
6. Proposals for new, revised, or deletion of agreed-upon current standards will be discussed formally with representatives of all agencies party to this agreement prior to implementation. The purpose of such discussions shall be to review proposals, evaluate the impacts on each organization, develop alternatives, resolve conflicts, and recommend follow-up action.
7. Aircraft and pilot approvals issued by authorized interagency inspectors for “On-Call” or “Call-When-Needed” contracts/rental agreements shall include approval for both DOI and USDS FS “ON-Call” or “Call-When-Needed” contracts/rental agreements applicable to the aircraft or pilot being approved. Inspectors will include both contract/rental agreement numbers when adherence to the applicable contract standards can be confirmed.

V. General Provisions

- A. The signatory agencies are not obligated to make expenditures of funds or provide services through their participation under the terms of this MOU unless such funds are made available through appropriations by the Congress of the United States or other means.
- B. This instrument is neither a fiscal nor a funds obligation document. Any endeavor involving reimbursement or contribution of funds among the parties to this instrument will be handled in accordance with applicable laws, regulations, and procedures including those for Government procurement and printing. Such endeavors will be outlined in separate agreements or other appropriate arrangements that shall be made in writing by representatives of the parties and shall be independently authorized by appropriate statutory authority. This instrument does not provide such authority. Specifically, this instrument does not authorize or commit to noncompetitive awards to the signatory agencies or cooperators of any contract or other agreement. Any contract or agreement for training or other services must fully comply with all applicable requirements for competition.
- C. Signatory agencies and their respective offices are responsible to manage their own activities and costs and will utilize their own resources, including the expenditure of their own funds, in pursuing the objectives of this MOU. Each signatory agency will carry out its respective separate activities in a coordinated and mutually beneficial manner.
- D. Recommended modifications to this MOU may be initiated through members of the National Interagency Aviation Council (NIAC). The modifications shall not take effect until documented and signed by properly authorized signatory officials from each of the signatory agencies.
- E. The signatory agencies agree to comply with all Federal information laws, regulations, and requirements and shall be responsible for properly protecting all information used, gathered, or developed as a result of work under this agreement. Each signatory agency will share data and information to the extent appropriate, practical, and consistent with the requirements of Federal law regarding fire occurrence reporting. Any information furnished to or shared among the signatory agencies under this instrument is subject to the Freedom of Information Act (5 U.S.C. § 552).
- F. This MOU in no way restricts the signatory agencies from implementing their respective programs in accordance with the applicable statutes, regulations, or policies.
- G. Signatory agencies acknowledge that this MOU is not intended to and does not create any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity, by a party against the United States, its agencies, its officers, or any person, or the parties to this MOU.

VI. Term of Agreement

The term of this MOU shall become effective with and upon execution of the final signature by the participating signatory agencies and shall remain in effect for a period of 5 years from the date the final signature was placed on the approval section, or until such time as the MOU is terminated. The MOU shall be reviewed by the signatory agencies to determine its suitability for renewal, revision, or termination. Either signatory agency may terminate their participation in this MOU by providing written notice to the other party by providing ninety (90) days written notice in advance of the projected termination date.

VII. Resolution of Disagreement

Should disagreement arise on the interpretation of the provisions of this MOU or amendments and/or revisions thereto that cannot be resolved informally by the parties in consultation with the NIAC, each party shall state the area(s) of disagreement in writing and present them to the other parties for consideration. If agreement on interpretation is not reached within 30 days, the parties shall forward the written presentation of the disagreement to respective higher officials for resolution.

VIII. Principal Contacts

Unless otherwise designated (and identified) in this section, the signatory officials are the Points of Contact to this agreement. The Points of Contact are responsible for coordinating an annual review of the currency and adequacy of this agreement. Changes to the Points of Contact can be made by written notification to the signatory agencies.

IX. Signatory Approval

This MOU, upon full execution, supersedes the Aviation Management Council, Interagency Fire Helicopter Standards, executed by the USDA FS and DOI OAS on December 30, 2005, and which are attached to the DOI AM Operational Procedures (OPM) Memorandum 21.

Upon execution of this agreement, all solicitations/contracts written or awarded in consideration of this agreement shall contain the minimum interagency fire helicopter standards written herein, attached as the Exhibit.

This MOU shall be effective for a period of 5 years, commencing on the date the final signature is placed in this signature section.

Jeff Power
Assistant Director, Aviation
U.S. Department of Agriculture/Forest Service

Date

Mark L. Bathrick
Director, Office of Aviation Services
U.S. Department of the Interior

Date

The authority and format of this agreement have been reviewed and approved for signature.

EXHIBIT
INTERAGENCY FIRE HELICOPTER STANDARDS

I. Minimum Helicopter Equipment

- A. Hobbs/flight hour meter observable from the cockpit.
- B. Free air temperature gauge.
- C. FAA-approved double-strap shoulder harness with automatic or manual locking inertia reels for each front seat occupant. Shoulder straps and lap belts shall fasten with one single-point, metal-to-metal and quick-release mechanism. Standard factory shoulder harnesses are acceptable for all standard category helicopters. Military style harnesses are acceptable.
- D. Either single or double-strap shoulder harnesses for each aft cabin occupant. (All shoulder harness straps and lap belts shall fasten with a single-point, metal-to-metal, and quick-release mechanism.)
- E. Fire extinguisher(s) as required by 14 CFR (must be a handheld bottle, minimum 2-B:C rating, mounted and accessible to the flight crew while seated).
- F. Dual controls (for flight checks only).
- G. Aircraft lighting for night operation in accordance with 14 CFR Part 91.205(c), including instrument lights.
- H. A strobe light (with either a white, or half-white/half-red lens) or a flashing LED (red or white), mounted on top of the aircraft or otherwise visible from above, with an independent activating switch. A red strobe or rotating beacon does not satisfy this requirement.
- I. High visibility, pulsating, forward facing, conspicuity lighting.
- J. High visibility marked rotor blades.
- K. High-skid-type landing gear, if manufactured for make and model.
- L. Locking cap(s) on all fuel inlet ports. (Closed-system, single-point refueling port dust caps need not have an FAA-approved locking device.)
- M. Environmental Control Systems
 - 1. Cabin heater for passenger-carrying aircraft.
 - 2. Window defogger.
- N. Cargo restraint system for aircraft manufactured with a parcel/storage area behind the rear passenger seats.
- O. Convex mirror (not required for aircraft equipped for vertical reference operations).

- P. One keeperless cargo hook that is capable of being loaded and locked in a single motion with one hand and is rated at the maximum lifting capacity of the aircraft. (Not required for Type 1 helicopters).
- Q. Personnel access step for aircraft with a floor height greater than 18 inches.
- R. Water/retardant bucket or tank:
 - 1. One collapsible, variable capacity water/retardant bucket. The bucket shall have a manufacturer's capacity adjustment commensurate with the maximum lifting capability (HOGE) of the aircraft at 5,000 feet pressure altitude and 30 degrees Centigrade with a 200-pound pilot and 1½ hours of total fuel.
 - 2. One externally or internally mounted baffled, quick-disconnect fixed suppressant/retardant delivery tank that meets or exceeds the capability (HOGE) of the aircraft at 5,000 feet pressure altitude and 30 degrees Centigrade with a 200-pound pilot and 1½ hours of total fuel.
- S. A remote operating switch for the water/retardant bucket and/or remote hook clearly marked for "open" and "closed" and mounted on the collective control to avoid confusion with the airframe cargo hook release.
- T. A remote operating switch for the water/retardant tank clearly marked for "open" and "closed" and mounted on the collective control, unless tank STC requires a different switch location.
- U. Baggage compartment or cargo racks adequate for long-handled tools (58 inches). (only required for helicopters approved for passengers)
- V. First aid kit.
- W. Survival kit.
- X. An accessory power source consisting of an MS 3112E12-3S three-pin connector, accessible in the cabin (only required for helicopters approved for passengers).
- Y. Part number MS 3101E24-11S, nine-pin connector, for use as the power source for a helitorch or remote cargo hook (not applicable for Type I heavy helicopters).
- Z. A wire strike protection system (mechanical), if manufactured for the make and model of helicopter. (Wire Strike required for all helicopters carrying FS personnel.)

If required by the contract, the following additional special mission requirements apply:

- AA. One electrically activated remote cargo hook protected by a metal ring or cage that may be loaded and locked in a single motion with one hand and that is rated at the maximum lifting capacity of the aircraft.
- BB. Longline wire or synthetic rope readily adjustable from 50 to 150 feet in 50-foot increments.

II. Avionics Equipment

- A. One panel-mounted VHF-AM (VHF-I) aeronautical transceiver with a minimum of 760 channels covering 118.000 to 136.975 MHz
- B. One panel-mounted P25 digital VHF-FM aeronautical transceiver covering 138.0000 to 174.0000 MHz (analog narrowband + P25 digital narrowband, at least 6 but no more than 10 watts, 32 CTCSS TIA/EIA-603 standard tones, 168.625 MHz Guard).
- C. Auxiliary FM (AUX-FM) provisions (10-pin connection to the audio system, antenna w/BNC connector, and mounting facilities). Only required for helicopters approved for passengers.
- D. Separate audio systems for pilot and observer (only required for helicopters approved for passengers).
- E. ICS for the pilot, observer/copilot, and two aft cabin exits (not applicable for helicopters designed for a single occupant; e.g. KMAX or aft cabin exit positions on helicopters not approved for passengers).
- F. Hot mic for the pilot and observer/co-pilot (not applicable for helicopters designed for a single occupant; e.g. KMAX).
- G. Push-to-talk (PTT) for radio + ICS for the pilot (on cyclic) and observer/copilot (footswitch or cord-mounted), and ICS PTT (cord-mounted) for two aft exits (ICS PTT not applicable for helicopters designed for a single occupant; e.g. KMAX or aft cabin exit positions on helicopters not approved for passengers).
- H. One global positioning system (GPS). The GPS shall be located where the pilot and the copilot/observer can clearly view the display, shall utilize WGS-84 datum and reference latitude and longitude coordinates in the DM (degrees/minutes/decimal minutes) mode, and shall be powered by the aircraft electrical system. Antennas must have a clear view of the sky. The GPS unit must have the ability for manual entry of waypoints in flight. The GPS shall have a database updated annually and covering the continental United States. Contractors accepting dispatches to Alaska shall also include an Alaska database in the GPS. Aviation portable GPS units (Garmin GPSMAP 296/396/496 or equivalent) are acceptable provided they use remote antennas, are securely mounted, present information from an overhead orientation (not a drive-along-the-road type), and meet all the previously stated GPS requirements.
- I. One automatic-fixed Emergency Locator Transmitter (ELT), which must: be certified under TSO-C126 (or newer); be approved for use in helicopters; be installed in accordance with the ELT manufacturer's instructions (including rigid attachment providing less than one-tenth inch movement with 100 lbs. force applied in the weakest direction); be mounted in a conspicuous or marked location, and; meet the same requirements as those detailed for airplanes in 14 CFR 91.207 (excluding section f). The ELT's antenna(s) must

be mounted externally to the aircraft, unless installed in a location approved by the aircraft manufacturer. TSO-C126 and newer ELTs require documentation of current registration with the National Oceanic and Atmospheric Administration (NOAA), or the national civil aviation authority with which the aircraft is registered. ELTs certified to TSO-C91a are acceptable prior to January 1, 2024. ELT's utilizing hook-and-loop (e.g. Velcro) mounting straps will not be acceptable after January 1, 2024. U-92A/U audio connector jacks at all required positions.

- J. One air traffic control (ATC) transponder and altitude reporting system meeting the requirements of 14 CFR Part 91.215(a) and (b).
- K. Pitot/static/altimeter and transponder/encoder maintained to 14 CFR 91.411 specifications.
- L. One Automated Flight Following (AFF) system compatible with the Government's AFF tracking network.
- M. One ADS-B Out system meeting the requirements of 14 CFR Parts 91.225 and 91.227 beginning January 1st 2020.

III. Fuel Service Vehicle (Not Required in Alaska)

- A. Minimum capacity, 8 hours fuel for the assigned helicopter.
- B. Two fire extinguishers, each having a rating of at least 20-B:C and with one extinguisher mounted on each side of the vehicle. Extinguishers must comply with *National Fire Protection Association (NFPA) 10: Standard for Portable Fire Extinguishers*.

Note: FSV inspected after 1 January 2022 shall comply with the following:

- ▶ Each FSV shall have two fire extinguishers, with one fire extinguisher mounted on each side.
 - ▶ Extinguishers shall comply with *NFPA 10: Standard for Portable Fire Extinguishers* and each shall have a minimum rating of 40-B:C. Fire extinguishers with an A-rating will not be acceptable.
- C. One accurate fuel-metering device for registering quantities in U.S. gallons of fuel pumped. (The meter must be positioned so it is in full view of the person fueling the aircraft.)
 - D. Placards in accordance with 49 CFR 172.
 - E. Marked with fuel type.
 - F. Sump with drain.
 - G. Nozzle screen (splash refueling), nozzle dust-protective device, nozzle-bonding device.

- H. Adequate bonding cables which must be utilized in accordance with *NFPA 407: Standard for Aircraft Fuel Servicing*
- I. Fuel filtering system marked with filter change date.
- J. Spare filter.
- K. NO SMOKING signs with letters that are a minimum of 3 inches high and that are visible from both sides and rear of the vehicle.
- L. Record for recording daily sump-draining results as per the procurement document.
- M. Spill containment material.
- N. Hoses compatible with aviation fuel being dispensed.
Note: FSV inspected after 1 January 2022 shall comply with the following:
 - ▶ Aircraft fueling hose shall be removed from service after 10 years from date of manufacture.
 - ▶ Aircraft fueling hose not placed into service within 2 years of the date of manufacture shall not be used.
- O. Fuel trucks shall meet the deadman control requirements as outlined in NFPA 407.
- P. The contractor is responsible for ensuring compliance with 40 CFR Part 112, including a written Spill Prevention, Control, and Countermeasure Plan (SPCC) for each mobile fueler (fuel service vehicle).

IV. Pilot Certification Standards

- A. Commercial or airline transport pilot certificate with rotorcraft/helicopter rating.
- B. Class I or II FAA medical certificate.
- C. Contract/vendor pilots shall have a current FAA Form 8410-3 for passenger and internal cargo transport.
- D. Written evidence of authority to transport external loads.
- E. Contractor provided signed verification of vertical reference proficiency (long line operations).

V. Pilot Experience Standards

Experience	Hours
Pilot-in-command, helicopters	1,500
Helicopter, preceding 12 months	100**
Weight class (12,500 lbs. or less, more than 12,500 lbs.)	100
Turbine helicopter operations	100
Make and model	50*
Make, model, and series preceding 12 months	10

*Flight hour requirements may be reduced by 50% if the pilot submits evidence of satisfactory completion of the manufacturer's approved pilot ground and flight procedures training in the applicable make and model, or FS/OAS-accepted equivalent training.

**The contractor may request that this pilot flight-hour requirement is waived for a pilot under special circumstances; however, the waiver may or may not be granted. The contractor should contact the contracting officer in advance of this need for additional information on this process. No other pilot qualification exceptions will be considered by the Government.

If required by contract, the following additional special mission requirements apply:

Note: Pilot-in-Command (as related to the applicable special mission approval).

Special Missions	Minimum Flying Hours Experience
Mountain flying***	200
Mountain flying experience, make and model	10
Longline vertical (VTR) reference experience	10
Annual longline VTR recurrency training	2

***Operating helicopters in mountainous terrain as identified in 14 CFR 95 Subpart B, Designated Mountainous Area. Operating includes maneuvering and numerous takeoffs and landings to ridgelines, pinnacles, and confined areas.

Note: Experience operating outside the United States may be considered "Mountain Flying" providing it is conducted in mountainous regions defined as 2,000 feet above surroundings containing long slopes, deep valleys, and high ridges. Operating includes maneuvering and numerous takeoffs and landings to pinnacles, ridgelines, and confined areas.

VI. Pilot Personal Protective Equipment

Comply with the April 2018 Revision 2.8 or the most current revision of the Interagency Aviation Life Support Equipment (IALSE) for further guidance.

VII. Pilot Duty Limitations

- A. Maximum 14 hour duty day.
- B. Minimum 10 hours of rest between duty days.
- C. Maximum 8 hours of flight in a duty day.
- D. Flight time not to exceed 42 hours in any 6 consecutive days.
- E. If flight time exceeds 36 hours in 6 days, the next day is a required day off.

VIII. Pilot Evaluation Standards

- A. All special use evaluations shall be conducted in accordance with the Interagency Helicopter Pilot Practical Test Standards.
- B. All longline evaluations shall be conducted using a minimum of a 150-foot line.
- C. All pilots shall have completed the Interagency Aviation Training (IAT) aviation firefighting courses MH1, MH2, and MH3 within the last 36 months.
- D. All pilots shall have completed IAT A-110–Hazardous Materials, within the last 36 months.

IX. Mechanic Standards

- A. The mechanic must have a valid FAA mechanic certificate with airframe and powerplant (A&P) ratings.
- B. The mechanic must meet one of the following qualifications:
 - 1. The mechanic must have held a valid FAA mechanic certificate, with A&P ratings, for 24 months and been actively engaged in aircraft maintenance as a certificated mechanic for at least 18 months out of the last 24 months.
 - 2. The mechanic must have held a valid FAA mechanic certificate, with A&P ratings, for 12 months and show evidence of four years military experience of aircraft maintenance training and qualification as a Technical Inspector, or service equivalent, for Airframe or Powerplant.
 - 3. The mechanic must have held a valid FAA mechanic certificate, with A&P ratings, for 12 months and have held a foreign equivalent mechanic certificate for 24 months.
- C. The mechanic must have 12 months experience as an A&P mechanic, or foreign equivalent, in maintaining helicopters (3 of those 12 months must have been within the preceding 24 months).

- D. The mechanic must show evidence of maintaining a helicopter of the same make and model as offered under "field" conditions for at least one full season. Three months' experience maintaining a helicopter away from the operator's principle base of operations and, while under minimal supervision, will meet this requirement.
- E. The mechanic must have 12 months maintenance experience on the same make and model offered or satisfactory completion of a manufacturer, or equivalent, maintenance course for the same make and model offered.

X. Operational Standards

- A. Minimum aircraft performance standards.
 - 1. Aircraft shall be capable of a jettisonable payload of 550 pounds HOGE at 30 degrees Centigrade at 5,000 feet pressure altitude with a 200-pound pilot and 1½ hours total fuel.
 - 2. Powered by a turbine engine.
 - B. Aircraft Maintenance
 - 1. The aircraft's required weight and balance data must be determined by actual weighing of the aircraft, in contract configuration. The weight and balance data must be current, within the preceding 24 calendar months. The aircraft must be weighed following any major repair or major alteration or change to the equipment list that significantly affects the center of gravity of the aircraft. The contractor must compile a list of equipment installed in the aircraft at the time of weighing. If the Government requires additional equipment after the contract award, the jettisonable payload requirement in paragraph X.A.1 will be decremented accordingly.
 - 2. Helicopters shall conform to the approved type design (normal or restricted) and be maintained and operated in accordance with type certificate requirements. If an operator has a 135 certificate, the aircraft will be maintained in accordance with their FAA-approved maintenance program. 14 CFR Part 133 and 137 aircraft will be maintained in accordance with the type certificate and applicable supplemental type certificates (STC).
 - 3. Power assurance checks will be conducted and recorded and trends monitored at least once every 10 flight hours.
 - 4. Operators will provide a consolidated listing of component TBO and retirement items and their status.
 - C. Rapid/Hot refueling shall comply with NFPA 407.
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