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USDA United States Department of Agriculture

Animal and Plant Health Inspection Service

Wildlife Services

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Subject: 14 CFR 137-Agricultural Aircraft Operations

Date: September 20, 2001

To: Bobby Acord, Acting Administrator, APHIS
William Clay, Deputy Administrator, WS

From: Michael V. Worthen, Director Western Region, WS

This memorandum serves as notice that the US Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services aviation program conducts agricultural aircraft operations and will operate under 14 CFR 137, Subpart C operating rules.

Lloyd D. Burraston
Regional Aviation Manager, WS

Approved:

/s/ Michael V. Worthen, Director Western Region, WS 9/21/01

/s/ William H. Clay 10/02/01
William Clay, Deputy Administrator, WS

Animal Protecting America's Agriculture

A-6.7 Certified Flight Instructors:

Airplane and Helicopter Certified Flight Instructors (CFIs) report directly to the FITO and the ASI, respectively on matters that relate to their duties as a CFI only. The CFI must be knowledgeable on the WS Aviation Operations Manual, WS training manuals, WS Aviation Safety Program Manual, MEL, aircraft maintenance manuals, AFMs, FARs, and other instructions pertinent to his duties. The CFI's duties include but are not limited to the following:

- Assist in keeping training manuals current.
- Perform training of agency or contract pilots.
- Conduct pilot proficiency flights for agency or contract pilots.

A-6.8 Pilots:

The Pilots report directly to the SDs and are responsible for the safe and efficient conduct of the flight. The Pilot in Command (PIC) shall meet the aeronautical experience requirements per the WS Aviation Operations Manual. Must be knowledgeable of the WS Aviation Operations Manual, WS Aviation Safety Program Manual, MEL, aircraft maintenance manuals, AFMs, FARs, and other instructions pertinent to his duties. The PIC duties include but are not limited to the following:

- Determine he/she is current in the aircraft assigned and initial and recurrent tests are accomplished on or before the required time period.
- Check flight and duty time records to determine he/she meets the flight time limitations and rest requirements before accepting the assigned flight.
- Perform the required pre-flight inspection appropriate for the aircraft being flown in accordance with the AFM and WS Aviation Operations Manual.
- Review the aircraft records to determine if the aircraft is airworthy and has adequate time remaining to complete the assigned flight without going beyond compliance time for inspections, airworthiness directives, overhauls, and life limited components.
- Confirm the aircraft has been returned to service in accordance with FARs and WS accepted procedures.
- Confirm the AFM, aircraft weight and balance records, aircraft equipment list, current appropriate aeronautical charts, MEL (if applicable), AFML, and registration and airworthiness certificates are on board the aircraft as required by FARs and WS agency policy.
- Check discrepancy sheet to determine if discrepancies have been corrected or deferred in accordance with accepted procedures in the WS Aviation Operations Manual.
- Confirm inoperative items have been properly placarded and deferred in accordance with the approved MEL and WS Aviation Operations Manual.
- Plan the flight assignment and obtain a weather briefing through a Flight Service Station (FSS) or other approved weather source. The briefing will include a review of the current and forecast weather, Pilot Weather Reports (PIREPS), winds aloft, flight precautions, Significant Meteorological Information (SIGMET), Airman's Meteorological Information (AIRMET), NOTAMS, and ATC delay programs.
- Prepare or supervise preparation of flight planning considering factors such as altitude, terrain, weather, range, weight, cruise control data, airport facilities, navigational aids, and fuel

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- requirements.
- Ensure the proposed flight will not be contrary to FARs or WS policy.
- Supervise the loading, distribution, and securing of cargo and calculate weight and balance is within the prescribed center of gravity limits.
- Responsible for completing the AFML in accordance with the procedures in the WS Aviation Operations Manual.
- Responsible for recording all aircraft discrepancies in the AFML and for notifying the mechanic of these discrepancies as soon as possible.
- Responsible for contacting the SD and mechanic prior to obtaining maintenance away from the base of operations.
- Responsible for supervising refueling and maintenance activities away from the base of operations.
- Responsible for assisting crewmembers/passengers in the event of an emergency.
- Responsible for submitting a report for deviation from the FARs in the event of an emergency.

A-6.9 Maintenance Personnel:

Maintenance Personnel are directly responsible to the SD and PIC for all matters pertaining to their duties and responsibilities. Maintenance Personnel will inform the SD or PIC immediately of any condition or function of the maintenance operation that is unsafe or not in compliance with FARs or WS policy. Maintenance Personnel will:

- Adhere to all directions and instructions given him/her by the SD or PIC and to assist the SD or PIC where and whenever possible to minimize delays and increase production and efficiency.
- Keep informed of all procedures, methods, and practices performed by the maintenance organization and to seek out all available information pertinent to their responsibilities.
- Ensure all utilized shop equipment and tools are in a serviceable and working condition.
- Maintain the premises of the maintenance facility in a clean and orderly manner, ensure all tools and equipment are properly calibrated and returned to their proper place for future use, and to preclude their loss or damage.
- Ensure he/she has been provided with and will use the current applicable maintenance and overhaul manuals, service and parts manuals, Service Letters (SL) and Service Bulletins (SB), Airworthiness Directives (AD), and any other required technical data. Ensure these materials are kept clean and orderly and return them to their proper place when the work is completed or his/her shift terminates thus ensuring their future availability.
- Ensure proper handling of all parts, units, assemblies, and aircraft while in the maintenance and/or repair process and all documentation is kept current as to open discrepancies and completed corrective actions.
- Ensure all required inspection records, inspection forms, identification tags, and other pertinent forms are properly executed and all forms are updated daily or in a timely manner so as to preclude delays and loss of productivity.
- Install the correct and applicable replacement parts, hardware, and/or materials. If parts, hardware, and/or materials are not available, they will inform the ASI for further instructions with regards to initiating requisitions for parts, hardware, and/or materials and follow through with the instructions given them.

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A-9.1 Weapons Requirement:

While conducting aerial hunting operations, only the designated gunner may carry weapons aboard the aircraft and operate these weapons while in the aircraft. The weapon will at no time have a shell in the chamber unless the muzzle is outside of and pointed away from the aircraft.

A-9.2 Ammunition Requirements:

All ammunition used in aerial hunting operations will be factory ammunition. The use of reloaded or hand loaded ammunition is not authorized.

Section C – Aircraft and Equipment

C-5.5 Fixed Wing Discretionary Equipment (State Option):

The following equipment is desirable and may be required by the SD:

- 82" diameter propeller (PA18 STC 11-SA279AL) or equivalent.
- Oversize main wheel tires (Tundra tires).
- Built up cushions for either front or rear seat.
- Right side shooting window.
- Extended landing gear.
- Extended skylite.

Note: Any item listed above requires the approval of the NAM prior to installation.

C-5.6 Shooting Window Requirements - Fixed Wing:

- Gunning may be accomplished from either side of the aircraft, providing suitable shooting windows or ports are available and proper safety markings are applied to the aircraft as specified in this section. The left-hand shooting window will have a maximum of a 22-inch opening. The majority of the pilots and gunners feel the left side of the aircraft is the most desirable side for right-handed gunners and the right side for left-handed gunners.
- It is generally agreed, it is easier to accidentally hit aircraft components while shooting from the right side, and the flight characteristics of the aircraft tend to favor left turns. Therefore, gunning from the left side is strongly encouraged, but the SD may, if he feels the situation warrants it, authorize gunning from either side of the aircraft with approval from the NAM.
- The PIC is directly responsible for the safety of the flight and has the final jurisdiction in any decision that may affect the safety of that flight, and if, in the pilot's opinion, gunning from the designated side compromises safety, the pilot may refuse to conduct the flight. The pilot may be required to submit a written report to the SD or the NAM detailing his reason for not conducting the flight.

C-6 Fire Extinguishers, First Aid and Survival Kits:

C-6.1 Fire Extinguishers:

A fire extinguisher will be carried in each aircraft and will be of a type meeting DOT requirements and be UL listed. The fire extinguisher at a minimum must contain 14 oz. of Halon 1211 and be mounted so as to be accessible to the flight crew in flight. Dry chemical fire extinguishers are not acceptable.

E-1 Pilot in Command Qualifications and Certification:

- All pilots that are approved for WS operations will hold at least a valid restricted commercial pilot certificate with the proper ratings for the equipment to be used and have in their possession a valid Class 1 or Class 2 FAA medical certificate.

E-1.1 Agency Pilots:

- Employees of the WS program must meet the requirements of GS-2181 Aircraft Operator Series. They may be issued a WS pilot qualification card with a minimum of 900 hours total flight time if they meet the requirements listed in the WS Aviation Operations Manual, have successfully completed an approved WS pilot training program, and completed a comprehensive flight evaluation given by the NAM or his designee. See the Training Section of the WS Aviation Operations Manual for further details.
- Individuals applying for the position of WS pilot who do not meet the minimum requirements for the WS pilot training program outlined in the Training Section must meet the minimum requirements for WS contract pilots outlined in the Training Section and must successfully complete a pilot pre-employment flight check with the NAM or his designee.
- Pilots engaged in WS operations must consistently demonstrate the following traits:
  - Positive flying safety attitudes and habits.
  - A positive attitude regarding requirements and procedures for the aerial hunting of predatory animals.
  - Emotional stability under the stress of low-level aircraft operations required in aerial hunting operations.
  - Positive personality characteristics are required to effectively work and communicate with field personnel and cooperating agencies.
  - Knowledge of predators and a willingness to learn how to take advantage of predator behavior to effectively and efficiently conduct aerial search and pursuit activities.
  - Ability to identify and safely maintain effective airborne visual contact with the target animal.
  - Willingness to work unusual hours and lodge at remote field locations.
- Pilots who do not meet the above criteria, show a disregard for safety and policy, or exhibit a poor and reckless attitude may be grounded from further flight operations by the SD, NAM, or RD.
- Any pilot that is actively engaged in WS program flight operations must immediately report to their immediate supervisor and the NAM any known medical deficiency that would make them unable to meet the requirements of their current medical certificate. See FAR 61.53, Operations During Medical Deficiency. The NAM has the authority to ground a pilot for suspected medical problems.
- No Agency pilot may operate an aircraft in a careless or reckless manner so as to endanger the life or property of another.
- A copy of the pilot's FAA certificate and WS ID card will be sent to ABS Contracting for documentation for the contract file under which a pilot may be operating.

Section E – Flight Crewmember Requirements

E-1.2 Contract Helicopter Pilot Requirements:

The use of rental or contract helicopter pilots for all WS operations must meet the following requirements:

- The NAM or his designee must certify the helicopter operator and pilot on a regular basis.
- If helicopter use will involve external load operations (i.e., sling loads), the operator and the pilot must also be certificated under the provisions of FAR, Part 133 (External Load Operations). The pilot and helicopter must have the approval of the NAM.
- Helicopters used for the capturing of animals must comply with the provisions of the WS Aviation Operations Manual.
- All contract and charter helicopter pilots will have the following minimum experience requirements that can be verified by personal or company log books. Personal references will be verified for low-level and WS pilot time.
  - 1,500 hours in a helicopter as PIC.
  - 100 hours in appropriate class size aircraft (e.g., light, medium, or heavy as applicable).
  - 200 hours in a helicopter equipped with a reciprocating engine (if applicable).
  - 100 hours in a helicopter equipped with a turbine engine (if applicable).
  - 50 hours of helicopter time within the preceding 12 months.
  - 200 hours including 50 hours in the last 6 months of low-level flying over hazardous or mountainous terrain of the type in the general contract area and operating from unimproved helipads located at high-density altitudes if applicable to contract areas.
  - 250 hours experience as pilot for predator control hunting operations or 500 hours experience in agriculture application operations or similar type flying.
- Limited waivers may be issued by the NAM for experienced WS contract or charter pilots who do not meet the recent short term flying time requirements but meet all other requirements and satisfactorily complete a flight check with an experienced inspector pilot.

E-1.3 Contract Fixed Wing Pilot Requirements:

All contract fixed-wing pilots will have the following minimum experience requirements that can be verified by personal or company log books. Low-level and WS pilot time must be verified by personal references.

- 1,500 hours total pilot time.
- 1,200 hours PIC in single engine land (SEL).
- 200 hours PIC time in the preceding 12 months including 50 hours in similar type aircraft in the preceding 6 months.
- 100 hours PIC in the make and model of aircraft to be used on WS missions.
- 200 hours PIC low-level operations over typical terrain found in the area of operations and operating from unimproved airstrips at high-density altitudes.
- 250 hours experience as PIC for predator control hunting operations or 500 hours experience in agriculture application operation or similar type flying experience.
- Depending on the total experience level of the pilot, pilots that do not meet the recent short-term flying time requirements, but meet all other requirements, may be granted a waiver by the NAM on certain short-term requirements.

- Each new contract pilot will receive a minimum of 40 hours of WS low-level operations training by an approved WS CFI at the expense of the government.

E-2 Pilot Identification Cards:

- All pilots meeting the minimum certification and qualification requirements will receive a flight proficiency check by the NAM or his designee. Upon satisfactory completion of all flight tests, the pilot will be issued a WS Pilot Identification Card.
- The pilot will carry this card with him during all Agency operations.
- WS Pilot ID cards can only be issued by the NAM or his designee.
- WS Pilot ID cards may be suspended or revoked by the NAM for failure to meet the minimum safety or medical standards or for reasons of general unsatisfactory performance in operating and/or maintaining the aircraft. If a pilot is involved in an aircraft accident/incident, the NAM may suspend a pilot's ID card and flight authority until the completion of an accident/incident investigation.

E-3 Drugs and Alcohol:

- No individual will act as a flight crewmember on WS flights while taking or under the influence of any drug or medication that affects that person's faculties in any manner contrary to safety. These drugs include but are not limited to:
  - Antihistamines (found in most over-the-counter cold medications)
  - Muscle relaxants
  - Some pain killers
  - Some motion sickness preventatives
  - Alcohol and narcotics
- No person will act as a flight crewmember within 8 hours after the consumption of any alcoholic beverage or while under the influence of alcohol.
- Departmental Regulation 6116, Drug Free Workplace, requires agency pilots to submit to random drug testing. Refusal to submit to drug testing can lead to a 30-day suspension or removal from duty.

More information concerning the Drug and Alcohol Testing program can be found in Section N of this manual.

J-1 Maintenance and Inspection:

J-1.1 Nine or Less Passenger Seats:

All aircraft used in WS operations will be maintained under the applicable portions of 14 CFR Part 43, 14 CFR Part 91, and 14 CFR Part 135. WS aircraft will be inspected in accordance with 14 CFR Part 91.409 for 100 hour and annual inspections, or for helicopters, the manufacturer's inspection program may be used unless WS or the contractor has approval from the FAA to use an Approved Aircraft Inspection Program (AAIP) for that aircraft. Manufacturer's inspection checklists will be used to inspect the aircraft. The ASI or his designee is responsible for ensuring equipment is installed with a Supplemental Type Certificate (STC) or Field Approval, having instructions for continued airworthiness, and for ensuring these instructions become a part of the inspection program. All ADs and mandatory SBs will be complied with as applicable.

J-1.2 Ten or More Passenger Seats:

WS aircraft type certificated for a passenger seating configuration, excluding any pilot seat, of ten seats or more will be maintained under a maintenance program in accordance with 14 CFR Part 135.415, 14 CFR Part 135.417, and 14 CFR Part 135.423 through 135.443.

J-1.3 Avionics Inspection Procedures:

WS is responsible for the airworthiness of each of the aircraft that it operates including all installed avionics. The SD or his designee is responsible for ensuring each aircraft is inspected in accordance with the Avionics Inspection Procedures in Section O of the WS Aviation Operations Manual. The avionics inspection checklists will be used and completed for each inspection and remain in the aircraft records until the inspection is repeated, superseded, or for two years whichever comes first.

J-2 Mechanical Reliability Reports:

WS will report the occurrence or detection of each failure, malfunction, or defect "*During Flight*" in any aircraft it operates concerning the following:

- Fires *during flight* and whether the related fire-warning system functioned properly;
- Fires *during flight* not protected by related fire-warning system;
- False fire-warning *during flight*;
- An exhaust system that causes damage *during flight* to the engine, adjacent structure, equipment or components;
- An aircraft component that causes damage or accumulation or circulation of smoke, vapors or toxic or noxious fumes in the crew compartment or passenger cabin *during flight*;
- Engine shutdown *during flight* because of flameout;
- Engine shutdown *during flight* when external damage to the engine or aircraft structure occurs;
- Engine shutdown *during flight* due to foreign object ingestion or icing;
- Shutdown of more than one engine *during flight*;
- A propeller feathering system or ability of the system to control overspeed *during flight*;

- A fuel or fuel-dumping system that affects fuel flow or causes hazardous leakage *during flight*;
- An unwanted landing gear extension, retraction, or opening or closing of landing gear doors *during flight*;
- Brake system components that result in loss of brake actuating force when the aircraft is "*in motion on the ground*";
- Aircraft structure that requires major repair;
- Cracks, permanent deformation, or corrosion of aircraft structures if more than the maximum acceptable to the manufacturer or the FAA;
- Aircraft components or systems that result in taking emergency actions *during flight* (except action to shut-down an engine); and/or
- Any other failure, malfunction, or defect in an aircraft that occurs or is detected at any time if in the opinion of WS personnel, the failure, malfunction, or defect has endangered or may endanger the safe operation of the aircraft.

"*During Flight*" means the period from the moment the aircraft leaves the surface of the earth on takeoff until it touches down on landing.

J-2.1 Reporting Failures, Malfunctions, or Defects:

The PIC or the maintenance personnel as applicable will enter a concise statement in the AFML concerning the failure, malfunction, or defect. The PIC or maintenance personnel will immediately notify the SD by the most expeditious means available with as much of the following information as possible:

- The type and identification number of the aircraft.
- The date of the occurrence.
- The nature of the failure, malfunctions, or defects.
- Identification of the part and system involved, including available information pertaining to type designation of the major component and time since last overhaul.
- The apparent cause of the failure, malfunction, or defect (e.g., wear, crack, design, deficiency, or personnel error).
- Other pertinent information necessary for more complete identification, determination of seriousness, or corrective action.

The SD is responsible for completing the FAA Form 8010-4 "*Malfunction or Defect Report*" (see example, Section Z) using the information submitted above. The above information along with the name of the operator will be submitted to the local FSDO for each 24-hour period beginning at 0900 hours local time of each day and ending at 0900 hours local time on the next day. Each report of occurrences during a 24-hour period must be mailed or delivered to that FSDO within the next 72 hours. Reports due on Saturday or Sunday may be mailed or delivered on the following Monday, and reports due on a holiday may be mailed or delivered on the next workday. For aircraft operated in areas where mail is not collected, reports may be mailed or delivered within 72 hours after the aircraft returns to a point where the mail is collected.

The PIC is responsible for reporting all of the above-mentioned failures, malfunctions, or defects that occur *"during flight"* or *"in motion on the ground."*

Maintenance personnel are required to report any of the above-mentioned abnormalities they may note during maintenance, inspection, or repair of the aircraft.

All personnel will submit these reports to the SD with all applicable details of the abnormality. In the absence of the SD the report will be submitted to the NAM, and the NAM is responsible for completing and submitting the FAA Form 8010-4 (see example, Section Z) in the time limits specified above.

J-3 Informing Personnel of Maintenance Information and Appropriate Changes:

WS maintenance personnel will use current and appropriate data when performing all maintenance on agency and contract aircraft that are approved to be operated in WS operations.

J-3.1 Maintenance Manuals and Technical Information:

The NAM is responsible for contacting the aircraft manufacturer to verify what information and publications are available for each aircraft operated. The NAM will ensure WS has the appropriate information for the maintenance tasks to be performed. The NAM will verify publication part numbers and revision status of all maintenance manuals and technical information. The NAM will ensure WS has a current subscription service to provide revisions and maintenance information in a timely manner for each of the aircraft it has approval to operate. The NAM will maintain files verifying the subscription service. These files will be kept at the WRO.

J-3.2 Aircraft Alterations:

Major alterations to WS aircraft will be performed in accordance with approved data, by either a STC or by Field Approval. Both of these require instructions for continued airworthiness and in some cases a flight manual supplement. The mechanic is responsible for ensuring the Instructions for Continued Airworthiness are made a part of the inspection checklist or inspection program for the aircraft and maintenance personnel are made aware of the Instructions for Continued Airworthiness. If the alteration requires a flight manual supplement to be added, the mechanic will inform the NAM, and the procedure used in Section B Paragraph B-14.2 will be implemented.

J-4 Replacement Parts:

WS policy is to use only FAA approved parts on all aircraft it operates. The SD has the overall responsibility for ensuring all installed and replacement parts are FAA approved.

Maintenance personnel are responsible for installing only FAA approved parts. When components are inspected, overhauled or taken apart for repair, the maintenance personnel will inspect all components on an individual basis. The parts will be inspected for serviceability and for traceability. If any parts configuration or origin is questionable or if unauthorized repairs are found, the part will be replaced with FAA approved parts, and the SD will be notified immediately.

Maintenance personnel will carefully review and inspect the paperwork that accompanies replacement parts to verify the parts are FAA approved and produced under an approved FAA quality control system.

Maintenance personnel will report any suspected unapproved part(s) to the SD. The SD is responsible for and will report the suspected unapproved part(s) to the FAA.

J-5 Tool Calibration:

All tools, including any instruments and equipment, requiring calibration as specified by the manufacturer will be calibrated in accordance with the manufacturers recommended procedures and time intervals.

Maintenance personnel are responsible for maintaining a Tool Calibration Record (WS Form 135-21) for each tool requiring calibration that will be used on WS aircraft. This includes tools that are the property of maintenance personnel as well as WS owned tools. The SD is responsible for checking these records to ensure these tools are calibrated on or before the due date and each tool has a calibration sticker showing the due date.

Maintenance personnel using the tools will verify the tool calibration is current prior to using the tool. Tools that are not current will not be used until they are calibrated. The SD will be notified and will be responsible to have the tool calibrated and record the calibration as indicated above.

General

A-1 Organization:

Wildlife Services (WS) is a United States Government organization, United States Department of Agriculture, Animal and Plant Health Inspection Services, Wildlife Services (USDA/APHIS/WS). WS has prepared this Aviation Operations Manual using 14 CFR Part 135 as a guide. All flight, ground, and maintenance personnel will use this manual in conducting WS operations.

A-1.1 Purpose:

This manual prescribes the minimum standards for aircraft use in WS. It is intended to aid in the safeguarding of personnel and equipment. In no instance will safety be sacrificed for accomplishment. All WS aviation operations will be conducted in strict compliance with this manual, the Federal Aviation Regulations (FAR), Federal Airborne Hunting Act, and any applicable State and local laws.

A-1.2 Mission of the WS Aviation Program:

The mission of the WS Aviation program is to support the WS program in its effort to alleviate or curtail damage to agricultural products caused by wild mammals or birds. The use of light aircraft has proven to be one of the most selective and effective tools available to meet the mission requirements.

A-1.3 Authorities:

- The WS Deputy Administrator has delegated the authority and responsibility for all aviation operations conducted by WS to the Western and Eastern Regional Directors (RDs) and the National Wildlife Research Center (NWRC). This will be accomplished by maintaining close contact with the State Directors (SD) and NWRC Project Leaders.
- The National Aviation Manager (NAM) is delegated the authority to:
  - Provide guidance and assistance to the aviation programs in the Eastern and Western Regions and NWRC.
  - Inspect and approve all aircraft used in the WS program.
  - Administer initial certification flight checks and periodic proficiency flight checks to all pilots or pilot applicants used in the WS program.
  - Approve or disqualify WS pilots, pilot applicants, contract and rental pilots, or other pilots flying for the WS program, whether or not for hire.

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A-1.3 Exceptions or Waivers to Stated Policy:

- The SD or Project Leader may request a waiver of one or more parts of the WS policy.
- The request for a waiver will be submitted in writing to the NAM who will determine if there is compromise to safety or economy. The NAM will submit a recommendation to the Western Regional Director for action.
- The request for a waiver must be submitted in writing. If time does not permit, the request may be submitted verbally and followed up with a written request. The SD or Project Leader will be notified by telephone and in writing of the Western Regional Director's decision.
- It is not the intent of this manual to attempt to address each and every situation that may be encountered in WS aviation operations. If the situation warrants, RDS, SDs, and the NWRC Director can formulate an additional, more restrictive policy. A copy of any such policy must be forwarded to the NAM.

A-2 General WS Aircraft Policy:

A-2.1 Official Use of Aircraft:

- There are occasions when the use of aircraft, both fixed wing and helicopters, is necessary or desirable to accomplish WS objectives other than aerial hunting (i.e., aerial census of waterfowl or other animals, bird hazing, telemetric or radio tracking operations, or any other operations not involving the shooting of animals).
- Any operations involving the shooting or capturing of animals, whether lethal or non-lethal projectiles are used, must comply with the requirements specified in this manual.
- Low-level flight operations are considered to be those operations requiring extensive (i.e., more than 10% of the total flight time) operations at 500 feet or less above the surface. The following requirements must be followed:
  - The NAM must approve the aircraft used.
  - The pilot must have a Commercial Pilot Certificate, a valid Class 2 Medical Certificate, a minimum of 1,500 hours flight time, and be approved by the NAM for low-level operations.
  - Only the required crew members (pilot and necessary observers) will be on board.
  - All personnel, including the pilot, must wear personal protective equipment as outlined in this Manual.
- Flights conducted predominately (i.e., 90% or more) at altitudes greater than 500 feet above the surface for the purpose of reconnaissance, census, etc., must minimally meet the following requirements:
  - Aircraft and pilot must be approved by the NAM. If the aircraft and pilot have not been previously approved by the NAM, the operator must be certified as an air taxi operator under the provisions of the FAR, Part 135. The operating certificate must cover the type operation to be conducted, and the aircraft and pilot to be used must be listed on the operator's certificate.

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- The pilot must have satisfactorily complied with the requirements specified in FAR, Part 135.293 (Crewmember requirements for initial and recurrent pilot testing), and compliance must be verifiable by FAA Form 8410-3, Airman Competency/Proficiency check or equivalent.
- Use of military or other Government aircraft will not be used for WS missions without written approval of the RD or the Director of the NWRC.
- WS aircraft may be used for search and rescue (SAR) missions being conducted by a government agency (i.e., a city or county law enforcement agency), the Civil Air Patrol (if the search is authorized by the U.S. Air Force Search & Rescue Coordination Center), or the U.S. military, because of life threatening situations.
- If a WS aircraft is being searched for, all available WS aircraft and pilots will be dispatched to aid in the search.

The following requirements will apply when using WS aircraft for SAR missions.

- Non-WS personnel designated as an official observer by the SAR coordination agency may be transported on board the WS aircraft while engaged in the SAR mission.
- WS aircraft will not be flown less than 500 feet above the surface while engaged in SAR missions if non-WS personnel are on board except for temporary descents to a lower altitude necessary to identify personnel, wreckage, markers, etc., or to communicate with ground personnel.
- The SD will make the determination whether to expend WS resources for SAR. The Regional Office will be notified of SAR activities as soon as practical after the start of a SAR mission.

A-2.2 General Rules:

- Aerial animal control operations conducted on or over private lands will be covered by WS Form 12A, or an equivalent cooperative agreement form. Aerial hunting will be conducted only on lands under agreement for such activity.
- WS aerial operations conducted on or over public lands will be in compliance with the signed annual plan of work for those specific lands. Aerial hunting will be conducted only on lands under agreement for such activity.
- When cooperative funds are used to pay for aerial control operations, payments will be made in accordance with existing cooperative agreements. All fiscal transactions will comply with applicable Federal and state financial laws and regulations.

A-2.3 Authorized Personnel and Crew:

Authorized personnel using agency-owned aircraft during hunting operations are limited to the WS-employed pilot and crew. Special authorization may be issued, on a case-by-case basis, by the SD for other operations to be conducted by other Federal, state, or cooperative personnel.