



United States Department of the Interior  
Office of Aviation Services  
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Boise, Idaho 83706-3991

**DOI OPERATIONAL PROCEDURES MEMORANDUM (OPM) - 11**

**Subject:** DOI Use of Unmanned Aircraft Systems (UAS)

**Effective Date:** January 1, 2018

**Supersedes:** OPM 11 dated August 9, 2016

**Expiration:** December 31, 2018

**1. Summary of Changes:**

Minor grammatical changes. Added language for operating in certain special use airspace. Added link to the Small UAS Inspection Form. Added language to address development of operational procedures that are beyond what operators have been instructed in previously. Clarifies PIC role in tracking flight training/proficiency. Added language allowing "trainee status" for DOI remote pilots who need additional development prior to certification.

**2. Purpose:** The purpose of this OPM is to provide DOI with policy on the operations and management of DOI operated Unmanned Aircraft Systems (UAS).

**3. Authority:** This policy is established by the Director, Department of the Interior (DOI or Department), Office of Aviation Services (OAS) in accordance with the provisions of Departmental Manual 112 DM 12, 350 DM 1; Secretarial Order 3322 dated August 23, 2012, and the Presidential Memorandum on Promoting Economic Competitiveness While Safeguarding Privacy, Civil Rights, and Civil Liberties in Domestic Use of Unmanned Aircraft Systems, dated February 15, 2015.

**4. Scope:** This policy covers all UAS use under the operational control of DOI bureaus and offices.

**5. Policy:** Policy for the use of all aircraft within DOI is contained in Departmental Manuals 350-353 (DMs) and the associated Operational Procedures Memoranda (OPMs).

A. Bureau specific UAS policy pertaining to the use of UAS can be found in each bureau's national aviation management plan.

B. Current Federal Aviation Administration (FAA) policy is provided in 14 CFR Parts 91 and 107 and/or FAA Order 8900.1, Volume 16, Unmanned Aircraft Systems (UAS).

C. For all DOI UAS operations the following fundamental provisions apply:

1) 14 CFR 1.1 defines "aircraft" as a device that is used or intended to be used for flight in the air. UAS are considered aircraft and must comply with applicable regulations, policies and procedures required by FAA and DOI and its bureaus and offices.

2) Aircraft and pilots must maintain compliance with OPM-11 and with applicable

sections of Title 14 CFR to operate in the National Airspace System (NAS). The FAA retains the sole authority to approve UAS operations within the NAS. The controlling agency has the authority to approve UAS operations in active Prohibited and Restricted Areas, Special Flight Rules Areas, and the Washington DC Flight Restricted Zone.

- 3) UAS are defined as an aircraft and the associated elements (including communication links and the components that control the unmanned aircraft) that are required for safe and efficient operation.
- 4) Per 351 DM 1.2 B, DOI employees are not authorized to manipulate the controls of DOI UAS unless they possess a current DOI Remote Pilot card, are receiving a flight evaluation from an OAS-designated UAS pilot inspector or are attending an approved DOI UAS training course.
- 5) When operating in Class A, B, C, D, E and G airspace, DOI UAS must be operated in accordance with 14 CFR Parts 91 and 107, FAA Certificate of Waiver or Authorization (COA) or Emergency COA (ECO) and any terms and conditions outlined in agreements between DOI/FAA.
- 6) UAS operations in Restricted, Prohibited, or Warning airspace will be regulated and approved by the controlling authority.

## **6. Roles and Responsibilities:**

### A. OAS (<https://www.doi.gov/aviation/uas>):

- 1) Coordinates fleet management, acquisition, and disposal of DOI-owned UAS.
- 2) Issues Department-wide policies, procedures, and training requirements.
- 3) Establishes UAS specifications and standards to ensure aviation safety and individual privacy, civil rights, and civil liberties protections in compliance with applicable laws, regulations, and policies.
- 4) Coordinates with internal and external agencies, partners, and organizations on UAS policy, acquisition, inspections, audits, compliance reviews, and proposed rulemaking.

### B. Office of the Chief Information Officer:

- 1) Promulgates and provides oversight of Department-wide information management policies, guidelines and procedures to bureaus and offices for their implementation to ensure compliance with relevant Federal laws, regulations and policies. Such policies, guidelines and procedures include, but are not limited to, addressing requirements associated with privacy, IT security, and records management.
- 2) Publishes privacy policy, provides guidance, and collaborates with bureaus, offices, and program officials to evaluate program activities to ensure privacy considerations

are addressed for the collection, use, retention, and dissemination of personally identifiable information and appropriate safeguards are implemented to protect individual privacy, civil rights, and civil liberties.

C. Office of Civil Rights:

- 1) Develops policy and guidelines to assure proper implementation of laws, Executive Orders, regulations, and Departmental initiatives relating to affirmative employment, equal opportunity, civil rights and educational partnerships.
- 2) Oversees the management and evaluation of programs, activities, and services receiving Federal financial assistance, and ensures expedient processing and resolution of complaints of discrimination, prevention of discriminatory practices, and equal access to Federal financial assistance and federally conducted programs for all persons regardless of race, color, age, religion, sex, national origin, disability, and sexual orientation.

D. Bureau or Office:

- 1) Implements departmental and bureau or office UAS specific policies, procedures, and protections consistent with applicable Federal laws, executive orders, regulations, policies, and standards.
- 2) Bureaus are responsible for developing, organizing, and conducting training required and authorized by DOI OAS.

**7. UAS Acquisition:**

A. All acquisitions of commercially available systems by DOI personnel shall be routed through OAS and the Interior Business Center, Acquisitions Services Directorate (IBC-AQD). Specifications for UAS used by DOI will be developed collaboratively between the bureaus and OAS. Acquisition activities including requests for information, quotation, or proposal will be coordinated through the NAM's office.

B. Procurement Methods:

- 1) For UAS acquisitions under the capital asset threshold of \$15,000 the bureau shall complete the DOI UAS Acquisition Request Form (OAS-13U, Appendix 1).
- 2) UAS purchases above the capital asset threshold will require an Aviation Business Case as described in OPM-08.

**8. UAS Flight Services:**

Contractor provided UAS Flight Services must follow the processes outlined in 353 DM 1 and OPM-35.

**9. UAS Airworthiness Certification:**

- A. All UAS operated under DOI operational control, including cooperator aircraft, must have a current OAS-36U DOI UAS Data Card or letter of authorization issued by OAS.
- B. Any modification to a DOI UAS, such as adding a new sensor may affect airworthiness and requires approval from the DOI UAS Fleet Management (OAS)

**10. Periodic Inspections:**

- A. The DOI UAS Fleet Manager, in collaboration with the bureaus, determines the appropriate method of inspection and re-inspection of DOI UAS.
- B. DOI Remote Pilots assigned a small UAS shall inspect the aircraft prior to the expiration of the OAS-36U and submit the inspection form online:  
[https://docs.google.com/a/ios.doi.gov/forms/d/e/1FAIpQLSfjAhKTJCLzfkCQB19zoHK\\_tyDXiCWyyS3SrpB1CGxB9CIQ/viewform?c=0&w=1](https://docs.google.com/a/ios.doi.gov/forms/d/e/1FAIpQLSfjAhKTJCLzfkCQB19zoHK_tyDXiCWyyS3SrpB1CGxB9CIQ/viewform?c=0&w=1)
- C. OAS-36U Aircraft Data Cards for small UAS, will be issued every 24 months, upon receipt of the inspection form. The Remote Pilot Operator must submit the inspection form 30 days prior to the expiration of the OAS-36U.
- D. Large UAS (>55lbs) will be inspected annually, or as required by a contract, by an OAS approved inspector or designee.
- E. All inspections for all UAS shall accomplish the following tasks:
  - 1) Confirm aircraft configuration conforms to original manufacturer's design.
  - 2) Inspect the airframe of general condition and serviceability.
  - 3) Note serial numbers of airframe and ground control station (GCS).
  - 4) Perform preflight checklist.
  - 5) Run systems diagnostics to confirm all tests results are normal.
  - 6) Conduct ground engine run to confirm proper operation.
  - 7) Check battery charger and other peripherals for proper operation.
  - 8) Ensure the system is operating on the DOI approved firmware.

- 9) Confirm DOI UAS are registered and marked in accordance with FAA and DOI requirements.

#### **11. DOI Remote Pilot Responsibilities:**

- A. DOI Remote Pilots shall possess a FAA Remote Pilot Certificate prior to attending A-450 DOI UAS Training course or approved equivalent. DOI Remote Pilots are required to maintain their Remote Pilot certificate as required by FAA.
- B. The Remote Pilot is responsible for and is the final authority as to the operation of the aircraft.
- C. Remote Pilots are responsible for performing a preflight inspection of the UAS in accordance with the manufacturer's recommendations and assuring the aircraft is in an airworthy condition.
- D. DOI Remote Pilots shall fly in accordance with the manufacturer's specifications and established DOI policy/training standards. Proposed deviations from established operational procedures (checklists, etc.), which may affect safety of flight, shall be discussed with the NAMs, UAS program Managers and OAS prior to the deployment of such operations, in order to minimize programmatic/operational risk.
  - 1) If a procedure is required for a specific mission, and was not instructed during A-450, then it is the responsibility of the PIC to contact their NAM/OAS to vet the process as described in paragraph 2. Examples of operations or procedures not taught in A-450 include, but are not limited to, launch and recovery methods other than those taught or described during approved training (i.e., launch and recovery involving hand catching or any method that increases the risk of human contact, launch and recovery from a vessel, or launch and recovery procedures from a moving vehicle not taught/endorsed by the manufacturer).
  - 2) Process for obtaining approval of a new procedure:
    - a) Bureau identifies a need that is outside of how the remote pilot was trained.
    - b) The DOI remote pilot who identified the need must contact bureau NAM to make request for evaluation of the procedure.
    - c) If NAM concurs then bureau national aviation office and OAS will collaboratively work to create training and certification standards for the identified procedure.
    - d) Upon meeting the certification standards, the remote pilot will receive an endorsement on their OAS-30U for that particular procedure from and OAS approved UAS inspector.
- E. The Remote Pilot must discontinue any mission in which the airworthiness of the aircraft or system is in question or there are discrepancies with the aircraft that have not been corrected or the cause of the discrepancy is not understood.
- F. A Remote Pilot in Command (PIC) must be designated for each flight and recorded on the form OAS-2U.

- G. DOI Remote Pilots are responsible for keeping track of their training. Flight training requirements include:
  - 1) Proficiency
  - 2) Night flying training
  - 3) Any specific training requirements developed by the NUAS manager or OAS designated Inspector
  - 4) Remote Pilot's IAT.gov "DOI Remote Pilot (UAS)" training plan is in compliance
- H. Remote Pilots are responsible for ensuring their equipment has been inspected within the timeframe specified on the aircraft data card (OAS-36U).

### **12. UAS Use Reporting:**

- A. Fleet aircraft:
  - 1) Record UAS flight time using the OAS-2U form. Remote Pilots shall submit updates at least monthly or at the conclusion of the project, whichever occurs first.
  - 2) DOI Remote Pilots must record malfunctions, damage or repairs to UAS, component replacement on the OAS-2U form. Repair of damage beyond normal wear shall be coordinated with the DOI UAS Fleet Manager.
- B. Flight service contract flight use reporting will follow the reporting process outlined in the contract.

### **13. Flight Time and Duty Day:**

Remote Pilots are limited to 8 hours of flight time during any duty day.

- A. For non-incident UAS operations, DOI UAS flight crewmembers are limited to a 16-hour duty day and must have at least two days off in any 14-day period.
- B. For UAS operations in support of incident management efforts, UAS flight crewmembers shall comply with the Interagency Incident Business Management Handbook and/or bureau policy for personnel duty limitations.

### **14. Visual Observer (VO) Requirements:**

- A. DOI Remote Pilots conducting operations under 14 CFR Part 107 must maintain visual contact with the UAS, or utilize a VO. Use of VOs must comply with the provisions of Part 107.
- B. If operating under COA, MOA or ECOA the VO requirement of those authorizations must be complied with.

- C. VO Training: Certain certificates of authorization/waiver (COAs) require that observers must have completed sufficient training to communicate to the pilot any instructions required to remain clear of conflicting traffic. DOI Remote pilots shall ensure that VO training requirements have been met. Refer to 14 CFR part 107 or COA/ECOAs as applicable.

### **15. Visual Observer Responsibilities:**

VOs must:

- A. Have a clear view of the area of operation.
- B. Be in communication with the Remote Pilot either within speaking distance or with a portable radio/cell phone equipped for immediate communication.
- C. Keep the Remote Pilot advised of any possible hazards such as power lines, birds, other aircraft, terrain, and hazardous weather conditions.
- D. VOs may not act as a Remote Pilot unless they possess a valid FAA Remote Pilot certificate and a current OAS-30U qualification card.

### **16. UAS Inspectors:**

OAS is responsible for designating UAS pilot and aircraft inspectors. Requests for use of approved bureau inspectors will be evaluated and approved on a case-by-case basis. Requests for the use/designation of bureau inspectors must be routed through the NAM. The list of approved DOI inspectors will be kept on the OAS website.

### **17. Initial UAS Training:**

- A. DOI Remote Pilot candidates and supervisors must meet the following prerequisites before a candidate may attend the A-450 Basic Remote Pilot training or approved equivalent:
  - 1) Candidate must possess a current FAA Remote Pilot certificate.
  - 2) Candidate must meet the training requirements for Aircrew Member as outlined in OPM-04, DOI Aviation User Training Program. Current DOI manned aircraft pilots are not required to retake A-100.
  - 3) Candidates will be nominated by the Bureau NAM or designee via the nomination form.
- B. DOI Remote Pilots must complete the A-450 Basic Remote Pilot course or approved equivalent. Specific training for additional makes/models of aircraft may be required.
- C. All DOI UAS personnel must pass an initial evaluation administered by an OAS UAS Pilot Inspector or OAS-designated bureau UAS Pilot Inspector. In the situation of a candidate not meeting the evaluation standards, but who may become proficient with additional training and practice under the supervision of a qualified DOI remote pilot, the Pilot Inspector, with approval from the bureau NAM or designee, may place the student into "Trainee Status" (noting on the candidate's OAS-30U the requirement to be

recommended for another flight evaluation).

- D. DOI UAS Remote Pilots and crewmembers, with the exception of current DOI manned aircraft pilots, are required to maintain currency as Aircrew Members per OPM-04. A UAS crewmember is defined as any person directly involved in the setup, launch, recovery, or manipulating the controls of the UAS. If not already current Aircrew Members, VOs are not to be given associated responsibilities during UAS missions.
- E. DOI Supervisors of Remote Pilots and crewmembers shall be current in the training requirements outlined in OPM-04. Details can be found in the Interagency Aviation Training Guide (<https://www.iat.gov/>).

### **18. Flight Proficiency and Currency:**

- A. Flight proficiency: Remote Pilots must demonstrate three takeoffs (launch) and landings (recovery) with the UAS they are approved to operate within the preceding 90 days. If proficiency is lost prior to a mission, the Remote Pilot must regain proficiency by performing the flight maneuvers and emergency procedures for the specific make and model, during a proficiency flight prior to an operational mission or conduct their mission flight under the observation of a current UAS pilot.
- B. Flight Currency: Remote Pilots are required to fly each of the aircraft for which they are carded at least once every 12 months or the interval specified on their OAS-30U. Remote Pilots failing to meet this requirement shall fly under the supervision of a carded and current Remote Pilot and perform the flight maneuvers and emergency procedures for that aircraft.

### **19. UAS Refresher Training:**

- A. DOI Remote Pilots must complete UAS refresher training (A-452R) or approved equivalent every 24 months following the issuance of their OAS-30U. Current DOI Remote Pilots participating in either A-450 or A-452R, as a student or instructor, will receive credit for refresher training. This training can be completed in advance or within 30-days after the date of expiration on the OAS-30U and shall be documented on the [iat.gov](http://iat.gov) website. Remote Pilots operating the low complexity UAS will be able to complete this requirement via distance learning opportunities. Remote Pilots operating more complex aircraft may be required to attend a refresher in person.
- B. Required Refresher Training Elements:
  - 1) Program and policy updates
  - 2) Flight exercise
  - 3) Mishaps, SAFECOMs, and trends
  - 4) Airspace authorization
  - 5) Risk management and crew resource management review
  - 6) Lessons learned
  - 7) Aircraft/Sensor updates



8) Identified special emphasis items

C. Recommended Refresher Training Elements:

- 1) Industry trends
- 2) Emerging technology discussion
- 3) Hardware/software/apps
- 4) Lessons learned/case studies
- 5) Training review/curriculum updates

**20. DOI UAS Operations in the National Airspace System (NAS):**

DOI has the authority to conduct operations in the NAS under the following authorities:

- A. Following the requirements of this OPM and following the provisions of 14 CFR Part 107. Waiver requests under 14 CFR Part 107 waivers will be reviewed by the Bureau/Office NAM (or designee) and OAS prior to submittal to FAA.
- B. Utilizing the DOI/FAA Memorandum of Agreement Regarding Operation of Small Unmanned Aircraft Systems in Class G Airspace.
- C. Utilizing the MOA Regarding Beyond Visual Line of Sight Operations of Unmanned Aircraft Systems in Support of Emergency Assistance within an Active Temporary Flight Restriction Under the terms of the DOI/FAA Agreement.
- D. Following the provisions outlined in the DOI Blanket Certificate of Authorization for operating in Class G airspace.
- E. Under a standalone COA for a specific mission.
- F. COAs will be coordinated with the Bureau/Office NAM or designee and OAS.
- G. Under an emergency COA (ECO) requested through the OAS UAS Division to the FAA.
- H. UAS operations within restricted, prohibited and warning areas must be authorized by the controlling authority. DOI UAS operators must comply with any restrictions placed on the operation by the controlling authority.

**21. UAS Operations General Provisions:**

- A. A Project Aviation Safety Plan (PASP) will be developed for all UAS missions. For UAS missions on a recurring or routine basis, the required PASP can be rolled into a station/unit aviation plan that shall be reviewed by the NAM or designee at least annually.
- B. Coordination:
  - 1) Bureaus and Offices are responsible for coordinating with each other for UAS operations over lands owned or managed by DOI.
  - 2) For operations taking off and landing on Federal, State, Tribal and municipal lands,

- Bureaus and Offices will receive authorization from the appropriate authority prior to operations. This coordination shall include anticipated periods of operation, purpose of the flights, and contact information for the responsible unit should questions or issues arise.
- 3) For flights over private land, DOI UAS pilots should make every effort to notify landowners of the anticipated periods of operation, purpose of the flights, and contact information for the responsible unit should questions or issues arise.
  - 4) For flights under the DOI/FAA MOAs or blanket COA (see Appendix 3) landowner notification is required.
- C. Flights will be planned to avoid sustained/repeated overflight of heavily trafficked roads or highways but may briefly cross over active roads as necessary.
- D. Cooperator/Affiliate Missions (DOI Operational Control): Requests for approval of cooperator/affiliate UAS under the operational control of DOI should follow the process outlined in 351 DM 4. UAS Cooperator approval letters will be issued by the OAS UAS Division Chief.
- E. Notice to Airman (NOTAM)
- 1) Flights conducted under 14 CFR Part 107 do not require a NOTAM.
  - 2) Flights conducted under DOI/FAA MOAs/COAs will adhere to the terms of the MOAs or COAs for filing of NOTAMs (may be filed online): <https://www.1800wxbrief.com/>
- F. Beyond Visual Line of Sight (BVLOS) must be conducted with an FAA Part 107 waiver or under the terms of the DOI/FAA MOA for flights within a Temporary Flight Restriction (TFR).
- G. Flights within a TFR must be conducted under the direction of the official in charge of the on-scene activity.
- H. Night flights must be conducted with a FAA Part 107 waiver, under the DOI/FAA MOA or blanket COA, or with permission from the controlling agency if flying in Restricted airspace.
- I. Flights above 400 feet AGL must be conducted with an FAA Part 107 waiver, under the DOI/FAA MOA, or with permission from the controlling agency if flying in Restricted airspace.

## **22. UAS Mishap Reporting:**

- A. Submit SAFECOM reports for any conditions, acts, observations, circumstances or maintenance problems that led to, or could have led to, an aircraft mishap (<https://www.safecom.gov>). This includes any damage to an aircraft that renders it un-airworthy, even temporarily.

- B. Immediately report the following by calling the Aircraft Accident Reporting Hotline at 1-888-4MISHAP prior to continuing operations:
  - 1) Any missing aircraft.
  - 2) Injury to any person or any loss of consciousness.
  - 3) Damage to any property other than the small unmanned aircraft.
- C. The same reporting requirements for manned aircraft apply to any incident involving a UAS that exceeds the small category. Please reference 352 DM 3 for details.

### **23. Privacy, Civil Rights, and Civil Liberties Protections:**

- A. The use of UAS significantly expands DOI's ability to obtain remotely sensed data critical to fulfilling diverse mission objectives. However, this use raises distinct privacy, civil rights, and civil liberties concerns that must be addressed in order to promote the responsible use of UAS and protections for individual privacy, civil rights, and civil liberties in accordance with the Constitution, Federal law, and applicable regulations and policies. <https://www.whitehouse.gov/the-press-office/2015/02/15/presidential-memorandum-promoting-economic-competitiveness-while-safegua>
- B. Privacy Protections. In light of the advancements in UAS technologies and diverse potential uses of UAS across Department, Bureaus, and Offices missions, it is imperative that DOI take appropriate steps to implement UAS policies that address privacy protections, procedures, and standards to ensure compliance with the Privacy Act of 1974, DOI Privacy Act regulations, Departmental privacy policies, and other applicable laws, regulations and policies (<https://www.doi.gov/sites/doi.gov/files/uploads/DI-4001%20Unmanned%20Aircraft%20System%20Program%20PIA%20001.12.2016.pdf>). Accordingly, DOI Bureaus and Offices utilizing UAS or UAS-collected information shall meet the following privacy requirements:
  - 1) DOI bureaus and offices shall only collect information using UAS, or use UAS-collected information, to the extent that such collection or use is consistent with and relevant to an authorized purpose and DOI privacy policy.
  - 2) Information collected by or on behalf of DOI bureaus and offices using UAS that may contain personally identifiable information (PII) shall not be retained for more than 180 days unless retention of the information is determined to be necessary to an authorized mission, is maintained in a system of records covered by the Privacy Act, or is required to be retained for a longer period by any other applicable law or regulation.
  - 3) DOI bureaus and offices shall take appropriate steps to ensure that UAS-collected information that is not maintained in a system of records covered by the Privacy Act is not disseminated outside of the agency unless dissemination is required by law, or fulfills an authorized purpose and complies with the bureau's and office's mission.

- C. Civil Right and Civil Liberties Protections. To protect civil rights and civil liberties, DOI bureaus and offices shall:
- 1) Ensure that policies are in place to prohibit the collection, use, retention, or dissemination of data in any manner that would violate the First Amendment or in any manner that would discriminate against persons based upon their ethnicity, race, gender, national origin, religion, sexual orientation, or gender identity, in violation of law.
  - 2) Ensure that UAS activities are performed in a manner consistent with the Constitution and applicable laws, Executive Orders, and other Presidential directives.
  - 3) Ensure that adequate procedures are in place to receive, investigate, and address, as appropriate, privacy, civil rights, and civil liberties complaints.
- D. Accountability. To provide for effective accountability, OAS, in conjunction with the Office of the Chief Information Officer and the Office of Civil Rights, will provide collaborative oversight of the DOI UAS program within their respective areas of expertise and responsibility. DOI bureaus and offices employing UAS or UAS-collected information shall comply with Departmental oversight activities, and take additional appropriate steps to ensure effective oversight and accountability for their respective UAS programs. Accordingly, bureaus and offices shall ensure:
- 1) Oversight procedures are implemented for UAS use, including audits or assessments, in compliance with Departmental policies and regulations.
  - 2) Bureau and office personnel and contractors comply with UAS program training requirements, rules of behavior, and procedures for reporting suspected cases of misuse or abuse of UAS technologies.
  - 3) Policies and procedures are implemented that provide meaningful oversight of individuals who have access to sensitive information (including any PII) collected using UAS consistent with applicable Federal laws, regulations, and policies, as well as Departmental policy guidance.
  - 4) Any data-sharing agreements or policies, data use policies, and records management policies applicable to UAS conform to applicable laws, regulations, and policies.
  - 5) Policies and procedures are implemented to authorize the use of UAS in response to a request for UAS assistance in support of Federal, State, local, tribal, or territorial government operations. Any authorized use, letter of authorization, or memorandum of understanding must include the requirements of this policy and appropriate safeguards to protect privacy, civil rights, and civil liberties.
  - 6) State, local, tribal, and territorial government recipients of Federal grant funding for the purchase or use of UAS for their own operations have in place policies and procedures to safeguard individuals' privacy, civil rights, and civil liberties prior to expending such funds.

- E. Transparency. OAS will complete the following activities, in collaboration with bureau and office UAS programs, to promote transparency about DOI UAS activities within the NAS, while not revealing information that could reasonably be expected to compromise law enforcement or national security.
- 1) Provide notice to the public regarding where DOI's UAS are authorized to operate in the NAS.
  - 2) Keep the public informed about the DOI UAS program as well as changes that would significantly affect privacy, civil rights, or civil liberties.
  - 3) Make available to the public, on an annual basis, a general summary of DOI UAS operations during the previous fiscal year, to include a brief description of types or categories of missions flown, and the number of times the agency provided assistance to other agencies, or to State, local, tribal, or territorial governments.

#### **24. Oceanic and International Operations:**

DOI UAS operations over international waters typically do not lend themselves to compliance with International Civil Aviation Organization (ICAO) procedures due the low altitudes flown and lack of required avionics. For UAS flights in Oceanic Flight Information Regions (FIR) where the FAA is the air traffic provider, DOI owned and operated UAS shall be considered "State Aircraft." The following conditions are designed to provide a level of safety equivalent to that normally given by ICAO Air Traffic Control agencies and fulfill United States Government obligations under Article 3 of the Chicago Convention of 1944 which stipulates there must be "due regard for the safety of navigation of civil aircraft" when the flight is not being conducted under ICAO flight procedures.

- A. These conditions apply only to small UAS weighing 55 pounds or less.
- B. The Ground Control Station (GCS) and UAS shall remain within uncontrolled airspace at all times.
- C. The GCS shall remain greater than 12 NM (i.e. international waters) from the U.S. coastline during all phases of flight.
- D. Operations will be limited to below 1200 feet AGL provided the UAS remains with ICAO Class G airspace at all times.
- E. The UAS shall remain within 5NM of the GCS at all times.
- F. All UAS flights will be flown in Visual Meteorological Conditions (VMC) only. If Instrument Meteorological Conditions (IMC) conditions are unintentionally encountered, the pilot will return the UAS to VMC conditions by the safest and most expeditious means possible.
- G. Day or night operations are permitted, and associated risks and mitigation measures shall be addressed in each project-specific Operational Risk Management (ORM) document.

- H. UAS operating areas shall be selected so as not to interfere with established air routes and ocean shipping lanes.
- I. The operating agency will request the FAA publishes a NOTAM for the affected airspace to alert non-participating aircraft of the operation and advise them of the VHF-AM frequency which will be monitored while operations are being conducted. The Remote Pilot and team must be equipped with an operable VHF-AM radio capable of transmitting and receiving on the monitored frequency and VHF guard frequency (121.5).
- J. For launches conducted from ships equipped with search radar, the launch vessel shall conduct a surface search using its radar within (no later than) 10 minutes of the launch in order to identify other vessels within the operational area. A qualified radar operator should monitor the ship's radar display at all times the UAS is airborne. If another vessel is identified within a 5 NM operational radius of the GCS, the pilot shall take action to keep the UAS at least 2 NM from that vessel at all times unless identification of vessels is a requirement of the mission flight.
- K. For UAS flights in Oceanic FIRs, where the air traffic service provider is a foreign government, coordination and approval with that government is required prior to commencing flight operations. Additional diplomatic clearances may also be required.
- L. International UAS Flights: Any proposed international flights of DOI owned or operated UAS will be approved on a case-by-case basis by the Bureau or Office NAM and OAS. Proposals for international UAS activities should be forwarded in writing to the Bureau or Office NAM and OAS UAS Division Chief 60 days in advance of the proposed mission.

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Mark Bathrick  
Director, Office of Aviation Services

Attachments:

- Appendix 1: DOI UAS Acquisition Request Form (OAS-13U)
- Appendix 2: Guidance for End-Product Contracting
- Appendix 3: Useful Web Links

## Definitions

**Operational Control:** Per 14 CFR 1.1 Operational control, with respect to a flight, means the exercise of authority over initiating, conducting or terminating a flight.

**COA:** Certificate of Authorization issued by the Air Traffic Organization to an operator for a specific UAS activity not covered under a Federal Aviation Regulation, such as 14 CFR Part 107.

**ECOA:** An Emergency COA (ECO) is an authorization issued by the Air Traffic Organization to an operator for a specific emergency UAS activity. ECOAs are requested through OAS to the FAA.

**MOA:** A Memorandum of Agreement (MOA) is a written document describing a cooperative relationship between DOI and another party working together on a project or to meet an agreed upon objective. An MOA serves as a legal document and describes the terms and details of the partnership agreement.

**NOTAM:** A Notice To Airmen or NOTAM is a notice containing information (not known sufficiently in advance to publicize by other means) concerning the establishment, condition, or change in any component (facility, service, or procedure of, or hazard in the National Airspace System) the timely knowledge of which is essential to personnel concerned with flight operations.

**TFR:** A Temporary Flight Restriction (TFR) is a limitation on aviation activity applied to an area of airspace (defined both laterally and vertically) that has been temporarily or partially closed to non-participatory aircraft for a specified period of time due to a hazardous condition, a special event, or to provide a safe environment for operation of disaster relief aircraft. A NOTAM is issued containing information on the reason for the TFR, contact information and fine points of the restriction.

**UAS Crewmember:** Person directly involved in the setup, launch, recovery or manipulating the controls of the UAS.

DOI UAS Acquisition Request Form (OAS-13U)



**Department of the Interior Small Unmanned  
Aircraft Systems  
Acquisition Request Form (OAS-13U)  
Version 1.0**

**Note:** This form is to be used for aircraft that are under the \$15K capital asset threshold.

Fill out the following information and return to the Bureau NAM or designee. If the NAM concurs, then the form shall be forwarded to the DOI UAS Division Chief.

**1. Contact information of individual requesting UAS asset.**

Name:	
Phone Number(s):	
Email address	

**2. Do you acknowledge that UAS are legally considered "Aircraft" when used by the Federal Government, and therefore subject to certain financial and operational policies and regulations?**

Yes \_\_\_ No \_\_\_

**3. Does your immediate Supervisor accept the responsibilities and educational requirements as defined 350 DM 1, OPM-4 and OPM-11?**

Yes \_\_\_ No \_\_\_



## DOI UAS Acquisition Request Form (OAS-13U)

4. **Number of systems (with associated ground support equipment.) and number of potential students to be trained on the system(s).**

Aircraft	Quantity of Systems	Other purchase requests	Potential # of Students per platform this year

5. **Describe the Proposed/Planned/Anticipated mission to be conducted by the UAS asset your Unit is acquiring:**

6. **Does your future UAS budget planning recognize that there will be additional financial responsibilities for maintaining proficiency and travel for DOI Remote Pilot training?** This amount will vary depending on the number of Remote Pilots and complexity of program. Personnel should account for regular proficiency flights as well as attending refresher training every 24 months.

Yes\_\_\_\_, I have supervisor and fiscal commitment to maintain proficiency, travel and support future training.

No\_\_\_\_

## DOI UAS Acquisition Request Form (OAS-13U)

### Executive Summary of UAS Requirements

#### General Conditions

- Bureau or office will submit UAS use reports via the OAS-2U form for all UAS flights.
- Bureau or office will report to OAS UAS Fleet Manager any damaged or unserviceable system parts and/or components.
- Bureau or office will submit SAFECOMS IAW 352 DM 3.4.
- Bureau or office will submit all requests for UAS modifications as well as all other aviation related contracting requirements through OAS. Including any desired payload modifications.
- Bureau or office will not make any modification to aircraft of payloads without prior approval of OAS UAS Fleet Manager.
- Bureau or office will ensure that all assigned UAS are flown and operated by trained, OAS (carded), current UAS Remote Pilots IAW OPM 11.
- Bureau or office is responsible for funding all Bureau travel and related costs associated with OAS approved UAS training.
- For informational purposes, Bureau are asked and encouraged to provide OAS with After-Action Reports (AARs) and any lessons learned.
- Bureau or office will ensure UAS security is provided utilizing a secure and locked storage facility, building or location.

#### Protection of Privacy, Civil Rights, and Civil Liberties

- Bureau or office will only collect information using UAS, or use UAS-collected information, to the extent that such collection or use is consistent with and relevant to an authorized purpose and DOI privacy policy.
- Information collected by or on behalf of Bureau or office using UAS that contains personally identifiable information (PII) shall not be retained for more than 180 days unless retention of the information is determined to be necessary to an authorized mission, is maintained in a system of records covered by the Privacy Act, or is required to be retained for a longer period by any other applicable law or regulation.
- Bureau or office shall take appropriate steps to ensure that UAS-collected information that is not maintained in a system of records covered by the Privacy Act is not disseminated outside of the agency unless dissemination is required by law, or fulfills an authorized purpose and complies with the bureau's and office's missions.
- Bureau or office will ensure that policies are in place to prohibit the collection, use, retention, or dissemination of data in any manner that would violate the First Amendment or in any manner that would discriminate against persons based upon their ethnicity, race, gender, national origin, religion, sexual orientation, or gender identity, in violation of law.
- Bureau or office will ensure that UAS activities are performed in a manner consistent with the Constitution and applicable laws, Executive Orders, and other Presidential directives.

## DOI UAS Acquisition Request Form (OAS-13U)

- Bureau or office will ensure that adequate procedures are in place to receive, investigate, and address, as appropriate, privacy, civil rights, and civil liberties complaints.
- Bureau or office will ensure that any data-sharing agreements or policies, data use policies, and records management policies applicable to UAS conform to applicable laws, regulations, and policies.

Requesting official

\_\_\_\_\_ Date \_\_\_\_\_

Endorsement, Bureau National Aviation Manager

\_\_\_\_\_ Date \_\_\_\_\_

Approval, Bureau Line Officer

\_\_\_\_\_ Date \_\_\_\_\_

Approval, Director, DOI Office of Aviation Services

\_\_\_\_\_ Date \_\_\_\_\_

## Guidance for End-Product Contracting

End Product Contracts are not aircraft flight service contracts. They are used to acquire a product for the Department (i.e., per-acre, per-unit or per-area, or per head basis). The intent of this type of procurement is for the contractor to supply all personnel and equipment in order to provide a "service" or "end-result." Many contractors utilize aircraft (including UAS) to meet the performance objectives of End Product contracts for activities such as: animal capture, seeding, spraying, survey, photography, etc. Since these are not flight services contracts, the AQD does not perform any acquisition service. End Product contracts are administered by the bureau procurement units.

These contracts must be conducted in accordance with *OPM-35*. *OPM-35* aids in determining whether an operation is being conducted as either "end-product" or "flight service" and supplements existing DOI policy regarding End Product contracts found in *353 DM 1.2A (3)*. If the provisions of *353 DM 1.2A (3)* and *OPM-35* are met, the aircraft will be operated as a civil aircraft and the aviation management principles normally required for aircraft under DOI operational control do not apply.

### End Product Contract Specifications

Specifications in the contract must only describe the desired quantity or quality of the service or contracted end-result. Contracting officers, procurement specialists, and aviation managers at all levels must be aware of these requirements. DOI contracting officers and resource specialists must consult with their bureau aviation managers if the acceptable language guidelines do not address a specific project requirement or the contract solicitation does not follow the guidelines in *OPM-35*. End Product contracts where contractors could conceivably utilize aircraft should be reviewed by the bureau aviation manager to ensure that specifications and language do not unintentionally imply or determine aircraft operational control.

The following list describes acceptable contract language for end-product contracts.

- No contract language describing aircraft or pilot capabilities, standards, requirements or aircraft specific payment provisions.
- The area of work should be described in terms of: location, scale of area, general topography, elevation, slope, vegetation, and accessibility by roads or off-road vehicles, land use restrictions for mechanized equipment, etc.
- Aviation Regulations - Acceptable Language: "The Contractor must comply with all applicable federal, state and local regulations and land-use permitting procedures."
- Airspace Coordination – In areas of military airspace it is acceptable to describe coordination agreements with military airspace scheduling or range control authorities and that it is the contractors' responsibility to coordinate their activities with the scheduling office or Range Control. Close coordination is necessary to ensure compliance with applicable airspace coordination agreements that states have with military authorities.
- Aircraft Equipment Specifications - Acceptable Language: Delete all reference to aircraft/equipment. Suggested example clause: "...Contractor is required to demonstrate to the government that the equipment can capture the imagery and/or data as specified in the project description."
- Radio/Communication Requirements - Acceptable Language: "Contractor must provide a

## Guidance for End-Product Contracting

communication system so that contractor personnel engaged in the project at different locations can communicate at all times with each other, and so that government Project Inspectors may communicate with the contractor at any time to discuss performance matters." (The government VHF-FM radio system may have to be described.)

- Transporting, Passengers and Equipment - Acceptable Language: "Only approved contractor personnel, contractor equipment and government-provided equipment required for performance ... will be transported by contractor vehicles, trailers, animals or equipment."
- Safety Hazards - Acceptable Language: "Any ground or aerial hazards that would pose a danger to Contractor's personnel or operating equipment must be identified and mitigated by the Contractor prior to commencing operations".
- Aircraft Use Reporting - Acceptable Language: Do not mention or require flight hour/aircraft usage reports.

**Operational Control:** During the performance of End Product contracts, DOI will not exercise operational control of the aircraft in any way. DOI will not direct the contractor as to flight profiles, flight following, landing areas (except for areas that are off limits due to land management restrictions), use of personal protective equipment, etc. DOI personnel assigned to administer End Product contracts will have no aviation management responsibility or authority. Any directions to the contractor must be in terms of the service or end-result being specified; e.g. desired imagery quality, number and disposition of animals surveyed, etc. It is acceptable to inform military airspace scheduling authorities or range control that the contractor plans on performing work during specified time periods and provide the military authorities the contractor contact information. DOI dispatchers will not perform the airspace scheduling service for the contractor. DOI personnel must not become involved in any way with aircraft ground operations such as take-off and landing areas, loading, fueling, etc. They can however, be on site for other support activities such as setting ground control, scale bars, etc. or collection of in-situ type data for ground truthing to aid in the overall data collection aspects.

**Aircraft Use Reporting:** Since aircraft utilized by the contractor under DOI end product contracts are operating entirely within the applicable 14 CFR as a civil aircraft, and procurement is not through AOD, the Bureau will not submit any billing invoice to AOD in conjunction with End Product contracts. Any flight time incurred by the contractor will not be recorded or reported as DOI or Bureau aviation statistics.

**Aircraft Incidents and Accidents:** Although aircraft utilized by the contractor under End Product contracts are operating entirely within the applicable 14 CFR as a civil aircraft, mishaps should be reports as per FAA - to continue to promote aviation safety the Bureau will report aviation incidents or accidents incurred by these contractors through the FAA. These events should be noted in the Contract Daily Diary and reported through channels as normally required for End Product contracts.

**Reconnaissance/Observation Flights:** Before, during or after the performance of an End Product contract it may be necessary for Bureau employees to aerially survey or inspect the project area.

When flights transporting DOI personnel are required, an AOD aviation "flight service" procurement (completely separate from the End Product contract) is required. Aircraft and

## Guidance for End-Product Contracting

pilots must have current OAS approvals for the intended mission and a current DOI contract or Aircraft Rental Agreement must be in place. When a DOI procurement is utilized all DOI and Bureau aviation management policy, procedures and requirements must be applied.

**Operations within Military Airspace:** If an "End Product" contract project using aircraft is being conducted within Military Airspace (MOA, RA, MTR) it is the responsibility of the contractor to coordinate with the Military Airspace Scheduling Office. DOI Contracting Officers and CORs should inform the contractor of any DOI agreements with the Military organizations regarding airspace. The Bureau may contact the Scheduling Office to alert them of the project and general time frames and provide contractor contact information.

## Useful Web Links

DOI UAS Website

<https://www.doi.gov/aviation/uas>

DOI Small UAS Annual Inspection Form

[https://docs.google.com/a/ios.doi.gov/forms/d/e/1FAIpQLSfjAhKTJCILzfkCOB19zoHK\\_tyDXiCWyysH3SrpB1CGxB9CIQ/viewform?c=0&w=1](https://docs.google.com/a/ios.doi.gov/forms/d/e/1FAIpQLSfjAhKTJCILzfkCOB19zoHK_tyDXiCWyysH3SrpB1CGxB9CIQ/viewform?c=0&w=1)

DOI FAA MOA for Class G operations

[https://www.doi.gov/sites/doi.gov/files/uploads/DOI\\_FAA\\_MOA\\_Class\\_G\\_09112015.pdf](https://www.doi.gov/sites/doi.gov/files/uploads/DOI_FAA_MOA_Class_G_09112015.pdf)

DOI/FAA MOA for BVLOS flights within TFRs

[https://www.doi.gov/sites/doi.gov/files/uploads/FAA\\_DOI\\_UAS\\_TFR\\_MOA\\_8-13-15.pdf](https://www.doi.gov/sites/doi.gov/files/uploads/FAA_DOI_UAS_TFR_MOA_8-13-15.pdf)

DOI Blanket COA

[https://www.doi.gov/sites/doi.gov/files/uploads/faa\\_form\\_7711-1\\_uas\\_coa\\_2016-csa-185\\_doi.pdf](https://www.doi.gov/sites/doi.gov/files/uploads/faa_form_7711-1_uas_coa_2016-csa-185_doi.pdf)

Presidential Memo for Protecting Privacy, Civil Rights and Civil Liberties

<https://www.whitehouse.gov/the-press-office/2015/02/15/presidential-memorandum-promoting-economic-competitiveness-while-safegua>

DOI UAS Privacy Impact Assessment

<https://www.doi.gov/sites/doi.gov/files/uploads/DI-4001%20Unmanned%20Aircraft%20System%20Program%20PIA%2001.12.2016.pdf>

Online NOTAM filing service 1800wxbrief.com

<https://www.1800wxbrief.com/>

Sky Vector flight planning tools

<https://skyvector.com/>