



United States Department of the Interior

Office of Aviation Services

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DOI OPERATIONAL PROCEDURES MEMORANDUM (OPM) - 11

Subject: DOI Use of Unmanned Aircraft Systems (UAS)

Effective Date: January 1, 2016

Supersedes: OPM 13-11 dated October 20, 2014

Expiration: December 31, 2016

1. **PURPOSE.** The purpose of this OPM is to provide guidance on the operations and management of Unmanned Aircraft Systems (UAS).
2. **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.
3. **BACKGROUND.** Current Federal Aviation Administration (FAA) policy is provided in FAA Order 8900.1, Volume 16, Unmanned Aircraft Systems (UAS), dated June 23, 2014 and subsequent. This national policy document contains the following fundamental provisions.
 - A. Unmanned Aircraft are defined as “aircraft” flown by a “pilot” regardless of where the pilot is located. 14 CFR 1.1 defines “*aircraft*” as a device that is used or intended to be used for flight in the air.
 - B. Aircraft and pilots must demonstrate compliance with applicable sections of Title 14 CFR to operate in the National Airspace System (NAS). The FAA retains the authority to approve UAS operations within the NAS in Class A, B, C, D, E and G airspace.
 - C. When operating in Class A, B, C, D, E and G airspace, DOI UAS’s must be operated with a FAA Certificate of Waiver or Authorization (COA).
 - D. COAs are not required in Restricted, Prohibited, or Warning airspace. However, UAS operations in these specific airspaces will be regulated and approved by the Controlling Authority (a.k.a. “Range Control”).
4. **POLICY.** UAS by definition are considered aircraft regardless of size or weight. While their methods of control and airspace utilization procedures are different than manned aircraft, the overall

responsibility for management within the DOI rests with the Office of Aviation Services (OAS). DOI bureaus and offices shall comply with the following protections and procedures when using any UAS operated by DOI or on behalf of DOI, whether DOI-owned or vendor-owned.

5. ROLES AND RESPONSIBILITIES.

- A. The Office of Aviation Services (OAS) has overall responsibility for management, ownership, acquisition, assignment, and disposal of DOI-owned aircraft, including UAS. OAS oversees the UAS program and issues Department-wide policy, procedures, training, and a comprehensive actionable strategy for the use of UAS. In collaboration with Bureau and Office Aviation Programs, OAS establishes UAS requirements and standards to ensure aviation safety and individual privacy, civil rights, and civil liberties protections in compliance with applicable laws, regulations, and policies. Additionally, OAS coordinates with internal and external agencies, partners, and organizations on UAS policy, inspections, audits, compliance reviews, and proposed rulemaking.
- B. The Office of the Chief Information Officer (OCIO) has overall responsibility for promulgation and 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. The Departmental Privacy Officer within the OCIO formulates 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. The Office of Civil Rights (OCR) is responsible for developing 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. OCR 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. Bureaus and offices are responsible for implementing and executing Departmental and organization-specific policies, procedures, and protections consistent with applicable Federal laws, Executive Orders, regulations, policies, and standards.

6. PRIVACY, CIVIL RIGHTS, AND CIVIL LIBERTIES PROTECTIONS. The use of UAS significantly expands DOI's ability to obtain remote 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.

- A. Privacy Protections. In light of the advancements in UAS technologies and diverse potential uses of UAS across Department and Bureau 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. 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 agency requirements established by appropriate authority.
- B. Civil Rights 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.
- C. Accountability. To provide for effective accountability, the Office of Aviation Services, 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.
- D. 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.

7. PROCEDURES AND GUIDELINES.

- A. Acquisition of UAS: There are three primary methods for bureaus and offices to acquire UAS assets and capabilities. Each requires a different acquisition process:
1. Assignment of UAS previously declared excess by federal agencies. OAS is responsible for acquisition and management of DoD bailed or transferred UAS acquired to satisfy bureau and office requirements. Since these UAS are typically acquired at virtually no cost to the Department, bureaus and office desiring to operate these systems are not required to submit an aviation business case analysis for approval by Department aviation governance. However, to ensure the appropriate level of oversight and support from bureau and office leadership, requestors must prepare a UAS operational test and evaluation (OTE) proposal, coordinated through the bureau or office National Aviation Manager (NAM) and vetted by the first senior executive in the requestor's chain of command. Ultimately, the decision on whether to issue UAS will be made by the OAS Director based on the availability of assets, the requesting agency's experience operating

UAS, and the concurrences of the requesting Bureau's Executive Aviation Committee (EAC) member on the distribution of these assets. The proposal shall contain the following elements.

- a. Bureau or office designation.
- b. Requestor name and contact information.
- c. State whether this is a new requirement or program renewal.
- d. Number and type of assets requested. Note: UAS typically are deployed in "kits" which may consist of multiple aircraft.
- e. Proposed Start and End Dates. Indicate the date assets must be in place to support tests or schedule training.
- f. Proposed/Planned/Anticipated Activities to Be Conducted. Briefly summarize the activities, with approximate dates, location, agency to be supported, objectives and number of hours to be flown.

The OAS UAS program manager can provide a template for the proposal. The aircraft is assigned to the requesting bureau or office through a Memorandum of Agreement outlining expectations and responsibilities of both parties.

2. As with manned aircraft, Department operations of commercially available UAS is most efficient when acquisition is limited to a few proven systems that allow standardized training and procedures as well as simplified logistics. Further, until the FAA publishes airworthiness standards for the various classes of UAS, the Department will seek to limit its operational risk by purchasing commercial UAS that are direct derivatives of DOD procured systems OR have undergone extensive testing by an independent agency or group recognized by OAS for their expertise and objectiveness.
 3. For commercial contracts, under which a contractor owned and operated UAS are utilized under the operational control of the bureau or office, the Department assumes responsibility for the airworthiness of the UAS and could be held liable for any injury or damages incurred during the operation. Procurement of contract UAS shall follow the existing DOI processes for aviation contract services. If a bureau or office determines that a commercial contract is the best way to satisfy their requirements, a primary point-of-contact must be appointed for the duration of the contract.
- B. Cooperator UAS Operations: Cooperator UAS missions fall into two categories.
1. Operations in which DOI has operational control of the mission. For these types of missions the Cooperator aircraft and crew shall be approved by OAS. Requests for approval of cooperator UAS should follow the process outlined in 351DM4.
 2. Operations in which DOI does not exercise operational control. In this example the Bureau is allowing a cooperator to utilize DOI lands for the purpose of takeoff and landing, and may or may not be utilizing the data captured by the cooperator UAS. Universities, other governmental agencies (CBP, NOAA) would be examples of this type of mission. This type of mission does not include commercial filming or other types of "commercial" operations. Approvals for takeoff and landings from DOI lands shall follow bureau land use permitting procedures (i.e. special use permit). Prior to bureaus approving/issuing a special use permit for this type of mission the following must occur: The cooperator must secure their FAA approved COA; The approving unit shall obtain a copy of the COA, and forward to the bureau NAM and OAS UAS specialist for review.

Once this is completed, then the permit may be issued. DOI will not sponsor COA's for these types of cooperator missions. These types of missions will not fall under DOI operational control.

Note: Operational control with respect to a flight means the exercise of authority over initiating, conducting, or terminating a flight. In order to reduce ambiguity, it is recommended that all DOI bureaus and offices operating in a multi-bureau/office/agency environment document the entity designated to exercise operational control over an activity prior to the commencement of flight operations. The minimum components and signature requirements are referenced in DM352 Chapter 1, the specifics can be found in OPM-06 Aviation Management Plans (7/21/2014). <http://oas.doi.gov/library/opm/CY2014/OPM-06.pdf>

Examples of this authority include:

The following table provides some guidance to identify end product/service or flight service procurement. If the answer is YES in any block under a project, you have a flight service that must be procured through DOI OAS.

PROJECT	Aerial photo remote sensing	Aerial application (spray/seed)	Animal inventory	Your project
Set pilot standards				
Direct aircraft maintenance				
Dispatch aircraft				
Other aircraft and pilot requirements				

- a. Approving crewmembers and determining their qualifications to operate the aircraft;
- b. Determining the aircraft configuration and specifying standards under which the aircraft shall be maintained.
- c. Determining required dates and times of departure, departure and recovery bases. It does not include the specification of windows of time during which flights need to be flown to achieve mission objectives.

d. Determining the nature and quantities of cargo to be flown.

The NTSB maintains the ultimate authority for assigning operational control for all accidents and incidents investigated by that agency. For DOI investigations that do not involve the NTSB, OAS will assign operational control based on any pre-operation designation (if completed) and the preponderance of evidence relating to the actions of the involved individuals and entities.

C. Certificates of Authorization (COA)

1. FAA-issued Certificates of Authorization are required for all UAS operations within the National Airspace System, (NAS), excluding active Restricted or Warning Areas designated for aviation use. OAS has been designated as DOI's proponent for the purpose of applying for COA's. Until such time as the FAA begins to issue UAS type certificates or other means of certifying airworthiness, civil and commercial operators are not authorized to submit COA requests, except in very limited cases. The Department will not "sponsor" COA requests for UAS operations in which a DOI bureau does not exercise operational control.
2. A complete COA package includes, but is not limited to, the operational plan, PASP, risk assessment, airworthiness, airspace, pilot qualifications, frequencies and communication plan. All COAs will be developed and submitted using the COA online system (<https://ioeaaa.faa.gov>). Units with approved UAS projects will establish on-line COA accounts with the UAS Specialist at OAS who administers access to this account on behalf of the Department.
3. Units that do not have established UAS programs, but desire to employ UAS for short-term operations or feasibility testing, are encouraged to request support from a bureau with an ongoing program. By using experienced operators, offices new to UAS operations can benefit from shorter spin-up times and reduced vehicle "mortality." For offices with established program, this shared approach will help them maintain currency/proficiency with the systems.
4. Initial feasibility discussions for a proposed UAS operation (new location, mission area, sensors) should normally be conducted between the unit proposing the operation, the bureau regional aviation manager (RAM), and the respective NAM. The OAS UAS Specialist is also available to provide advice and clarification as necessary. The bureau NAM and OAS will coordinate in the designation of a bureau (or office) proponent for each bureau-approved UAS program.
5. COA's require issuance of a Notice to Airmen (NOTAM) 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 (if required). Each COA contains the instructions for requesting the NOTAM. For operations under the DOI/FAA MOA, NOTAMS must be issued no later than 24 hours in advance of the operation.
6. The bureau proponent is responsible for obtaining spectrum authorization in the form of Special Temporary Authority (STA) issued by the National Telecommunications and Information Administration (NTIA) if using DOD frequencies.
7. Bureaus are responsible for coordinating with each other for sUAS operations over lands owned or managed by DOI.

8. For operations over other U.S. government, state or privately-owned or managed lands, excluding DOD restricted areas/airspace, Bureaus will coordinate with the appropriate authority and ensure the property owners have advance notice prior to the proposed sUAS operation. This coordination shall include anticipated periods of operation, purpose of the flights, and contact information for the responsible unit should questions or issues arise.
 9. The bureau will complete the detailed COA application on-line. When the proponent feels the application is ready for review and submittal, it shall be forwarded through bureau channels to the bureau NAM for review and then to the OAS UAS Specialist. The UAS specialist will exercise the committal authority in the on-line COA system to transmit the approved COA request to the FAA.
 10. The status of the COA can be followed on the COA on-line site. The COA, once issued, shall serve as the UAS Operations Plan in addition to the PASP, IAP, etc...
- D. Operations Under the DOI/FAA MOA: Under the DOI/FAA Memorandum of Agreement for Operation of UAS in the NAS, dated Jan 23, 2014, bureaus operating OAS-approved UAS may conduct flights using COA via notification procedures subject to conditions of the [DOI FAA MOA](#)
1. Operations may only be conducted in Class G airspace, with UAS weighing 55 pounds or less, and are limited to scientific applications, wildlife surveys, and search and rescue (SAR) efforts. COA via notification procedures are not authorized for fire suppression operations or law enforcement missions.
 2. Operations will be conducted within visual line of sight of the pilot/operator or trained observer utilizing Class G VFR weather requirements. UAS operations will follow the same right-of-way rules as any manned aircraft and shall give way to manned aircraft at all times. For operations below 1200 feet above ground level (AGL), the day minimums are one mile visibility and clear of clouds. At night, the requirements are 3 statute miles visibility and at least 500' below and 2000 feet horizontally from clouds.
 3. Requests for COAs for operations meeting the above requirements will be made using the following COA via notification procedures. See the attached Class G notification procedures for details.
 - a. Bureau proponents will enter mission data in the UAS COA Online System. This will include uploading the project aviation safety plan (PASP). The requirement to complete a PASP, minimum components and signature requirements are referenced in DM352 Chapter 1, the specifics can be found in OPM-06 Aviation Management Plans (7/21/2014). <http://oas.doi.gov/library/opm/CY2014/OPM-06.pdf>
 - b. The bureau will request a NOTAM 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 (if required). The NOTAM shall be requested 24 hours in advance of the operation.
 4. COAs for UAS operations in support of active fire suppression or other emergency

operations will be requested as Emergency COAs using the UAS COA Online System, unless otherwise authorized by FAA. Any requests for an emergency COA will be routed through OAS UAS Specialist to the FAA.

5. Operations conducted entirely within Restricted/Prohibited and Warning areas do not require a COA; however, an MOU for UAS use will be established between the using bureau/OAS and the controlling agency ("range control").

E. Requirements for UAS Flights in the NAS:

1. General Limitations:

- a. Operations will not be conducted over populated areas, defined as those areas indicated in yellow on VFR sectional charts, unless authorized in the COA.
- b. Flights will be planned to avoid sustained/repeated overflight of heavily trafficked roads or highways but may briefly cross over active roads as necessary. Surveillance of roads or outside gatherings of people shall be accomplished with offset surveillance techniques to minimize risk to persons or property on the ground.
- c. If the COA dictates that telephone contact must be made with ATC for normal or emergency communication, the PIC shall have ready access to a telephone from the mission location (cellular, satellite, landline, etc...)
- d. Flights will be conducted in accordance with any applicable Part 93 Special Air Traffic Rules, a.k.a. Special Flight Rules Area (SFRA) considerations: Examples, Grand Canyon Special Federal Aviation Regulation, (SFAR 50-2), Washington DC, Anchorage, AK.
- e. Operations within Class G airspace underlying Class B or C airspace (Mode C veil) generally require either an independent UAS flight termination system or a transponder, or both.
- f. UAS will remain outside of five (5) NM (nautical miles) from any civil airport or heliport at or below 400 feet AGL except as authorized by the COA.

2. Night operations are permitted provided:

- a. The UAS meets the night lighting requirements as defined in 14 CFR 91.209.
- b. Flight Crews have been trained on the lighting configuration of the UAS and are in place 30 minutes prior to night operations to ensure night vision adaptation has occurred.

F. Overflight Responsibilities:

1. The bureau with operational control is responsible for obtaining authorization for flights operations to and from lands managed by States, other federal agencies such as USDA or NOAA, or other DOI bureaus. These areas include National Parks, National Wildlife Refuges, NOAA Olympic Marine Sanctuary, etc... These items must be addressed in the

PASP prior to operations.

2. For flights over other U.S. government or state managed lands, excluding DoD restricted areas/airspace; the bureau proponent will coordinate with the appropriate authority and notify them, in writing, prior to commencing the operation.
- G. UAS Pilot/Mission Operator and Observer Responsibilities, Qualifications and Certification.
1. General UAS Pilot Responsibilities: The PIC of a UAS is directly responsible for and is the final authority as to the operation of that aircraft.
 2. One PIC must be designated for each flight and recorded on the form OAS-2U.
 3. Pilots are responsible to perform a thorough preflight inspection of the UAS in accordance with the operator's handbook. The PIC is responsible for determining that the aircraft is in a condition for safe flight, the PIC must discontinue a flight when the aircraft encounters un-airworthy mechanical, electrical, or structural conditions.
 4. Pilots and observers will not have concurrent responsibilities during the mission. They may not perform more than one crew duty at a time (i.e. pilot/UAS Crewmember/observer).
 5. Per 350 DM 1.8, Reporting Requirements, all UAS flight time must be recorded on an OAS 2U (fleet UAS) or OAS 23 (commercial UAS) for each flight.
 6. UAS Pilot Certification Factors: Rating requirements for the UAS PIC depend on the conditions, airspace and UAS the flights are conducted with and fall into two categories.
- H. DOI Specific Training and Certification for all UAS Pilots and Mission Operators:
1. Current Class II FAA medical certificate.
 2. All DOI UAS pilots must complete a manufacturer's UAS-specific training course (approved by OAS), or OAS-developed UAS qualification course (or other Federal agency equivalent) for each make and model of UAS to be flown.
 3. All DOI UAS pilots and operators must pass an initial qualification evaluation administered by a DOI UAS pilot inspector. The evaluation will include an oral evaluation of subjects covered in the OAS UAS ground school and a minimum of one evaluation flight. OAS will publish a practical test standard (PTS) for UAS. For systems requiring additional crewmember in addition to the PIC the crewmembers will be carded for specific duties (i.e., ground crew, backup pilot).
 4. DOI UAS pilots/crewmembers are required to maintain currency as Aircrew Members per. OPM-04. (A-116 one time, A-100, A-200 and A-110 (if using hazmat) every 3 years)
 5. Supervisors of UAS personnel shall be current in the Supervisor training requirements outlined in OPM-04. Details can be found in the Interagency Aviation Training Guide (https://www.iat.gov/docs/IAT_Guide_2014_0331.pdf)
- I. Operations requiring only a OAS UAS Pilot Qualification Card: The PIC will not be required

to hold an FAA pilot certificate if all the following conditions are met:

1. UA operated solely within visual line of sight of pilot/operator. At an altitude of no more than 400 feet above ground level (AGL) at all times except as authorized in Restricted/Warning/Prohibited areas or by COA or MOA with FAA
2. In Class G or Restricted/Prohibited or Warning airspace.
3. Conducted in a sparsely populated location.
4. Conducted no closer than 5 NM from any airport or heliport.
5. In lieu of a FAA pilot certificate, DOI PIC operating UAS under the provisions of this paragraph must have:
 - a. Successfully completed an FAA private pilot ground instruction, and have passed the written examination, or
 - b. Completed the DOI/OAS A-450 Basic Small UAS Basic Operator's course, or OAS approved equivalent, which is a tailored aviation course approved by FAA and which covers applicable sections of the FAR/AIM or other aviation publications that will enable the pilot to safely operate a specific UAS in the class of airspace desired. This training also includes instruction and practical exercises in weather (as applicable to a UAS pilot), emergency procedures, aircraft mishap reporting, SAFECOM Program, lost link, Air Traffic Control (ATC communications) and NOTAM procedures, classes of airspace, system operating limitation all other applicable DMs and OPMs pertaining to aviation.

J. Operations that may require a FAA pilot certificate (plus OAS qualification card):

1. All operations approved for use in Class A, B, C, D, and E airspace.
2. All operations conducted under IFR (FAA instrument rating required).
3. Night time operations except in Restricted/Warning/Prohibited areas if authorized by the Controlling Authority, if specifically allowed in the Special Provisions Section of the COA, or as authorized in the DOI/FAA MOA.
4. All operations conducted at joint use or public airfields.
5. All operations conducted beyond line of sight, unless the flight is within restricted or prohibited airspace with the permission of the controlling agency.
6. Operations above 400 feet AGL or with visual line of sight conducted greater than one NM from the UAS observer. A FAA pilot certificate may not be required for altitudes to 1000 feet in Restricted/Warning/Prohibited areas if so authorized by the Controlling Authority. Also, the higher altitude is authorized without a FAA pilot certificate if specifically allowed in the Special Provisions Section of the COA.
7. At any time the FAA (as specified in the COA) has determined the need based on the UAS characteristics, mission profile, or other operational parameters.

8. For those operations that require a certificated pilot, the PIC, in order to exercise the privileges of his certificate, shall have flight reviews and maintain currency in manned aircraft per 14 CFR 61.56, *Flight Review* and 61.57, *Recent Flight Experience: Pilot in Command*.
9. For operations approved for night or IFR, the PIC shall maintain currency per 14 CFR 61.57, *Recent Flight Experience: Pilot in Command*, as applicable.

K. Flight Currency:

1. DOI UAS pilot or to act as PIC a DOI UAS pilot must demonstrate three takeoffs (launch) and landings (recovery) in the specific UAS in the previous 90 days. If currency is lost prior to a mission, operator must regain currency by flying three missions in the UAS simulator, performing 3 takeoffs and landings with the UAS or fly under the observation of a current UAS pilot.
2. DOI UAS pilots are required to fly each of the aircraft they are carded for at least once every six months. Operators failing to meet this requirement shall fly under the supervision of a carded and current DOI UAS pilot. Operational flights are acceptable to maintain currency.
 - a. Medical Qualification: The PIC shall maintain, and have in their possession, at a minimum, a valid FAA Class 2 medical certificate issued under 14 CFR Part 67

L. General UAS Observer Responsibilities:

1. Observer duties include but are not limited to the following:
 - a. Have a clear view of the area of operation.
 - b. Be in communications with the PIC either within speaking distance or with a portable radio/cell phone equipped for immediate communication.
 - c. Keep the pilot advised of any possible hazards such as power lines, birds, other aircraft, terrain, and hazardous weather conditions.
 - d. The observer can also act as the launch person for a hand launched aircraft.
 - e. Qualified UAS Pilots may act as observers, however observers may not act as a pilot or UAS crewmember unless they possess a valid OAS-30U qualification card.
2. Observer Training: Observers must have completed sufficient training to communicate to the pilot any instructions required to remain clear of conflicting traffic. This training, at a minimum, shall include knowledge of the rules and responsibilities described in 14 CFR 91.111, *Operating Near Other Aircraft*; 14 CFR 91.113, *Right-of-Way Rules: Except Water Operations*; and 14 CFR 91.155, *Basic VFR Weather Minimums*; knowledge of air traffic and radio communications, including the use of approved ATC/pilot phraseology, if applicable; and knowledge of appropriate sections of the *Aeronautical Information Manual*.

3. Observer Medical Qualification: All observers are required to have a current Class 2 FAA medical certificate, or FAA approved equivalent.
 4. Supervisory Training: Supervisors of UAS crewmembers (Pilots, Mission Operators and/or Observers) shall maintain currency for "Supervisor" as outlined in OPM-04. (https://www.iat.gov/docs/IAT_Guide_2014_0331.pdf)
- M. UAS Inspections and Maintenance:
1. PICs will:
 - a. Conduct a conditional inspection of each UAS before every flight, and document any discrepancies on the OAS-2U.
 - b. Record UAS flight time in the aircraft logbook (using the OAS-2U) and submit one copy of each form to OAS Technical Services at least monthly or at the conclusion of the project, whichever occurs first.
 - c. Report monthly flight statistics to the FAA via the COA online site (<https://ioeaaa.faa.gov/oeaaa/Welcome.jsp>)
 - d. Record malfunctions (loss of link), damage (parts that require repair to be airworthy again). Repairs to UAS beyond component replacement shall be coordinated with the OAS UAS specialist.
 - e. Submit SAFECOM reports for any conditions, acts, observations, circumstances or maintenance problems that led to, or could have led to, an aircraft mishap. (www.safecom.gov)
 - f. Immediately report any missing aircraft or a mishap involving injury to personnel or property on the ground or total loss of the air vehicle by calling the Aircraft Accident Reporting Hotline at 1-888-4MISHAP prior to continuing operations.
 2. OAS UAS inspectors will be qualified in accordance with DOI OAS Instruction 5400-202. As a minimum, OAS UAS inspectors will receive formal training on preflight inspection, ground engine runs and systems/diagnostic checks for each make and model of UAS to be inspected and demonstrate proficiency in those tasks annually.
 3. UAS will be inspected annually by an OAS approved inspector. Such inspections will be documented on OAS-36U. The inspector will utilize available military technical orders, FAA airworthiness guidance and manufacturer's developed checklists, as available, to accomplish the following tasks.
 - a. Confirm aircraft configuration conforms to original manufacturer's design. All modifications, including sensor changes and/or upgrades must be approved by OAS UAS specialist.
 - b. Inspect the airframe of general condition and serviceability.
 - c. Note serial numbers of airframe and GCS.

- d. Perform preflight checklist.
 - e. Run systems diagnostics to confirm all tests are nominal.
 - f. Conduct ground engine run to confirm proper operation.
 - g. Check battery charger and other peripherals for proper operation.
 - h. Document any missing kit items.
4. OAS UAS office in conjunction with Technical services will:
- a. Receive and archive OAS-2U forms for a minimum of 5 years.
 - b. Track accumulated flight time per fuselage/airframe, and be able to generate and deliver overall usage reports when needed by the bureaus.
 - c. As able, develop use histories on major UAS components (e.g. batteries, GCUs, etc.).
 - d. Report UAS usage via FAIRS.
 - e. Review OAS-36U forms to confirm status of inventory.
 - f. Arrange for in-house or contract repair of damaged, inoperable UAS to the extent practical.
- N. Oceanic and UAS Flights: 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 as "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 flight is not being conducted under ICAO flight procedures.
- 1. These conditions apply only to small UAS weighing 55 pounds or less.
 - 2. The Ground Control Station (GCS) and UAS shall remain within uncontrolled airspace at all times.
 - 3. The GCS shall remain greater than 12 NM (i.e. international waters) from the U.S. coastline during all phases of flight.
 - 4. Operations will be limited to below 1200 feet AGL provided the UAS remains with ICAO Class G airspace at all times.
 - 5. Operations will be conducted within visual line of sight of the pilot/observer. (The UAS shall remain within 5NM of the GCS at all times.)

6. 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.
 7. Day or night operations are permitted, but associated risks and mitigations shall be addressed in each project-specific PASP.
 8. UAS operating areas shall be selected so as not to interfere with established air routes and ocean shipping lanes
 9. UAS operations shall not be conducted beneath (“under the veil”) of Class B or C airspace.
 10. The operating agency will request the FAA to publish 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 UAS operator 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).
 11. 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.
 12. 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.
- O. 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 specialist.
8. **EXCEPTIONS and LIMITATIONS.** Per 350 DM 1.9., Deviations from this OPM must be approved by the Director, Office of Aviation Services.

Director, Office of Aviation Services