

ANNEX A (DOD-FAA UAS MOU) TO HQDA EXORD 228-24 ARMY POLICY FOR THE DOD AND FAA  
MOU FOR OPERATIONS IN THE NATIONAL AIRSPACE SYSTEM

MEMORANDUM OF UNDERSTANDING BETWEEN THE DEPARTMENT OF  
DEFENSE  
AND  
FEDERAL AVIATION ADMINISTRATION FOR  
UNMANNED AIRCRAFT SYSTEM OPERATIONS IN THE NATIONAL  
AIRSPACE SYSTEM

1. **BACKGROUND:** This Memorandum of Understanding (MOU) between the Department of Defense (DoD) and the Federal Aviation Administration (FAA) sets forth provisions that will allow, in accordance with applicable law, increased access for DoD unmanned aircraft systems (UAS) into the National Airspace System (NAS) outside of Restricted, Warning, or Prohibited Areas through accommodation, implementation of advanced mitigation, and integration, where applicable. DoD and the FAA undertake specific activities in this MOU, and this MOU applies to all DoD UAS operations (including National Guard UAS training conducted under State command and control). This MOU replaces the Memorandum of Agreement Concerning the Operation of Department of Defense Unmanned Aircraft Systems in the National Airspace System, dated September 16, 2013, and incorporates policies and procedures adopted since 2013.
  - I. I. DoD's long-term goal is to operate UAS seamlessly with manned aircraft in all classes of airspace without the need for airspace segregation or special authorizations, such as Certificates of Waiver or Authorization (COAs) or airspace restrictions established as special security instructions.
  - 1.2. DoD's interim goal is to operate UAS in the NAS utilizing Military Department National COAs (UAS weighing greater than 1,320 pounds, e.g., MQ-I, MQ-4, MQ-9 and RQ-4) while the technology to enable file-and-fly is developed.
  - 1.3. FAA's goal is to integrate appropriately equipped UAS consistent with no degradation to the safety and operational efficiency of the NAS, as well as the safety of persons and property on the surface.
  - 1.4. DoD and the FAA will continue to collaborate in the development of policy, regulatory, technical, and safety-related requirements in order to increase DoD UAS access to the NAS in a safe manner. This collaboration will include the sharing of safety data and joint participation in research and development activities.
2. **AUTHORITIES:**
  - 2.1. Pursuant to Section 113 of Title 10, U.S. Code, and subject to the direction of the President and to other applicable law, the Secretary of Defense exercises authority, direction, and control over DoD, including setting military aviation standards and directing military aviation activities.
  - 2.2. The Federal Aviation Act of 1958, Sections 106(1), 106(m), 40103(b), and 44701(a)(S) of Title 49, U.S. Code, provides the authority of the Federal Aviation Administration (FAA) Administrator to enter into Agreements, set aviation safety standards and regulate aviation operations in the NAS.

- 2.3. DoD Directive 5030.19, DoD Responsibilities on Federal Aviation, September 13, 2013, as revised.
- 2.4. DoD Instruction 4000.19, Support Agreements, April 25, 2013, incorporating Change 1, November 30, 2017.
3. PURPOSE: The policies, procedures, and operations prescribed in this MOU apply to the operation of DoD UAS within the NAS outside of Restricted, Warning, or Prohibited Areas.
4. FUNDS AND PERSONNEL: This MOU does not document nor provide for the exchange of funds or personnel between the Parties nor does it make any commitment of funds or resources. Each Party is responsible for all costs of its personnel, including pay and benefits, support, and travel. Each Party is responsible for supervision and management of its personnel.
5. DoD ACTIVITIES:
  - 5.1. UAS AIRWORTHINESS CERTIFICATION: All DoD UAS operating in the NAS will be certified by one of the Military Departments as airworthy to operate in the intended segments of national airspace in accordance with applicable DoD and Military Department policies and standards (see paragraph 2.1).
  - 5.2. UAS PILOT/OPERATOR QUALIFICATION: Pilots/operators<sup>1</sup> and crewmembers of DoD UAS will be qualified and medically certified by the appropriate Military Department.
  - 5.3. MULTIPLE UNMANNED AIRCRAFT (UA) FLOWN BY A SINGLE PILOT/OPERATOR: Multiple UA flown by a single pilot/operator may be authorized by the appropriate Military Department in airspaces delegated to DoD by the FAA for air traffic control service provision purposes through a Letter of Agreement (LOA). UAS Airworthiness Certification documentation must include specific authorization for multiple UA operations and pilot/operators must be specifically qualified to operate multiple UA simultaneously.
  - 5.4. DOD UAS ACCESS TO NAS WITHOUT AN FAA COA: COAs are not required if the entire UAS flight will be conducted within airspace that has been delegated to DoD by the FAA for air traffic control service provision purposes. DoD is the approval authority for DoD UAS operations in DoD delegated airspace.
  - 5.5. NOTICE TO AIRMEN (NOTAMs): DoD proponents will publish NOTAMs to alert non-participating aircraft not more than 72 hours in advance but not less than 24 hours prior to the UAS operation.
6. FAA ACTIVITIES:
  - 6.1. FAA COA PROCESS FOR UAS OPERATIONS THAT EXTEND OUTSIDE DOD-CONTROLLED AIRSPACE: At present, the primary means of granting access to the NAS for public UAS is through the COA process. COAs will be issued using the guidance contained in the latest FAA Order JO 7200.23 and other applicable FAA Orders and Notices.
    - 6.1.1. New COAs: A request for a new COA will be submitted via the FAA COA

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<sup>1</sup> The term "operator" is a DoD-specific term to describe individuals with the appropriate training and Military Department certification for the type of UAS being operated. and, as such, DoD is responsible for the UAS operations and safety.

Application Processing System (CAPS). The FAA will process requests for new COAs within 60 business days of receipt of a submitted application. In instances where this timeline will not be met, the FAA will notify the requester of the status of the anticipated delay, any additional information required, and the expected COA processing date.

- 6.1.2.** Renewal COAs: The renewal of a COA with no changes will be processed using a streamlined application process and may be renewed one time as prescribed below. The FAA will process COA renewal requests within 30 business days of receipt of a complete application.
  - 6.1.3.** The DoD proponent will submit the request for COA renewal via CAPS no later than 45 business days before the COA expiration date.
  - 6.1.4.** The FAA will approve the COA renewal no later than (NLT) 15 business days prior to the COA expiration date.
  - 6.1.5.** If a renewal COA requires an extension to complete processing, extensions will be granted by the FAA via letter until the renewal COA is approved, not to exceed 24 months from the original expiration date.
  - 6.1.6.** Existing COAs that have FAA-approved modifications via "pen-and-ink" changes may be processed as a renewal COA.
  - 6.1.7.** Requests for COA renewals that contain additions or changes by the proponent will not be accepted as a renewal but will be processed as a new COA.
- 6.2. New and renewal COAs will be valid for 24 months from the date of approval, unless a shorter duration has been requested by the proponent. Requests involving policy or airspace changes may require an applicant to provide additional information to the FAA before a renewal COA can be approved.
  - 6.3. COA proponents will ensure that airworthiness certification, spectrum approvals, and Letters of Agreement (such as written agreements with air traffic control facilities or for land use, if applicable) remain current for the duration of the COA and will provide the FAA any updates to those documents.
  - 6.4. Priority COA Requests: In the case of an urgent and compelling need to prioritize a specific COA application (new/renewal), the DoD Policy Board on Federal Aviation (PBFA) UAS Subgroup Chair will notify the FAA of the COA request for priority action, the reason for priority action, and the requested approval date. The FAA will move the requested COA to the top of the DoD queue and process it as quickly as possible. Metrics for DoD COAs currently in the queue when the request for prioritization is received will be adjusted as appropriate.
7. **DOD SMALL UAS (sUAS) ACCESS TO CLASS G AIRSPACE WITHOUT FAA COA:** Operations will be conducted in Class G airspace during day/night under visual meteorological conditions. Additional requirements for operating in Class G airspace are as follows:
- 7.1. DoD is the approval authority for DoD sUAS operations in Class E airspace areas designated as an extension to Class C, D, or E surface areas.
  - 7.2. Operations in Class G airspace may only be conducted with UA weighing 55 pounds or less.
  - 7.3. The proponent will publish a NOTAM to alert non-participating aircraft not more than 72 hours in advance but not less than 24 hours prior to the operation. (DoD requirement)

- 7.4. Operations will be conducted within visual line of sight of the operator or visual observer.
- 7.5. Operations may be conducted over lakes, rivers, or coastal waters.
- 7.6. Operations taking off and/or landing on private property require permission from the landowner.

8. OPERATIONS IN THE VICINITY OF AIRPORTS (NON-DoD DELEGATED):

- 8.1. No person may operate a UAS in Class B, Class C, or Class D airspace or within the lateral boundaries of the surface area of Class E airspace designated for an airport unless that person has an FAA COA and prior authorization from Air Traffic Control (ATC).
- 8.2. No person may operate a UAS aircraft in a manner that interferes with operations and traffic patterns at any airport, heliport, or seaplane base.

9. UAS NIGHT OPERATIONS ARE PERMITTED PROVIDED:

- 9.1. The UAS must meet the night lighting requirements prescribed in CFR 91.209 or alternate means approved by the FAA as safe for the intended operation.
- 9.2. Flight crews have been trained on the lighting configuration of the unmanned aircraft and are required to be in place 30 minutes prior to night operations to ensure that night vision adaptation has occurred, as applicable.

10. OPERATIONS OVER-POPULATED AREAS: Operations will not be conducted over-populated areas without the appropriate level of airworthiness as determined under DoD policies and standards (see paragraph 2.1).

11. INSPECTION/REPORTING PROGRAMS: DoD and the FAA agree that regular assessment of UAS operations under COAs is essential to ensuring the continued safety of the NAS. Each Military Department will conduct regular inspections and self-assessments of units that operate UAS, as well as at DoD Air Traffic Control facilities and airfields where UAS operations are conducted.

12. DOD/FAA PARTNERING INITIATIVES: To the maximum extent practicable, DoD and the FAA will partner on efforts to further UAS research, development, standards, testing, and certification initiatives as follows:

- 12.1. Sharing UAS Safety Data: DoD and FAA will continue to collect and share safety-related data on UAS operations to support DoD/FAA UAS safety studies and analyses. The FAA will share with DoD its UAS safety data collected from other non-DoD sources, as permitted by law and the non-DoD sources. The FAA will release to DoD requested data, results, and findings of studies and analysis conducted using DoD and non-proprietary non-DoD UAS data. The goal of mutual safety data reporting will be to arrive at an agreed-upon set of data reporting requirements that can be supported by the individual Military Departments. In the interim, the data-reporting methodology delineated below will be utilized.

- 12.1.1. Data will be provided in accordance with the June 2011 Memorandum of Agreement "Concerning Sharing Safety Mishap Information Related to the Operation of Unmanned Aircraft Systems (UAS) between the DoD Components and the Federal Aviation Administration (FAA)."
  - 12.1.2. COA data is reported via CAPS.
  - 12.1.3. Additional data elements may be added by future DoD-FAA agreements or arrangements regarding the sharing of safety or operational data (incorporated by reference).
13. SAFEGUARDING OF SHARED INFORMATION (NON-PUBLIC INFORMATION): DoD and the FAA will take all actions reasonably necessary to preserve, protect, and maintain all privileges and claims of confidentiality related to non-public government-generated information provided pursuant to the MOU, in accordance with applicable law. Release of any non-public, government generated information to third parties is prohibited without the written consent of signatories to this MOU or their duly appointed designees unless release is otherwise required by law. DoD and the FAA intend that sharing of non-public government-generated information with each other pursuant to the terms of the MOU will not constitute public disclosure, nor will it constitute a waiver of confidentiality or any privilege applicable to such information. DoD and the FAA expressly reserve the discretion, under any applicable legal authority, to withhold from public release the information shared under this MOU.
14. IMPLEMENTATION PLAN: The Chairman, DoD Policy Board on Federal Aviation, and the FAA's Director of Airspace Services, in conjunction with the FAA's Director of Operations, Air Traffic Services, are responsible for formulating policy for their respective organizations to ensure compliance with the provisions of this MOU.
15. REVIEW OF MOU: This MOU becomes effective upon the last signature of the Parties and is subject to review every five (5) years, or by request of either party, and may be renewed or amended by agreement of the Parties.
16. TERMINATION: This MOU will terminate nine years from the date of the last signature of the Parties unless renewed. This MOU may be terminated sooner by either Party or upon mutual consent of the Parties through the submission of written notification 60 calendar days prior to the effective date of termination.
17. MODIFICATION OF MOU: This MOU may only be modified by the written agreement of the Parties, duly signed by their authorized representatives. Attachments may be added or updated by agreement of both parties.
18. DISPUTES: Any disputes relating to this MOU will, subject to any applicable law, executive order, directive, or instruction, be resolved by consultation between the Parties or in accordance with DoD Instruction 4000.19.
19. TRANSFERABILITY: This MOU is not transferable except with the written consent of the Parties.

20. ENTIRE UNDERSTANDING: It is expressly understood and agreed that this MOU embodies the entire understanding between the Parties regarding the MOU's subject matter.

21. CANCELLATION OF PREVIOUS MOA: This MOU cancels and supersedes the DoD-FAA, "Memorandum of Agreement Concerning the Operation of Department of Defense Unmanned Aircraft Systems in the National Airspace System," September 16, 2013.

22. POINTS OF CONTACT: The following points of contact will be used by the Parties communicate in the implementation of this MOU. Each Party may change its point of contact upon reasonable notice to the other Party.

22.1. For the DoD:

22.1.1. Primary: Mr. Barney Owens, (703) 806-4865, barney.c.owens.civ@mail.mil

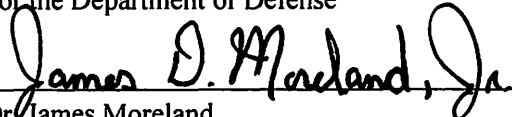
22.1.2. Alternate: Mr. Ray Lewis, (703) 614-2641, ray.lewis@navy.mil

22.2. For the FAA:

22.2.1. Primary: Mr. Randy Willis, (202) 267-8152, randy.willis@faa.gov

22.2.2. Alternate: Mr. Donald Grampp, (202) 267-8280, donald.e.grampp@faa.gov

For the Department of Defense


  
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Dr. James Moreland  
Chair, DoD Policy Board on Federal Aviation

1/8/19  
Date

For the Federal Aviation Administration

  
\_\_\_\_\_  
Maurice Hoffman  
Director, Airspace Services, FAA Air Traffic Organization

5/9/19  
Date

  
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Aaron Barnett  
Director of Air Traffic Operations, FAA Air Traffic Organization

2/27/15  
Date