



U.S. Department
of Transportation
**Federal Aviation
Administration**

Public Unmanned Aircraft Operations in the National Airspace System

The Federal Aviation Administration (FAA) is responsible for processing and approving all requests for Unmanned Aircraft Systems (UAS) operations in the National Airspace System (NAS). For UAS operators, this authorization is generally granted via the issuance of a Certificate of Waiver or Authorization (COA). Typically, Law Enforcement Agency (LEA), Fire, or First Responder UAS flight operations are considered "public aircraft" operations. The guidelines for operating as a "public aircraft" entity are described in the FAA's Unmanned Aircraft Systems (UAS) Operational Approval Notice N8900.207, which may be found on the FAA web site: <http://www.faa.gov/about/initiatives/uas/>.

When the FAA receives a COA application through the FAA's *COA Online* portal, the Agency initiates a rigorous program review and application assessment. Included in this review and assessment are: 1) concept of operations (CONOPS) or type of missions; 2) launch/recovery/operation location(s); 3) operational altitudes; 4) flight procedures; 5) communications; 6) emergency procedures, such as lost communication and loss-of-control link; and 7) Pilot in Command (PIC), flight crew, and observer qualifications and training requirements. The typical COA application approval process is completed within 60 business days of receipt, provided there are no submittal errors, missing information, or safety or airspace issues. New authorizations are valid for two years and must be renewed while valid or a new application must be submitted. Before the FAA grants access to the *COA Online* application process, the Proponent will be asked to provide preliminary information that includes, but is not limited to:

- The Proponent's address and contact information, including the accountable executive's name
- The name and manufacturer of the UAS technology being considered
- How the Proponent anticipates using the UAS technology (Concept of Operations)
- The level of aviation experience of the Proponent (e.g., does any member of the Proponent's organization hold a private or advanced FAA pilot certificate or an FAA Airman Medical Certificate, etc.)
- Will the Proponent be developing the UAS program "in house" or utilizing a third party to develop and/or implement its UAS program
- A letter from the LEA's County or State Attorney General formally acknowledging that the Proponent is recognized as a subdivision of the government of the State under Title 49 of the United States Code (USC) Section (§) 40102(a)(41)(c) or (d) and that the proponent will operate its Unmanned Aircraft in accordance with 49 USC. § 40125b (not for Commercial Purposes)

The FAA believes that the safest and most successful jurisdiction-wide deployment of UAS technology that supports public safety agencies is accomplished through a two-phase process. The *initial* COA (Phase I) is generally restricted to training and evaluation activities at a specific training site that is confined to Class G airspace, and remains well clear of housing areas, roads, any persons, and watercraft. This permits the public agency the ability to conduct necessary ground and flight training to bring pilots, observers and ground crewmembers to a high level of UAS flight proficiency and also enables them to develop and conduct training exercises to ensure efficient, standardized coordination amongst other supporting elements (e.g., SWAT or SRT team coordination for operational missions, search and rescue, disaster control, crime-

scene or post-accident forensic photography, fire response teams, etc.). Along with the *initial* COA Application, several documents need to be submitted by the Proponent, including:

- An airworthiness statement from the Proponent's accountable executive acknowledging that the Proponent accepts all responsibility for ensuring that the UAS is airworthy and that the UAS will be operated and maintained in compliance with the manufacturer's operational and maintenance recommendations
- A lost-link procedures document that addresses the specific lost-link procedure that will be implemented in the event of a lost-link occurrence
- A lost communication procedures document that addresses what actions the Pilot-in-Command (PIC) will take if there is lost communication between PIC and Air Traffic Control, as well as lost communication between PIC and the Visual Observer (VO)
- An emergency procedures document that explains the protocols that will be executed at the site in the event of an emergency (this could include execution of procedures outlined in the operator's manual, possible alternative courses of action available for each phase of flight, and any outside agencies or resources for medical and fire or other assistance)

Once the Proponent feels confident that it can safely operate the UAS at a level of competency to safely support actual operational missions, the Proponent will apply for a second *operational* COA (Phase II) that typically incorporates the Proponent's jurisdiction. As part of the *operational* COA approval, the FAA will conduct an onsite program review and evaluation. This onsite review will include:

- Review of the Public Safety Agency's UAS training and proficiency program, including all training records
- Review of the Public Safety Agency's Standard Operating Procedures (SOPs) for each phase of flight operation from notification for deployment through preflight, launch, recovery, post-flight and mission record keeping. SOPs must include, at a minimum: emergency procedures and standards for expected scenarios (e.g., lost-link, lost communications between VO and PIC or between PIC and ATC, medical emergencies, etc.), Crew Resource Management, sterile ground control station protocols, PIC and VO standard communications and any special mitigation procedures
- Review of the Proponent's Safety Risk Analysis Plan (SRAP) that specifically identifies the boundaries of the Proponent's jurisdiction, and all unique operational areas within that jurisdiction and their attendant hazards (Note: The SRAP must include a description of specific risk controls the Proponent will employ to mitigate any attendant hazard for UAS)
- An evaluation by the FAA of a UAS exercise to demonstrate the competency and safety of the Proponent's program

The FAA is committed to safely integrating UAS into the NAS and looks forward to working with public safety agencies in developing UAS Programs. If you have questions, please direct them to one of the below contacts:

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