

## **FEDERAL AVIATION ADMINISTRATION**

### **Public Guidance for Petitions for Exemption Filed under Section 333**

This document provides guidance to people who are interested in submitting a petition for exemption to the FAA to operate unmanned aircraft in the National Airspace System (NAS). Specifically, this document outlines the FAA's exemption process and describes the information petitioners should submit to the FAA in a petition for exemption. This information will assist the FAA in determining whether to grant relief from its regulations and will assist the Secretary of Transportation with determining whether to grant relief from airworthiness certification requirements under the FAA Modernization and Reform Act of 2012, Public Law 112-95 FEB. 14, 2012, Section 333.

#### **BACKGROUND:**

The FAA's continuing mission is to provide the safest, most efficient aerospace system in the world. However, the National Airspace System (NAS) is not static and must constantly adapt to new technologies and applications, as evidenced by the proliferation of unmanned aircraft systems (UAS). Because UAS are inherently different from manned aircraft, introducing UAS into the nation's airspace is challenging for both the FAA and aviation community.

In the FAA Modernization and Reform Act of 2012, Public Law 112-95 (P.L. 112-95), Congress mandated the safe and expedient integration of UAS into the NAS.

For public operation – including national, state, and local government agencies, as well as public universities – the FAA issues a Certificate of Waiver or Authorization (COA) permitting public agencies and organizations to operate a particular UAS, for a specific purpose, in a designated area. The objective is to issue a COA with terms that ensure an equivalent level of safety to manned aircraft operations. Usually, this entails several safety mitigations including, but not limited to, requiring that the UA not operate in a congested area and is observed either by someone in a manned aircraft or someone on the ground. Public operators self-certify the airworthiness of the UAS design.

Civil UAS operators have the option to obtain FAA airworthiness certification. They may apply for a special airworthiness certificate in the experimental category under Title 14 of the Code of Federal Regulations (14 CFR) § 21.191 for the purposes of research and development, crew training, or market survey. They may also apply for type certification under § 21.17(b) (for a standard airworthiness certificate in the special class category) or § 21.25 (for a special airworthiness certificate in the restricted category).

Recognizing the demand to expedite integration of UAS into the NAS, the FAA is developing a regulatory framework for safely integrating UAS into routine NAS operations. The first stage in this process will be accomplished by the small UAS rule.

The FAA's authority to issue exemptions from operating rules, and the Secretary's authority granted by Section 333 of P.L. 112-95, *Special Rules for Certain Unmanned Aircraft Systems*, provide an opportunity to authorize certain UAS operations in the NAS prior to implementation of the small UAS rule. This incremental step provides a pathway for civil operators who desire safe and legal entry into the NAS.

## TERMS OF REFERENCE:

1. **Aircraft:** any contrivance invented, used, or designed to navigate, or fly in, the air (Title 49, United States Code (49 USC) § 40102)
2. **National Airspace System (NAS):** the common network of U.S. airspace; air navigation facilities, equipment and services, airports or landing areas; aeronautical charts, information and services; rules, regulations and procedures, technical information, and manpower and material
3. **Operational Control:** with respect to a flight, means the exercise of authority over initiating, conducting or terminating a flight (14 CFR § 1.1)
4. **Pilot in Command (PIC):** the person who has final authority and responsibility for the operation and safety of the flight; has been designated as PIC before or during the flight; and holds the appropriate category class and type-rating, if appropriate, for the conduct of the flight (14 CFR § 1.1)
5. **Unmanned aircraft (UA):** any aircraft that is operated without the possibility of direct human intervention from within or on the aircraft (P.L. 112-95, Section 331)
6. **Unmanned Aircraft System (UAS):** an unmanned aircraft and associated elements, including communication links and the components that control the unmanned aircraft, that are required for the pilot in command to operate safely and efficiently in the national airspace system (P.L. 112-95, Section 331)
7. **UAS Certificate of Waiver or Authorization (COA):** an authorization issued by the Air Traffic Organization to an operator for a specific unmanned aircraft activity
8. **Visual Line of Sight (VLOS):** unaided (corrective lenses and/or sunglasses excepted) visual contact between a pilot in command and an unmanned aircraft sufficient to maintain safe operational control of the aircraft, know its location, and be able to scan the airspace in which it is operating to see and avoid other air traffic or objects aloft or on the ground

## **INTRODUCTION:**

Section 333 grants the Secretary of Transportation authority to determine:

1. If an unmanned aircraft system, as a result of its size, weight, speed, operational capability, proximity to airports and populated areas, and operation within visual line of sight does not create a hazard to users of the national airspace system or the public or pose a threat to national security; and
2. Whether a certificate of waiver, certificate of authorization, or airworthiness certification under 49 USC § 44704, is required for the operation of unmanned aircraft systems identified under paragraph (1).

Although Section 333 provides limited statutory flexibility relative to 49 USC § 44704 and § 44711 for the purposes of airworthiness certification, it does not provide flexibility relative to other sections of 49 USC or Federal Aviation Regulations.

For example, § 44711 requires that all aircraft, including UAS, be registered in accordance with part 47 of the regulations and must provide identification markings in accordance with part 45, Subpart C.

Because UAS are aircraft, they are subject to the noise certification and testing requirements of part 36. However, if a determination is made under Section 333 that an airworthiness certificate is not required, noise certification and testing will also not be required for the subject aircraft for the term of the exemption. When the finding required by Section 333 cannot be made, the requirements of part 36 continue to apply.

Section 333 does not provide flexibility for the statutory requirement to hold an airman certificate under § 44711. Therefore the PIC, who has final authority and responsibility for the operation and safety of the UAS flight, must possess the appropriate airman certificate as prescribed by 14 CFR part 61 for the proposed operation and the appropriate medical certificate as prescribed by 14 CFR part 67.

Furthermore, the Transportation Security Administration (TSA) conducts security screenings of certificated airmen. UAS operations authorized under Section 333 will only be conducted by airmen with valid airmen certificates, which have been screened by TSA, thereby meeting the statutory requirement in Section 333 for operations to not pose a threat to national security.

Because Section 333 provides limited relief from certain certifications or authorizations, UAS operators must comply with all other applicable regulations concerning the operation of aircraft unless otherwise exempted by the FAA.

UAS operations conducted for purposes other than hobby or recreation are subject to the regulations in 14 CFR. In addition to petitioning for the relief afforded under Section 333, UAS

operators must petition for exemption from regulations applicable to the specific circumstances of their operations with which they believe they are unable to comply. If a petitioner has any questions with regard to the applicability of Federal Aviation Regulations, s/he is encouraged to discuss with FAA officials prior to submitting an exemption request. Prior to commencing operations, the operator will need to obtain an exemption and a COA from the FAA. More information about the exemption process is available [here](#). Additional guidance for preparing petitions for exemption under Section 333 authority and applying for COAs is provided below.

The FAA will only grant exemptions for UAS under the operational control of the petitioner (person or organization). Exemptions will not be granted to a UAS manufacturer unless the manufacturer intends to maintain operational control of the UAS.

### **PREPARING A PETITION FOR EXEMPTION:**

The FAA's mission is to provide the safest, most efficient aerospace system in the world. The use of aircraft that have not been subject to an airworthiness certification process may introduce unique safety risks with respect to the NAS that must be appropriately mitigated prior to authorizing operation. In order for the FAA to consider a petition for exemption, the petition must meet the requirements of [14 CFR § 11.81](#). In order to make an effective evaluation of the requested relief, the FAA will need to analyze the petitioner's proposed UAS operation with regard to safety. The following information will be considered in making that evaluation:

#### *Regarding the Unmanned Aircraft System*

1. Petitioners should describe how the proposed UAS operation will be safely conducted to minimize risk to the NAS or to persons and property on the ground. Specifically, petitioners should describe the design and operational characteristics for the type(s) of UAS they intend to operate, e.g. aircraft performance and performance limitations, operating procedures, and aircraft loading information in as much detail as possible. This could be provided in the petition or in an Aircraft Flight Manual or similar document.  
NOTE: The FAA will consider all information and data submitted by the petitioner that describes the UAS developmental and operational history. This could include statistical data or other documentation for the specific design and performance characteristics of the UAS, including the operational history and operational failure modes, obtained through previous Research & Development (R&D) and/or flight test activities, e.g. operations conducted under a COA, with a civil airworthiness certificate, or under other authorized operating conditions.
2. Petitioners should describe any procedures they would implement, such as pre-flight inspections, maintenance, and repair, to ensure that the UAS is in a condition for safe flight. This could be provided in the petition, an Aircraft Flight Manual, a Maintenance and Inspection Manual, or similar document.

NOTE: The Aircraft Flight Manual and Maintenance and Inspection Manual may be separate documents or combined in a single document.

3. The petitioner should describe the Radio Frequency (RF) spectrum used for control of the UAS and associated equipment that is part of the UAS (i.e., sensors, cameras, etc.), and whether it complies with Federal Communications Commission (FCC) or other appropriate government oversight agency requirements.

NOTE: Petitioners should be able to provide the FCC approval letter or show compliance with FCC requirements upon request.

#### *Regarding the Unmanned Aircraft PIC*

4. Petitioners should describe the qualifications required of any PIC(s) who will be directly responsible for the operation of the UAS, including information such as: the level of airman certificate held; any applicable training related to the operation; and any minimum hours of flight experience required by the PIC(s), both total flight time and the time with the particular UAS. If the operation would use visual observers, petitioners should describe their roles and qualifications.
5. Petitioners should describe the medical standards and certification of the PIC(s) directly responsible for the operation of the UAS.

#### *Regarding the Operation of the Unmanned Aircraft*

6. Petitioners should fully describe their intended UAS operation(s). Petitioners should describe how the proposed operation(s) would not adversely affect safety, or how they would provide a level of safety at least equivalent to that provided by the rule from which exemption is sought. Petitioners should address any plans to implement clearly defined operational borders and procedures to ensure public safety, which includes persons and property both in the air and on the ground. This can be described in the petition, in an Operations Manual, or similar document.

NOTE: The FAA will closely examine the proposed operation(s) with respect to safety of flight, NAS safety considerations, and the safety of the non-participating persons and property during the operational period and within the operational area.

7. Petitioners should specify the proposed maximum operating speed and altitude, and describe minimum flight visibility and distance from clouds for their intended operation(s). Petitioners should describe potential hazards and safety mitigations associated with these proposed conditions. These issues can be addressed in the petition, an Operations Manual, or similar document.
8. Petitioners should describe the characteristics of the area of intended operation(s) and the associated potential hazards, in accordance with the statutory mandate under Section 333

regarding proximity to populated areas. These issues can be addressed in the petition, an Operations Manual, or similar document.

9. Petitioners should describe if they intend to operate in the proximity of any airports, in accordance with the statutory mandate under Section 333 regarding proximity to airports.
10. The UAS must be operated within visual line-of-sight (VLOS), in accordance with the statutory mandate under Section 333(b)(1). Petitioners should describe how they intend to comply with his mandate.
11. Petitioners should describe any procedures they would implement for conducting a preflight safety risk assessment to determine that the UAS is in a condition for safe flight (14 CFR § 91.7(b)) and that the planned operation can be completed safely. These procedures can be addressed in the petition, an Aircraft Flight Manual, Operations Manual, or similar document.
12. If petitioners intend to conduct operations which have existing requirements to notify Flight Standards District Offices (FSDOs) prior to operations – such as motion picture and television filming, or pipeline and powerline patrol – petitioners should describe their intended coordination in this regard for their proposed operation(s).
13. The FAA intends to require entities who obtain an exemption under this process to also obtain a Certificate of Waiver or Authorization (COA) from the FAA Air Traffic Organization prior to conducting operation(s) in the NAS. The COA application is available [here](#).

In seeking authorization, petitioners will require exemptions from regulations with which they cannot fully comply. The table below provides guidance regarding regulations from which a petitioner may require exemption. However, some proposed operations may require exemption from regulations not listed here, while others may not require exemption from all regulations listed here.

<b>14 CFR PART</b>	<b>SUMMARY OF REGULATION</b>
<b>Part 21 Airworthiness Certification</b>	
21, Subpart H	Certification procedures for products and parts, Airworthiness Certificates
<b>Part 61 Certification: Pilots, Light Instructors, and Ground Instructors</b>	
<b>Part 91 General Operating and Flight Rules</b>	
91.103(b)(2)	Preflight action
91.105	Flight crewmembers at stations
91.109	Flight instruction
91.119	Minimum safe altitudes
91.121	Altimeter settings
91.151	Fuel requirements for flights in VFR conditions
91.405	Maintenance required
91.407	Operation after maintenance
91.409	Inspections
91.417	Maintenance records

## **FILING A PETITION FOR EXEMPTION:**

A petition for exemption is prepared and filed in accordance with [14 CFR § 11.81](#). The regulations in 14 CFR establish appropriate safety standards for aircraft, operators, and crewmembers. If a proposed operation can be performed in full compliance with aviation safety regulations, an exemption is not routinely granted.

To allow the FAA to thoroughly evaluate each request, petitioners should allow at least 120 days for processing and review of any exemption requests.

Petitions for Exemption and any supporting materials should be submitted using any of the following methods:

- (1) Federal eRulemaking Portal: Go to <http://www.regulations.gov> and follow the online instructions for sending your comments electronically (a petition is submitted as a comment); or
- (2) Mail: Send your petition to Docket Operations, M-30; U.S. Department of Transportation (DOT), 1200 New Jersey Avenue, SE., Room W12-140, West Building Ground Floor, Washington, DC 20590-0001; or
- (3) Hand Delivery or Courier: Take your petition to Docket Operations in Room W12-140 of the West Building Ground Floor at 1200 New Jersey Avenue, SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays; or
- (4) Fax: Fax your petition to Docket Operations at 202-493-2251.

If you already have received a docket number, you must reference that docket number in your request.