

**SMALL UAV  
COALITION**  
*A Partnership for  
Safety & Innovation*

March 17, 2015

Honorable Michael Huerta  
Administrator  
Federal Aviation Administration  
800 Independence Avenue SW  
Washington, DC 20591

Re: Reforming and Improving the Section 333 Exemption Process

Dear Administrator Huerta:

The Small UAV Coalition<sup>1</sup> appreciates the opportunity to have met with you in January to discuss our Members' objectives and the ways in which we can expedite safe operation of small UAVs in the United States. We'd like to follow up with you about our discussion regarding the Federal Aviation Administration's implementation of section 333 of the FAA Modernization and Reform Act of 2012. As you know, until the final rule for small unmanned aerial systems ("sUAS") is adopted, an exemption under section 333 is the only avenue by which a company or person may operate a small UAV for commercial purposes. Based on the FAA's statement to GAO that its goal is to issue the final rule no later than 16 months after the proposed sUAS rule, the final rule is not expected until late 2016. Yet hundreds of companies are waiting to operate now. Thus, it is imperative that FAA devote sufficient attention and resources to processing section 333 petitions, as well as to expedite and improve the section 333 process.

To date, the FAA has granted 48 exemptions (including three amendments to previously granted exemptions), while over 650 petitions have been docketed. The delays in processing section 333 petitions (and applications for Certificates of Authorization), coupled with the limitations imposed on the approved exemptions, have cost the United States economic investment and have hindered further innovation in this industry. For example, our member Sky-Futures USA, with an established global record of safe UAS operations and training, waited nearly 200 days for its exemption to inspect oil and gas infrastructure. Only now can Sky-Futures execute its U.S. business plan to invest millions of dollars in the United States integrating UAS into the U.S. oil and gas market. Sky-Futures USA will create jobs, cut costs, and improve efficiency through innovation, but crucially, also will increase safety using life-saving UAS technology on

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<sup>1</sup> Members of the Small UAV Coalition are 3D Robotics, Aerialtronics, Airware, Amazon Prime Air, Botlink, Drone Deploy, DJI, EHANG, Intel, Google [X] Project Wing, GoPro, HAZON Solutions, Kespry, Parrot, PrecisionHawk, Sky-Futures, SkyWard, Strat Aero, SkyPan, Transport Risk Management, Verifly, and Zero Tech.

inherently dangerous industrial infrastructure. Our member Amazon Prime Air filed a petition last July to conduct research on its own property, which remains pending.

In our meeting with you and in other meetings with the UAS Integration Office, we have recommended several ways in which the section 333 exemption process can be expedited and improved. We applaud the FAA's recent decision to combine the issuance of a section 333 exemption and a Certificate of Authorization ("COA"), although that move has not yet been implemented. The FAA's publication of the sUAS Notice of Proposed Rulemaking ("proposed rule") last month suggests additional steps the FAA may take to further improve the section 333 process. This letter sets forth our recommendations for your consideration.

### **Substantive reforms**

1. Eliminate the requirement to obtain a COA for operations in Class G airspace.

Under the proposed rule, a small UAV operator would not be required to communicate with Air Traffic Control provided the operation is in Class G (uncontrolled) airspace, below 500 feet Above Ground Level ("AGL"), and operated within the visual line of sight of the operator. While the COA process provides the necessary coordination with Air Traffic for operations in the national airspace, there should be no requirement to obtain a COA where there is not requirement to coordinate with ATC.

2. Allow operations to be conducted to 500 feet AGL.

Section 333 exemptions currently limit operations to 400 feet AGL. Under the rule as proposed, the FAA would authorize small UAS operations within the visual line of sight up to 500 feet AGL.

3. Remove the condition requiring operations at least 500 feet from a non-participating person, vehicle, vessel or structure.

Section 333 exemptions currently prohibit operations closer than 500 feet from a person, vehicle, vessel, or structure not involved in the UAS operation, except with the consent of the landowner(s) and provided the pilot-in-command ("PIC") conduct a risk assessment. The proposed rule does not include such a condition; instead it prohibits the operation *over* any person not directly involved with the UAV operation. The low kinetic energy, short range of line of sight operations, and the light weight of small UAVs make this exemption condition unnecessarily cumbersome, and can be replaced with the provision in the proposed rule.

4. Revise condition prohibiting operations from any moving device or vehicle to allow operations from boats.

Section 333 exemptions currently prohibit operations from any moving device or vehicle, while the proposed rule would not prohibit operations from vehicles on the water. Inspection of bridges over water, especially given the line of sight requirement, should be permitted in the interest of both safety and providing the best vantage point. Thus, the FAA should allow for such operations in section 333 exemptions.

5. Allow certain limited operations in the event the small UAV loses its GPS signal.

Section 333 exemptions provide that if the small UAS loses its GPS signal, it must return to a pre-determined location with the planned operating areas and land or be recovered. There are certain situations, such as inspection under a bridge or other structure, which could result in a blocking of the GPS signal. The FAA should permit a properly-trained PIC to manually operate the UAV in such a situation, because the PIC will have the UAV in sight at all times. The proposed rule appropriately would rely on a general prohibition on careless and reckless operations.

6. Substitute passing an aeronautical knowledge test for obtaining a private pilot certificate.

The Coalition has argued that the FAA has discretion to exempt small UAS operators from all of the requirements in Part 61 and to issue an airman certificate (as required by the Federal Aviation Act) based on successful completion of ground school instruction and an adequate amount of hours operating the particular UAV. In the proposed rule, the FAA would no longer require any manned aircraft flying experience and would replace the current private pilot requirements with an aeronautical knowledge test to be administered by an FAA-approved testing facility. Accordingly, the FAA should no longer require as a condition of granting a section 333 exemption, that the pilot in command hold a private pilot certificate. Instead, the FAA should give discretion to Designated Pilot Examiners to issue UAS operator certificates upon successful completion of a suitable aeronautical knowledge test. We believe that FAA, the DPE community, and experienced UAS operators can quickly agree on an aeronautical knowledge test that is relevant to the scope and nature of UAS operations to be authorized by an exemption. This is perhaps the single most significant reform to the section 333 process, as it would save operators thousands of dollars and many hours.

7. Allow operators to certify physical and mental fitness before flight, in lieu of medical certification.

One of the conditions in the FAA's current section 333 exemptions is that the pilot in command must hold a third class medical certificate. Under the proposed sUAS rule, a pilot would be required only to attest to the pilot's physical and mental fitness to operate the UAS. We note that under 14 C.F.R. 61.3(c)(2), certain manned aircraft student and sport pilots are not required to hold a medical certificate. This reform would also save time and money.

8. Remove the requirement to have a visual observer.

Section 333 exemptions require that a visual observer assist the PIC. The proposed rule provides requirements for the use of visual observers but does not require their use. Given the line of sight and related requirements in proposed section 107.31 that can be included in a section 333 exemption, there is no need to require a visual observer.

9. Replace required 5-mile distance from an airport with airspace class permission requirement.

One of the conditions in the FAA's section 333 exemptions is that the UAS operation not be conducted closer than 5 miles of an airport reference point as noted on a currently published FAA aeronautical chart. There is no such requirement in the proposal rule; instead, UAS operators would be required to obtain ATC permission for operations in Class B, C, and D airspace.

10. Allow operators to conduct research and development testing over property owned or leased by the operator.

The FAA has delayed processing certain petitions to conduct R&D testing over the petitioner's own property, ostensibly because of a desire to push R&D testing to the FAA-approved test sites. Because of disincentives to operating at such test sites, some UAS testing is currently being conducted at U.S. military facilities and much testing has been moved to other countries. Under the proposed rule, there is no restriction on R&D testing over the operator's property, whether owned or leased, subject to across-the-board requirements such as operating below 500 feet AGL and within the visual line of sight. We also note that the FAA issued Exemption 11188 to an operator to conduct research and development testing not limited to the petitioner's property. There is no safety reason why FAA should not summarily grant an exemption to a petitioner who will confine R&D testing to the petitioner's owned or leased property.

Further, we believe that property owners who are conducting research and development testing over their own property using a particular type and model of UAV should also be permitted to conduct R&D testing of modified versions of that UAV without having to seek another exemption. The concept of testing various designs of a product is inherent in the concept of research and development, and confining operations of these UAV variations to a landowner's property (and below 500 feet AGL) will not pose a safety risk to persons or property not involved in the operation.

### **Process reforms**

1. Allow for amendments to previously granted exemption to take effect upon filing in certain circumstances.

Exemptions are currently limited to the particular UAS identified in the petition as well as to the purposes for which the exemption is sought. Thus, an exemption holder who wants to operate one or more additional UAS types and models, or who wants to operate the approved UAS for another purpose, must file a petition to amend the exemption, and wait for weeks or months before obtaining an amended exemption. Where an exemption holder seeks to operate an additional UAS that has been determined to be airworthy in a previously granted exemption to another operator, the FAA should approve that amendment summarily. Where the additional purpose would not raise a distinct safety issue, the FAA should likewise grant the amendment summarily.

2. Provide that an exemption covering a particular type and model of UAS authorizes the exemption holder to operate multiple UAS of the same type and model.

Currently, if a petitioner is granted an exemption to operate a single UAS of a particular type and model, the petition must seek an amended exemption to operate additional UASs of the same particular type and model. The FAA should change its practice to authorize an exemption holder to operate an unlimited number of UASs of the same type and model subject, of course, to the same conditions and limitations, and thereby obviate the filing and processing of a petition for amended exemption.

3. Allow operators of a UAS that was approved for operation in a previously granted exemption to obtain a summary grant of exemption upon a written pledge to comply with the conditions and limitations in that previous exemption.

In several recently issued section 333 exemptions, the FAA has dispensed with public comment for exemptions that would not set a precedent. We believe the FAA should adopt the practice of other agencies who allow operators to benefit from the authority granted in a previously granted exemption or permit where the operator agrees to comply with the conditions and limitations in the initial exemption or permit status as well as the UAS manufacturer's manual.

4. Allow UAS manufacturers to obtain an exemption on behalf of operators who will use that UAS for commercial operations.

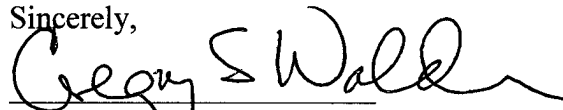
Under Part 11 of the Federal Aviation Regulations, a petition for exemption is to be filed by the operator. The FAA has taken the position that it will not consider a petition for exemption filed by a UAS manufacturer. SenseFly – a subsidiary of Parrot, a Coalition member – filed a section 333 petition on its own behalf and on behalf of operators of senseFly's eBee UAS, which remains pending. Several other pending section 333 petitions have been filed by manufacturers on behalf of operators not yet named. We believe the FAA should proceed to evaluate these petitions in terms of the airworthiness of the particular type and model of UAS and the nature and scope of proposed operations. If the manufacturer were granted an exemption, the FAA would agree summarily to approve petitions filed by operators who notify the FAA of their intent to use the same type and model of UAS in the same operational setting(s) and to comply with both manufacturer- and FAA-imposed conditions and limitations, e.g., training requirements, geo-fencing and go-home capabilities.

Finally, the FAA has ample discretion to reform the section 333 process by adopting one or more provisions in the proposed rule as recommended above, as each such provision reflects the considered opinion of the FAA that such provision would serve aviation safety. Adoption of any such provision in the section 333 process would not preclude the FAA from revising that provision in the final SUAS rule in response to public comment.

Thank you for considering our recommendations to improve the section 333 exemption process. We respect the FAA's diligence in ensuring continued safety in our national airspace. However, we call on the FAA to allocate the resources and attention necessary to the exemption process so

that it does not unduly stand in the way of companies who could otherwise operate safely and spur economic growth in the United States. We believe the FAA may reform the section 333 process without any derogation of public safety, with substantial benefits to the UAS industry and providing significant relief to the demand on limited FAA resources.

Sincerely,



Michael Drobac  
Jennifer Richter  
Gregory S. Walden  
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*For* The Small UAV Coalition

3D Robotics  
Aerialtronics  
Airware  
Amazon Prime Air  
Botlink  
DJI  
DroneDeploy  
EHANG  
Google[X] Project Wing  
GoPro  
HAZON Solutions  
Intel  
Kespri  
Parrot  
PrecisionHawk  
Sky-Futures  
SkyPan  
SkyWard  
Strat Aero  
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Copy to:

Honorable Anthony Foxx  
Secretary of Transportation