

NOTICE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

N 8900.313

National Policy

Effective Date:
8/4/15

Cancellation Date:
8/4/16

SUBJ: Education, Compliance, and Enforcement of Unauthorized Unmanned Aircraft Systems Operators

1. Purpose of This Notice. This notice provides guidance to inspectors on the process of contact and education generally to be provided to individuals who are the subject of an inquiry relating to the unauthorized operation of Unmanned Aircraft Systems (UAS) in the National Airspace System (NAS) under Public Law (PL) 112-95, FAA Modernization and Reform Act of 2012; Chapter 447 of Title 49 of the United States Code (49 U.S.C.); 49 U.S.C. § 40102; and Title 14 of the Code of Federal Regulations (14 CFR) part 1, § 1.1. This notice replaces the expired Federal Aviation Administration (FAA) Notice N 8900.268, Education, Compliance, and Enforcement of Unauthorized Unmanned Aircraft Systems Operators, dated 7/15/14.

2. Audience. The primary audience for this notice is all regional Flight Standards divisions (RFSO) and Flight Standards District Office (FSDO) aviation safety inspectors (ASI). The secondary audience includes headquarters (HQ) Flight Standards Service (AFS) policy divisions responsible for implementation.

3. Where You Can Find This Notice. You can find this notice on the MyFAA employee Web site at https://employees.faa.gov/tools_resources/orders_notices. Inspectors can access this notice through the Flight Standards Information Management System (FSIMS) at <http://fsims.avs.faa.gov>. Operators can find this notice on the FAA's Web site at <http://fsims.faa.gov>. This notice is available to the public at http://www.faa.gov/regulations_policies/orders_notices.

4. Background. On February 14, 2012 the President signed into law the FAA Modernization and Reform Act of 2012 (PL 112-95), which established in Section 336 a "special rule for model aircraft." This provision defines model aircraft as aircraft. Commercial UAS operations are prohibited without FAA authorization. The statute requires model aircraft to be flown strictly for hobby or recreational purposes and within the operator's Visual Line of Sight (VLOS).

a. Ensuring Safe UAS Operations. The increasing number of UAS-related incident reports arising from some model aircraft and small UAS operations creates a potential risk to safety. In order to mitigate this risk, to ensure compliance, and thus ensure safe operations from this community, the FAA will use outreach and education to encourage voluntary compliance with applicable statutory and regulatory requirements that pertain to UAS operations. When necessary

and in the interest of aviation safety, however, the FAA will use administrative action or legal enforcement action to gain that compliance.

b. Conducting a UAS Investigation. This notice provides an outline and protocol for inspectors to educate alleged violators and, when necessary, conduct a UAS investigation. Steps to be taken include the following:

(1) Conduct an inquiry appropriate to the circumstances. The inquiry will include a phone call to the operator. This contact provides an educational outreach opportunity, and it should include a review of current UAS guidance and relevant Code of Federal Regulations (CFR) provisions.

(2) If warranted, send the operator an administrative informational letter that includes Web site addresses to FAA UAS guidance and relevant CFR provisions.

(3) In cases where the operator is uncooperative or intentionally noncompliant or the operation poses medium to high potential or actual endangerment to the NAS, proceed with enforcement action as outlined in the Compliance and Enforcement Bulletin No. 2014-2.

(4) Enter the activity into the Program Tracking and Reporting Subsystem (PTRS) database using the guidance in FAA Order 8900.1, Flight Standards Information Management System (FSIMS), Volume 16. In addition to any comments, the inspector should list the operator's certificate number in the "cert" field. If the operator does not have an airman's certificate, the inspector should list the operator's name in the "non cert" field (last name, first name).

5. Education, Compliance, and Enforcement Philosophy. In determining what action to take, ASIs will evaluate the extent of the safety risk to the NAS that arises from any noncompliance associated with the UAS operation. An ASI should start by using counseling or an informational letter to advise and educate a UAS operator about the requirements for regulatory compliance. This type of approach is most appropriate when an ASI determines that regulatory compliance will likely be achieved by informing the operator about how to comply with statutory and regulatory requirements. These informational letters will be strictly advisory in nature, and will serve to provide the UAS operator with guidance on how to conduct operations in accordance with applicable statutory and regulatory requirements. A template informational letter is attached as Appendix C.

a. NAS Enforcement Action. When an operator is uncooperative or intentionally noncompliant or the operation poses medium to high risk to the NAS, enforcement action may be appropriate. In addition, repeat or intentional violations generally warrant legal enforcement action. In these cases, inspectors should follow the guidance provided in Chapter 5 of the current edition of FAA Order 2150.3, FAA Compliance and Enforcement Program, and the Compliance and Enforcement Bulletin No. 2014-2.

b. Administrative vs. Legal Enforcement Action. Inspector questions regarding how to evaluate a particular case with respect to taking administrative versus legal enforcement action should be coordinated with the UAS Integration Office (AFS-80) and the Office of the Chief Counsel, Enforcement Division (AGC-300). With regard to cases that require legal enforcement

action, AFS-80 will prepare a memo to AGC-300 recommending an appropriate sanction based on the facts of the case and in accordance with the guidance in Order 2150.3 and the Compliance and Enforcement Bulletin No. 2014-2.

6. Action. Until further notice, the following compliance program is in effect for all possible violations of statutory and regulatory requirements applicable to UAS operations. As resources become available based on safety priorities, ASIs are expected to investigate complaints in accordance with FAA Order 8900.1, Volume 7, and use their judgment in determining the appropriate course of action. If the investigating inspector requires additional guidance or technical information concerning UAS operations, he or she should contact the UAS specialist located within the 220 branch in the regional office. In general:

a. Counsel the Operator. The first action is to counsel the operator and send an informational letter to inform the operator how to achieve and maintain compliance with statutory and regulatory requirements. The informational letter contained in Appendix C must not be altered other than to fill in the appropriate address of the operator and FSDO along with your contact information and signature.

b. Consider Enforcement Action. If the educational outreach is ineffective in gaining compliance, the UAS operator is uncooperative or intentionally noncompliant (e.g., repeat or intentional violations), or the UAS operation resulted in a medium to high potential or actual endangerment to the NAS, the inspector should consider enforcement action in accordance with the Compliance and Enforcement Bulletin.

7. Guidance.

a. Appendices. AFS-80 developed this notice. This notice contains the following documents:

- Appendix A, FAA Modernization and Reform Act Model Aircraft Sections.
- Appendix B, Interpretation of the Special Rule for Model Aircraft.
- Appendix C, UAS Informational Letter Template for Inspectors.

b. Reference Documents (current editions):

- FAA Order 8900.1, Volume 7, Investigations.
- FAA Order 8900.1, Volume 16, Unmanned Aircraft Systems.
- FAA Order 8130.34, Airworthiness Certification of Unmanned Aircraft Systems and Optionally Piloted Aircraft.

8. Disposition. We will incorporate the information in this notice into Order 8900.1 before this notice expires. Direct questions concerning the information in this notice to AFS-80 at 202-267-8306.

A handwritten signature in black ink, appearing to read "John Barbagallo". The signature is stylized with a large, sweeping initial "J" and "B".

John Barbagallo
Deputy Director, Flight Standards Service

Appendix A. FAA Modernization and Reform Act Model Aircraft Sections**UAS and Model Aircraft Related Provisions
of
FAA Modernization and Reform Act of 2012****Subtitle B–Unmanned Aircraft Systems****SEC. 331. DEFINITIONS.**

In this subtitle, the following definitions apply:

(8) **UNMANNED AIRCRAFT**- The term ‘unmanned aircraft’ means an aircraft that is operated without the possibility of direct human intervention from within or on the aircraft.

(9) **UNMANNED AIRCRAFT SYSTEM**- The term ‘unmanned aircraft system’ means 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.

SEC. 336. SPECIAL RULE FOR MODEL AIRCRAFT.

(a) **In General**- Notwithstanding any other provision of law relating to the incorporation of unmanned aircraft systems into Federal Aviation Administration plans and policies, including this subtitle, the Administrator of the Federal Aviation Administration may not promulgate any rule or regulation regarding a model aircraft, or an aircraft being developed as a model aircraft, if--

- (1) the aircraft is flown strictly for hobby or recreational use;
- (2) the aircraft is operated in accordance with a community-based set of safety guidelines and within the programming of a nationwide community-based organization;
- (3) the aircraft is limited to not more than 55 pounds unless otherwise certified through a design, construction, inspection, flight test, and operational safety program administered by a community-based organization;
- (4) the aircraft is operated in a manner that does not interfere with and gives way to any manned aircraft; and
- (5) when flown within 5 miles of an airport, the operator of the aircraft provides the airport operator and the airport air traffic control tower (when an air traffic facility is located at the airport) with prior notice of the operation (model aircraft operators flying from a permanent location within 5 miles of an airport should establish a mutually-agreed upon operating procedure with the airport operator and the airport air traffic control tower (when an air traffic facility is located at the airport)).

(b) **Statutory Construction**- Nothing in this section shall be construed to limit the authority of the Administrator to pursue enforcement action against persons operating model aircraft who endanger the safety of the national airspace system.

(c) **Model Aircraft Defined**- In this section, the term ‘model aircraft’ means an unmanned aircraft that is--

- (1) capable of sustained flight in the atmosphere;
- (2) flown within visual line of sight of the person operating the aircraft; and
- (3) flown for hobby or recreational purposes.

Appendix B. Interpretation of the Special Rule for Model Aircraft**Interpretation of the Special Rule for Model Aircraft****[4910-13]****DEPARTMENT OF TRANSPORTATION****Federal Aviation Administration****14 CFR Part 91****[Docket No. FAA-2014-0396]****Interpretation of the Special Rule for Model Aircraft****AGENCY:** Federal Aviation Administration (FAA), DOT.**ACTION:** Notice of Interpretation with Request for Comment

SUMMARY: This action provides interested persons with the opportunity to comment on the FAA's interpretation of the special rule for model aircraft established by Congress in the FAA Modernization and Reform Act of 2012. In this interpretation, the FAA clarifies that: model aircraft must satisfy the criteria in the Act to qualify as model aircraft and to be exempt from future FAA rulemaking action; and consistent with the Act, if a model aircraft operator endangers the safety of the National Airspace System, the FAA has the authority to take enforcement action against those operators for those safety violations.

DATES: Effective June 23, 2014. Comments must be received on or before July 25, 2014.

ADDRESSES: You may send comments identified by docket number FAA-2014-0396 using any of the following methods:

- **Federal eRulemaking Portal:** Go to <http://www.regulations.gov> and follow the online instructions for sending your comments electronically.

- Mail: Send Comments to Docket Operations, M-30; US Department of Transportation, 1200 New Jersey Avenue, SE., West Building Ground Floor, Room W12-140, West Building Ground Floor, Washington, DC 20590-0001.
- Hand Delivery: Take comments 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.
- Fax: (202) 493-2251.

FOR FURTHER INFORMATION CONTACT: Dean E. Griffith, Attorney, Regulations Division, Office of the Chief Counsel, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591; telephone: (202) 267-3073; email: dean.griffith@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites interested persons to submit written comments, data, or views concerning this interpretation. The most helpful comments reference a specific portion of the interpretation, explain the reason for any recommended change, and include supporting data. To ensure the docket does not contain duplicate comments, please send only one copy of written comments, or if you are filing comments electronically, please submit your comments only one time.

The FAA will file in the docket all comments received, as well as a report summarizing each substantive public contact with FAA personnel concerning this interpretation. The FAA will consider all comments received on or before the closing date for comments and any late-filed comments if it is possible to do so without incurring expense or delay. While this is the FAA's interpretation of statute and regulations relevant to model aircraft, the FAA may modify this interpretation based on comments received.

Availability of This Interpretation

You can get an electronic copy using the Internet by—

- (1) Searching the Federal eRulemaking Portal (<http://www.regulations.gov>);
- (2) Visiting the FAA’s Regulations and Policies web page at http://www.faa.gov/regulations_policies/; or
- (3) Accessing the Government Printing Office’s web page at <http://www.gpoaccess.gov/fr/index.html>.

You can also get a copy by sending a request to the Federal Aviation Administration, Office of Rulemaking, ARM-1, 800 Independence Avenue SW., Washington, DC 20591, or by calling (202) 267-9680. Make sure to identify the docket number or notice number of this proposal.

Background

The FAA is issuing this interpretation because we have received many inquiries regarding the scope of the special rule for model aircraft in section 336 of the FAA Modernization and Reform Act of 2012 and the FAA’s enforcement authority over model aircraft as affirmed by the statute. In this interpretation, we explain the history of FAA oversight of model aircraft operations and the new statutory requirements that apply to model aircraft operations, and then clarify how the FAA intends to apply its enforcement authority to model aircraft operations that endanger the safety of the National Airspace System (NAS).

Discussion of the Interpretation**I. Background of FAA Oversight of Model Aircraft Operations**

Historically, the FAA has considered model aircraft to be aircraft that fall within the statutory and regulatory definitions of an aircraft, as they are contrivances or devices that are “invented, used, or designed to navigate, or fly in, the air.” See 49 USC 40102 and 14 CFR 1.1. As aircraft, these devices generally are subject to FAA oversight and enforcement. However, consistent with

FAA's enforcement philosophy, FAA's oversight of model aircraft has been guided by the risk that these operations present. The FAA first recognized in 1981 that "model aircraft can at times pose a hazard to full-scale aircraft in flight and to persons and property on the surface," and recommended a set of voluntary operating standards for model aircraft operators to follow to mitigate these safety risks. See Advisory Circular 91-57, Model Aircraft Operating Standards (June 9, 1981). These operating standards included restricting operations over populated areas, limiting use of the devices around spectators until after the devices had been flight tested and proven airworthy; restricting operations to 400 feet above the surface; requiring that the devices give right of way to, and avoid flying near manned aircraft, and using observers to assist in operations.

These guidelines were further clarified in 2007, when the FAA issued a policy statement regarding unmanned aircraft systems (UAS) operations in the NAS. See 72 Fed. Reg. 6689 (Feb. 13, 2007). In this policy statement, the FAA also recognized that UAS fall within the statutory and regulatory definition of "aircraft" as they are devices that are "used or [are] intended to be used for flight in the air with no onboard pilot." Id.; see also 49 U.S.C. 40102; 14 CFR 1.1. The FAA noted that they can be "as simple as a remotely controlled model aircraft used for recreational purposes or as complex as surveillance aircraft flying over hostile areas in warfare." The FAA then stated its current policy regarding UAS based on the following three categories: (1) UAS used as public aircraft; (2) UAS used as civil aircraft; and (3) UAS used as model aircraft.

With respect to UAS used as model aircraft, the FAA reiterated the operating guidelines in AC 91-57, and further noted that to qualify as a model aircraft, the aircraft would need to be operated purely for recreational or hobby purposes, and within the visual line of sight of the

operator. The policy statement also clarified that AC 91-57 applied only to modelers and “specifically excludes its use by persons or companies for business purposes.” 72 FR at 6690.

II. Requirements to Qualify as a Model Aircraft under the FAA Modernization and Reform Act of 2012 (P.L. 112-95, section 336).

A. Statutory Requirements

On February 14, 2012, the President signed into law the FAA Modernization and Reform Act of 2012 (P.L. 112-95) (the Act), which established, in Section 336, a “special rule for model aircraft.” In Section 336, Congress confirmed the FAA’s long-standing position that model aircraft are aircraft. Under the terms of the Act, a model aircraft is defined as “an unmanned aircraft” that is “(1) capable of sustained flight in the atmosphere; (2) flown within visual line of sight of the person operating the aircraft; and (3) flown for hobby or recreational purposes.” P.L. 112-95, section 336(c). Congress’ intention to define model aircraft as aircraft is further established by section 331(8) of the Act, which defines an unmanned aircraft as “an aircraft that is operated without the possibility of direct human intervention from within or on the aircraft.” Congress’ definition of model aircraft is consistent with the FAA’s existing definition of aircraft as “any contrivance invented, used, or designed to navigate, or fly in, the air.” 49 U.S.C. 40102; see also 14 C.F.R. 1.1. Although model aircraft may take many forms, at a base level model aircraft are clearly “invented, used, or designed” to fly in the air. Id.

Section 336 also prohibits the FAA from promulgating “any rule or regulation regarding a model aircraft, or an aircraft being developed as a model aircraft” if the following statutory requirements are met:

- the aircraft is flown strictly for hobby or recreational use;
- the aircraft is operated in accordance with a community-based set of safety guidelines and within the programming of a nationwide community-based organization;
- the aircraft is limited to not more than 55 pounds unless otherwise certified through a design, construction, inspection, flight test, and operational safety program administered by a community-based organization;
- the aircraft is operated in a manner that does not interfere with and gives way to any manned aircraft; and
- when flown within 5 miles of an airport, the operator of the aircraft provides the airport operator and the airport air traffic control tower ... with prior notice of the operation....

P.L. 112-95, section 336(a)(1)-(5).

Thus, based on the language of the statute, we conclude that aircraft that meet the statutory definition and operational requirements, as described above, would be exempt from future FAA rulemaking action specifically regarding model aircraft. Model aircraft that do not meet these statutory requirements are nonetheless unmanned aircraft, and as such, are subject to all existing FAA regulations, as well as future rulemaking action, and the FAA intends to apply its regulations to such unmanned aircraft.

B. Model Aircraft Must Meet the Criteria in Section 336 to Be Exempt from Future Rulemaking

Congress directed that the FAA may not “promulgate any rule or regulation regarding a model aircraft, or an aircraft being developed as a model aircraft” if the aircraft is being operated, or being developed to be operated, pursuant to the five criteria enumerated in the statute as described above. P.L. 112-95, section 336(a). In other words, Congress has restricted

the FAA from promulgating regulations, from the date when the statute was enacted, specifically regarding model aircraft that meet the terms of the statute.

However, the prohibition against future rulemaking is not a complete bar on rulemaking that may have an effect on model aircraft. As noted above, the rulemaking limitation applies only to rulemaking actions specifically “regarding a model aircraft or an aircraft being developed as a model aircraft.” P.L. 112-95, section 336(a). Thus, the rulemaking prohibition would not apply in the case of general rules that the FAA may issue or modify that apply to all aircraft, such as rules addressing the use of airspace (e.g., the 2008 rule governing VFR operations in the Washington, DC area) for safety or security reasons. See 73 FR 46803. The statute does not require FAA to exempt model aircraft from those rules because those rules are not specifically regarding model aircraft. On the other hand, a model aircraft operated pursuant to the terms of section 336 would potentially be excepted from a UAS aircraft certification rule, for example, because of the limitation on future rulemaking specifically “regarding a model aircraft, or an aircraft being developed as a model aircraft.” P.L. 112-95, section 336(a). The FAA interprets the section 336 rulemaking prohibition as one that must be evaluated on a rule-by-rule basis.

Although the FAA believes the statutory definition of a model aircraft is clear, the FAA provides the following explanation of the meanings of “visual line of sight” and “hobby or recreational purpose,” terms used in the definition of model aircraft, because the FAA has received a number of questions in this area.

By definition, a model aircraft must be “flown within visual line of sight of the person operating the aircraft.” P.L. 112-95, section 336(c)(2).¹ Based on the plain language of the

¹ For purposes of the visual line of sight requirement, “operator” means the person manipulating the model aircraft’s controls.

statute, the FAA interprets this requirement to mean that: (1) the aircraft must be visible at all times to the operator; (2) that the operator must use his or her own natural vision (which includes vision corrected by standard eyeglasses or contact lenses) to observe the aircraft; and (3) people other than the operator may not be used in lieu of the operator for maintaining visual line of sight. Under the criteria above, visual line of sight would mean that the operator has an unobstructed view of the model aircraft. To ensure that the operator has the best view of the aircraft, the statutory requirement would preclude the use of vision-enhancing devices, such as binoculars, night vision goggles, powered vision magnifying devices, and goggles designed to provide a “first-person view” from the model.² Such devices would limit the operator’s field of view thereby reducing his or her ability to see-and-avoid other aircraft in the area. Additionally, some of these devices could dramatically increase the distance at which an operator could see the aircraft, rendering the statutory visual-line-of-sight requirements meaningless. Finally, based on the plain language of the statute, which says that aircraft must be “flown within the visual line of sight of the person operating the aircraft,” an operator could not rely on another person to satisfy the visual line of sight requirement. See id. (emphasis added). While the statute would not preclude using an observer to augment the safety of the operation, the operator must be able to view the aircraft at all times.

The statute requires model aircraft to be flown strictly for hobby or recreational purposes. Because the statute and its legislative history do not elaborate on the intended meaning of “hobby or recreational purposes,” we look to their ordinary meaning and also the FAA’s previous

² The FAA is aware that at least one community-based organization permits “first person view” (FPV) operations during which the hobbyist controls the aircraft while wearing goggles that display images transmitted from a camera mounted in the front of the model aircraft. While the intent of FPV is to provide a simulation of what a pilot would see from the flight deck of a manned aircraft, the goggles may obstruct an operator’s vision, thereby preventing the operator from keeping the model aircraft within his or her visual line of sight at all times.

interpretations to understand the direction provided by Congress.³ A definition of “hobby” is a “pursuit outside one's regular occupation engaged in especially for relaxation.” Merriam-Webster Dictionary, *available at* www.merriam-webster.com (last accessed June 9, 2014). A definition of recreation is “refreshment of strength and spirits after work; a means of refreshment or diversion.” *Id.* These uses are consistent with the FAA’s 2007 policy on model aircraft in which the Agency stated model aircraft operating guidelines did not apply to “persons or companies for business purposes.” *See* 72 FR at 6690.⁴

Any operation not conducted strictly for hobby or recreation purposes could not be operated under the special rule for model aircraft. Clearly, commercial operations would not be hobby or recreation flights.⁵ Likewise, flights that are in furtherance of a business, or incidental to a person’s business, would not be a hobby or recreation flight. Flights conducted incidental to, and within the scope of, a business where no common carriage is involved, generally may operate under FAA’s general operating rules of part 91. *See* Legal Interpretation to Scott C. Burgess, from Rebecca B. MacPherson, Assistant Chief Counsel for Regulations (Nov. 25, 2008). Although they are not commercial operations conducted for compensation or hire, such operations do not qualify as a hobby or recreation flight because of the nexus between the operator’s business and the operation of the aircraft. *See, e.g.*, Legal Interpretation to BSTC Corporation, from Rebecca B. MacPherson, Assistant Chief Counsel for Regulations

³ In construing statutory language, agencies should assume that the ordinary meaning of the language accurately expresses the legislative purpose of Congress. Agencies are also permitted to presume that Congress was aware of the agencies’ administrative or adjudicative interpretations of certain terms and intended to adopt those meanings. *See BedRoc Ltd. v. U.S.*, 541 U.S. 176, 183 (2004); *see also Haig v. Agee*, 453 U.S. 280, 300 (1981); *Lorillard v. Pons*, 434 U.S. 575, 580-81 (1978).

⁴ The FAA has also addressed recreational use of aircraft by pilots in the Sport and Recreational Pilot Certificate rules, which prohibit those pilots from acting as pilot in command of an airplane carrying passengers or property for compensation or hire, or in furtherance of a business. 14 CFR 61.101(e), 61.315(c). As discussed in the Sport Pilot final rule, those prohibitions are designed to limit those pilots to “sport and recreational flying only.” 69 FR 44772, 44839 (July 27, 2004).

⁵ A commercial operator is a “person, who, for compensation or hire, engages in the carriage by aircraft in air commerce of persons or property” *See* 14 CFR 1.1. The FAA would therefore not consider a commercial operation to be “flown strictly for hobby or recreation purposes” because it would be conducted for compensation or hire.

(June 22, 2009) (noting transportation of mining employees and guests appears to be incidental to and within scope of operator's geological business); Legal Interpretation to Scott C. Burgess (Nov. 25, 2008) (noting transportation of automotive dealership employees and guests must be incidental to and within scope of operator's real estate development business).

To provide guidance, the following are examples of flights that could be conducted as hobby or recreation flights and other types of flights that would not be hobby or recreation.

Hobby or Recreation	Not Hobby or Recreation
Flying a model aircraft at the local model aircraft club.	Receiving money for demonstrating aerobatics with a model aircraft.
Taking photographs with a model aircraft for personal use.	A realtor using a model aircraft to photograph a property that he is trying to sell and using the photos in the property's real estate listing. A person photographing a property or event and selling the photos to someone else.
Using a model aircraft to move a box from point to point without any kind of compensation.	Delivering packages to people for a fee. ⁶
Viewing a field to determine whether crops need water when they are grown for personal enjoyment.	Determining whether crops need to be watered that are grown as part of commercial farming operation.

Operations that meet the section 336 definition of "model aircraft" must also meet the five additional criteria for model aircraft established in section 336(a) to be exempt from future rulemaking regarding model aircraft. These criteria, with the exception of the hobby and recreation standard that was previously addressed, are explained below.

⁶ If an individual offers free shipping in association with a purchase or other offer, FAA would construe the shipping to be in furtherance of a business purpose, and thus, the operation would not fall within the statutory requirement of recreation or hobby purpose.

Section 336(a)(2) requires model aircraft to be operated within a community-based set of safety guidelines and within the programming of a nationwide community-based organization. Congress explained that it intended “nationwide community-based organization” to mean, in part, a “membership based association that represents the aeromodeling community within the United States; [and] provides its members a comprehensive set of safety guidelines that underscores safe aeromodeling operations within the National Airspace System and the protection and safety of the general public on the ground” U.S. House, FAA Modernization and Reform Act of 2012, Conference Report (to Accompany H.R. 658), 112 H. Rpt. 381 (Feb. 1, 2012) (discussion of special rule for model aircraft). Based on this language, which provides context to Congress’ use of the term “nationwide community-based organization,” the FAA expects that model aircraft operations conducted under section 336(a) will be operated according to those guidelines.⁷

Additionally, model aircraft are limited to 55 pounds or less. The statutory language does not specify whether it applies to 55 pounds unloaded or 55 pounds with other equipment, payload, or fuel, for example, on the aircraft. The FAA believes that Congress intended for the 55-pound limit to mean the weight of the aircraft at the time of the operation. If the weight of the aircraft, alone, was the determining factor then it could conceivably be loaded with equipment or payload increasing the weight of the aircraft at time of takeoff well in excess of 55 pounds, thereby increasing the risk of harm should the operation not proceed as planned. The weight at the time of operation is also consistent with the FAA’s designation of small or large aircraft which is determined by an aircraft’s maximum certificated takeoff weight. See, e.g., 14 CFR 1.1 (defining small and large aircraft). Congress’ recognition of the increased risk posed by heavier

⁷ “[C]ommunity-based organizations,” for example, would include groups such as the Academy of Model Aeronautics and others that meet the statutory definition.

aircraft is demonstrated by the more stringent requirements for aircraft heavier than 55 pounds in the statute which are discussed below. Accordingly, the FAA interprets this provision to mean the weight of the aircraft at the time of the operation must not exceed 55 pounds, including the weight of any payload and fuel.

The statute creates an exception for model aircraft that exceed the 55-pound weight limit if the aircraft is “certified through a design, construction, inspection, flight test, and operational safety program administered by a community-based organization.” P.L. 112-95, section 336(a)(3). If a nationwide community-based organization has provided its members with a set of safety guidelines that define a design, construction, inspection, flight test, and operational safety program then model aircraft constructed in accordance with that program may exceed 55 pounds and operate in accordance with section 336(a).

Model aircraft must not interfere with and must give way to any manned aircraft. This requirement needs no further explanation, and the FAA would expect that model aircraft operators abide by it.⁸ We note that model aircraft interfering with, or that do not give way to, manned aircraft would be subject to enforcement action under section 336(b), as further explained in section III below.

Finally, the statute sets a requirement for model aircraft operating within 5 miles⁹ of an airport to notify the airport operator and control tower, where applicable, prior to operating.^{10,11}

⁸ This requirement is consistent with longstanding FAA guidance for model aircraft operators. See AC 91-57, para. 3 (advising model aircraft operators to “[g]ive right of way to, and avoid flying in the proximity of, full-scale aircraft.”).

⁹ For ease of determining distance, the FAA interprets the statute to mean 5 statute miles.

¹⁰ This requirement is consistent with longstanding FAA guidance for model aircraft operators. See AC 91-57, para. 3 (advising model aircraft operators to notify an airport operator, control tower, for flight service station when planning to operate within three miles of an airport).

¹¹ If a group of modelers intends to operate in one area, one person could contact air traffic control on behalf of the group. Additionally, consistent with the statute, the FAA encourages operators who fly from a permanent location within 5 miles of an airport to “establish a mutually-agreed upon operating procedure with the airport operator and the airport air traffic control tower (when an air traffic facility is located at the airport).”

If the model aircraft operator provides notice of forthcoming operations which are then not authorized by air traffic or objected to by the airport operator, the FAA expects the model aircraft operator will not conduct the proposed flights. The FAA would consider flying model aircraft over the objections of FAA air traffic or airport operators to be endangering the safety of the NAS. Additionally, we note that following this 5-mile notification procedure would be read in conjunction with FAA rules governing airspace usage discussed below.

III. Scope of FAA's Enforcement Authority

As discussed above, if a model aircraft is operated consistently with the terms of section 336(a) and (c), then it would not be subject to future FAA regulations regarding model aircraft. However, Congress also recognized the potential for such operations to endanger other aircraft and systems of the NAS. Therefore, it specifically stated that “[n]othing in this section shall be construed to limit the authority of the Administrator to pursue enforcement action against persons operating model aircraft who endanger the safety of the national airspace system.” P.L. 112-95, section 336(b).

Through this language, Congress specifically recognized the FAA's existing authority to take enforcement action to protect the safety of the NAS.¹² Moreover, it did not limit the FAA's authority to take enforcement action where a violation of a regulation results in the endangerment of the NAS. As demonstrated by the FAA's statutory and regulatory authorities,

¹² The NAS is broadly described as “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. Included are system components shared jointly with the military.” See FAA Aeronautical Information Manual (Apr. 3, 2014), available at http://www.faa.gov/air_traffic/publications/media/AIM_Basic_4-03-14.pdf.

our charge to protect the safety of the NAS is not only intended to protect users of the airspace, but is also intended to protect persons and property on the ground.¹³

For example, the FAA regulates low-altitude operations to protect people and property on the ground. The FAA permits aircraft operations below 500 feet when flown over open water and in sparsely populated areas. 14 CFR 91.119(c). Such operations may not be conducted “closer than 500 feet to any person, vessel, vehicle, or structure.” *Id.* Therefore, although such low-altitude operations may pose a lower risk to aircraft flying much higher, the operation may still pose a risk to persons and property on the ground warranting enforcement action when conducted unsafely. *See, e.g., Adm’r v. Kachalsky*, NTSB Order No. EA-4847, 2000 WL 1072332 (July 24, 2000) (affirming a violation of § 91.119(c) for operating within 500 feet of a dwelling in a sparsely populated area); *Adm’r v. Beissel*, NTSB Docket No. SE-19436, 2013 WL 7809754 (Dec. 11, 2014) (ordering suspension of a pilot certificate when pilot flew a helicopter less than 40 feet above the surface of a lake).

Reading the broad reference to the NAS, along with Congress’ clear interest in ensuring that model aircraft are safely operated, we conclude that Congress intended for the FAA to be able to rely on a range of our existing regulations to protect users of the airspace and people and property on the ground. Therefore, regardless of whether a model aircraft satisfies the statutory definition and operational requirements described above, if the model aircraft is operated in such a manner that endangers the safety of the NAS, the FAA may take enforcement action consistent with Congress’ mandate.

¹³ *See* 49 U.S.C. 40103(b)(2) (authorizing the FAA to prescribe air traffic regulations to protect people and property on the ground); *Adm’r v. Johnson*, NTSB Order No. EA-1008, 1977 WL 22279 at *2 (May 10, 1977) (recognizing FAA authority to promulgate regulations to protect persons and property on the ground); *Adm’r v. Page*, NTSB Order No. EA-2786, 1988 WL 250725 at *3 (July 19, 1988) (finding FAA’s rulemaking and enforcement authority extends to areas away from runways and taxiways – in this case the ramp of a fixed base operator).

IV. Examples of Regulations That Apply to Model Aircraft

The FAA could apply several regulations in part 91 when determining whether to take enforcement action against a model aircraft operator for endangering the NAS. The FAA's general operating and flight rules are housed in part 91 of the FAA's regulations. These rules are the baseline rules that apply to all aircraft operated in the United States with limited exceptions,¹⁴ and are the appropriate rules to apply when evaluating model aircraft operations.

See 14 CFR 91.1.

Rules relevant to these operations fall generally into three categories: (1) how the aircraft is operated; (2) operating rules for designated airspace; and, (3) special restrictions such as temporary flight restrictions (TFRs) and notices to airmen (NOTAMs). These rules are discussed in greater detail below.

Rules addressing operation of the aircraft may include prohibitions on careless or reckless operation and dropping objects so as to create a hazard to persons or property. See 14 CFR 91.13 through 91.15. Additionally, § 91.113 establishes right-of-way rules for converging aircraft.¹⁵ Model aircraft that do not comply with those rules could be subject to FAA enforcement action.

Rules governing operations in designated airspace are found in §§ 91.126 through 91.135. In general, those rules establish requirements for operating in the various classes of airspace, and near airports in non-designated airspace to minimize risk of collision in higher traffic airspace. Generally, if an operator is unable to comply with the regulatory requirements for operating in a particular class of airspace, the operator would need authorization from air traffic control to operate in that area. See, e.g., 14 CFR 91.127(a), 91.129(a). Operations within

¹⁴ Part 91 does not apply to moored balloons, kites, unmanned rockets, and unmanned free balloons, and ultralights vehicles operated under 14 CFR parts 101 and 103.

¹⁵ Additionally, model aircraft must not interfere with and must always give way to any manned aircraft. Section 336(a)(4).

restricted areas designated in part 73 would be prohibited without permission from the using or controlling agency. Accordingly, as part of the requirements for model aircraft operations within 5 miles of an airport set forth in section 336(a)(4) of P.L. 112-95, the FAA would expect modelers operating model aircraft in airspace covered by §§ 91.126 through 91.135 and part 73 to obtain authorization from air traffic control prior to operating.

The third category of rules relevant to model aircraft operations are rules relating to operations in areas covered by temporary flight restrictions and NOTAMs found in §§ 91.137 through 91.145. The FAA would expect that model aircraft operations comply with restrictions on airspace when established under these rules.

Other rules in part 91, or other parts of the regulations, may apply to model aircraft operations, depending on the particular circumstances of the operation. The regulations cited above are not intended to be an exhaustive list of rules that could apply to model aircraft operations. The FAA anticipates that the cited regulations are the ones that would most commonly apply to model aircraft operations.

Issued in Washington, DC, on June 18, 2014.

Michael P. Huerta,
Administrator.

Appendix C. UAS Informational Letter Template for InspectorsU.S. Department
of Transportation**Federal Aviation
Administration**Flight Standards District Office
FSDO Address

Date:

Name:

Address:

Dear:

The purpose of this letter is to provide you with information about the laws and regulations regarding Unmanned Aircraft System (UAS) operations conducted within the National Airspace System (NAS). The NAS is “the common network of U.S. airspace; air navigation facilities, equipment and services, airports or landing areas Included are system components shared jointly with the military.”¹⁶ The FAA’s safety mandate under 49 U.S.C. § 40103 requires it to regulate aircraft operations conducted in the NAS, which include UAS operations, to protect persons and property on the ground and to prevent collisions between aircraft and other aircraft or objects.

A UAS is an Aircraft

A UAS is an “aircraft” as defined in the FAA’s authorizing statutes and is therefore subject to regulation by the FAA. 49 U.S.C. § 40102(a)(6) defines an “aircraft” as “any contrivance invented, used, or designed to navigate or fly in the air.” The FAA’s regulations (14 CFR part 1, § 1.1) similarly define an “aircraft” as “a device that is used or intended to be used for flight in the air.” Because an unmanned aircraft is a contrivance/device that is invented, used, and designed to fly in the air, it meets the definition of “aircraft”. The FAA has promulgated regulations that apply to the operation of all aircraft, whether manned or unmanned, and irrespective of the altitude at which the aircraft is operating. For example, 14 CFR part 91, § 91.13 prohibits any person from operating an aircraft in a careless or reckless manner so as to endanger the life or property of another.

An important distinction for UAS operators to be aware of is whether the UAS is being operated for hobby or recreational purposes or for some other purpose. This distinction is important because there are specific requirements in the FAA Modernization and Reform Act of 2012, Public Law 112-95 (the Act), that pertain to “Model Aircraft” operations, which are conducted solely for hobby or recreational purposes. While flying model aircraft for hobby or recreational purposes does not require FAA approval, all model aircraft operators must operate safely and in

¹⁶ See FAA Pilot/Controller Glossary (Apr. 3, 2014), [available at](http://www.faa.gov/air_traffic/publications/media/pcg_4-03-14.pdf) http://www.faa.gov/air_traffic/publications/media/pcg_4-03-14.pdf.

accordance with the law. The FAA provides guidance and information to individual UAS operators about how they can operate safely under current regulations and laws. Guidance may be found at http://www.faa.gov/uas/publications/model_aircraft_operators/.

Model Aircraft Operations

Section 336(c) of the law defines “Model Aircraft” as “. . . an unmanned aircraft that is –

- (1) capable of sustained flight in the atmosphere;
- (2) flown within visual line of sight of the person operating the aircraft; and
- (3) flown for hobby or recreational purposes.

Each element of this definition must be met for a UAS to be considered a Model Aircraft under the Act. Under Section 336(a) of the Act the FAA is restricted from conducting further rulemaking specific to Model Aircraft as defined in section 336(c) so long as the Model Aircraft operations are conducted in accordance with the requirement of section 336(a). Section 336(a) requires that—

- (1) the aircraft is flown strictly for hobby or recreational use;
- (2) the aircraft is operated in accordance with a community based set of safety guidelines and within the programming of a nationwide community-based organization;
- (3) the aircraft is limited to not more than 55 pounds unless otherwise certified through a design, construction, inspection, flight test, and operational safety program administered by a community-based organization;
- (4) the aircraft is operated in a manner that does not interfere with and gives way to any manned aircraft; and
- (5) when flown within 5 miles of an airport, the operator of the aircraft provides the airport operator and the airport air traffic control tower (when an air traffic facility is located at the airport) with prior notice of the operation (model aircraft operators flying from a permanent location within 5 miles of an airport should establish a mutually-agreed upon operating procedure with the airport operator and the airport air traffic control tower (when an air traffic facility is located at the airport)).

Section 336(b) of the law, however, makes clear that the FAA has the authority under its existing regulations to pursue legal enforcement action against persons operating Model Aircraft in accordance with section 336(a) and 336(c) when the operations endanger the safety of the NAS. Nothing in section 336 otherwise alters or restricts the FAA’s statutory authority to pursue enforcement action against any UAS operator, even those whose operations are conducted in accordance with sections 336(a) and (c) that endanger the safety of the NAS. So, for example, a model aircraft operation conducted in accordance with section 336(a) and (c) may be subject to an enforcement action for violation of § 91.13 if the operation is conducted in a careless or reckless manner so as to endanger the life or property of another.

UAS Operations that are not Model Aircraft Operations

Operations of UASs that are not Model Aircraft operations as defined in section 336(c) of the law and conducted in accordance with section 336(a) of the law, may only be operated with specific authorization from the FAA. The FAA currently authorizes UAS operations that are not

for hobby or recreational purposes through one of three avenues: (1) public aircraft operations; (2) civil aircraft certification; or (3) exemptions under 14 CFR part 11 that relies on section 333 (Special Rules for Certain Unmanned Aircraft Systems) of the Act for relief from the airworthiness certificate requirement. In all three cases, Certificates of Waiver or Authorization (COA) are also required. In accordance with § 91.903 the FAA grants COAs to applicants waiving compliance with certain regulatory requirements listed in § 91.905. The applicants must be able to show that they are able to safely conduct operations in the national airspace system. The COA contains specific safety risk mitigation(s) with which the applicant must comply in order to conduct operations. The FAA also issues COAs on an emergency basis when:

- 1) a situation exists in which there is distress or urgency and there is an extreme possibility of a loss of life; 2) the proponent has determined that manned flight operations cannot be conducted efficiently; and 3) the proposed UAS is operating under a current approved COA for a different purpose or location.

1. Public Aircraft Operations + COA. In accordance with 49 U.S.C. §§ 40102 and 40125, a public entity performing a governmental function may operate UAS in the NAS. Further information about public aircraft operations is available in Advisory Circular (AC) 00-1.1A, Public Aircraft Operations (Feb. 12, 2014). Public aircraft operators must also obtain a COA prior to operations.

2. Airworthiness Certification + COA. For civil operators, you can apply for a special airworthiness certificate under 14 CFR part 21. Refer to the current edition of FAA Order 8130.34, Airworthiness Certification of Unmanned Aircraft Systems and Optionally Piloted Aircraft. The full civil type certification process allows for production and commercial operation of UAS and is a lengthy process typically undertaken by aircraft manufacturers. UAS operators who have obtained an airworthiness certificate for their UAS must also obtain a COA before conducting UAS operations.

3. Section 333 Exemptions + COA. In accordance with part 11, §§ 11.15 and 11.61-11.103 and the FAA's authority in 49 U.S.C. § 44701(f), the FAA may grant exemptions from regulatory requirements. The exemption process allows for the submission of a petition to the FAA outlining why the granting of an exemption would be in the public interest, the need for the exemption, and the reasons why granting the petition would not adversely affect safety or would provide a level of safety equal to the rules from which the exemption is sought. The FAA is currently reviewing petitions by, and granting exemptions to, civil UAS operators that want to operate for other than hobby or recreational purposes. Under section 333 of the Act, operators in appropriate circumstances can be exempted from airworthiness certification requirements. UAS operators who have obtained an exemption must also obtain a COA before conducting UAS operations.

Finally, UAS operators must understand that all UAS operations that are not operated as Model Aircraft under section 336 of the Act are subject to current and future FAA regulation. At a minimum, any such flights are currently required under the FAA's regulations to be operated with a certificated aircraft, with a certificated pilot, and with specific FAA authorization.

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Appendix C

For All UAS Operators

More information regarding UAS operations is available at the FAA Unmanned Aircraft Program Office's Web site: <http://www.faa.gov/about/initiatives/uas/>.

If you require additional information please contact me at {contact information}

In conclusion, we hope the information provided to you in this letter will assist you in conducting safe UAS operations in compliance with the FAA's regulations.

Sincerely,

Aviation Safety Inspector – Operations