

2015 Annual Seminar on Municipal Law

October 2-3, 2015
Cheyenne Mountain Resort

***Hovering Over Your City: Municipal Use
and Regulation of Drones***

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Municipal Interests in UAS

- City use
 - Police and fire
 - Property management
 - Resource management
 - Code enforcement
 - Utilities
- Liability and risk
- Regulation of drone use
 - General safety
 - Airport safety
 - Privacy
 - Proprietary interests



Photo credit:
<http://increasinghumanpotential.org>

**Federal Control of Aircraft and
Airspace**

49 U.S.C. § 40103 –National Airspace System

- Protect persons and property
- Prevent collisions
 - Between aircraft
 - With other objects

49 U.S.C. § 44701(a) – Safe flight of civil aircraft in air commerce

- Regulations
- Minimum standards

Critical FAA Regulations

14 C.F.R § 91.119 – Minimum altitudes for safe flight

- Floor of navigable airspace
- 500 feet for uncongested areas
- 1,000 feet for congested areas
- Necessary for takeoff and landing

14 C.F.R. § 91.13 –

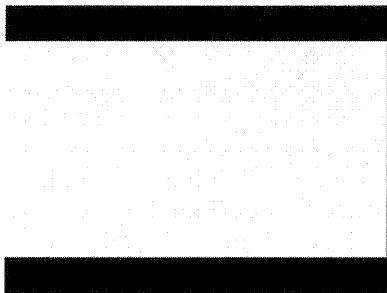
"No person may operate an aircraft in a careless or reckless manner so as to endanger the life or property of another."

Are UAS Aircraft?

• 49 USC 40102(a)(6) and 14 C.F.R 1.1:

- Aircraft are "contrivances or devices" that are "invented, used, or designed to navigate, or fly in, the air."

Huerta v. Pirker, NTSB Docket No. CP-217



UAS Authority Depends on Use



COA – Certificate of Waiver or Authorization

Section 333 Exemption or Experimental Exemption and COA

Generally No Prior Authorization

Photo credit: Lakemaid Beer

FAA Modernization and Reform Act of 2012

Pub. L. 112-95, Feb. 14, 2012

- Safely accelerate integration of UAS into the National Airspace System by Sept. 30, 2015
- Case-by-case approval of public operations
- Reduced burden for model/hobby UAS

Guidance and Regulations

Non-binding guidance documents:

- AC 91-57 Revision (Sept. 10, 2015) – Model Aircraft Operating Standards
- Policy notice, Unmanned Aircraft Operations in the National Airspace System, 72 Fed Reg 6689 (Feb. 13, 2007)
- Interim Operational Approval Guidance 08-01, Unmanned Aircraft Systems Operations in the U.S. National Airspace System, March 13, 2008

Proposed Regulations:

- Operation and Certification of Small Unmanned Aircraft Systems, 80 Fed. Reg. 9544 (Feb. 23, 2015)

Certificate of Authorization (COA)

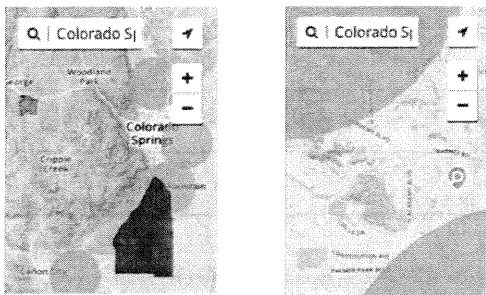
For UAS operation by public bodies – public aircraft:

- Case-by case evaluation by FAA
- Authorizes use of particular vehicle in particular location for specific use
- Operator must have pilot's certificate
- Typical conditions:
 - Visual flight rules – line of sight
 - Visual observer in addition to operator
 - Daytime operations only
 - Operations only under 400' AGL
 - Avoid airports
 - Restricted airspace

Some Risk Management Considerations

- Own and operate or lease services?
- Scope of insurance
- Mutual aid agreement provisions
- Internal policies regarding use
 - Safety
 - Data retention
 - Use of video/images
- Training
- 4th Amendment considerations
 - See *Florida v. Riley*, 488 U.S. 445 (1989); *Henderson v. People*, 879 P.2d 383 (Colo. 1994); *People v. Pollack*, 796 P.2d 63 (Colo. App. 1990)
- Trespass?

Airport Considerations and Restricted Airspace

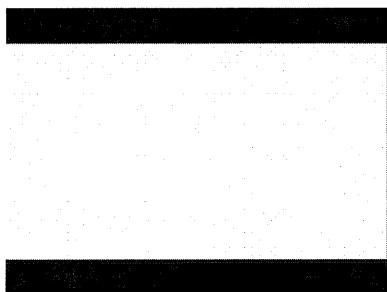


See: <http://knowbeforeyoufly.org/air-space-map/>

Local/State UAS Ordinances

- Variety of local ordinances/ resolutions passed or introduced
- +/- 20 states to date – focus primarily on limiting UAS use by law enforcement
 - Also, weaponization, hunting
- Little experience with enforcement
- Scope of preemption not tested by courts

Weaponized Drone



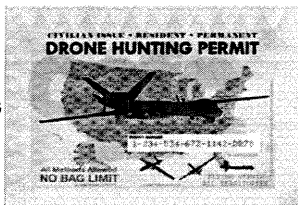
Possible Local Regulations -- Types

- Flat bans or moratoria
- Safety
 - Use regulation (traffic, law enforcement, code enforcement)
 - Location regulation (airports, sensitive locations)
 - Height
 - Weaponizing
 - No interference with civic functions
- Protection of privacy from government
 - Ban
 - Requirement for warrant
 - Limits on use
 - Data retention

Photo credit:
<http://increasinghumanpotential.org>

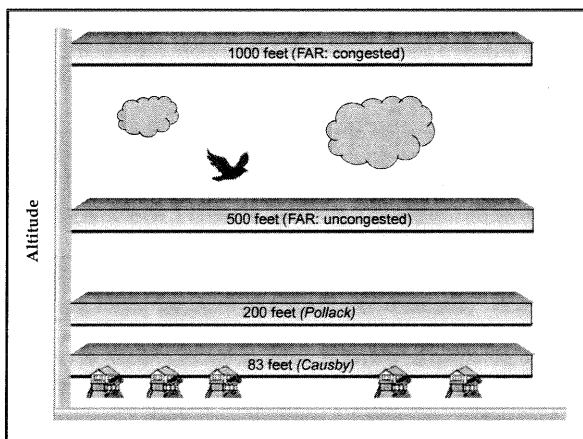
Possible Regulations (Continued)

- Protection of privacy/property rights (private parties) from private parties
 - Height limits
 - Use of images
 - Trespass
 - Prior permission
 - Harassment
- Hunting licenses



Preemption Considerations

- **Pervasive control of aircraft and flight**
 - See *Banner Towing v. People of the City of Boulder* (Colo. 1984)
- **Airspace**
 - Potential airspace "gap"
 - See *Causby v. U.S.*



Preemption (continued)

- Land use not preempted
- Non-aviation-specific provisions
 - E.g., remote control use of weapons
- Self-restrictions
 - Privacy controls for city departments
 - Avoidance of private property

FAA Law Enforcement Guidance

FAA Law Enforcement Guidance for Suspected Unauthorized UAS Operations, Jan. 8, 2015

- Seeks assistance of local law enforcement agencies to prevent unlawful UAS operations: deter, detect and investigate – report to FAA
- Reduce reckless operations:
 - Model aircraft
 - UAS

Other Considerations

- Interference with emergency operations
- Internal and external coordination
- Websites/public communication
 - E.g., <http://knowbeforeyoufly.org/>

Questions?

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projects that keep life moving.



LAW ENFORCEMENT GUIDANCE FOR SUSPECTED UNAUTHORIZED UAS OPERATIONS

Issue

There is evidence of a considerable increase in the unauthorized use of small, inexpensive Unmanned Aircraft Systems (UAS) by individuals and organizations, including companies. The FAA retains the responsibility for enforcing Federal Aviation Regulations, including those applicable to the use of UAS. The agency recognizes though that State and local Law Enforcement Agencies (LEA) are often in the best position to deter, detect, immediately investigate,¹ and, as appropriate,² pursue enforcement actions to stop unauthorized or unsafe UAS operations. The information provided below is intended to support the partnership between the FAA and LEAs in addressing these activities.

Discussion

The general public, a wide variety of organizations, including private sector (e.g., commercial companies), non-governmental (e.g., volunteer organizations), and governmental entities (e.g., local agencies) continue to demonstrate significant interest in UAS. The benefits offered by this type of aircraft are substantial and the FAA is committed to integrating UAS into the National Airspace System (NAS). This introduction, however, must address important safety and security considerations. The increasing number of cases of unauthorized use of UAS is a serious concern for the FAA and, in terms of safety and security challenges, many of its interagency partners.

This document is intended to assist LEAs in understanding the legal framework that serves as the basis for FAA legal enforcement action against UAS operators for unauthorized and/or unsafe UAS operations (Section 1) and to provide guidance regarding the role of LEAs in deterring, detecting, and investigating unauthorized and/or unsafe UAS operations (Section 2).

SECTION 1.

Basic Legal Mandates

The FAA's safety mandate under 49 U.S.C. § 40103 requires it to regulate aircraft operations conducted in the NAS,³ which include UAS operations, to protect persons and property on the

¹ At least in terms of initial contact with the suspected offender.

² Applying any laws falling within the enforcement authority of the LEA in question.

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

ground, and to prevent collisions between aircraft and other aircraft or objects. In addition, 49 U.S.C. § 44701(a) requires the agency to promote safe flight of civil aircraft in air commerce by prescribing, among other things, regulations and minimum standards for other practices, methods, and procedures the Administrator finds necessary for safety in air commerce and national security.⁴

A UAS is an Aircraft that Must Comply with Safety Requirements

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 C.F.R. § 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 C.F.R. § 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.

Model Aircraft Operations

An important distinction 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 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/

Section 336(c) of the Act 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 requirements of section 336(a). Section 336(a) requires that—

⁴ FAA action on these security concerns support and are informed by the national defense, homeland security, and law enforcement statutory responsibilities and authorities of our interagency partners.

- (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)).

Model Aircraft that Operate in a Careless or Reckless Manner

Section 336(b) of the Act, however, makes clear that the FAA has the authority under its existing regulations to pursue legal enforcement action against persons operating Model Aircraft when the operations endanger the safety of the NAS, even if they are operating in accordance with section 336(a) and 336(c). 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 14 C.F.R. § 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 UAS that are not Model Aircraft operations as defined in section 336(c) of the Act and conducted in accordance with section 336(a) of the Act may only be operated with specific authorization from the FAA. The FAA currently authorizes non-hobby or recreational UAS operations through one of three avenues:

- (1) The issuance of a Certificate of Waiver or Authorization, generally to a governmental entity operating a public aircraft;
- (2) The issuance of an airworthiness certificate in conjunction with the issuance of a Certificate of Waiver or Authorization; or
- (3) The issuance of an exemption under part 11 of title 14, Code of Federal Regulations that relies on section 333 (Special Rules for Certain Unmanned Aircraft Systems) of the Act for relief from the airworthiness certificate requirement, also in conjunction with the issuance of a Certificate of Waiver or Authorization.

It is important to 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 an

authorized aircraft (certificated or exempted), with a valid registration number (“N-number”), with a certificated pilot, and with specific FAA authorization (Certificate of Waiver or Authorization).

Regardless of the type of UAS operation, the FAA’s statutes and the Federal Aviation Regulations prohibit any conduct that endangers individuals and property on the surface, other aircraft, or otherwise endangers the safe operation of other aircraft in the NAS. In addition, States and local governments are enacting their own laws regarding the operation of UAS, which may mean that UAS operations may also violate state and local laws specific to UAS operations, as well as broadly applicable laws such as assault, criminal trespass, or injury to persons or property.

UAS Compliance with Airspace Security Requirements

As an aircraft, UAS operations (including those involving Model Aircraft) must be conducted in accordance with the airspace-centric security requirements prescribed by the FAA’s regulations and various implementation tools used by the FAA, specifically including airspace with special flight rules and Notices to Airmen (NOTAM) that define Temporary Flight Restrictions (TFR). It is important that UAS operators and LEAs be familiar with the airspace restrictions respectively relevant to their operations and their enforcement area of responsibility.

Flight restrictions are used to protect, but are not limited to, special security events, sensitive operations (e.g., select law enforcement activity, space flight operations, etc.), and Presidential movement. The most up-to-date list of TFRs is available at <http://tfr.faa.gov/tfr2/list.html>.

See Attachment A for reference resources.⁵

SECTION 2.

The Role of Law Enforcement

The FAA promotes voluntary compliance by educating individual UAS operators about how they can operate safely under current regulations and laws. The FAA also has a number of enforcement tools available including warning notices, letters of correction, and civil penalties. The FAA may take enforcement action against anyone who conducts an unauthorized UAS operation or operates a UAS in a way that endangers the safety of the national airspace system. This authority is designed to protect users of the airspace as well as people and property on the ground.

However, as noted above, State and local Law Enforcement Agencies (LEA) are often in the best position to deter, detect, immediately investigate,⁶ and, as appropriate,⁷ pursue

⁵ Attachment A also includes a NOTAM concerning avoidance (including no loitering) over power plants, dams, refineries, industrial complexes, and military facilities. Although not a restriction, this TFR urges aircraft operators to avoid these locations.

⁶ At least in terms of initial contact with the suspected offender.

⁷ Applying any laws falling within the enforcement authority of the LEA in question.

enforcement actions to stop unauthorized UAS operations. Although the FAA retains the responsibility for enforcing FAA's regulations, FAA aviation safety inspectors, who are the agency's principal field elements responsible for following up on these unauthorized and/or unsafe activities, will often be unable to immediately travel to the location of an incident.

While the FAA must exercise caution not to mix criminal law enforcement with the FAA's administrative safety enforcement function, the public interest is best served by coordination and fostering mutual understanding and cooperation between governmental entities with law enforcement responsibilities. Although there are Federal criminal statutes that may be implicated by some UAS operations (see 49 U.S.C. § 44711), most violations of the FAA's regulations may be addressed through administrative enforcement measures. As with any other civil or criminal adjudication, successful enforcement will depend on development of a complete and accurate factual report contemporaneous with the event.

Although certainly not an exhaustive list, law enforcement officials, first responders and others can provide invaluable assistance to the FAA by taking the actions outlined below:

- (1) **Witness Identification and Interviews.** Local law enforcement is in the best position to identify potential witnesses and conduct initial interviews, documenting what they observed while the event is still fresh in their minds. In addition, local law enforcement is in an optimum position to secure all information necessary for our safety inspectors to contact these witnesses in any subsequent FAA investigation. Administrative proceedings often involve very technical issues; therefore, we expect our own safety inspectors will need to re-interview most witnesses. We are mindful that in many jurisdictions, state law may prohibit the transmission of witness statements to third parties, including the FAA. In those circumstances it is extremely important that the FAA be able to locate and conduct independent interviews of these individuals.
- (2) **Identification of Operators.** Law enforcement is in the best position to contact the suspected operators of the aircraft, and any participants or support personnel accompanying the operators. Our challenges in locating violators are marked in that very few of these systems are registered in any federal database and rarely will they have identifiable markings such as used for conventional manned aircraft. Likewise, information on few of the UAS operators will be archived in a pilot data base. Many operators advertise openly on the internet. However, in our enforcement proceedings, we bear the burden of proof, and showing who actually is operating the unmanned aircraft is critical. Therefore, evidentiary thresholds must be met even when using data or video acquired via the internet. Likewise, the purpose for the operation (such as in support of a commercial venture, to further some business interest, or to secure compensation for their services) may become an important element in determining what regulations, if any, may have been violated by the operation. Identification and interview of suspected operators early on will help immeasurably to advance enforcement efforts.
- (3) **Viewing and Recording the Location of the Event.** Pictures taken in close proximity to the event are often helpful in describing light and weather conditions, any damage or injuries, and the number and density of people on the surface,

particularly at public events or in densely populated areas. During any witness interviews, use of fixed landmarks that may be depicted on maps, diagrams or photographs immeasurably help in fixing the position of the aircraft, and such landmarks also should be used as a way to describe lateral distances and altitude above the ground, structures or people (e.g. below the third floor of Building X, below the top of the oak tree located Y, anything that gives reference points for lay witnesses).

- (4) **Identifying Sensitive Locations, Events, or Activities.** The FAA maintains a variety of security-driven airspace restrictions around the country to help protect sensitive locations, events, and activities through Temporary Flight Restrictions (TFR), Prohibited Areas, and other mechanisms such as the Washington, DC Flight Restricted Zone (DC FRZ). UAS operations, including Model Aircraft flights, are generally prohibited within these defined volumes of airspace. LEAs should become familiar with the steady-state airspace restrictions active within their area of responsibility, along with as-needed TFRs, which could be instituted to help protect sensitive events (e.g., major gatherings of elected officials) and activities (e.g., Presidential movements). If there is any question as to whether a TFR has been established in a given location, contact the nearest air traffic facility or flight service station for further information or visit <http://tfr.faa.gov/tfr2/list.html> for a graphic representation of TFRs locatable by state and effective dates.
- (5) **Notification.** Immediate notification of an incident, accident or other suspected violation to one of the FAA Regional Operation Centers (ROC) located around the country is valuable to the timely initiation of the FAA's investigation. These centers are manned 24 hours a day, 7 days a week with personnel who are trained in how to contact appropriate duty personnel during non-business hours when there has been an incident, accident or other matter that requires timely response by FAA employees. A list of these centers and telephone numbers is included as Attachment B to this letter.
- (6) **Evidence Collection.** Identifying and preserving any public or private security systems that may provide photographic or other visual evidence of UAS operations, including video or still picture security systems can provide essential evidence to the FAA. Many times these systems do not permanently store information but erase it as the system recycles at a given interval. Local law enforcement is in the best position to inquire and make initial requests to identify and preserve this form of evidence or obtain legal process for securing this evidence in the context of an investigation of a possible violation of state criminal law. In addition, some UAS may be marked with identification numbers ("N-numbers") signifying FAA registration. The presence or lack of these identification numbers may be significant in an FAA investigation. For example, an operator may state that he or she is conducting an approved commercial activity, which usually requires registered aircraft. However, the absence of registration markings on the UAS may indicate that the aircraft is not registered, meaning the operation may not be authorized. Note that identification numbers may not be conspicuous from a distance because of the size and non-traditional configuration of some UAS. The registered owners

of UAS bearing identification numbers can be found by searching for the N-number on the FAA's website: www.faa.gov.

Virtually all of the items listed above are already in the tool box for law enforcement officers. Other investigative methods also may prove useful, such as consensual examination of the UAS, equipment trailers and the like. However, other law enforcement processes, such as arrest and detention or non-consensual searches almost always fall outside of the allowable methods to pursue administrative enforcement actions by the FAA unless they are truly a by-product of a state criminal investigation. We do not mean to discourage use of these methods and procedures where there is an independent basis for them under state or local law. We simply wish to emphasize that work products intended for FAA use generally should involve conventional administrative measures such as witness interviews, "stop and talk" sessions with suspected violators, consensual examination of vehicles and equipment, and other methods that do not involve court orders or the potential use of force by law enforcement personnel.

It is extremely difficult to provide a "one size fits all" guide to cooperative investigation of unauthorized UAS operations considering the myriad jurisdictions and the associated statutory and constitutional restraints and requirements. State and local officials are always urged to use their governmental unit's legal resources and their own management chain to develop acceptable protocols for dealing with these instances. In some situations, there may be legal bars to the sharing of some information or the use of databases designed for conventional law enforcement. However, with appropriate data collection during first responses and early reporting to the FAA, Federal, State and local agencies will be in the best position to both collect and share information that may be of interest to each jurisdiction. FAA aviation safety inspectors are adept at coordination with our own legal resources to ensure unauthorized operators are properly accountable for the potential risk they create to both people and property. In addition, we have specially trained inspectors within the FAA UAS Integration office who can provide expertise in this area.

If you have any questions or your agency would like to pursue advance planning on how to address these situations, please feel free to contact your local FAA Law Enforcement Assistance Special Agent or the FAA's Law Enforcement Assistance Program Office at (202) 267-4641 or (202) 267-9411.

Attachment A.

Excerpts**Presidential
Movements**

FDC 4/7607 ZBW RI..AIRSPACE PROVIDENCE, RHODE ISLAND..TEMPORARY FLIGHT RESTRICTIONS. OCTOBER 16, 2014 LOCAL. THIS NOTAM REPLACES NOTAM 4/7600 DUE TO SCHEDULE CHANGE. PURSUANT TO 49 USC 40103(B) THE FEDERAL AVIATION ADMINISTRATION (FAA) CLASSIFIES THE AIRSPACE DEFINED IN THIS NOTAM AS 'NATIONAL DEFENSE AIRSPACE'. PILOTS WHO DO NOT ADHERE TO THE FOLLOWING PROCEDURES MAY BE INTERCEPTED DETAINED AND INTERVIEWED BY LAW ENFORCEMENT/SECURITY PERSONNEL. ANY OF THE FOLLOWING ADDITIONAL ACTIONS MAY ALSO BE TAKEN AGAINST A PILOT WHO DOES NOT COMPLY WITH THE REQUIREMENTS OR ANY SPECIAL INSTRUCTIONS OR PROCEDURES ANNOUNCED IN THIS NOTAM:

A) THE FAA MAY TAKE ADMINISTRATIVE ACTION, INCLUDING IMPOSING CIVIL PENALTIES AND THE SUSPENSION OR REVOCATION OF AIRMEN CERTIFICATES; OR

B) THE UNITED STATES GOVERNMENT MAY PURSUE CRIMINAL CHARGES, INCLUDING CHARGES UNDER TITLE 49 OF THE UNITED STATES CODE, SECTION 46307; OR

C) THE UNITED STATES GOVERNMENT MAY USE DEADLY FORCE AGAINST THE AIRBORNE AIRCRAFT, IF IT IS DETERMINED THAT THE AIRCRAFT POSE AN IMMINENT SECURITY THREAT.

...

C. THE FOLLOWING OPERATIONS ARE NOT AUTHORIZED WITHIN THIS TFR: FLIGHT TRAINING, PRACTICE INSTRUMENT APPROACHES, AEROBATIC FLIGHT, GLIDER OPERATIONS, SEAPLANE OPERATIONS, PARACHUTE OPERATIONS, ULTRALIGHT, HANG GLIDING, BALLOON OPERATIONS, AGRICULTURE/CROP DUSTING, ANIMAL POPULATION CONTROL FLIGHT OPERATIONS, BANNER TOWING OPERATIONS, SIGHTSEEING OPERATIONS, MAINTENANCE TEST FLIGHTS, MODEL AIRCRAFT OPERATIONS, MODEL ROCKETRY, UNMANNED AIRCRAFT SYSTEMS (UAS), AND UTILITY AND PIPELINE SURVEY OPERATIONS.

DC FRZ

FDC 0/8326 ZDC PART 1 OF 10 FLIGHT RESTRICTIONS, WASHINGTON, DC, EFFECTIVE 1012010401 UTC UNTIL FURTHER NOTICE. THIS NOTICE WILL REPLACE NOTAM 0/9477 DUE TO A CHANGE IN RESTRICTIONS. THIS NOTAM AND A NOTAM FOR THE LEESBURG MANEUVERING AREA SUPPLEMENT SUBPART V, 14 CFR PART 93 FOR THE WASHINGTON, D.C. SPECIAL FLIGHT RULES AREA (DC SFRA). PURSUANT TO 49 USC 40103(B), THE FAA HAS ESTABLISHED THE DC SFRA AREA AS 'NATIONAL DEFENSE AIRSPACE. ANY PERSON WHO DOES NOT COMPLY WITH THE REQUIREMENTS APPLICABLE TO THE DC SFRA MAY BE INTERCEPTED, DETAINED AND INTERVIEWED BY LAW ENFORCEMENT/SECURITY PERSONNEL. ANY OF THE FOLLOWING ADDITIONAL ACTIONS MAY ALSO BE TAKEN AGAINST A PILOT WHO DOES NOT COMPLY WITH THE REQUIREMENTS OR ANY SPECIAL INSTRUCTIONS OR PROCEDURES ANNOUNCED IN THIS NOTAM: A) THE FAA MAY TAKE ADMINISTRATIVE ACTION, INCLUDING IMPOSING CIVIL PENALTIES AND THE SUSPENSION OR REVOCATION OF AIRMEN CERTIFICATES; B) THE UNITED STATES GOVERNMENT MAY PURSUE CRIMINAL CHARGES, INCLUDING CHARGES UNDER TITLE 49 OF THE UNITED STATES CODE, SECTION 46307; C) THE UNITED STATES GOVERNMENT MAY USE DEADLY FORCE AGAINST THE AIRBORNE AIRCRAFT, IF IT IS DETERMINED THAT THE AIRCRAFT POSE AN IMMINENT SECURITY THREAT.

...

A. THE FOLLOWING OPERATIONS ARE NOT AUTHORIZED WITHIN THE DC FRZ: FLIGHT TRAINING, AEROBATIC FLIGHT, PRACTICE INSTRUMENT APPROACHES, GLIDER OPERATIONS, PARACHUTE OPERATIONS, ULTRA LIGHT, HANG GLIDING, BALLOON OPERATIONS, TETHERED BALLOONS, AGRICULTURE/CROP DUSTING, ANIMAL POPULATION CONTROL FLIGHT OPERATIONS, BANNER TOWING OPERATIONS, MAINTENANCE TEST FLIGHTS, MODEL AIRCRAFT OPERATIONS, MODEL ROCKETRY, FLOAT PLANE OPERATIONS, UNMANNED AIRCRAFT SYSTEMS (UAS) AND AIRCRAFT/HELICOPTERS OPERATING FROM A SHIP OR PRIVATE/CORPORATE YACHT. B. IT IS HIGHLY RECOMMENDED THAT A PILOT CONTINUOUSLY MONITOR VHF FREQUENCY 121.5 OR UHF FREQUENCY 243.0 FOR EMERGENCY INSTRUCTIONS WHEN OPERATING AN AIRCRAFT IN THE DC FRZ, EITHER IN AN AIRCRAFT THAT IS SUITABLY EQUIPPED, OR BY USE OF PORTABLE EQUIPMENT.

Avoidance of Power Plans Etc. *(Applied to all Aircraft, including UAS)*

FDC 4/0811 SPECIAL NOTICE. THIS IS A RESTATEMENT OF A PREVIOUSLY ISSUED ADVISORY NOTICE. IN THE INTEREST OF NATIONAL SECURITY AND TO THE EXTENT PRACTICABLE, PILOTS ARE STRONGLY ADVISED TO AVOID THE AIRSPACE ABOVE, OR IN PROXIMITY TO SUCH SITES AS POWER PLANTS (NUCLEAR, HYDRO-ELECTRIC, OR COAL), DAMS, REFINERIES, INDUSTRIAL COMPLEXES, MILITARY FACILITIES AND OTHER SIMILAR FACILITIES. PILOTS SHOULD NOT CIRCLE AS TO LOITER IN THE VICINITY OVER THESE TYPES OF FACILITIES.

Select Sporting Events

FDC 4/3621 FDC SPECIAL SECURITY NOTICE. SPORTING EVENTS. THIS NOTAM REPLACES FDC NOTAM 9/5151 TO REFLECT A TSA WEBSITE UPDATE AND ADDITIONAL INFORMATION CONCERNING AIRSPACE WAIVERS. FLIGHT RESTRICTIONS IN THIS NOTAM COMPLY WITH STATUTORY MANDATES DETAILED IN SECTION 352 OF PUBLIC LAW 108-7 AS AMENDED BY SECTION 521 OF PUBLIC LAW 108-199. PURSUANT TO 49 USC 40103(B), THE FEDERAL AVIATION ADMINISTRATION (FAA) CLASSIFIES THE AIRSPACE DEFINED IN THIS NOTAM AS 'NATIONAL DEFENSE AIRSPACE'. ANY PERSON WHO KNOWINGLY OR WILLFULLY VIOLATES THE RULES PERTAINING TO OPERATIONS IN THIS AIRSPACE MAY BE SUBJECT TO CERTAIN CRIMINAL PENALTIES UNDER 49 USC 46307. PILOTS WHO DO NOT ADHERE TO THE FOLLOWING PROCEDURES MAY BE INTERCEPTED, DETAINED AND INTERVIEWED BY LAW ENFORCEMENT/SECURITY PERSONNEL. PURSUANT TO 14 CFR SECTION 99.7, SPECIAL SECURITY INSTRUCTIONS, COMMENCING ONE HOUR BEFORE THE SCHEDULED TIME OF THE EVENT UNTIL ONE HOUR AFTER THE END OF THE EVENT. ALL AIRCRAFT OPERATIONS; INCLUDING PARACHUTE JUMPING, UNMANNED AIRCRAFT AND REMOTE CONTROLLED AIRCRAFT, ARE PROHIBITED WITHIN A 3 NMR UP TO AND INCLUDING 3000 F AGL OF ANY STADIUM HAVING A SEATING CAPACITY OF 30,000 OR MORE PEOPLE WHERE EITHER A REGULAR OR POST SEASON MAJOR LEAGUE BASEBALL, NATIONAL FOOTBALL LEAGUE, OR NCAA DIVISION ONE FOOTBALL GAME IS OCCURRING. THIS NOTAM ALSO APPLIES TO NASCAR SPRINT CUP, INDY CAR, AND CHAMP SERIES RACES EXCLUDING QUALIFYING AND PRE-RACE EVENTS. FLIGHTS CONDUCTED FOR OPERATIONAL PURPOSES OF ANY EVENT, STADIUM OR VENUE AND BROADCAST COVERAGE FOR THE BROADCAST RIGHTS HOLDER ARE AUTHORIZED WITH AN APPROVED AIRSPACE WAIVER. AN FAA AIRSPACE WAIVER DOES NOT RELIEVE OPERATORS FROM OBTAINING ALL OTHER NECESSARY AUTHORIZATIONS AND COMPLYING WITH ALL APPLICABLE FEDERAL AVIATION REGULATIONS. THE RESTRICTIONS DESCRIBED ABOVE DO NOT APPLY TO THOSE AIRCRAFT AUTHORIZED BY AND IN CONTACT WITH ATC FOR OPERATIONAL OR SAFETY OF FLIGHT PURPOSES, DEPARTMENT OF DEFENSE, LAW ENFORCEMENT, AND AIR AMBULANCE FLIGHT OPERATIONS. ALL PREVIOUSLY ISSUED WAIVERS TO FDC NOTAM 9/5151 REMAIN VALID UNTIL THE SPECIFIED END DATE BUT NOT TO EXCEED 90 DAYS FOLLOWING THE EFFECTIVE DATE OF THIS NOTAM. INFORMATION ABOUT AIRSPACE WAIVER APPLICATIONS AND TSA SECURITY AUTHORIZATIONS CAN BE FOUND AT [HTTP://WWW.TSA.GOV/STAKEHOLDERS/AIRSPACE-WAIVERS-0](http://www.tsa.gov/stakeholders/airspace-waivers-0) OR BY CALLING TSA AT 571-227-2071. SUBMIT REQUESTS FOR FAA AIRSPACE WAIVERS AT [HTTPS://WAIVERS.FAA.GOV](https://waivers.faa.gov)

Disney Theme Parks

FDC 4/XXXX ZZZ SECURITY SPECIAL NOTICE DISNEY WORLD THEME PARK ORLANDO FL THIS NOTAM REPLACES NOTAM 9/4985 TO REFLECT A TSA WEBSITE UPDATE AND ADDITIONAL INFORMATION CONCERNING AIRSPACE WAIVERS. FLIGHT RESTRICTIONS IN THIS NOTAM COMPLY WITH STATUTORY MANDATES DETAILED IN SECTION 352 OF PUBLIC LAW 108-7 AS AMENDED BY SECTION 521 OF PUBLIC LAW 108-199. PURSUANT TO 49 USC 40103(B), THE FEDERAL AVIATION ADMINISTRATION (FAA) CLASSIFIES THE AIRSPACE DEFINED IN THIS NOTAM AS 'NATIONAL DEFENSE AIRSPACE'. AN PERSON WHO KNOWINGLY OR WILLFULLY VIOLATES THE RULES PERTAINING TO OPERATIONS IN THIS AIRSPACE MAY BE SUBJECT TO CERTAIN CRIMINAL PENALTIES UNDER 49 USC 46307. PILOTS WHO DO NOT ADHERE TO THE FOLLOWING PROCEDURES MAY BE INTERCEPTED, DETAINED AND INTERVIEWED BY LAW ENFORCEMENT/SECURITY PERSONNEL. PURSUANT TO 14 CFR SECTION 99.7, SPECIAL SECURITY INSTRUCTIONS, ALL AIRCRAFT FLIGHT OPERATIONS TO INCLUDE UNMANNED AND REMOTE CONTROLLED AIRCRAFT ARE PROHIBITED WITHII A 3 NMR OF 282445N/0813420W OR THE ORL238014.8 UP TO AND INCLUDING 3000 FT AGL. THE RESTRICTIONS DO NOT APPLY TO THOSE AIRCRAFT AUTHORIZED BY AND IN CONTACT WITH ATC FOR OPERATIONAL OR SAFET OF FLIGHT PURPOSES, AND DEPARTMENT OF DEFENSE, LAW ENFORCEMENT, AND AIR AMBULANCE FLIGHT OPERATIONS. FLIGHTS CONDUCTED FOR OPERATIONAL PURPOSES OF ANY DISNEY WORLD EVEN AND VENUE ARE AUTHORIZED WITH AN APPROVED WAIVER. AN FAA AIRSPACE WAIVER DOES NOT RELIEVE OPERATORS FROM OBTAINING ALL OTHER NECESSARY AUTHORIZATIONS AND COMPLYING WITH ALL APPLICABLE FEDERAL AVIATION REGULATIONS. ALL PREVIOUSLY ISSUED WAIVERS TO FDC NOTAM 4/4985 REMAIN VALID UNTIL THE SPECIFIED END DATE BUT NOT TO EXCEED 90 DAYS FOLLOWING THE EFFECTIVE DATE OF THIS NOTAM. INFORMATION ABOUT AIRSPACE WAIVER APPLICATIONS AND TSA SECURITY AUTHORIZATIONS CAN BE FOUND AT [HTTP://WWW.TSA.GOV/STAKEHOLDERS/AIRSPACE-WAIVERS-0](http://www.tsa.gov/stakeholders/airspace-waivers-0) OR BY CALLING TSA AT 571-227-2071. SUBMIT REQUESTS FOR FAA AIRSPACE WAIVERS AT [HTTPS://WAIVERS.FAA.GOV](https://waivers.faa.gov)

Attachment B.

Facility	States	Office	E-Mail
Western ROC	AK, AZ, CA, CO, HI, ID, MT, NV, OR, UT, WA and WY	425-227-1999	9-ANM-ROC@faa.gov
Central ROC	AR, IA, IL, IN, KS, LA, MI, MN, MO, ND, NE, NM, OH, OK, SD, TX and WI	817-222-5006	9-asw-operation-center@faa.gov
Southern ROC	AL, FL, GA, KY, MS, NC, PR, SC, TN and VI	404-305-5180	9-ASO-ROC@faa.gov
Eastern ROC	DC, DE, MD, NJ, NY, PA, VA and WV	718-553-3100	7-AEA-ROC@faa.gov
New England ROC	CT, MA, ME, NH, RI and VT	404-305-5156	7-ANE-OPSCTR@faa.gov
Washington WOC		202-267-3333	9-awa-ash-woc@faa.gov



U.S. Department
of Transportation
Federal Aviation
Administration

Advisory Circular

**Subject: Model Aircraft Operating
Standards**

**Date: September 2, 2015
Initiated by: AJV-115**

AC No. 91-57A

1. PURPOSE. This advisory circular (AC) provides guidance to persons operating Unmanned Aircraft (UA) for hobby or recreation purposes meeting the statutory definition of “model aircraft” contained in Section 336 of Public Law 112-95, the *FAA Modernization and Reform Act of 2012*. This AC describes means by which model aircraft may be operated safely in the National Airspace System (NAS). Nothing in this AC changes the requirement to comply with the statute or any applicable regulations.

2. APPLICABILITY. This AC provides information for any person who engages in model aircraft operations using model aircraft as defined by statute. (See paragraph 6.)

3. REFERENCES. Title 49 U.S.C. § 40101; P.L. 112-95 (126 Stat. 77 *et seq.*).

4. RELATED MATERIAL (current editions).

- Subtitle VII of Title 49, United States Code (49 USC)
- Title 14 of the Code of Federal Regulations (14 CFR)
- Subtitle B of Public Law 112-95 (Feb. 14, 2012)
- *Aeronautical Information Manual* (AIM)
- Temporary Flight Restriction (TFR) listing: <http://tfr.faa.gov/tfr2/list.html>
- Aeronautical Navigation Products (Charts):
http://www.faa.gov/air_traffic/flight_info/aeronav/
- Notices to Airman: https://www.faa.gov/air_traffic/publications/notices/

5. CANCELLATION. AC 91-57, *Model Aircraft Operating Standards*, dated June 9, 1981, is cancelled.

6. MODEL AIRCRAFT OPERATIONS.

a. Terminology.

- (1) 49 USC § 40102 defines an aircraft as “any contrivance invented, used, or designed to navigate, or fly in, the air.” 14 CFR § 1.1 defines an aircraft as “a device that is used or intended to be used for flight in the air.”

- (2) Public Law 112-95 defines unmanned aircraft as an aircraft that is operated without the possibility of direct human intervention from within or on the aircraft.
- (3) Section 336 of P.L. 112-95 defines a model aircraft as an unmanned aircraft that is capable of sustained flight in the atmosphere, flown within visual line of sight of the person operating the aircraft, and flown only for hobby or recreational purposes.

b. Model Aircraft Hazards in the NAS. While aero-modelers generally are concerned about safety and exercise good judgment when flying model aircraft for the hobby and recreational purposes for which they are intended, they may share the airspace in which manned aircraft are operating. Unmanned aircraft, including model aircraft, may pose a hazard to manned aircraft in flight and to persons and property on the surface if not operated safely. Model aircraft operations that endanger the safety of the National Airspace System, particularly careless or reckless operations or those that interfere with or fail to give way to any manned aircraft may be subject to FAA enforcement action.

c. Determination of “Model Aircraft” Status. Whether a given unmanned aircraft operation may be considered a “model aircraft operation” is determined with reference to section 336 of Public Law 112-95:

- (1) The aircraft is flown strictly for hobby or recreational use;
- (2) The aircraft operates in accordance with a community-based set of safety guidelines and within the programming of a nationwide community-based organization (CBO);
- (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 CBO;
- (4) The aircraft operates 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 model aircraft provides the airport operator or 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).

d. Public Law 112-95 recognizes the authority of the Administrator to pursue enforcement action against persons operating model aircraft who endanger the safety of the National Airspace System. Accordingly, model aircraft operators must comply with any Temporary Flight Restrictions (TFR). TFRs are issued over specific locations due to disasters, or for reasons of national security; or when determined necessary for the management of air traffic

in the vicinity of aerial demonstrations or major sporting events. Do not operate model aircraft in designated areas until the TFR is no longer in force.

Model aircraft must not operate in Prohibited Areas, Special Flight Rule Areas or, the Washington National Capital Region Flight Restricted Zone, without specific authorization. Such areas are depicted on charts available at http://www.faa.gov/air_traffic/flight_info/aeronav/. Additionally, model aircraft operators should be aware of other Notices to Airmen (NOTAMS) which address operations near locations such as military or other federal facilities, certain stadiums, power plants, electric substations, dams, oil refineries, national parks, emergency, services and other industrial complexes. In addition to the previously mentioned link, information regarding published NOTAMS can be found at: https://www.faa.gov/air_traffic/publications/notices/.

The requirement to not fly within TFRs, or other circumstances where prohibited, would apply to operation of model aircraft that would otherwise comply with section 336 of Public Law 112-95.

e. Model aircraft operators should follow best practices including limiting operations to 400 feet above ground level (AGL).

f. All other operators and for additional information on Unmanned Aircraft Systems please visit: <http://www.faa.gov/uas/>.

Elizabeth L. Ray

Digitally signed by Elizabeth L. Ray
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