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| ***REPLACE WITH YOUR MASTHEAD*** | | |
| **VFIS logo black JPG** | **SOG Title:** | |
| **SOG Number:** | |
| **Original Date:** | **Revision Date:** |
| **ABC Fire Department General Operating Guideline** | | |

**Unmanned Aircraft Systems Operation Suggestions**

***This is a sample of a standard operating guideline (SOG) on this topic. You should review the content, modify as appropriate for your organization, have it reviewed by your leadership team and if appropriate your legal counsel. Once adopted, make sure the SOG is communicated to members, implemented and performance monitored for effective implementation.***

**Policy:**

The use of Unmanned Aircraft Systems (UAS), referred to as drones, has increased nationwide as regulations regarding who can operate these systems have rapidly changed. Emergency Service Organizations (ESOs) are frequently utilizing this technology for various applications, including hazard assessment and wildfire control. While these tools can be a vital asset to public service activities for ESOs, there are compliance requirements and inherent risks associated with UAS operations.

All ESOs, including fire departments and EMS departments, are required to receive clearance from the Federal Aviation Administration (FAA) under 14 CFR Part 107 to operate a UAS or a drone based on the fact that these activities are considered commercial/public entity UAS operations rather than recreational UAS operations. Current regulations allow for system operators for commercial use to pass a test and become a certified pilot.

**Procedures**

**Non-Public Entity Flight Certification Process:**

Follow the requirements set by 14 CFR Part 107

1. Obtain Remote Pilot Airman Certification
2. Must be 16 years of age
3. Must pass Transportation Security Administration (TSA) vetting process

**Public Entity Flight Certification Process:**

Government entities or organizations (e.g., law enforcement agencies, public universities, state governments, local municipalities} have two options for obtaining permission for flying UAS.

1. Fly under the small UAS rule - follow all rules under 14 CFR Part 107,including aircraft and pilot requirements (14 CFR Part 107 rules listed under the Non-Public Entity Process discussed above)

**OR**

1. Obtain a blanket public Certificate of Waiver or Authorization (COA) - permits nationwide flights in Class G airspace at or below 400 feet, self-certification of the UAS pilot, and the option to obtain emergency COAs (e-COAs) under special circumstances. (14 CFR Part 107} - Note: COAs are typically valid for two years.

A sample COA application can be found at the following link: COA Sample Application. Contact [9-AJV-115-UASCOA@faa.gov](mailto:9-AJV-115-UASCOA@faa.gov) to learn more about public COAs.

VFIS recommends all UAS operators obtain their Remote Pilot Airman Certification from the Federal Aviation Administration regardless of Public Entity or Non-Public Entity status.

**There are several topics to address when considering a UAS:**

* How many drones will be in the fleet?
* How many drone operators will be allowed to use the equipment?
* Have adequate training procedures been established for operator certification?
* What will the drones be used for?
* Have the applicable state and federal regulations been reviewed?
* Have department operational guidelines that meet the applicable regulations been established?
* Are registration, flight, and maintenance records for the aircraft in compliance with 14 CFR Part 48 and 14 CFR Part 107 (Flight records, maintenance records. etc.)?
* Who will maintain these records?
* Has the mission of the aircraft been defined in the operation records?

**Areas of Concern & Hazards:**

* Wind, rain, and other weather restrictions for drone use
* Powerline proximity policies
* Privacy policies and guidelines in according with FAA requirements
* Battery charging, inspection, and maintenance programs
* Data protection of drone footage

**Drone Registration Requirements:**

The Federal Aviation Administration requires all owners of UASs or drones weighing between 0.55 and 55 pounds to register online before flying. Failure to register an aircraft can result in civil penalties up to $27,500. Criminal penalties for failure to register can include fines of up to $250,000 under 18 U.S.C.3571 and/or imprisonment up to three years under 18 U.S.C. 3581 (b)(5).

**Rules for Operation:**

FAA restrictions not only apply to commercial applications such as ESO drone operations. Separate FAA regulations apply to recreational use of UASs as well. If members or the public are allowed to operate their personal drone from department property, there are FAA requirements in place in regards to when and where the drones can fly as well as registration requirements based on the weight of the aircraft and operating rules. The requirements for UAS recreational operation (middle column) versus commercial operation (right column) are outlined in the chart below:

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| **The rules of operating unmanned aircraft** | | |
|  | **Fly for Fun** | **Fly for Work** |
| **Pilot Requirements** | No pilot requirements | Must have Remote Pilot Airman Certificate  Must be 16 years old  Must pass TSA vetting |
| **Aircraft Requirements** | Must be registered if over 0.55 lbs. | Must be less than 55 lbs.  Must be registered if over 0.55 lbs. (online)  Must undergo pre-flight check to ensure UAS is in condition for safe operation |
| **Location Requirements** | 5 miles from airports without prior notification to airport and air traffic control | Class G Airspace\* |
| **Operating Rules** | Must ALWAYS yield right of way to manned aircraft  Must keep the aircraft in sight (visual line-of-sight)  UAS must be under 55 lbs.  Must follow community-based safety guidelines  Must notify airport and air traffic control tower before flying within 5 miles of an airport | Must keep the aircraft in sight (visual line-of-sight)  Must fly under 400 feet\*  Must fly during the day\*  Must fly at or below 100 mph\*  Must yield right of way to manned aircraft\*  Must NOT fly over people\*  Must NOT fly from a moving vehicle\* |
| **Example Applications** | Educational or recreational flying only | Flying for commercial use (e.g. providing aerial surveying or photography services) Flying incidental to a business (e.g. doing roof inspections or real estate photography) |
| **Legal or Regulatory Basis** | Public Law 112-95, Section 336 – Special Rule for Model Aircraft  FAA Interpretation of the Special Rule for Model Aircraft | Title 14 of the Code of Federal Regulation (14 CFR) Part 107 |

\*These rules are subject to waiver: See below at “Waivers to Certain Small UAS Operating Rules”.

**Waivers to Certain Small UAS Operating Rules:**

To operate a UAS for commercial purposes outside of the Operating Rules listed above, you may apply for a Certificate of Waiver. The FAA may grant waivers if the operation can be performed safely, but may otherwise not be allowed under Part 107.The Small UAS rule (14 CFR Part 107) includes the option to apply for a Certificate of Waiver. Which allows for a small UAS operation to deviate from certain operating rules if the FAA finds that the proposed operation can be performed safely.

**Note:** A waiver must be obtained for deviation from each UAS Operating Rule. There is no blanket waiver provided that allows deviation from all Operating Rules listed below.

* Waivable sections of Part 107
* Operation from a moving vehicle or aircraft (§ 107.25)\*\*
* Daylight operation (§ 107.29)
* Visual line of sight aircraft operation (§ 107.31) \*\*
* Visual observer (§ 107.33)
* Operation of multiple small unmanned aircraft systems (§ 107.35)
* Yielding the right of way (§ 107.37(a))
* Operation over people (§ 107.39)
* Operation in certain airspace (§ 107.41)
* Operating limitations for small unmanned aircraft (§ 107.51)

\*\*No waiver of this provision will be issued to allow the carriage of the property of another aircraft for compensation or hire.

Applicants should submit their waiver requests to the FAA as early as possible. Processing time depends on the complexity of the request; however, the FAA strives to respond within 90 days. Certificates of Waiver may include specific special provisions designed to ensure that the small UAS operation provides an equivalent level of safety as Part 107.

Additional Resources

The U.S. Federal Aviation Administration I Unmanned Aircraft System

Website [www.faa.gov/uas](http://www.faa.gov/uas)

FAA IsUAS Part 107 Summary

[www.faa.gov/uas/media/Part](http://www.faa.gov/uas/media/Part) 107 Summary.pdf

Know Before You Fly.Org

[www.knowbeforeyoufly.org](http://www.knowbeforeyoufly.org)

Remote Pilot Study Guide

[www.faa.gov/regulations policies/handbooks manuals/aviation/media/remotepilotstudyguide.pdf](http://www.faa.gov/regulations%20policies/handbooks%20manuals/aviation/media/remotepilotstudyguide.pdf)

VFIS / UAS Program Development & Implementation

[www.vfis.com/Portals/vfis/fire-and-ems-operations NFIS-UASProgramDevelopmentandlmplementation.pdf](http://www.vfis.com/Portals/vfis/fire-and-ems-operations%20NFIS-UASProgramDevelopmentandlmplementation.pdf)

It there are any general questions, comments. or complaints about UAS programs within the FAA, please contact the FAA via email at [UAShelpft@faa.gov](mailto:UAShelpft@faa.gov) or call 844-359-6982. UAS registration and assistance with pilot certification can be obtained at [www.faa.gov/uas](http://www.faa.gov/uas).

***This is a sample guideline furnished to you by VFIS. Your organization should review this guideline and make the necessary modifications to meet your organization’s needs. The intent of this guideline is to assist you in reducing exposure to the risk of injury, harm or damage to personnel, property and the general public. For additional information on this topic, contact your VFIS Risk Control representative.***

**References:**

Unmanned Aircraft Systems Operation Suggestions, vfis.com

Federal Aviation Administration (2016). Electronic Code of Federal Regulations: FAQs (14 CFR Part 107). Retrieved from [www.faa.gov/uas/faqs](http://www.faa.gov/uas/faqs)

Federal Aviation Administration (2016).Electronic Code of Federal Regulations: Getting Started (14 CFR Part 107). Retrieved from [www.faa.gov/uas/gettingstarted](http://www.faa.gov/uas/gettingstarted)









