

# Western Service Area Unmanned Aircraft Systems (UAS) Update

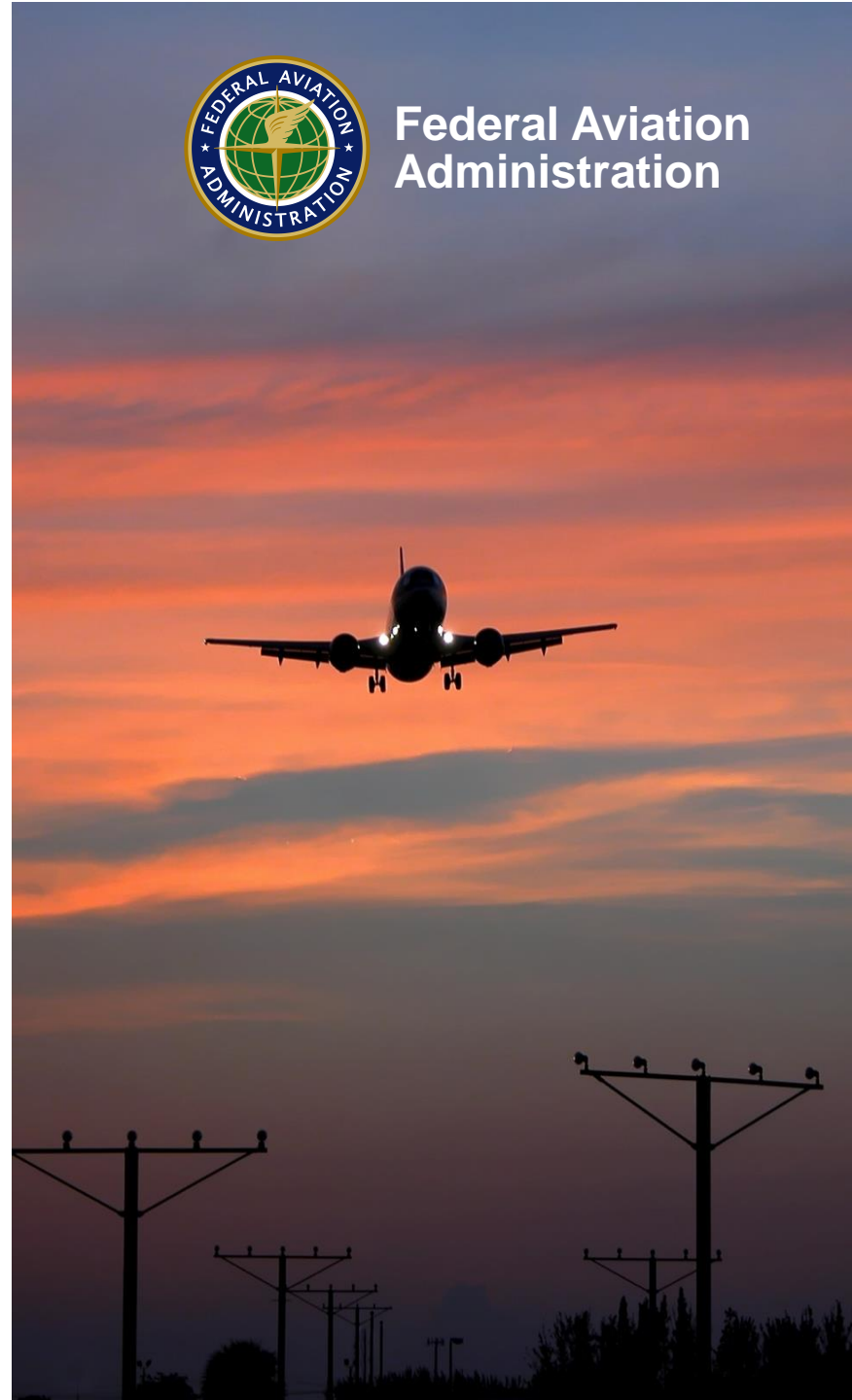
**Presented to:** Northwest Aerospace &  
Defense Symposium

**Presented by:** Matt Gammon,  
Tactical Operations Team, FAA  
Western Service Center

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Federal Aviation  
Administration



# Overview

- **UAS Policy**
- **2012 FAA Modernization and Reform Act (FMRA)**
- **Public UAS COAs**
- **Section 333 Exemptions/COAs**
- **Section 336 Special Rule for Model Aircraft**
- **UAS Registration**
- **B4UFLY App**
- **Small UAS Proposed Rule**



# UAS Policy

- **Specific authorization is required to operate UAS outside of active Restricted, Warning, Prohibited Area airspace per the FAA Modernization and Reform act of 2012 (FMRA 2012)**
  - Certificate of Authorization/Waiver (COA)
    - Public Operations
    - Federal, State, local agencies
  - Section 333 Exemption/COA
    - Commercial operations
  - Section 336, Special Rule for Model Aircraft
    - Modeler / Hobbyist operations

# Types of UAS Operations

	Public Operations	Civil Operations (including Section 333)	Hobby or Recreational
<b>Type</b>	<ul style="list-style-type: none"> <li>Governmental</li> </ul>	<ul style="list-style-type: none"> <li>Non-hobby                             <ul style="list-style-type: none"> <li>- Commercial/Compensation for Hire</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Hobbyist</li> </ul>
<b>Requirements</b>	<ul style="list-style-type: none"> <li>Must verify Public Aircraft Operator eligibility and be issued a Certificate of Waiver or Authorization (COA)</li> </ul>	<ul style="list-style-type: none"> <li>Must be granted an Exemption AND Certificate of Waiver or Authorization (COA), or</li> <li>Special Airworthiness Certificate (Restricted Category and Experimental) and COA</li> </ul>	<ul style="list-style-type: none"> <li>Must comply with Section 336 of FAA Modernization and Reform Act of 2012</li> <li>Must register if the aircraft is more than 0.55 lbs.</li> </ul>
<b>Rules</b>	<ul style="list-style-type: none"> <li>Detailed in COA</li> <li>Self-certification of crew and equipment</li> </ul>	<ul style="list-style-type: none"> <li>Detailed in COA</li> <li>Operational conditions and limitations outlined in exemption</li> <li>Operating limitations in special airworthiness certificate</li> </ul>	<ul style="list-style-type: none"> <li>Must operate for hobby/recreation only, in visual line-of-sight, generally under 400', avoid manned aircraft, and fly according to community-based safety guidelines</li> </ul>
<b>Examples</b>	<ul style="list-style-type: none"> <li>Federal Agencies</li> <li>State and Local Entities</li> </ul>	<ul style="list-style-type: none"> <li>Industry                             <ul style="list-style-type: none"> <li>- Manufacturers</li> <li>- Section 333 petitioners</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Members of Community-Based Organization</li> <li>General Public</li> </ul>



# Public Aircraft Operations

- **Federal or state government, or subdivision**
- **Aircraft is government-owned, or exclusively leased for 90 days**
- **Performing only government functions**
- **Agency self-certifies aircraft and crew**
- **FAA issues a Certificate of Waiver or Authorization (COA) since UAS cannot meet certain rules**



# Public UAS Standard COAs

- **Determination of a public entities is defined in CFR Part 1.1, Public Aircraft Operations.**
- **FAA issues a Certificate of Waiver or Authorization (COA) that permits public agencies and organizations to operate a particular UAS, in a particular area.**
- **The COA allows an operator to conduct UAS Operations in a defined Operations Area and includes Special Safety Provisions unique to the proposed operation.**
- **COAs usually are issued for a specific period – up to two years in many cases.**



# Public Aircraft Operations

- **Training COA**
  - Defines training location(s)
  - Practice missions
- **Jurisdictional COA**
  - Defines operating area where UAS operations are anticipated
  - Allows for rapid response
- **Emergency COA**
  - Requires Jurisdictional COA first
  - Enables operations outside of approved COA location



# Public UAS Blanket COAs

## Public Blanket COAs for small UAS operations:

- 55 pounds or less
- during daytime, VMC conditions Class G airspace,
- at or below 400 feet AGL, beyond the following distances from the airport:
  - 5 nautical miles (NM) from an airport having an operational control tower, or
  - 3 NM from an airport having a published instrument flight procedure,
  - 2 NM from an airport not having a published instrument flight procedure or an operational control tower, or from heliports





# Commercial Operations

- **Commercial Operations**
  - Film Industry
  - Real Estate
  - Agriculture
- **Non-Hobbyist Operations**  
(some operators think they are hobbyist but are commercial)
- **Exemptions Granted:**  
**Approx. 5,188**



# Section 333 Exemptions for Commercial Operations

- **Bridge for commercial UAS operations before finalization of small UAS rule**
- **All Section 333 exemption holders are issued a “blanket” COA to fly with the following provisions:**
  - Must fly registered UAS
  - At or below **400** feet above ground level
  - NOTAM required 24 hours prior to operation
  - Must meet requirements of the Class of airspace they will operate in (or standard COA required)
  - Must remain at least:
    - 5 nautical miles (NM) from airport with operational tower
    - 3 NM from airport with published instrument procedure (no tower)
    - 2 NM from all other public airports (heliports, gliderport, seaplane base, or airports without instrument procedures or towers)
- **A standard COA is required to operate outside of these parameters**

# Coordination for Military Training Routes (MTRs)

- For blanket COAs, Coordination is required for MTRs that are impacted by the UAS OPAREA
- Coordination and de-confliction is the proponent's responsibility,
- When identifying an operational area, the proponent must evaluate whether an MTR will be affected
- If a UAS operational area overlaps an MTR, the operator will contact the scheduling agency in advance
- Not all MTRs are 5nm either side of centerline
- Approval from the scheduling agency is not required.

# Hobbyist UAS Operations

- UAS only flown for Hobby or Recreational Purposes
- Sec 336 of 2012 FAA Modernization & Reform Act
- AC 91-57A Change 1 in effect (as of Jan 1st, 2016)
- “Know Before You Fly” video
  - [knowbeforeyoufly.org](http://knowbeforeyoufly.org)
  - Guidelines for hobbyists
  - Information distributed with some RC aircraft packaging



# Model Aircraft Resources:

## Model Aircraft on FAA UAS Website:

[https://www.faa.gov/uas/model\\_aircraft/](https://www.faa.gov/uas/model_aircraft/)



### Hobby / Recreational Flying

## What Can I Do With My Model Aircraft?

Having fun means flying safely! Hobby or recreational flying doesn't require FAA approval but you must follow safety guidelines. Any other use requires FAA authorization.

**AVOID DOING ANYTHING HAZARDOUS TO OTHER AIRPLANES OR PEOPLE AND PROPERTY ON THE GROUND.**

- ✓ **DO** fly a model aircraft/UAS at the local model aircraft club
- ✓ **DO** take lessons and learn to fly safely
- ✓ **DO** contact the airport or control tower when flying within 5 miles of the airport
- ✓ **DO** fly a model aircraft for personal enjoyment
- ✗ **DON'T** fly near manned aircraft
- ✗ **DON'T** fly beyond line of sight of the operator
- ✗ **DON'T** fly an aircraft weighing more than 55 lbs unless it's certified by an aeromodelling community-based organization
- ✗ **DON'T** fly contrary to your aeromodelling community-based safety guidelines
- ✗ **DON'T** fly model aircraft for payment or commercial purposes



### MODEL AIRCRAFT OPERATIONS LIMITS

According to the FAA Modernization and Reform Act of 2012 as (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; (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...with prior notice of the operation; and (6) the aircraft is flown within visual line of sight of the operator.

For more information about safety training and guidelines, visit [www.modelaircraft.org](http://www.modelaircraft.org)

For more information, visit [www.faa.gov/go/uas](http://www.faa.gov/go/uas)



Federal Aviation Administration



# UAS Registration

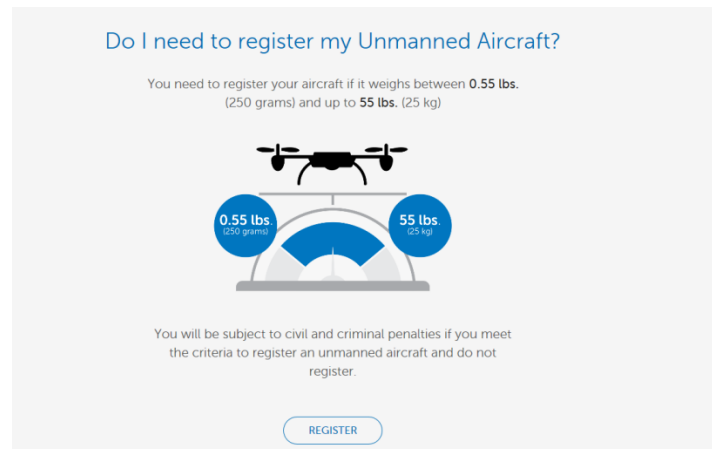
- Effective December 21, 2015, anyone who owns a small unmanned aircraft 0.55-55 lbs must register with the FAA UAS registry before they fly outdoors
- Must be 13 years of age
- People who do not register could face civil and criminal penalties
- \$5.00 fee, valid for 3 years



# Register sUAS at the FAA Website: <https://registermyuas.faa.gov/>

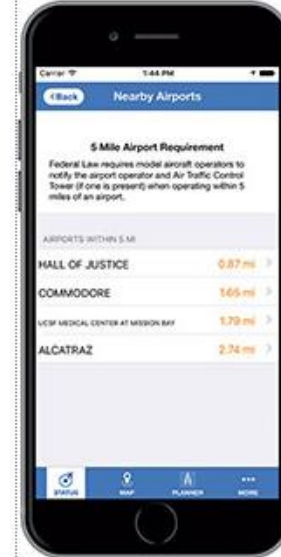


The screenshot shows the homepage of the FAA's Small Unmanned Aircraft System (sUAS) Registration Service. The page has a blue background. In the top left corner is the FAA logo and the text "Federal Aviation Administration". In the top right corner are links for "New Account" and "Login". The main heading reads "Welcome to the Small Unmanned Aircraft System (sUAS) Registration Service". Below this, a sub-heading states: "This site will allow you to register your small UAS with the FAA and update your registration." There are two buttons: "REGISTER" and "LEARN MORE". On the right side, there is an illustration of a yellow airplane flying above a pair of hands holding a remote control.



The graphic is titled "Do I need to register my Unmanned Aircraft?". It contains the following text: "You need to register your aircraft if it weighs between **0.55 lbs.** (250 grams) and up to **55 lbs.** (25 kg)". Below the text is an illustration of a drone on a scale. Two circular callouts point to the scale's markings: one for "0.55 lbs. (250 grams)" and another for "55 lbs. (25 kg)". At the bottom, it says: "You will be subject to civil and criminal penalties if you meet the criteria to register an unmanned aircraft and do not register." and includes a "REGISTER" button.

# B4UFLY Smartphone App:

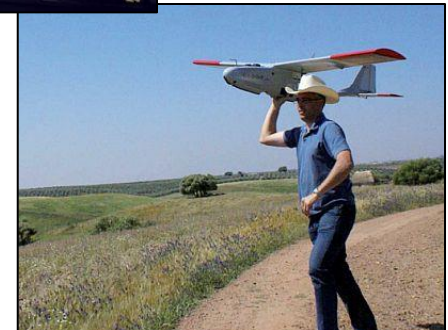
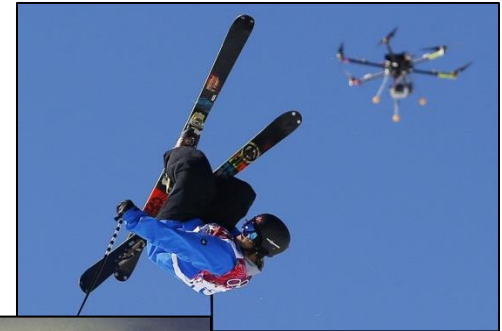


- **B4UFLY allows UAS operators determine whether there are any restrictions or requirements in effect at the location where they want to fly**



# Proposed Small UAS Rule

- **Currently in DRAFT**
  - Notice of Proposed Rulemaking (NPRM) Published to Federal Register on February 23, 2015
  - Public comment period concluded on April 24, 2015
    - Produced approximately 4,500 public comments
- **Expected to be finalized late spring 2016**



# Proposed Small UAS Rule: Major Provisions

- **Must see and avoid manned aircraft**
  - UAS must be first to maneuver away if collision risk arises
- **Must discontinue flight in event of presenting a hazard to other aircraft, people or property**
- **Must assess risks presented by:**
  - Weather conditions
  - Airspace restrictions
  - Location of people
- **May not fly over people, except those directly involved with the operation**
- **Flights limited to:**
  - 500 feet altitude
  - 100 mph
- **Must avoid airport flight paths and restricted airspace areas**
- **Must obey any FAA Temporary Flight Restrictions (TFRs)**



# Questions?



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