

Unmanned Aircraft Systems (UAS)

Update

Presented to: Airports Council International

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**Federal Aviation
Administration**



Who is Operating UAS in the National Airspace System (NAS)?*

Public (Governmental) Use Aircraft – via Certificate of Waiver or Authorization (COA)

- Department of Agriculture
- Department of Commerce
- Department of Defense
- Department of Energy
- Department of Homeland Security
- Department of Interior
- Department of Justice
- NASA
- State Universities
- Federal/State/Local Law Enforcement

Civil Aircraft – via Special Airworthiness Certificates in the Experimental Category and Special Flight Permits

- Insitu
- Aerovironment
- Raytheon
- AAI Corporation
- General Atomics
- Boeing
- Others

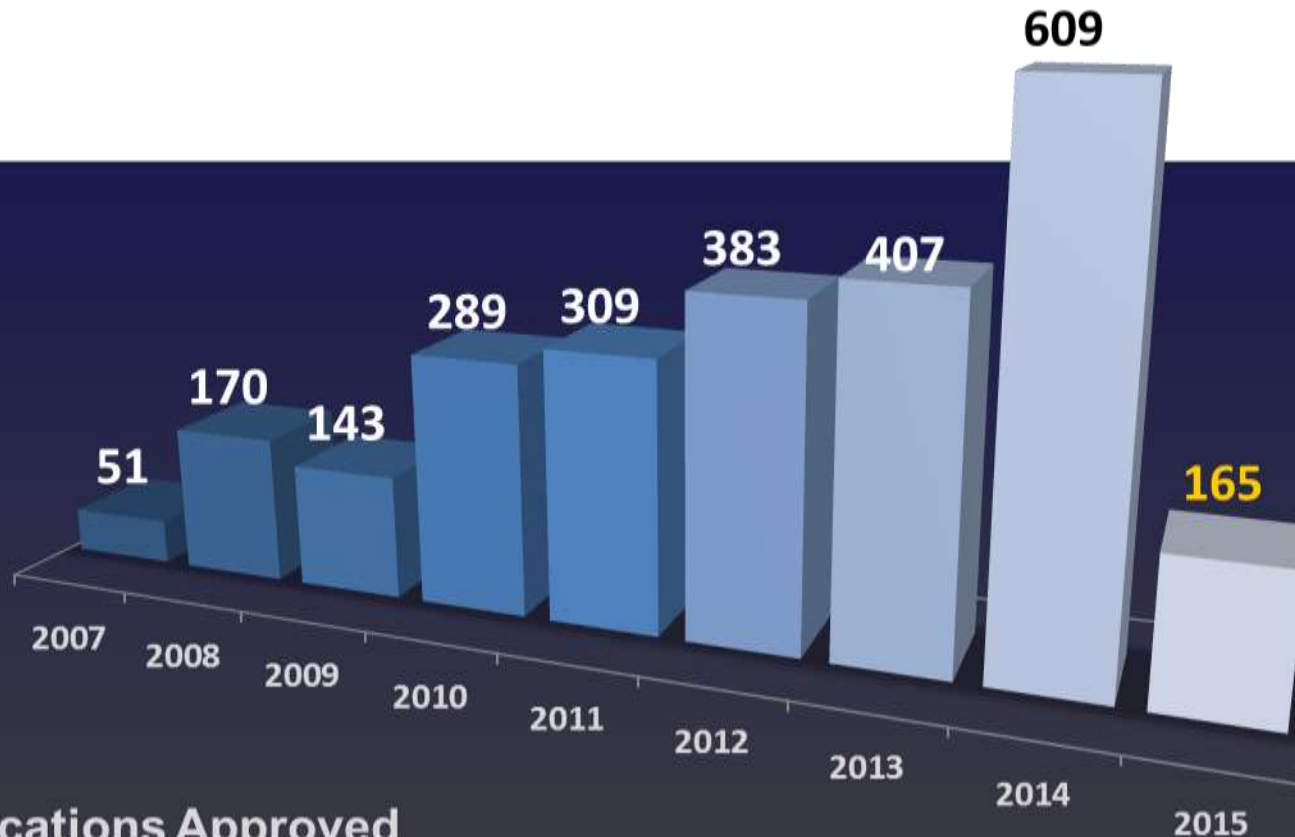
Civil Aircraft – via Section 333 Exemption and COA for Limited, Low-Risk Commercial Operations

- Television/Movie Filming
- Precision and Aerial Survey
- Flare Stack Inspection
- Construction Monitoring
- Agriculture
- Real Estate
- Others

** FAA has approved limited small UAS commercial operations in Arctic*



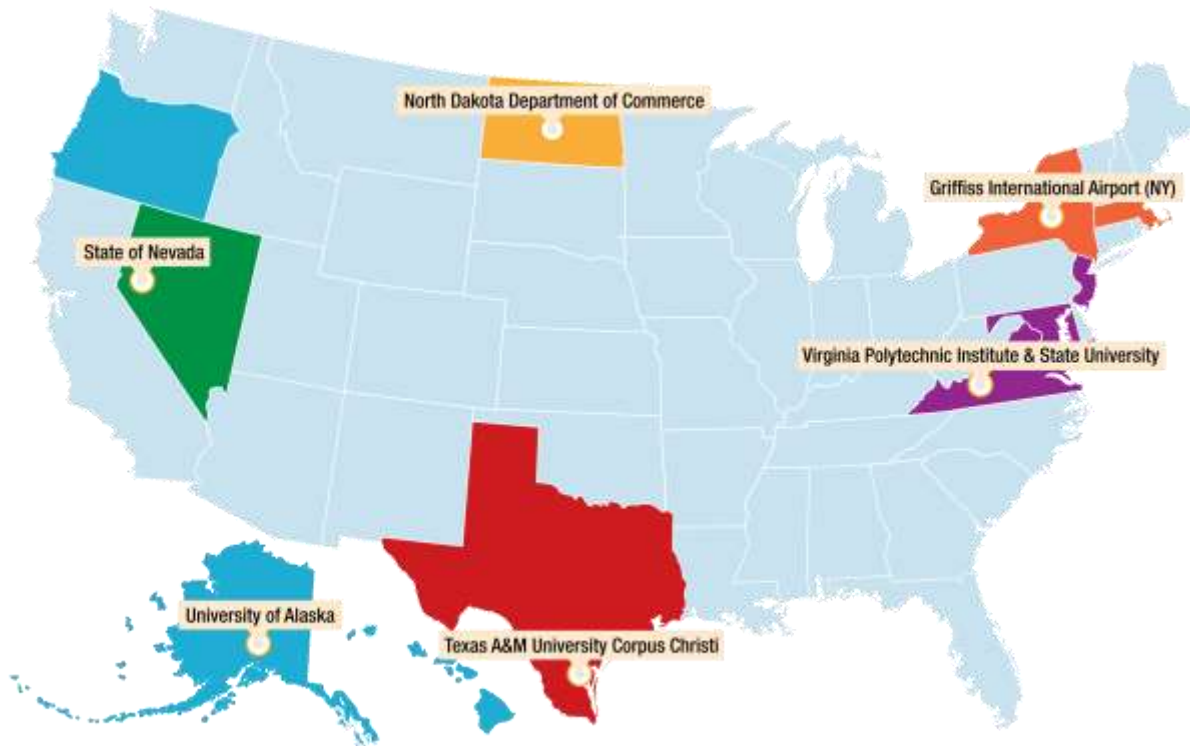
Approved COA Applications*



*as of 3/11/2014



UAS Test Sites



http://www.faa.gov/uas/legislative_programs/test_sites/

- **University of Alaska**
 - Includes test ranges in Hawaii and Oregon
 - Operational May 5, 2014
- **State of Nevada**
 - Operational June 9, 2014
- **New York Griffiss International Airport**
 - Includes test ranges in Massachusetts
 - Operational August 7, 2014
- **North Dakota Department of Commerce**
 - Operational April 21, 2014
- **Texas A&M University – Corpus Christi**
 - Operational June 20, 2014
- **Virginia Polytechnic Institute and State University (Virginia Tech)**
 - Includes test ranges in New Jersey (partnered with Rutgers University) and Maryland
 - Operational August 13, 2014

Proposed Small UAS Rule

- **Outlines major provisions of proposed Small UAS Rule (Part 107):**
 - Operational Limitations
 - Operator Certification and Responsibilities
 - Aircraft Requirements
 - Model Aircraft
- **Small commercial UAS projected to be largest growth sector**



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)**



Model Aircraft

- **Model aircraft have been around for decades, but the traditional hobby has changed**
 - No longer building aircraft – can be purchased at a hobby shop or through Amazon for a few hundred dollars
 - Many operators today do not have aviation experience, and may not know model aircraft guidelines:
 - Stay below 400 ft.
 - Be more than 5 miles from an airport
 - During daylight hours
 - Remain within visual line of sight
- **Increased reports of model aircraft flying where they should not be**



What is the FAA Doing?

- **Interpretive Rule for Model Aircraft**
 - Outlines:
 - Background of FAA Oversight
 - Requirements to qualify as model aircraft
 - FAA enforcement authority
- **Law Enforcement Guidance**
 - Education is the first step
 - Defines UAS and model aircraft as *aircraft*
 - Role of state and local law enforcement in detecting and reporting UAS violations



Education, Compliance and Enforcement



- **Notice to Aviation Inspectors issued July 2014**
- **Compliance and Enforcement Bulletin published January 2015**
 - Education primary tool
- **Enforcement may be used for persons who operate *any* UAS :**
 - In violation of the federal aviation regulations (FARs)
 - In a manner that endangers the safety of the NAS or people and property on the ground

Law Enforcement Guidance

- **Role of state and local law enforcement**
 - Front line in detecting/reporting UAS violations
 - Generally in the best position to capture evidence and identify witnesses
 - Public interest best served by coordination and cooperation between FAA and state/local law enforcement

http://www.faa.gov/uas/law_enforcement/



What Can We Do?

- **Maintain vigilance**
- **Check NOTAMs**
 - Required for all commercial operations
- **Report any unsafe operations to local Air Traffic Control**
 - Include as many details about the UAS in question, including size, type (i.e. fixed wing vs. rotor), location, etc.



 Federal Aviation Administration

Mobile

NOTAMs Search Results

28 Active NOTAMS for "DCA"

!DCA 01/345 [TFR]
AIRSPACE TFR SEE FDC 1/1155 0/8326 ZDC 99.7.
WIE UNTIL UFN. CREATED: 23 JAN 00:00 2011

!DCA 02/335
OBST TOWER UNKN (90 AGL)OVR BOF UNLGTD
(ASR UNKN). WIE UNTIL 11 MAR 01:03 2013.
CREATED: 25 FEB 01:09 2013

!DCA 02/346
OBST TOWER 1051 (689 AGL) 8.7 W LGTS OTS
(ASR 1017638). WIE UNTIL 12 MAR 20:12 2013.
CREATED: 25 FEB 20:14 2013

“Know Before You Fly” Outreach Campaign



- **Announced December 22, 2014**
 - provides prospective UAS users with information and guidance to fly safely and responsibly
 - founding members: AUVSI, Academy of Model Aeronautics (AMA) and the Small UAV Coalition
 - partnered with FAA
 - other Supporters include:
 - Consumer Electronics Association (CEA) – January 7, 2015
 - Experimental Aircraft Association (EAA) – January 9, 2015

www.knowbeforeyoufly.org



FAA Working with Industry on “Know Before You” Fly Campaign

- **FAA reached voluntary agreement with UAS manufacturers to include guidance materials in packaging**
 - Manufacturers who voluntarily committed include: DJI, Parrot and Yuneec Electrical Aviation
 - DJI has already begun including material in their Phantom 2 Quadcopter boxes

www.knowbeforeyoufly.org



Questions?

