



Everything You Want (and Need) to Know on Using Drones in Local Government





Brett Hoben

**Principal Inspector
FAA Aviation Safety**

**Des Moines Flight Standards
District Office**

Overview

Intro to Unmanned Aircraft Systems

Operating a UAS

Registration & DroneZone

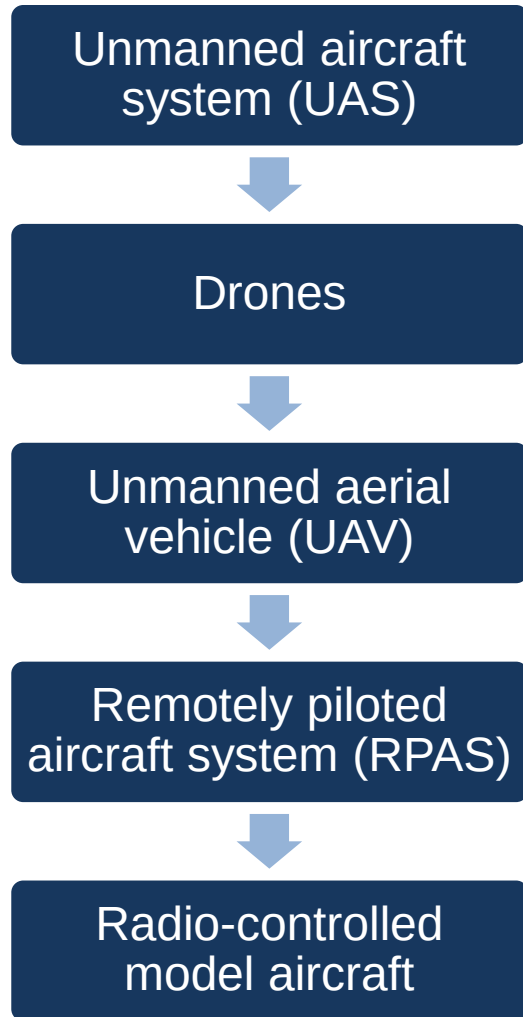
Part 107

UAS Integration Activities

Next Steps

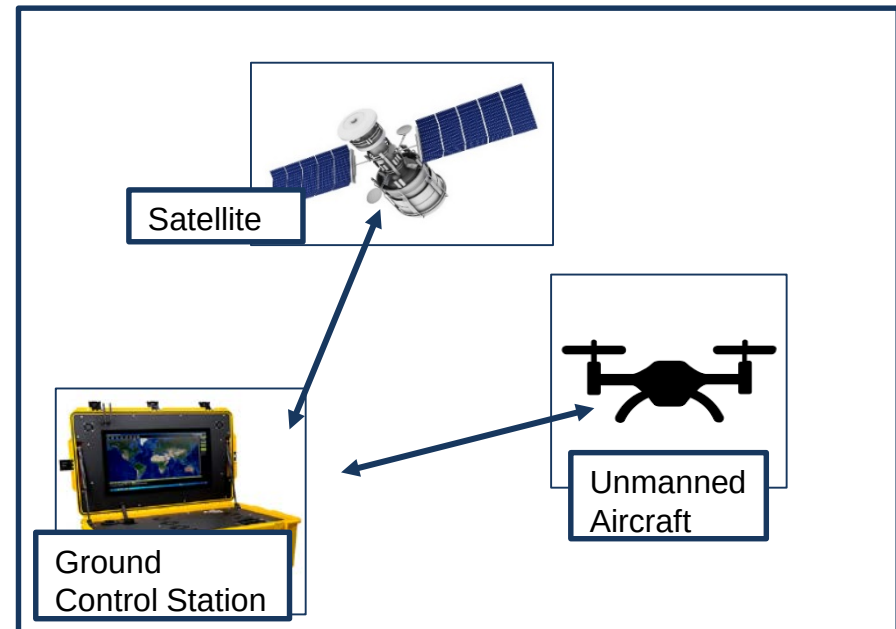
Research, Security, & Engagement

What is a UAS?



A UAS is a *system*:

- Unmanned Aircraft
- Ground Control Station
- Command & Control Link(s)





What is the FAA's Authority?

- **U.S. airspace is public space**
 - 49 U.S.C. §40103(a)(1)
- **UAS are aircraft subject to regulation**
 - 49 U.S.C. §40102(a)(6); 14 CFR 1.1; PL 112-95 §331, §336
 - An aircraft is any device used, or intended to be used, for flight
- **UAS flown outdoors must comply with FAA regulations**



Know Your Authority

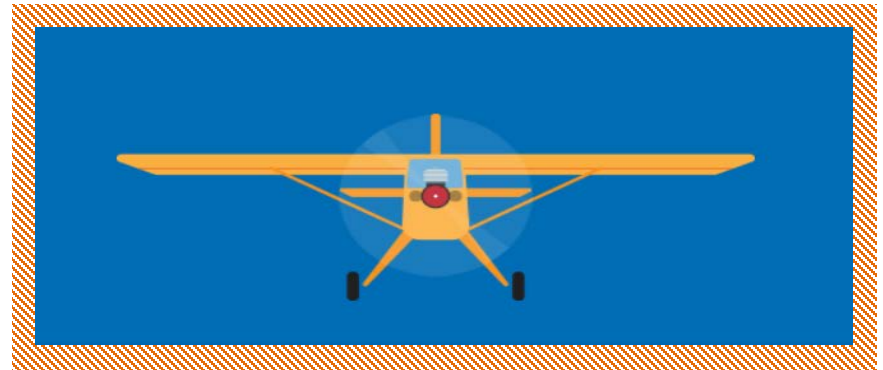


Operating a UAS Registration & DroneZone Part 107



Online UAS Registration

Applies to all small UAS over 0.55 and weighing less than 55 lbs. flown outside



Owner must provide name, address, email

Non-recreational owners (includes Part 107 and Public COA) must provide make, model, and serial number (if available) of each sUAS



Register through FAA DroneZone



How to Label Your **DRONE**

Registration #
FA12345678

Find your registration number
at faadronezone.faa.gov

FA12345678

Registration number must be visible on
an outside surface of the drone.

Mark all aircraft with your registration number
before you operate them. You can use:

FA12345678

ENGRAVING

FA12345678

PERMANENT LABEL

FA12345678

PERMANENT MARKER



Federal Aviation
Administration

FAA DroneZone

FAADroneZone

Welcome to the FAADroneZone



Fly sUAS under Part 107

I need to register my small unmanned aircraft for recreational, commercial, governmental, or other purposes under [Part 107](#). Each drone must be registered at a cost of \$5.00 and registration is valid for a period of 3 years. Also use this option to apply for a waiver/authorization, or reporting an accident under Part 107.

Register

Fly Model Aircraft under Section 336

I need to register my small unmanned aircraft to fly with an aero-modeling club and following all requirements of the [Special Rule for Model Aircraft](#).

Register

One-stop-shop for small UAS needs

- Registration
- Airspace Authorizations & Waivers
- Operational Waivers
- Accident Reporting

Waivers & Authorizations

sUAS operators who want to fly outside the requirements of the Small UAS Rule (Part 107) may request a waiver and/or airspace authorization using the provided tools.

Applicants are encouraged to review the form instructions below and the [list of regulations](#) subject to waiver prior to submitting via these tools. Please provide all required information in order to facilitate evaluation of your request.

Review the following information before requesting a waiver and/or airspace authorization:

- [Request to Operate in Controlled Airspace Instructions \(PDF\)](#)
- [Waiver Application Instructions \(PDF\)](#)

These tools should only be used to request waivers or airspace authorizations under Title 14 CFR Part 107; it is not for modelers or hobbyists flying in accordance with the Special Rule for Model Aircraft (P.L. 112-95, Section 336).

Manage Waivers/Authorizations

4
Total Waivers & Authorizations

1 Approved
1 Canceled
2 Under Review



Create Waiver/Authorization

Small UAS Rule (Part 107)

First rule for
small UAS
(<55 pounds)

Commercial,
hobby,
governmental
operators can
operate under
Part 107

Became
effective
August 29,
2016

Part 107 Operating Rules

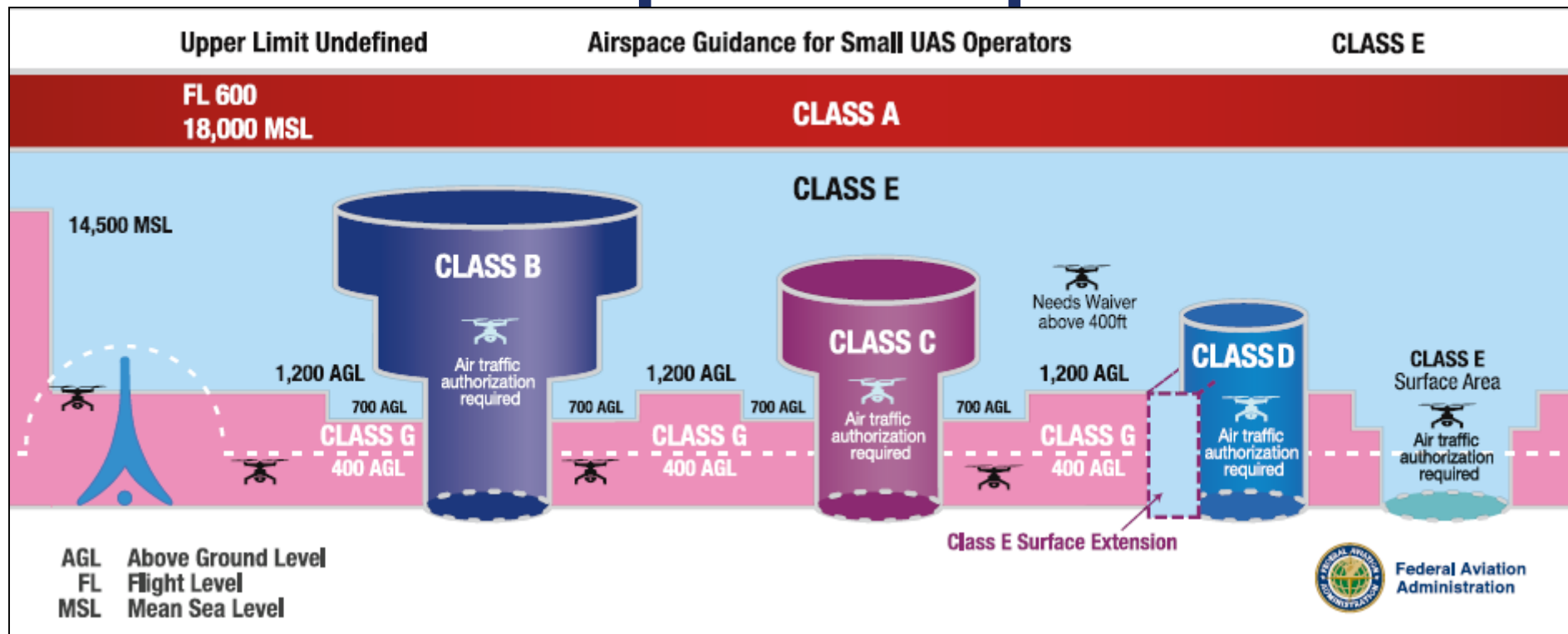


Part 107 Waivers



- **A number of provisions of Part 107 can be waived, including:**
 - Night operations
 - Operations over people
 - Visual line-of-sight
 - Weather/visibility requirements
 - Swarm
- **Waivers are submitted in the DroneZone and must carefully, clearly, and concretely demonstrate how the proposed operation can be conducted safely**
 - Reading and responding to all the questions in the Waiver Safety Explanation Guidelines is an essential to a successful waiver application
- **The FAA has a webinar series that outlines useful tips and tools for applying for waivers, available on the FAA website.**

Part 107 Airspace Requirements

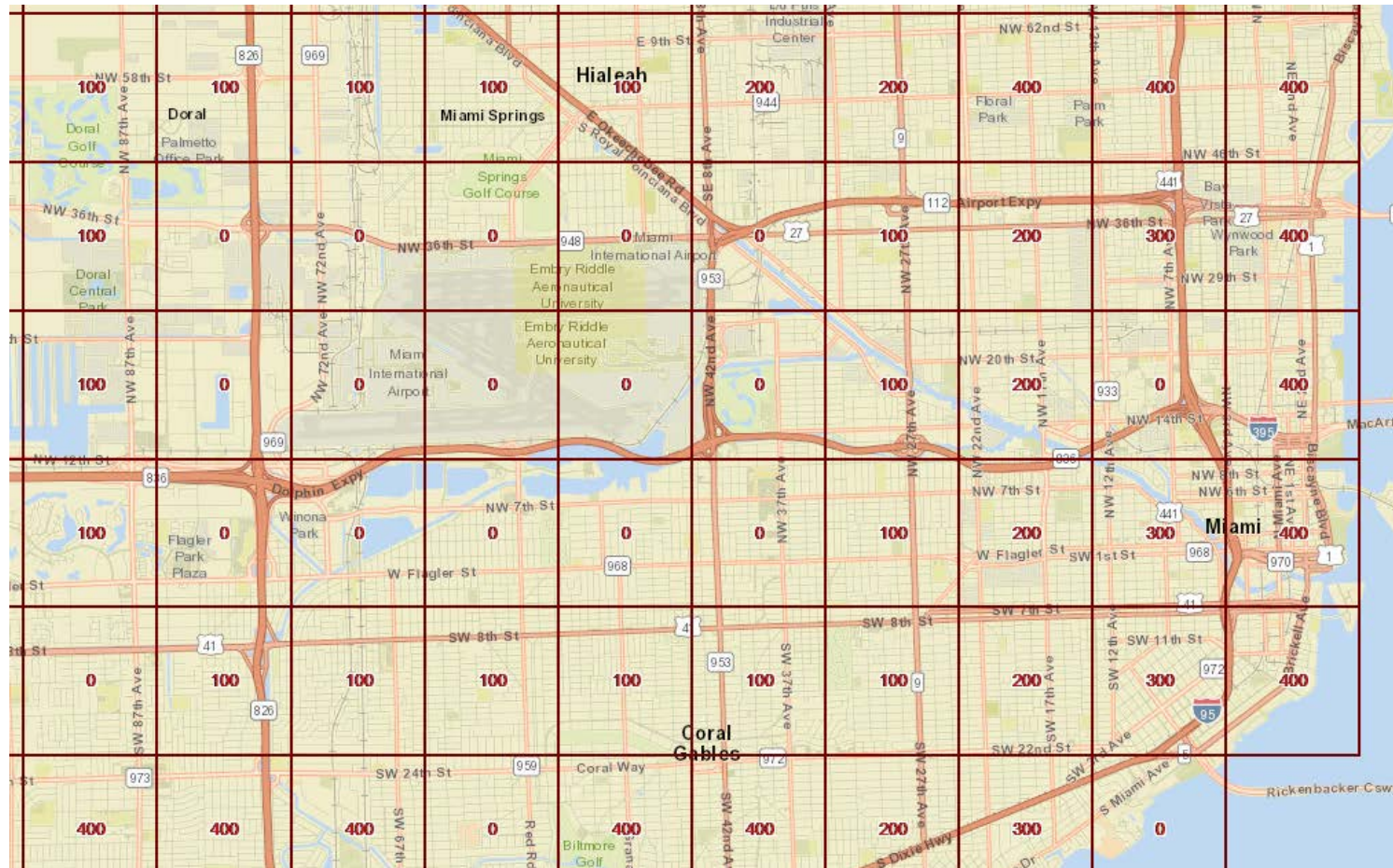


- Operations in Class G and Class E non-surface do not require ATC authorization
- Operations in Class B, C, D & Class E surface areas require ATC authorization
- Online portal available at the FAA DroneZone and through LAANC.



LAANC...How does it work?

- UAS Service Suppliers (USSs) provide airspace authorizations to Part 107 operators, in compliance with UAS Facility Maps.





Model Aircraft

FAA Reauthorization act of 2018 established new conditions for recreational use, these are the rules when you're flying just for fun. More guidance on testing/training requirements and airspace authorizations for hobbyists to come.

Hobby and recreational only

Never fly near other aircraft

Maintain visual line-of-sight at all times

Follow guidelines of a community-based organization (CBO)

Within controlled airspace can only fly at published fixed flying sites

Must register if over 0.55 pounds



UAS Integration Next Steps Research, Security, & Engagement



UAS Integration Pilot Program

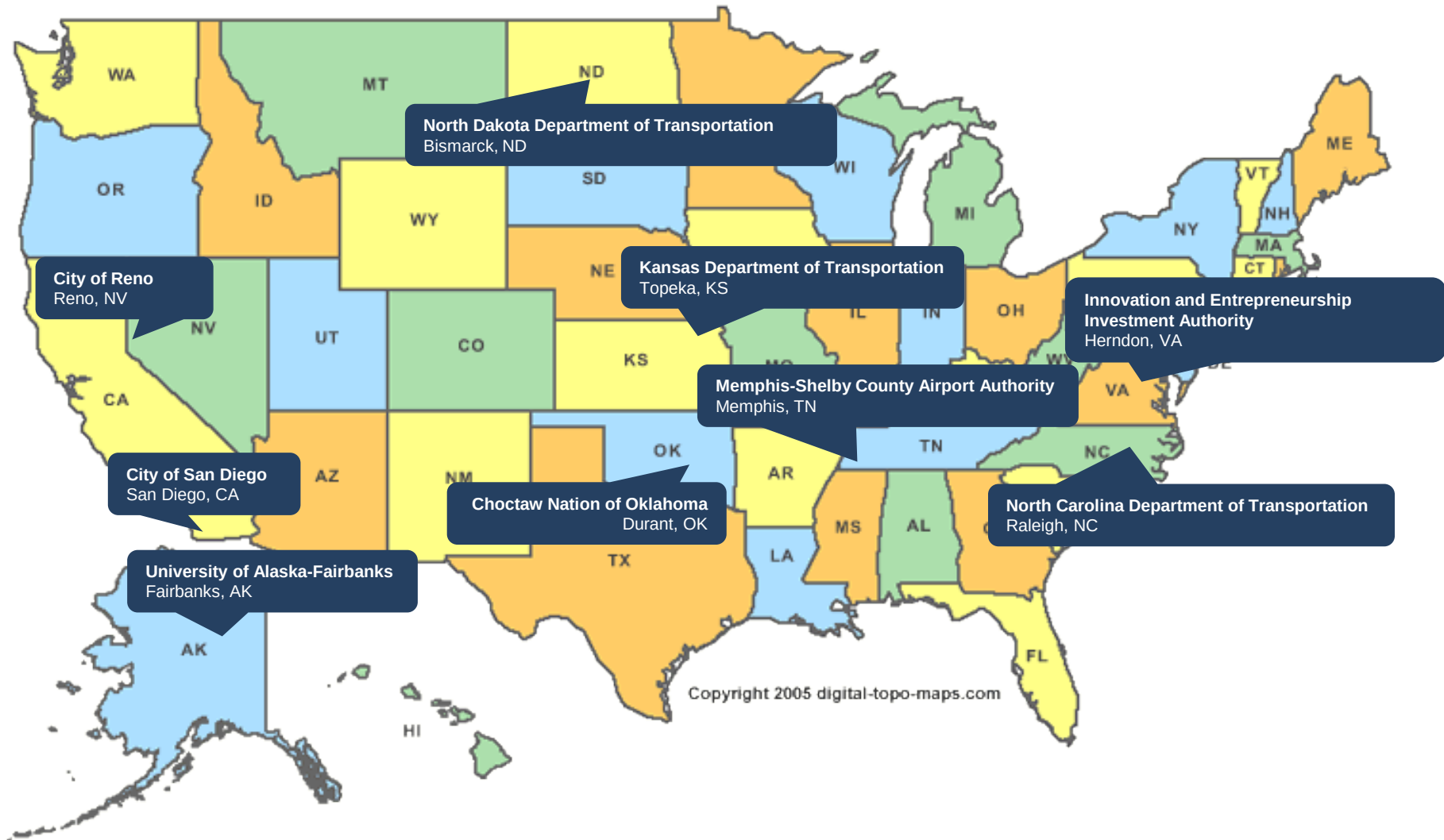


Develop and
test
innovative
UAS
concepts

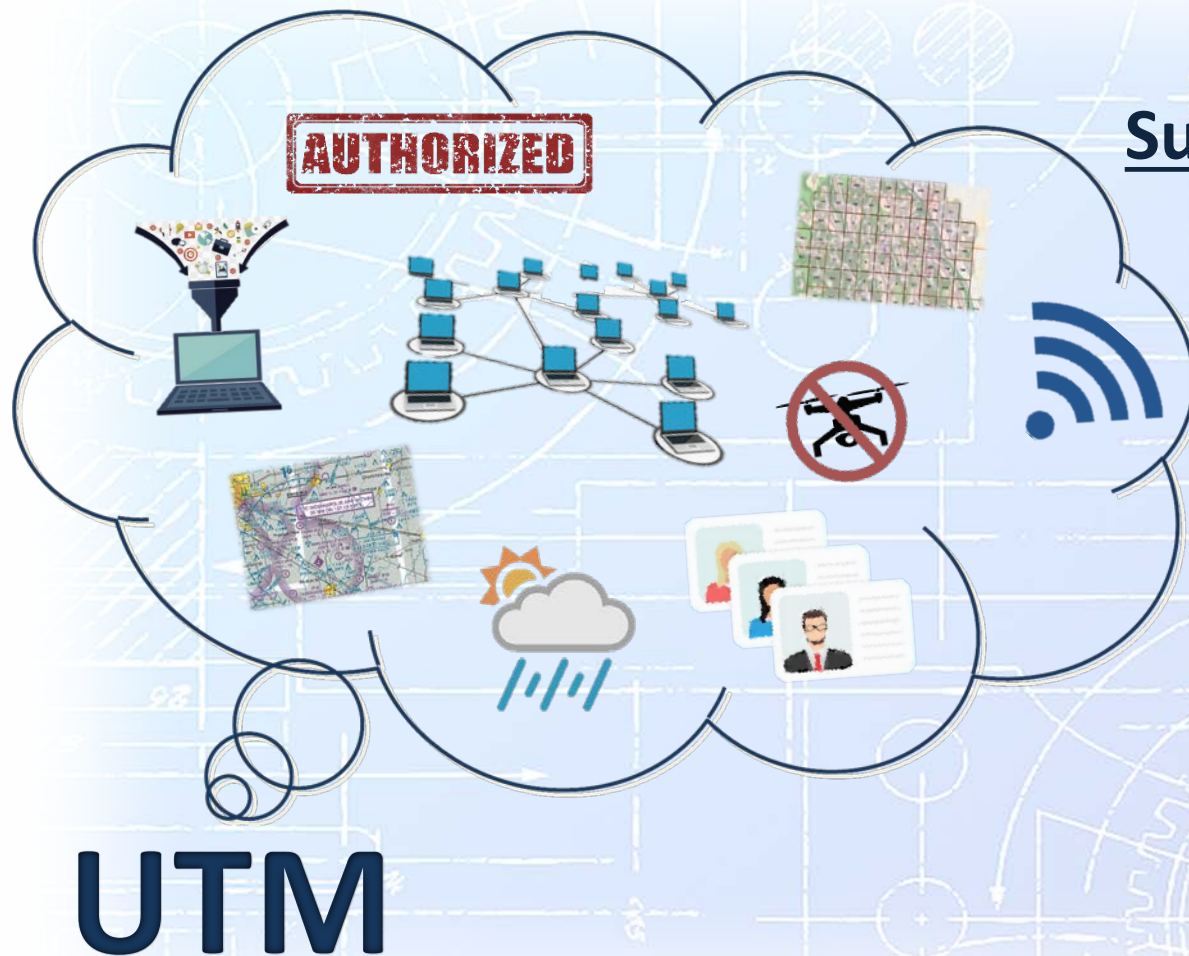
Inform future
guidelines
and
regulations

Evaluate
involvement
of state,
local, tribal
governments

UAS IPP Participants



FAA UAS Traffic Management



Suite of Capabilities:

- LAANC
- Remote ID
- Registration
- Dynamic
Airspace

UAS Security Sensitive Restrictions

- 300+ restrictions over sensitive facilities, including military sites, national landmarks, federal prisons, and other sites
- Existing authority from Title 14 CFR 99.7
- Must contact facility, and if in controlled airspace, the FAA, to operate over sites
- Interactive map and a list of facilities are available here: <https://uas-faa.opendata.arcgis.com/>
- Existing restricted airspace remains in effect

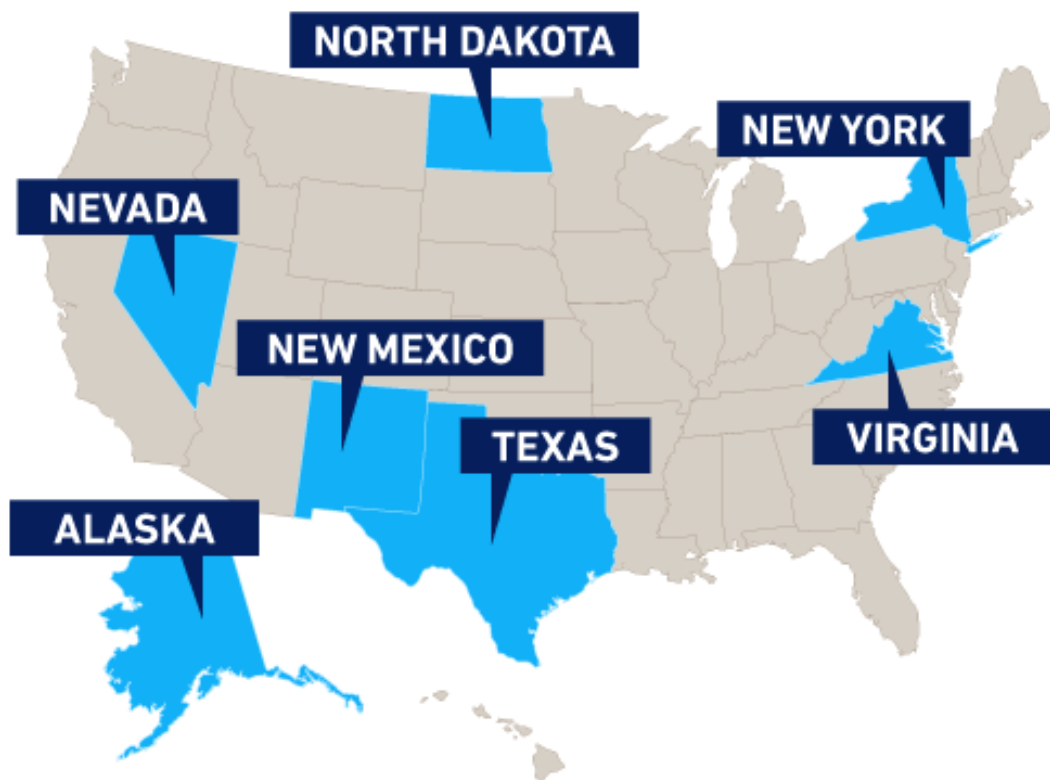


UAS Center of Excellence



UAS Test Sites

- Provide an avenue for the UAS industry to conduct more advanced UAS research and concept validation
- 7 UAS Test Sites with nationwide COAs:
 - University of Alaska – Fairbanks
 - State of Nevada
 - New York Griffiss International Airport
 - North Dakota Department of Commerce
 - Texas A&M University – Corpus Christi
 - Virginia Polytechnic Institute and State University (Virginia Tech)
 - New Mexico State University



Drone vs. Aircraft



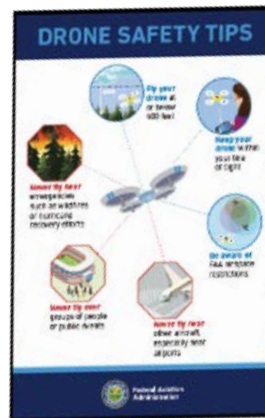


Reporting Unsafe UAS Activity

- **While flying or at the airport:**
 - Report the sighting to Air Traffic Control
 - Note the location, altitude, and characteristics of the aircraft
- **Anywhere else:**
 - Call local law enforcement
 - The FAA has published guidance for law enforcement to help them respond to unsafe UAS activity
- **Be as detailed & specific as possible**
 - Location, altitude, direction, pictures, videos, etc.



Education and Outreach





Questions?

www.faa.gov/uas

