sUAS Part 107 Operations

Paul Peterson, MnDOT
paul.peterson@state.mn.us
How did we get here?

How did the FAA get involved?
FAA vs Pirker

Final Ruling: Drones Are (unmanned) Aircraft
Do I need to register my Unmanned Aircraft?

You need to register your aircraft if it weighs between 0.55 lbs. (250 grams) and up to 55 lbs. (25 kg)

https://registermyuas.faa.gov/

You will be subject to civil and criminal penalties if you meet the criteria to register an unmanned aircraft and do not register.
Hobby or Recreational Use

“Flying for enjoyment and not for work, business purpose or for compensation or hire.” - FAA

FAR Part 101.41:

- Fly strictly for hobby or recreational use
- Follow community-based safety guidelines
- Weigh less than 55 pounds
- Don’t interfere with manned aircraft operations*
- Within 5 mi of an airport, contact airport or Air Traffic Control (ATC)*

*(Phone call, email, letter)

- Considered Aircraft by FAA
- Controlled by Section 336 of PL 112-95
- FAR 91.13 (Dangerous/Reckless)
- FAR 101.41 (Operating Rules)
- FAR 101.43 (Safety of the NAS)
AIRMAP is a free application that UAS users can use to check airspace.

One valuable feature of AIRMAP is it offers the UAS user the ability to send a notification to nearby airports.

You can opt in to accept these notifications by e-mailing information to AIRMAP.

AIRMAP affords the airport the ability to include customized maps of airport zones.

We strongly suggest that you participate in the AIRMAP system.
Commercial, Civil or Non-Hobby
Under FAR Part 107 – Small Unmanned Aircraft Systems (sUAS)

FAA Operating Requirements:
- Aircraft Registration (F or N number) for each aircraft
- Remote Pilot Certificate
  - Knowledge Test
  - Or have a Pilot’s license
  - 16 years or older
  - Pass a TSA background check
  - Be a U.S. citizen

FAA Ops limits:
- UAS must weigh less than 55 lbs
- Must operate Visual Line-of-Sight (VLOS)
- Fly only in daylight
- May not operate directly over people/moving vehicles
- Max height of 400’ AGL or within 400’ of a structure
- ATC permission in Class B, C, D, and E-SFC
- Must report accidents (or face $500 fine)
Operating Under Part 107 in Minnesota

MnDOT requirements:

- Aircraft Must be Registered with MnDOT
- Aircraft Must be Insured
- Operator may be required to have a Commercial Operations License
107 Waivers

Federal Aviation Administration

Request a Waiver/Airspace Authorization
Small Unmanned Aircraft System (sUAS)

It is important to review the following documents before requesting a waiver and/or airspace authorization:
- Waiver/Airspace Authorization instructions (PDF)
- Performance Based Standards (PDF)

This form 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).

UAS 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 form below.

Applicants are encouraged to review the form instructions (PDF) and the list of regulations subject to waiver prior to submitting this form. Please provide all required information in order to facilitate evaluation of your request.

Paperwork Reduction Act and Privacy Act Statements (PDF)

You are not required to respond to this collection of information unless it displays a valid OMB control number.

Top Tasks
- Read the Summary of the Small UAS Rule (PDF)
- Register your UAS
- Become a UAS pilot
- Request a Waiver/Airspace Authorization
- Report an Accident

More Information
- 14 CFR Part 107
- § 107205 List of Regulations Subject to Waiver
- Waiver/Airspace Authorization Instructions (PDF)
- Performance Based Standards (PDF)
# 107 Waivers

## Waiver/Airspace Authorization

You must select at least one regulation subject to waiver or airspace authorization.

### Regulation subject to airspace authorization

- [ ] 107.41 Operation in certain airspace

### Regulations subject to waiver

- [ ] 107.25 Operations from a moving vehicle or aircraft
- [ ] 107.29 Daylight operation
- [ ] 107.31 Visual line of sight aircraft operation
- [ ] 107.33 Visual observer
- [ ] 107.35 Operation of multiple sUAS
- [ ] 107.37(a) Yielding the right of way
- [ ] 107.39 Operation over people
- [ ] 107.41 Operation in certain airspace
- [ ] 107.51(a) Operating limitations: ground speed
- [ ] 107.51(b) Operating limitations: altitude
- [ ] 107.51(c) Operating limitations: minimum visibility
- [ ] 107.51(d) Operating limitations: minimum distance from clouds
333 Exemption

- By law, any aircraft operation in the national airspace requires a certificated and registered aircraft, a licensed pilot, and operational approval. Section 333 of the FAA Modernization and Reform Act of 2012 (FMRA) (PDF) grants the Secretary of Transportation the authority to determine whether an airworthiness certificate is required for a UAS to operate safely in the National Airspace System (NAS).

- Request made by an operator to not comply with the rule as written, but use an alternate method of compliance which ensures safety in the NAS
- Generally approved by FAA HQ
- ‘333 Exemptions’ were issued to exempt commercial UAS operations from many Regulations and used the ‘Conditions and Limitations’ section of the Exemption as the alternate method of compliance

Note: Must comply with 107 Waiver or 333 Exemption – No combinations allowed.
Aircraft Operating under a Certificate of Authorization (COA)

- Issued by Air Traffic Control primarily for Public Use entities or those operating under 333 Exemptions
- Grants permission to an operator to fly in specific ATC “controlled airspace”
  - Specific areas of Operation
  - Notice Requirements
  - Lost Link/Lost Comm Procedures
  - FAA has started using a blanket COA (333 Exemptions)
What if a UAS operator wants to fly at the airport under Part 107?

AC 107-2, 5.8.1: Unless the flight is conducted within controlled airspace, no notification or authorization is necessary to operate at or near an airport. However,

Before you allow any UAS to operate at your airport…
First, speak with or consult with -

- MnDOT: 651-234-7200
- Airports District Office (ADO): 612-253-4610
- Consult Legal Counsel
Regulatory support...

FAR 107.43: No person may operate a sUAS in a manner that interferes with operations and traffic patterns at any airport, heliport, or seaplane base.

FAR 107.61: The sUAS must yield the right of way to all aircraft; No person may operate an sUAS so close to another aircraft as to create a collision hazard.

MS 360.012 Subd. 3: Flight in aircraft over the lands and water of this state is lawful… unless so conducted as to be imminently dangerous or damaging to persons or property lawfully in the land or water beneath.
What if an sUAS is Operating off the end of the runway?

Part 91.13, 107.41, 107.43, 107.61 and MS 360.012 Subd. 3 apply-

If they are unsafe or disruptive...

- Contact local law enforcement
- Notify the FAA’s 24 hour Regional Operations Center (ROC) - Great Lakes: 847-294-8400
  - Civil and Criminal Penalties can be levied
**Best Practices:**

**FBO:**
- Where you will be operating (address or latitude/longitude)
- The altitudes at which you will be flying (below 400’ AGL)
- What type of flying activity you will be doing
- The number of aircraft and a basic description of the aircraft
- When you will be flying and for how long
- Your name and a method of contacting you such as a cell phone number or radio frequency


**Letter of Agreement:**
- LOAs are recommended to reduce workload and establish standard procedures
- Usually lists agreed upon operating area, restrictions, notification requirements, etc.,
- FAA provides a sample LOA

sUAS Part 107 Operations

Paul Peterson
Aviation Representative
MnDOT Aeronautics
(651)234-7227
paul.peterson@state.mn.us