

# Part 107 vs. Certificate of Authorization for the Public Safety UAV Program

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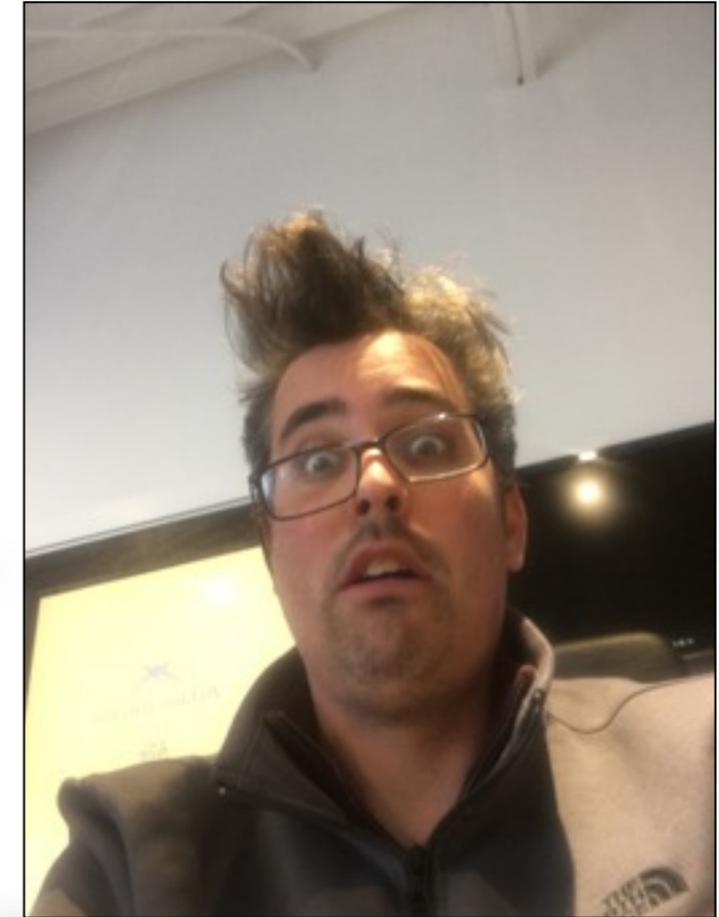
Matt Sloane  
CEO



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CSO



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General Counsel



Ben Kroll  
COO, Chief Pilot



# Flying Drones Legally

✈️ Hobbyist

✈️ Commercial Operator

✈️ 333 Exemption, Part 107

✈️ Public Agency

✈️ Certificate of Authorization (COA)



# Title 14 CFR Part 107 sUAS Rule

- ✍️ Less than 55 pounds
- ✍️ Visual Line of Sight
- ✍️ Daylight Operations
- ✍️ Not Over People
- ✍️ Under 400' Above Ground
- ✍️ Class G Airspace

ALMOST ALL WAIVE-ABLE

## FAA News



Federal Aviation Administration, Washington, DC 20591

June 21, 2016

### SUMMARY OF SMALL UNMANNED AIRCRAFT RULE (PART 107)

#### Operational Limitations

- Unmanned aircraft must weigh less than 55 lbs. (25 kg).
- Visual line-of-sight (VLOS) only; the unmanned aircraft must remain within VLOS of the remote pilot in command and the person manipulating the flight controls of the small UAS. Alternatively, the unmanned aircraft must remain within VLOS of the visual observer.
- At all times the small unmanned aircraft must remain close enough to the remote pilot in command and the person manipulating the flight controls of the small UAS for those people to be capable of seeing the aircraft with vision unaided by any device other than corrective lenses.
- Small unmanned aircraft may not operate over any persons not directly participating in the operation, not under a covered structure, and not inside a covered stationary vehicle.
- Daylight-only operations, or civil twilight (30 minutes before official sunrise to 30 minutes after official sunset, local time) with appropriate anti-collision lighting.
- Must yield right of way to other aircraft.
- May use visual observer (VO) but not required.
- First-person view camera cannot satisfy "see-and-avoid" requirement but can be used as long as requirement is satisfied in other ways.
- Maximum groundspeed of 100 mph (87 knots).
- Maximum altitude of 400 feet above ground level (AGL) or, if higher than 400 feet AGL, remain within 400 feet of a structure.
- Minimum weather visibility of 3 miles from control station.
- Operations in Class B, C, D and E airspace are allowed with the required ATC permission.
- Operations in Class G airspace are allowed without ATC permission.
- No person may act as a remote pilot in command or VO for more than one unmanned aircraft operation at one time.
- No operations from a moving aircraft.
- No operations from a moving vehicle unless the operation is over a sparsely populated area.
- No careless or reckless operations.
- No carriage of hazardous materials.

# Airspace Classification

FL 600

Class A  
18,000' MSL

14,500' MSL

Class G

Nontowered airport with Instrument approach

1,200' AGL

700' AGL

Class G

Class B

1,200' AGL

700' AGL

Class G

Class C

Class E

1,200' AGL

700' AGL

Class G

Class D

Nontowered airport with no Instrument approach



# Title 14 CFR Part 107

## Waiver Process

### Performance Based Standards

1. Applicant must provide a method for the remote pilot to maintain visual line of sight during darkness.
2. Applicant must provide a method for the remote pilot to see and avoid other aircraft, people on the ground, and ground-based structures and obstacles during darkness.
3. Applicant must provide a method by which the remote pilot will be able to continuously know and determine the position, altitude, attitude, and movement of their small unmanned aircraft (sUA).
4. Applicant must assure all required persons participating in the sUA operation have knowledge to recognize and overcome visual illusions caused by darkness, and understand physiological conditions which may degrade night vision.
5. Applicant must provide a method to increase conspicuity of the sUA to be seen at a distance of 3 statute miles unless a system is in place that can avoid all non-participating aircraft.

[FAA.gov/UAS/  
request\\_waiver](https://www.faa.gov/uas/request_waiver)

#### **Blanket Waiver:**

Conditions -

Darkness

Over people

Visual line of sight

#### **Specific Waiver:**

Locations -

Class B, C, D, E

Special Use Airspace

**4-6 Weeks or more**

# Part 107 Certification

## ▶ Remote Pilot in Command (RPIC) Written Test

- ▶ Roughly \$150
- ▶ 60 question, 70% to pass
- ▶ Valid for 2 years
- ▶ TSA Background Check

▶ Responsibility always falls to RPIC

▶ Airspace waiver required each time

▶ Primarily for commercial operators

▶ Public safety must declare a “civil operation”



# Public Agency Certificate of Authorization

## Blanket COA

✍️ Less than 55 lbs

✍️ Visual Line of Sight

✍️ Daylight Operations

✍️ Under 400' Above Ground

✍️ Class G Airspace

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION CERTIFICATE OF WAIVER OR AUTHORIZATION	
ISSUED TO	Wayne Township Fire Department 700 North High School Road Indianapolis, IN 46214
This certificate is issued for the operations specifically described hereinafter. No person shall conduct any operation pursuant to the authority of this certificate except in accordance with the standard and special provisions contained in this certificate, and such other requirements of the Federal Aviation Regulations not specifically waived by this certificate.	
OPERATIONS AUTHORIZED	Operation of small Unmanned Aircraft System(s) weighting less than 55 Lbs. only in Class G airspace at or below 400 feet Above Ground Level (AGL) under the provisions of this authorization. See Special Provisions.
LIST OF WAIVED REGULATIONS BY SECTION AND TITLE	N/A
<b>STANDARD PROVISIONS</b>	
1. A copy of the application made for this certificate shall be attached and become a part hereof. 2. This certificate shall be presented for inspection upon the request of any authorized representative of the Federal Aviation Administration, or of any State or municipal official charged with the duty of enforcing local laws or regulations. 3. The holder of this certificate shall be responsible for the strict observance of the terms and provisions contained herein. 4. This certificate is nontransferable.	
Note-This certificate constitutes a waiver of those Federal rules or regulations specifically referred to above. It does not constitute a waiver of any State law or local ordinance.	
<b>SPECIAL PROVISIONS</b>	
Special Provisions are set forth and attached.	
This certificate, 2016-CSA-162, is effective from June 16, 2016 through June 15, 2018 and is subject to cancellation at any time upon notice by the Administrator or his/her authorized representative. Should a renewal become necessary, the proponent shall advise the Federal Aviation Administration (FAA), in writing, no later than 45 business days prior to the requested effective date.	
BY DIRECTION OF THE ADMINISTRATOR	
FAA Headquarters, AJV-115 <small>(Region)</small>	 Scott J. Gardner <small>(Signature)</small>
June 14, 2016 <small>(Date)</small>	Acting Manager, UAS Tactical Operations Section <small>(Title)</small>

# Public Agency Certificate of Authorization

## Jurisdictional COA

- ✈️ Less than 55 pounds
- ✈️ Airspace in your jurisdiction
- ✈️ Nighttime
- ✈️ In the vicinity of airports
- ✈️ Any other conditions you request

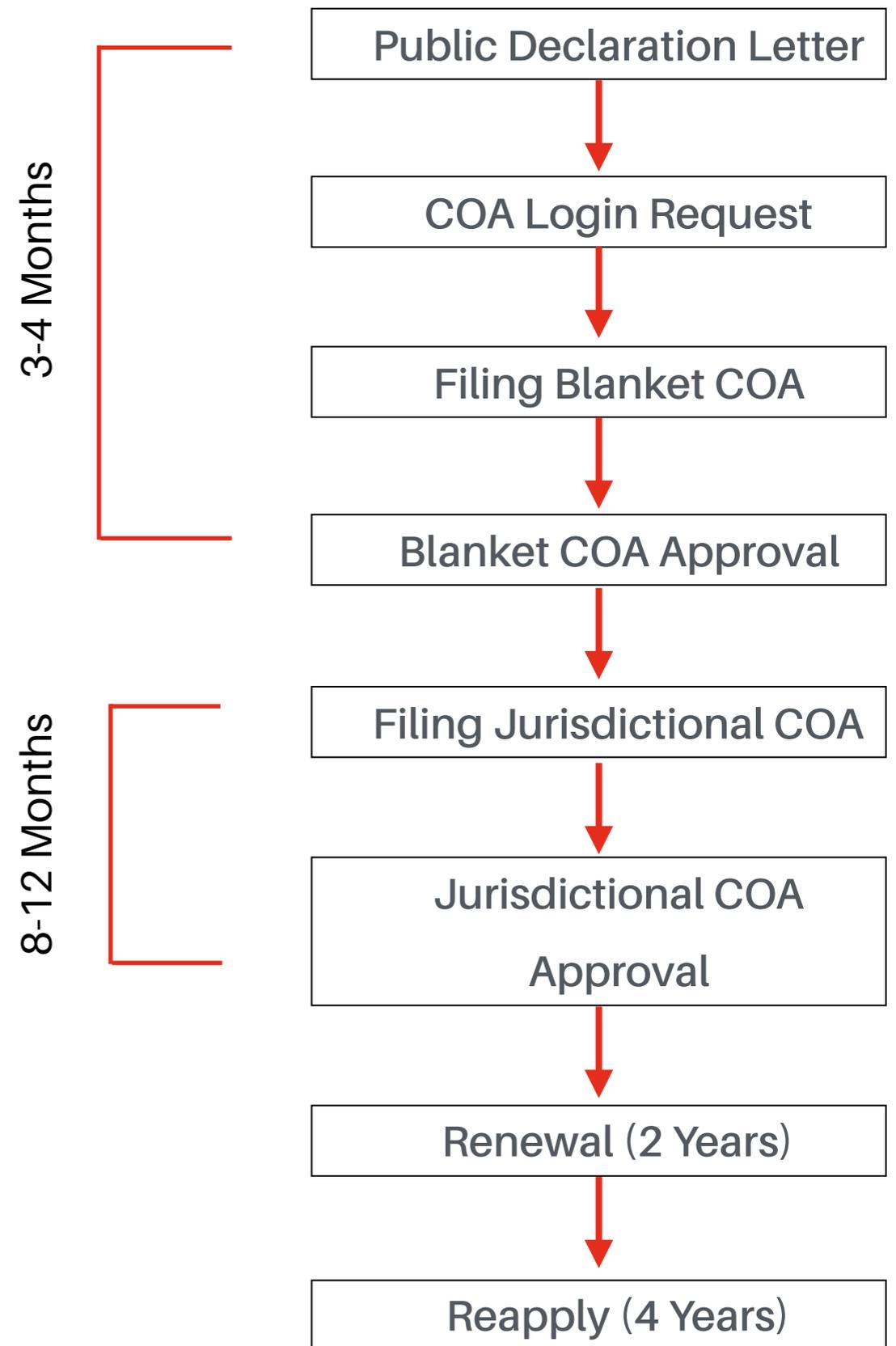


# COA Approval

- ▶ Training self-certified
- ▶ Medical fitness to fly self-certified
- ▶ Responsibility falls to proponent agency
- ▶ Airspace waiver included
- ▶ Primarily for public safety/public agency
- ▶ Allows for flight over people in an emergency

# Emergency COA

# COA Timeline





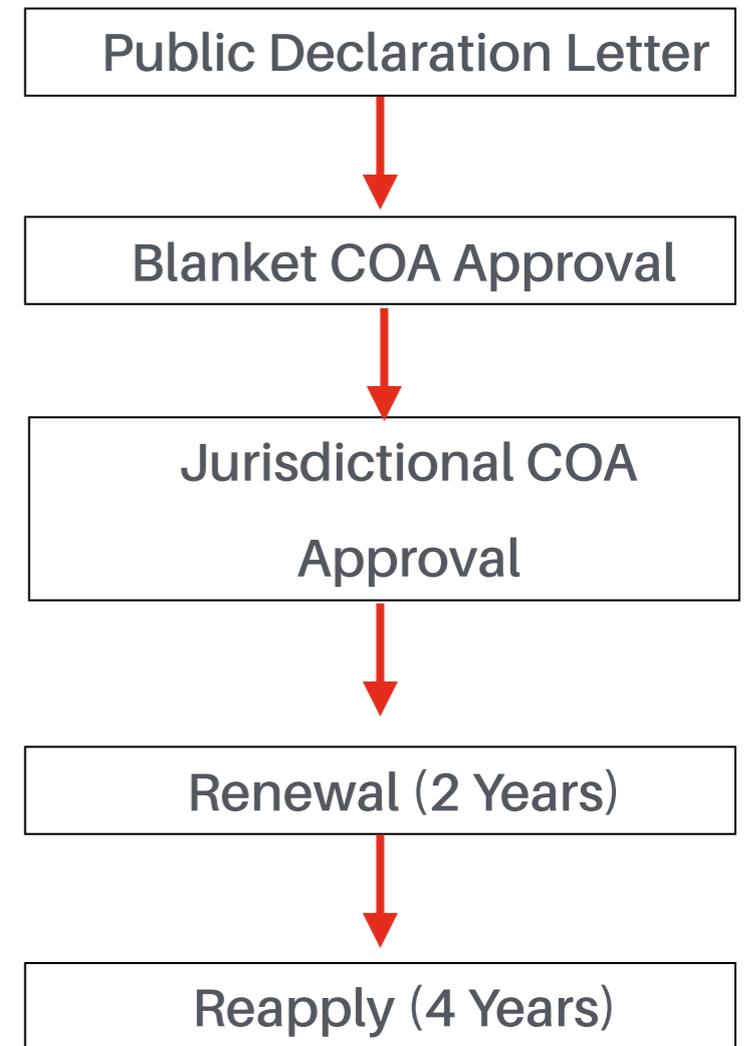
4-6 Weeks



2-3 Months



## COA Timeline



QUESTIONS?



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