

Ascend 2025

Drone as First Responder Program Manager Training

Tuesday, September 16 2025 9 am - 4 pm PT



Course Objective

Familiarization on core competencies related to sUAS program management for Drone as First Responder programs

This course has been designed for sUAS Program Management professionals serving Public Safety and Law Enforcement organizations





Course Schedule

09:00-09:15 Introduction to Drone as First Responder | Noreen Charlton

09:15-10:00 Regulatory Considerations | Jakee Stoltz

Gain a clear understanding of waiver pathways, Part 108, and how to align your DFR program with FAA regulations

10:15-11:00 Designing for DFR Program Value | Katrina Armistead

Learn how to define objectives, draft RFPs, and position your DFR program for sustainable funding



Course Schedule

11:00-12:00 Achieving Operational Success with DFR Jason LaFond & Deepu John

Learn how to apply best practices, SOPs, and real-world case studies to align your DFR program with operational objectives and long-term value

12:00-01:00 Lunch Break

01:00-02:00 Preparing Sites for Operational Readiness Graham Campbell

Learn how to select, prepare, and manage Dock installation sites while laying the foundation for long-term program ownership



Course Schedule

02:00-03:00 Flight Crew Training

Flight Crew Training & Education | Brian Morel & Jakee Stoltz

Learn how to design, staff, and sustain an in-house training program that keeps your DFR flight crew proficient, compliant, and mission-ready

03:15-04:15

Community Engagement | Mira Marquez & Ben Husch

Learn how to build trust and support for your DFR program by engaging the public, city councils, and elected officials with transparency, empathy, and effective communication



Course Instructors



Jakee Stoltz

Director, Aviation Regulatory Affairs



Katrina Armistead

Go-to-Market Strategy



Graham Campbell

Drone as First Responder Program Manager



Deepu John

Solutions Engineer, Public Safety



Course Instructors



Mira Marquez

Program Manager, Skydio For All



Ben Husch

Director, Policy & Community Affairs



Noreen Charlton

Public Safety Strategy



Jason LaFond

Customer Success Manager - DFR & Public Safety



Introduction to Drone as First Responder (DFR)

Noreen Charlton



DFR is here and Skydio is trusted by over 800 agencies nationwide



Live Now

*Not shown: Japan





Real results from real deployments



SAN FRANCISCO POLICE DEPT

42% reduction in auto theft500+ arrests30% drop in overall crime



REDMOND POLICE DEPT

88 sec average response time48% faster than officers on P125% of CFS cleared withoutpatrol



LAKEWOOD POLICE DEPT

768 flights in 15 weeks33% of CFS received DFR38% of CFS cleared without patrol



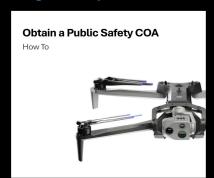
OKLAHOMA CITY POLICE DEPT

40% flights for fire-related calls



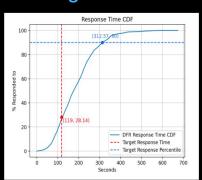
Building your DFR Program

Regulatory





Coverage model





Site selection & install





Staffing







Over 400 combined years of public safety and law enforcement experience





































































Regulatory Considerations

Jakee Stoltz





Session Objectives

Regulatory Considerations

- 1. Understand current status of 200' and 400' BVLOS waivers
- 2. Learn how to request an airspace authorization to operate above UAS Facility Map altitudes (zero grids)
- 3. Learn about future "multidrone" waivers







What did we talk about last year?

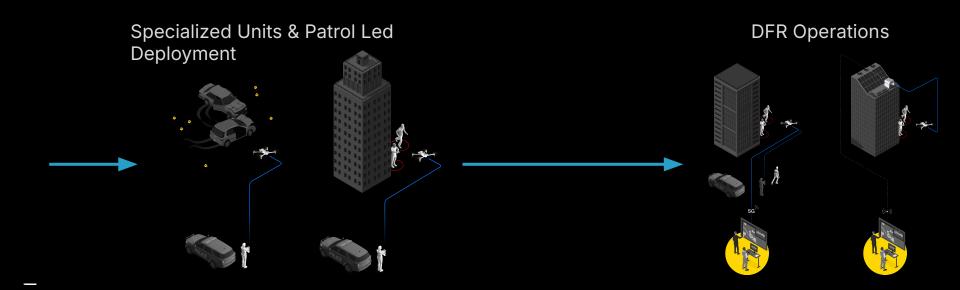


The DFR Adoption Journey: Regulatory

Start with Part 107

Acquire Jurisdictional COA

Acquire DFR BVLOS COAs



DFR with Visual Observers

Request a <u>First Responder BVLOS</u> <u>Certificate of Authorization</u>

- Requires Visual Observers (VOs) to scan
 2 miles of airspace around the drone
- Up to 400' Above Ground Level (AGL) or up to the FAA UAS Facility Map altitudes
- Transient operations over human beings when necessary to safeguard human life allowed
- Can acquire in approximately one month





DFR <u>without</u> Visual Observer

Pathways are emerging for both COAs and Part 107 waivers

- Agency must develop and submit a safety case to the FAA for review
- The safety case must consider:
 - Airspace safety
 - Citizen safety



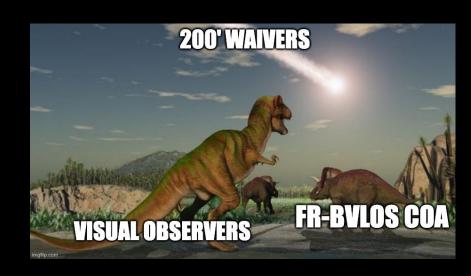




Where are we today?

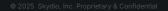
600+

"No VO" approvals (~87% are 200' requests)





The map is growing!



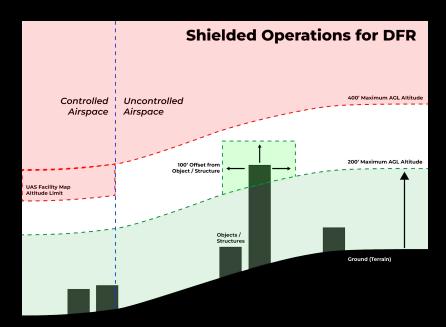


5

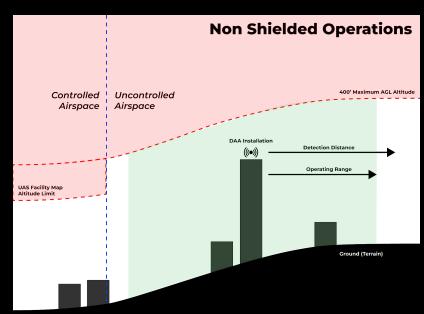
average days from submission to approval (for 200' + ADS-B requests)



Two Concepts of Operation



- 200' Operations
- ADS-B Only
- "Blanket approval"



- 400' Operations
- ADS-B + <u>non-cooperative DAA tech</u>
- Ops up to 400' within sensor range



Stuck on the Public Declaration Letter?

It's no longer required for the COW!

Agencies now self-certify the two eligibility requirements on their own letterhead:

- 1. The agency is a political subdivision and meets the statutory definition of Public Aircraft
- 2. The agency is a Public Safety Organization

Template letter is available on the FAA Public Safety Toolkit. Make sure this letter is on your agency's letterhead.

ADD AGENCY LETTERHEAD

Date: [DATE

Federal Aviation Administration Attention: Part 91 Waiver Team-AFS 751 800 Independence Ave, SW Washington, DC 20591

Reference: Public Aircraft/Public Safety Organization-91.113 Waiver

To whom it may concern:

This letter is to inform you that [AGENCY NAME] is a political subdivision of [ENTER THE NAME OF THE STATE, DC, US TERRITORY, OR INDIAN TRIBAL NATION] and meets the statutory definition of Public Aircraft in 49 USC 40102(a)(41) and also meets the statutory definition of Public Safety Organization in 49 USC 44806(e). In this section, 'public safety organization means an entity that primarily engages in activities related to the safety and well-being of the general public, including law enforcement, fire departments, emergency medical services, and other organizations that protect and serve the public in matters of safety and security.'

We desire a Public Aircraft/Public Safety Organization 91.113 Waiver to support our public safety mission with sUAS under 14 CFR part 91. The PAO/PSO 91.113 waiver checklist has been completed by the Responsible Person and is attached to the waiver application.

Some examples of public safety missions we typically conduct using drones includes but are not limited to: tactical situations with the Special Weapons and Tactics (SWAT), accident reconstruction, active shooters / officer-involved shootings (OISs), situations involving hazardous materials, fires, search and rescue missions, and calls for service. At times during these missions there are situations when we need to operate the UAS beyond visual line of sight of the remote pilot, and/or operate over human beings, and/or operate over moving vehicles with people inside for life safety and other public safety reasons. These situations may arise during the day or night.

Sincerely,

Signature: [SIGNATURE]
Printed Name: [NAME]
Title: Responsible Person
Telephone: [PHONE]
Email: [EMAIL]



If you haven't requested yours yet, don't wait!



https://www.skydio.com/resources/whitepapers/part91-bvlos-waiver-process

The guide was updated right before Ascend!

- Clear guidance to request a 200' or 400' waiver
- NEW: Information on requesting an airspace authorization



Flight above UAS Facility Map Altitudes

North Chili

Chili Center

West Chili

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Rochester

Quick FAA waiver flowchart





FAA Jurisdiction & Acronyms

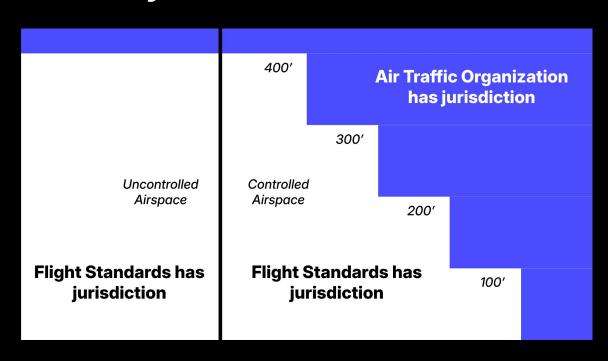
Certificate of Authorization (COA)

Typically Air Traffic
 Organization issues COAs

Certificate of Waiver (COW)

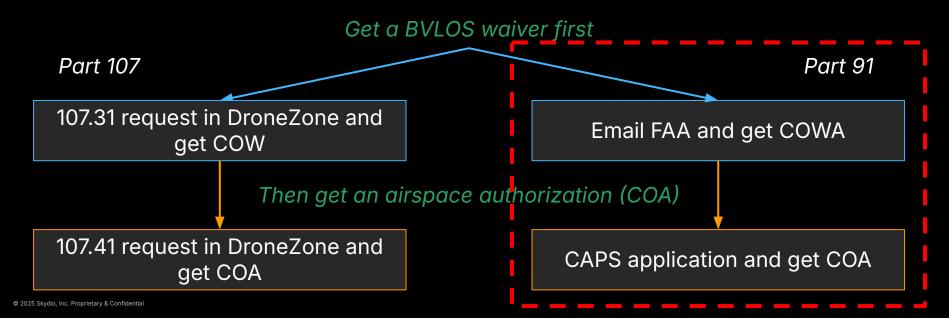
Typically Flight Standards issues COWs

What makes the 200' and 400' waivers so unique is the two got combined into a Certificate of Waiver **and** Authorization (COWA)!



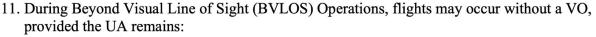
Quick FAA waiver flowchart

I need approval to fly BVLOS in controlled airspace.





200' and 400' Part 91 BVLOS waivers say...

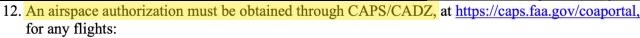


- a. In Class G Airspace,
 - 1) at or below 200 feet above the ground, or
 - 2) 100 feet above the height of any obstruction (natural or man-made) that is within a 100 foot radius of the sUA, not to exceed 400 feet AGL, or
- b. In Class B, C, D or E (Surface Area) Airspace,
 - 1) at or below 200 feet above the ground, or
 - 2) below the UASFM altitude, whichever is lower;
- 12. An airspace authorization must be obtained through CAPS/CADZ, at https://caps.faa.gov/coaportal, for any flights:
 - a. above 400 Feet AGL in Class G airspace,
 - b. above the UASFM grid heights,
 - c. in controlled airspace where UASFM's are not applicable, or

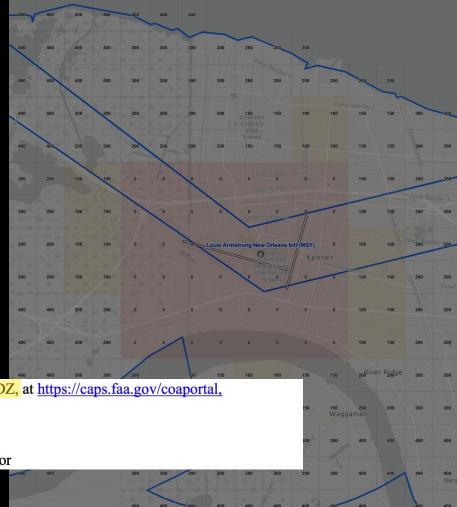


How do I submit an airspace authorization?





- a. above 400 Feet AGL in Class G airspace,
- b. above the UASFM grid heights,
- c. in controlled airspace where UASFM's are not applicable, or





Submitting an Airspace Authorization

(Today, but subject to change!)

01

02

03

Get access to CAPS

- Get Public Declaration Letter
- 2. Fill out CAPS Access Form
- 3. Email #1 and #2 to the FAA

Develop request

- Evaluate airspace and safety case
- 2. Develop graphic and KMZ
- 3. Coordinate with airport

Submit in CAPS

Skydio guide available



1. Get Access to COA Application Processing System (CAPS)

Email two documents to the FAA

Public Declaration Letter

Letter signed by outside counsel declaring the agency is a Public Aircraft Operator.

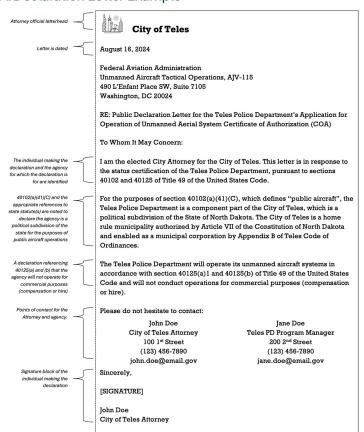
This is different than the PAO - PSO Letter to obtain a 200' or 400' waiver.

CAPS Access Form

Simple form filled out by the individual who will submit COAs on behalf of the agency.



A. Declaration Letter Example



Certificate of Operation (COA) Application Processing System (CAPS) Access Request Form

The Certificate of Walver or Authorization (COA) Application Processing System (CAPS) is a web application developed in Support of the Federal Aviation Administration (FAA) Modernization and Reform Act of 2012 (FMRA), P. 112-55, § 3338. & 331. The FMRA directs the FAA to safely integrate Unmanned Aircraft Systems (UASs) into the National Airspace System (NAS). CAPS provides an interactive on-line application process to request a COA for a specific flight operation, or a blanket COA, which permits nationwide flights under standard restrictions.

In order to gain access to CAPS and complete a COA, please complete this form and submit in accordance with the instructions provided at https://caps.faa.gov.

If you are not sure about which type of waiver or authorization is needed for your UAS operation, please visit www.faa.gov/uas.

Date	Name
Public/Civil Entity	•
Telephone	Email
Is requester a contract	. , , , , , , , , , , , , , , , , , , ,
Section 2: Cont	ractor Requests
Contractors must submit this form along with a signed	Example #1: This letter is to authorize (Contractor Name), of (Company Name), (Company Address), on-line access to the (Public/Civil Entity) COA documents and process.
letter from the authorizing agency for public requests.	Example #2: This letter is to authorize (Contractor Name), of (Company Name), (Company Address), on-line access to the (Public/Civil Entity) COA documents, process, and to serve as the primary point of contact in all COA matters.
Section 3: Perm	issions
I am requesting the following COA type (sele	e ability to draft, update, and commit COAs on behalf of the (Public/Civil Entity) listed above. I will be applying for the cet all that apply):
Section 4: UAS	Operation(s)
	(AOR) inty and state where the UAS will operate.
Please indicate the cou	
Please indicate the cou Provide us with a reas Example #1: I will submit which is developing a U	inty and state where the UAS will operate. on why you are using a UAS. COA applications for the (Name of University) AS program to address law enforcement and
Please indicate the cou Provide us with a reas Example #1: I will submit which is developing a Uniterior submit emergency response app Example #2: I am a UAS	inty and state where the UAS will operate. on why you are using a UAS. COA applications for the (Name of University) AS program to address law enforcement and licitations. operator and the UAS Tier 1 Projects Officer for
Please indicate the cou- Provide us with a reas Example #1: I will submit which is developing a U- emergency response app Example #2: I am a UAS- Marine Corps Systems demonstrations for VIP	inity and state where the UAS will operate. COA applications for the (Name of University) AS program to address law enforcement and Blications.
Provide us with a reas Example #1: I will submit which is developing a U. emergencyresponse app Example #2: I am a UAS: Marine Corps Systems demonstrations for VIP establish an account in oi Example #3: I will submit	inty and state where the UAS will operate. on why you are using a UAS. COA applications for the (Name of University) AS program to address law enforcement and bilications. operator and the UAS Tier 1 Projects Officer for Command and will be conducting flight visitors. (SES and Flag officers). I will need to rder to create COA requests.
Please indicate the cour Provide us with a reas Example #1: I will submit which is developing a U. emergency response ap Example #2: I am a UAS: Marine Corps Systems demonstrations for VIP establish an account in or Example #3: I will submit which is developing a U.	Inity and state where the UAS will operate. on why you are using a UAS. COA applications for the (Name of University) AS program to address law enforcement and licitations. operator and the UAS Tier 1 Projects Officer for Command and will be conducting flight visitors. (SES and Flag officers). I will need to rder to create COA requests.
Please indicate the cour Provide us with a reas Example #1: I will slow which is developing a U. emergency response app Example #2: I am a U.S. Marine Corps Systems demonstrations for VIP establish an account in oi Example #3: I will submit which is developing a U. development. Initially re	Inity and state where the UAS will operate. on why you are using a UAS. COA applications for the (Name of University) AS program to address law enforcement and licitations. operator and the UAS Tier 1 Projects Officer for Command and will be conducting flight visitors. (SES and Flag officers). I will need to drefer to create COA requests. COA applications for the (Name of University) AS program for the purpose of research and sesarch efforts will focus on agricultural ally will move into other areas of UAS

Application of the control of the co

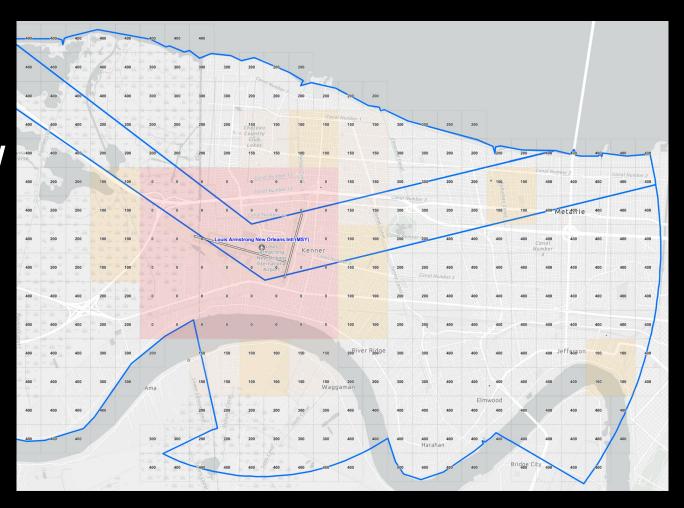


2. Develop request

Let's look at an example of how to evaluate airspace and create a graphic + KMZ.



Louis Armstrong / New Orleans Intl





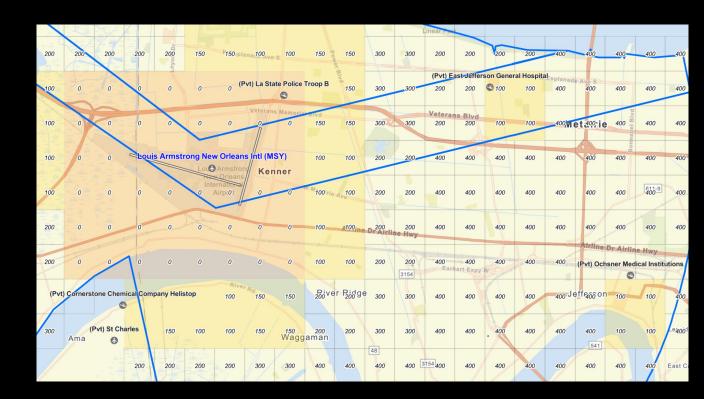
If you'd like to follow along in your agency...



Public Safety Airspace Map

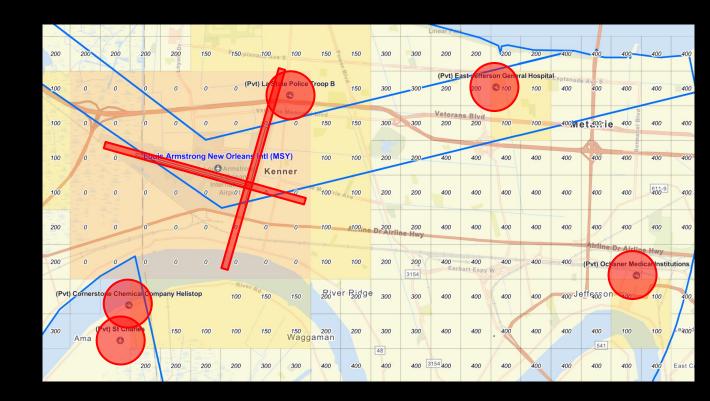


Consider areas of low flying crewed aircraft.



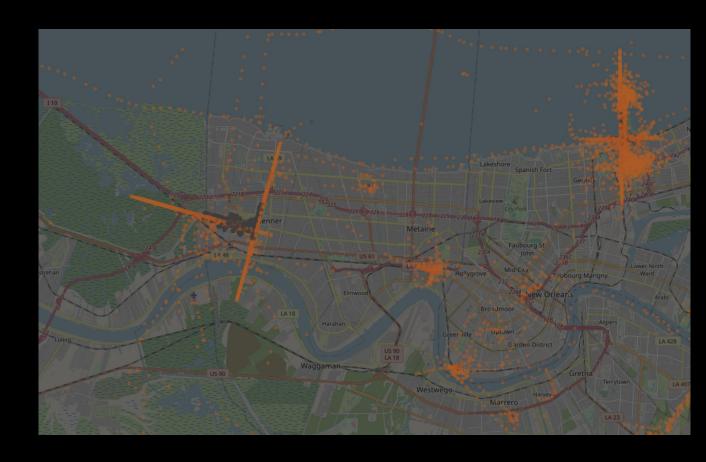


Consider areas of low flying crewed aircraft.

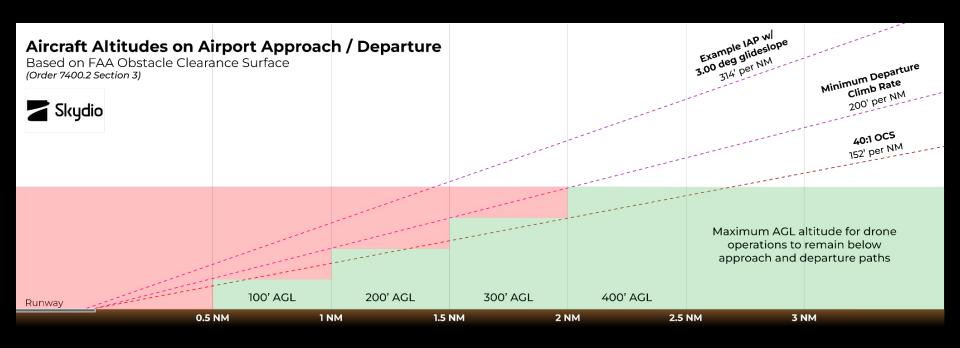




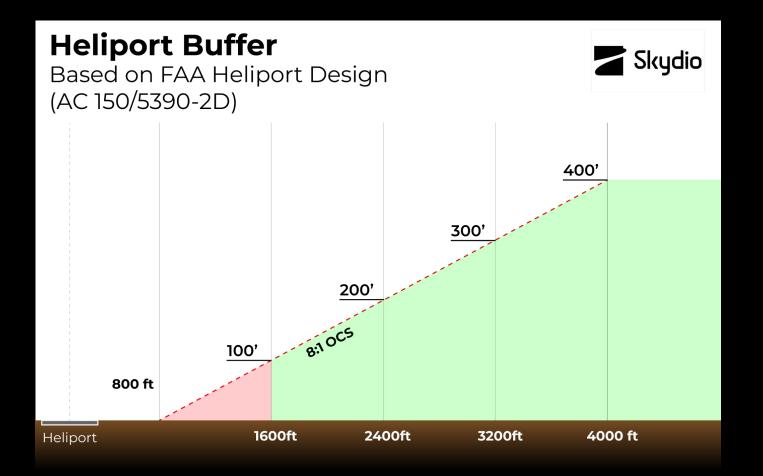
ADS-B Heatmap





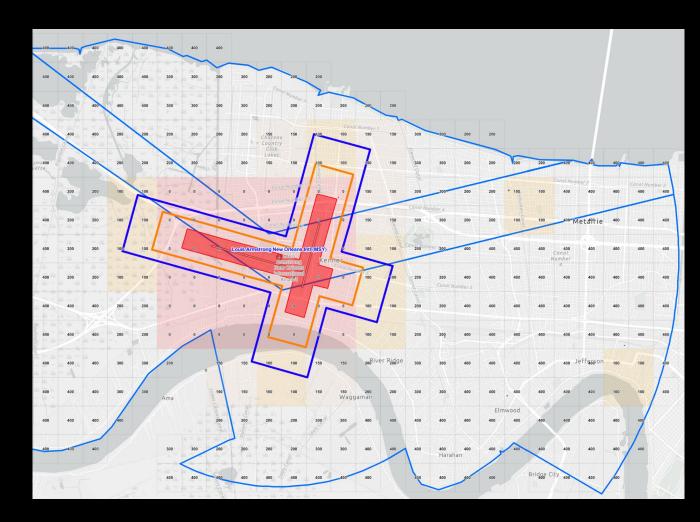






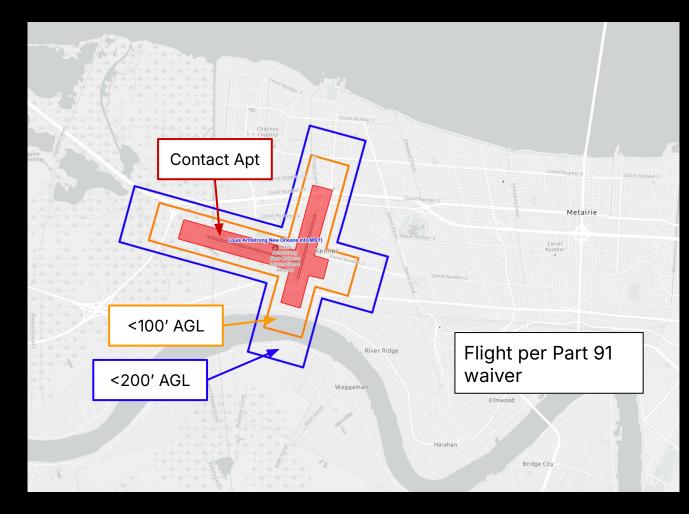


Baseline Ask





Review this type of graphic with the airport





3. Request COA in CAPS

CAPS is bad... but we have a guide.

What you need:

- Public Declaration Letter
- Skydio X10 Emergency Procedures PDF
- Skydio X10 Lost Link Procedures PDF
- Lost Comms PDF
- Airworthiness Statement
- 200' or 400' BVLOS waiver
- Area / Altitude graphic
- Area / Altitude KMZ

Page 1 of 9

sUAS, 14 CFR Part 91 PAO - BVLOS Above UASFM Certificate of Authorization, FAA Form 7711-1 2025-WSA-16945-COA

DEPARTMENT OF TRANSPORTATION

CERTIFICATE OF WAIVER OR AUTHORIZATION

Las Vegas Metropolitan Police Department

14 CFR Part 91

Attention of Name: Steven Oscar

Address: 400 S Martin Luther King Blvd City, State, ZIP: Las Vegas, NV 89106

This Certificate of Authorization (COA) is issued for the operations specifically described hereinafter. No person shall conduct any operation pursuant to the authority of this COA, except in accordance with the standard and special provisions contained in this COA, and such other requirements of the Code of Federal Regulations (CFR) not specifically waived.

Operation of small unmanned aircraft system(s) (sUAS) Beyond the Visual Line of Sight (BVLOS) of the Pilot in Command (PIC) in accordance with the operator's 14 CFR Part 91.113(b) BVLOS waiver 91.113-2025-00160 in Class B and D airspace, at or below 200 feet above ground level (AGL), in the vicinity of Las Vegas, Nevada, under the jurisdiction of Las Vegas Terminal Radar Approach Control (L30), Las Vegas Airport Traffic Control Tower (LAS), North Las Vegas Airport Traffic Control Tower (VGT), Nellis Air Force Base Airport Traffic Control Tower (LSV), Henderson Airport Traffic Control

Attachments. LIST OF WAIVED REGULATIONS BY SECTION AND TITLE

See AFS-700 waiver for list of waived regulations.

STANDARD PROVISIONS

Tower (HND), and Nellis Air Traffic Control Facility (NATCF). See Special Provisions and

- 1. A copy of the application made for this COA shall be made available upon request.
- 2. This COA shall be presented for inspection upon the request of any authorized representative of the Federal Aviation Administration (FAA) or of any State or municipal official charged with the duty of enforcing local laws or regulations.
- 3. The holder of this COA shall be responsible for the strict observance of the terms and provisions contained herein. 4. This COA is non-transferable.

Note-This COA 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.

SPECIAL PROVISIONS Special Provisions 1 to 5, inclusive, are set forth on the following pages.

This COA, 2025-WSA-16945-COA, is effective from 09/10/2025 to 09/09/2027, and is subject to cancellation at any time upon notice by the Administrator or his/her authorized representative.

BY DIRECTION OF THE ADMINISTRATOR

ADAM A

Digitally signed by ADAM A VETTER 10:03:53 -07'00

FAA, Western Service Center

Tactical Operations Team, Manager, AJV-W23

FAA Form 7711-1 (7-74)

14 CFR Part 91 - Certificate of Waiver or Authorization (August 2025)

SPECIAL PROVISIONS

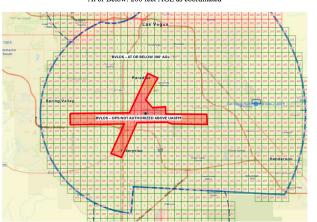
1. GENERAL:

a. Operations under this COA must be conducted in accordance with the provisions contained in the approved AFS-700 issued 14 CFR § 91.113 waiver 91.113-2025-00160.

Operations Area

Location: In the vicinity of Harry Reid International Airport, Nevada

Class(es) of Airspace: B At or Below: 200 feet AGL as coordinated



Page 1 of 9

sUAS, 14 CFR Part 91 PAO – BVLOS Above UASFM Certificate of Authorization, FAA Form 7711-1 2025-WSA-16945-COA

DEPARTMENT OF TRANSPORTATION

CERTIFICATE OF WAIVER OR AUTHORIZATION

Las Vegas Metropolitan Police Department

14 CFR Part 91

CONTACT INFORMATION

Attention of Name: Steven Oscar Address: 400 S Martin Luther King Blvd City, State, ZIP: Las Vegas, NV 89106

This Certificate of Authorization (COA) is issued for the operations specifically described hereinafter. No person shall conduct any operation pursuant to the authority of this COA, except in accordance with the standard and special provisions contained in this COA, and such other requirements of the Code of Federal Regulations (CFR) not specifically waived.

Operation of small unmanned aircraft system(s) (sUAS) Beyond the Visual Line of Sight (BVLOS) of the Pilot in Command (PIC) in accordance with the operator's 14 CFR Part 91.113(b) BVLOS waiver 91.113-2025-00160 in Class B and D airspace, at or below 200 feet above ground level (AGL), in the vicinity of Las Vegas, Nevada, under the jurisdiction of Las Vegas Terminal Radar Approach Control (L30), Las Vegas Airport Traffic Control Tower (LAS), North Las Vegas Airport Traffic Control Tower (VGT), Nellis Air Force Base Airport Traffic Control Tower (LSV), Henderson Airport Traffic Control Tower (HND), and Nellis Air Traffic Control Facility (NATCF). See Special Provisions and Attachments.

LIST OF WAIVED REGULATIONS BY SECTION AND TITLE

See AFS-700 waiver for list of waived regulations.

STANDARD PROVISIONS

- 1. A copy of the application made for this COA shall be made available upon request.
- 2. This COA shall be presented for inspection upon the request of any authorized representative of the Federal Aviation
 Administration (FAA) or of any State or municipal official charged with the duty of enforcing local laws or regulations.
- The holder of this COA shall be responsible for the strict observance of the terms and provisions contained herein.
 This COA is non-transferable.

Note- This COA 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.

SPECIAL PROVISIONS

Special Provisions 1 to 5, inclusive, are set forth on the following pages.

This COA, 2025-WSA-16945-COA, is effective from 09/10/2025 to 09/09/2027, and is subject to cancellation at any time upon notice by the Administrator or his/her authorized representative.

BY DIRECTION OF THE ADMINISTRATOR

ADAM A VETTER Digitally signed by ADAM A VETTER Date: 2025.09.10

FAA, Western Service Center

Adam Vetter

Tactical Operations Team, Manager, AJV-W23

FAA Form 7711-1 (7-74)

14 CFR Part 91 – Certificate of Waiver or Authorization (August 2025)

U.S. DEPARTMENT OF TRANSPORTATION

FEDERAL AVIATION ADMINISTRATION

CERTIFICATE OF WAIVER AND AUTHORIZATION

ISSUED TO

Las Vegas Metropolitan Police Department

Waiver Number: 91.113-2025-00160

ADDRESS -

400 S Martin Luther King Blvd

Las Vegas, NV 89106

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 provisions contained in this certificate.

OPERATIONS ALITHORIZED

Small unmanned aircraft system (sUAS) operations within and beyond the visual line of sight of the remote pilot in command (PIC), are permitted in operations at or below 200 feet above ground level (AGL), or within 100 feet of an object in Class G Airspace, and, at or below the UASFM altitudes in Class B, C, D or E (Surface Area) airspace whichever is lower, or as described and authorized in the Special Provisions.

LIST OF WAIVED REGULATIONS BY SECTION AND TITLE

14 CFR §§ 91.113(b) - Right-of-way rules: Except water operations.,

91.119(b) and (c) — Minimum safe altitudes: General.

91.126(d) - Operating on or in the vicinity of an airport in Class G airspace

91.127(c) — Operating on or in the vicinity of an airport in Class E airspace

91.129(c) — Operations in Class D airspace

91.130(c) - Operations in Class C airspace

91.131(a)(1) and (c)(2) — Operations in Class B airspace

91.131(a)(1) and (c)(2) — Operations in Class B airspace

91.155 - Basic VFR weather minimums

STANDARD PROVISIONS

- 1. A copy of the application made for this certificate shall be attached to and become a part hereof.
- This certificate shall be presented for inspection upon the request of any authorized representative of the Administrator 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.
- 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.

SPECIAL PROVISIONS

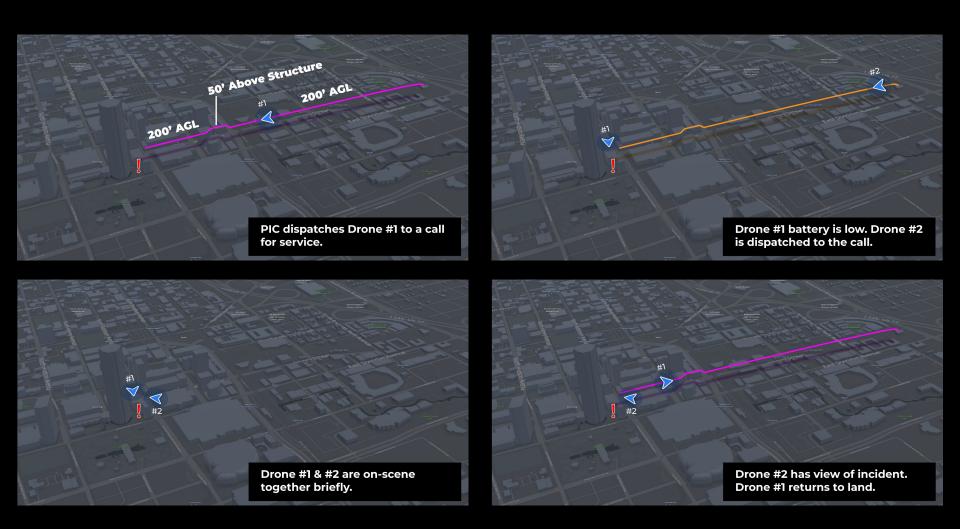
Special Provisions Nos. 1 to 37, inclusive, are set forth on the attached pages.

This Certificate of Waiver is effective from August 6, 2025, to August 31, 2029, and is subject to cancellation at any time upon notice by the Administrator or an authorized representative.

BY DIRECTION OF THE ADMINISTRATOR CHRISTOPHE Digitally signed by CHRISTOPHER M DOHERTY Date: 2025.08.06 10:23:11

Emerging Technologies Division, AFS-700

Multidrone! "On-Station Relief"





Multidrone Waiver Options

Part 107



Initial waiver approved for Skydio

- Establishes precedent for public safety agencies to follow
- Parachute required

Part 91

Work has begun to unlock this path