



FAA UAS SYMPOSIUM

Understanding your Options as an Operator

Understanding Recreational, Part 107, and Public Operations

Moderator: Joe Morra

Manager, Safety and Operations Branch,
Federal Aviation Administration UAS
Integration Office



Federal Aviation
Administration



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Breakout Session 1A: Understanding Your Options as an Operator



- **Moderator: Joe Morra**, Manager, Safety and Operations Branch, FAA UAS Integration Office
- **James Viola**, Manager, General Aviation and Commercial Division, FAA Flight Standards Service
- **Randy Willis**, Manager, Emerging Technologies Team, Mission Support Services, FAA Air Traffic Organization
- **Lorelei Peter**, Assistant Chief Counsel for Regulations, FAA Office of the Chief Counsel
- **Allison Ferguson**, Director of Research, PrecisionHawk
- **Chris Courtney**, Vice President of Flight Operations, Measure

Current UAS Options



	Aircraft Requirements*	Pilot Requirements	Airspace Requirements	Types of Operation
Part 107	UAS < 55 lbs.	Part 107 remote pilot certificate with small UAS rating	Airspace waiver or authorization for Class B, C, D, E airspace	VLOS, daytime, Class G, 400 ft., not over people OR waiver provisions
Section 333	As specified in exemption	Part 61 airman certificate	Blanket COA or Standard COA for specific airspace	UAS > 55 lbs.
Experimental Aircraft	Experimental Special Airworthiness Certificate	Part 61 airman certificate	Standard COA for specific airspace	Research and development, crew training, and market survey
Type Certificated Aircraft	Restricted type or special class certification	Part 61 airman certificate	Part 91 airspace requirements	Specified in operating authorization
Public Aircraft	Self-certification by public agency	Self-certification by public agency	Blanket COA or Standard COA for specific airspace	Public Aircraft Operations (AC 00-1.1A); UAS Test Site operations
Part 101 Model Aircraft	UAS < 55 lbs.	Community-based organization (CBO) standards	Notification requirement within 5 miles of an airport	Hobby or recreational, VLOS, Part 101 operating rules, CBO standards

*Note: All UAS greater than 0.55 pounds must be registered (see part 47 and part 48 requirements)

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Types of UAS Operations



	Recreational Operations	Small UAS Operations (Part 107)	Public COA Operations
Pilot Requirements	<ul style="list-style-type: none"> No FAA pilot requirements 	<ul style="list-style-type: none"> Must have Remote Pilot Airman Certification Must be 16 years or older Must undergo TSA security screening 	<ul style="list-style-type: none"> Self-certification of crew and equipment
Aircraft Requirements	<ul style="list-style-type: none"> Must be registered if over 0.55 pounds 	<ul style="list-style-type: none"> Must be less than 55 pounds Must be registered if over 0.55 pounds Must undergo pre-flight checklist 	<ul style="list-style-type: none"> Must verify Public Aircraft Operator eligibility and be issued a Certificate of Waiver or Authorization (COA) or MOA
Location Requirements	<ul style="list-style-type: none"> Must notify all airports and air traffic control (if applicable) within five miles of proposed area of operations 	<ul style="list-style-type: none"> Class G airspace without ATC permission Class B, C, D, and E require ATC permission 	<ul style="list-style-type: none"> Detailed in COA and/or MOA
Operating Rules	<ul style="list-style-type: none"> Must ALWAYS yield right of way to manned aircraft Must keep aircraft in visual line-of-sight Must follow community-based safety guidelines 	<ul style="list-style-type: none"> Must keep aircraft in visual line-of-sight* Must fly under 400 feet* Must fly only during daylight hours* Must fly at or below 100 mph* Must yield right of way to manned aircraft* Must NOT fly over people* Must NOT fly from a moving vehicle* 	<ul style="list-style-type: none"> Detailed in COA and/or MOA
Applications	<ul style="list-style-type: none"> Education or recreational flying only 	<ul style="list-style-type: none"> Flying for commercial/business use Flying recreationally Public operators choosing to operate as Part 107 operator 	<ul style="list-style-type: none"> Federal Agencies State and Local Entities

*These requirements are subject to waiver

Special Governmental Interest (SGI) Addendum (formerly e-COAs)



- Operating under the authority of an active COA or Part 107
- Public and select civil operations
- Significant and urgent governmental interests
 - National defense
 - Homeland security
 - Law enforcement
 - Emergency operations objectives (critical infrastructure)

Special Governmental Interest (SGI) Addendum (formerly e-COAs)



- Requested operations must be flown by a government entity or sponsored by a government entity
- Qualifying proponents contact System Operations Support Center (SOSC) for assistance
 - A component of System Operations Security
 - Contact number: (202) 267-8276

FAA ATO Policy Document

FAA Order 7200.23 UAS



- Effective October 3, 2016
- Combines new guidance on Part 101 and Part 107; FAA Notice 7210.891; GENOT 7210.886 into one publication
- Proposed Changes
 - Inclusion of Part 107 Class E Surface evaluation process
 - Updating references

Understanding your Options as an Operator



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Who's Presenting?



Chris Courtney

Chief Pilot,

Vice President of Flight Operations

Chris Courtney has served over 20 years in both the US Army and Coast Guard as an officer, leader, senior aviator & paratrooper accumulating over 3,000 flight hours in highly technologically advanced airframes. Senior staff & leadership positions include: Chief of Current Aviation Operations in Afghanistan, Coast Guard Aviation Program Resource Manager, Deputy Operations Officer, Attack Helicopter Company Commander, Aerial Reconnaissance Platoon Leader in South Korea, Senior Instructor Pilot and Flight Standardization Officer. During his successful career, he earned 11 Meritorious Service, Commendation & Achievement Medals for superior leadership, judgment, performance of duties and heroics in flight having saved 37 lives.

Since joining Measure as the Chief Pilot and VP of Flight Operations he successfully built a nationwide network of sUAS pilots and operations from the ground up. He continues to provide operational direction, tasking, oversight & risk management for all of Measure's operations throughout the United States and abroad.

MEASURE is the leading Drone as a Service[®] company.

- ✓ We provide comprehensive drone solutions for commercial enterprises
- ✓ Our focus is on customer requirements and ensuring return on investment
- ✓ In a hyper-local industry we are the exception, offering nationwide data collection from certified pilot teams
- ✓ Our customers get preferred access to best-in-class aircraft, sensors, and software

We get it. Drones may be a hot topic, but ultimately what our customers care about is reliable data to help them make better decisions.

Measure is the only company tackling the challenge of providing safe, legal, and insured drone services.



We own every step of the value chain.

Incorporating Part 107 Into Your Business



- Republican National Convention held in Cleveland, Ohio on July 18-21, 2016
- 50,000 attendees
- \$50 million security plan for the event
- Temporary flight restriction (TFR) imposed during the event



Our plan of action:

- TFR dates checked months prior; flew one day before TFR activated
- Section 333 Exemption secured for the Cleveland Burke Lakefront Airport
- Flight documents on hand during the event included: exemption, pilot's license, medical license, TFR dates
- Aviation handheld radio for airport traffic awareness



- First Category 5 Atlantic hurricane since 2007
- 10th costliest Atlantic Hurricane in history
- Damages estimated in excess of \$10.5 billion
- 1,600 people killed
- Deadliest Atlantic hurricane since Stan in 2005



Our plan of action:

- Pre-landfall mission planning
- Crew deployment
- Live news coverage
- B-roll news flights
- Infrastructure inspections
- Public support
- Re-deployment
- Post mission debrief with customers



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Joseph Morra, Manager, Safety and Operations Branch, FAA UAS Integration Office



Joe Morra is a Branch Manager with the Federal Aviation Administration's (FAA) Unmanned Aircraft Systems (UAS) Integration Office; AUS-430 (Safety & Operations) located at FAA Headquarters offices in Washington, DC. This branch is an enterprise-wide conduit for UAS initiatives serving as a liaison for safety, operational and security initiatives between responsible organizations both within the FAA and external stakeholders.



Before joining the UAS Integration Office, Mr. Morra was a General Aviation Operations Inspector for the Flight Standards District Office (FSDO) in Teterboro, New Jersey and more recently, served as a Subject Matter Expert in the Flight Standards Headquarters General Aviation and Commercial Division. Prior to working for the FAA, Mr. Morra owned and managed flight training and other small businesses for over 10 years.

Mr. Morra is a flight instructor and maintains his airline transport pilot (ATP) Certificate.

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Randy Willis, Manager, Emerging Technologies Team, Mission Support Services, FAA Air Traffic Organization



Randy Willis is the Emerging Technologies Team Manager working in the FAA's Air Traffic Organization. He has primary responsibility for the safe integration of UAS into the National Airspace System. In addition to his regular duties, Mr. Willis is the United States Member and also Vice Chairman of the International Civil Aviation Organization Remotely Piloted Aircraft Systems Panel. Additionally, he is Co-Chair of the Civil Air Navigation Services Organization (CANSO) RPAS Working Group and participates on several other domestic and international working groups dedicated to the safe integration of UAS.

Previously, Mr. Willis served as a Federal Contractor supporting the FAA UAS Office and also served in the United States Navy as an Air Traffic Controller.

Mr. Willis has a Bachelor of Science in business administration from the University of Maryland University College and Project Management certificate from St. Mary's College of Maryland.

James Viola, Manager, General Aviation and Commercial Division, FAA Flight Standards Service



James A. Viola is the Federal Aviation Administration's (FAA) Manager of the General Aviation and Commercial Division, where he is responsible for regulations and policy recommendations governing training, certification, inspection, and surveillance of general aviation (GA) airmen, flight instructors, GA air agencies (pilot schools), commercial operations, and public aircraft operations. Previously, Mr. Viola was the Army Aviation Division Chief for the Headquarters Department of the Army's Current Army Aviation Operations.



Mr. Viola holds a master's degree in strategic studies from the United States (U.S.) Army War College in Carlisle, PA; a master's degree in international relations from Auburn University in Montgomery, AL; a master's degree in military operational art and science from Air University in Maxwell AFB, AL; and a Bachelor of Science from East Stroudsburg University in East Stroudsburg, PA.

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Lorelei Peter, Assistant Chief Counsel for Regulations, FAA Office of the Chief Counsel



Lorelei Peter is the Federal Aviation Administration's (FAA) Assistant Chief Counsel for Regulations in the Office of the Chief Counsel. In this role, Ms. Peter is responsible for leading and managing both the long term operation and the immediate daily operation of the Regulations Division and overseeing the complex and diverse legal regulatory practice portfolio. She provides oversight of all legal aspects pertaining to the FAA's regulatory program.

Ms. Peter was previously the Deputy Assistant Chief Counsel for Regulations in April 2014 and a Senior Attorney prior to that position. Prior to that, Ms. Peter was a Senior Attorney in the Regulations Division and provided legal assistance and review of all regulatory matters involving airspace and air traffic issues, including flights operations, airspace obstructions and the slot administration program.

Ms. Peter holds a bachelor's degree in business administration and a Juris Doctor, both from the University of Missouri-Kansas City.



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Allison Ferguson, Director of Research, PrecisionHawk



Dr. Ferguson is a statistical physicist skilled in all facets of analysis of large data sets. She brings over 15 years of experience in the use of multivariate statistics and the development of predictive models to the PrecisionHawk team, with an emphasis on extracting actionable results in industrial applications.

Ms. Ferguson's current role in directing PrecisionHawk's Airspace Safety research efforts leverages her experience to develop data-driven risk assessment of UAS operations in the global airspace, including leading the FAA Pathfinder Focus Area Two Initiative and participating in NASA's Unmanned Traffic Management concept development program.



Chris Courtney, Vice President of Flight Operations, Measure



Chris Courtney has served over 20 years in both the US Army and Coast Guard as an officer, leader, senior aviator & paratrooper accumulating over 3,000 flight hours in highly technologically advanced airframes.

Senior staff & leadership positions include: Chief of Current Aviation Operations in Afghanistan, Coast Guard Aviation Program Resource Manager, Deputy Operations Officer, Attack Helicopter Company Commander, Aerial Reconnaissance Platoon Leader in South Korea, Senior Instructor Pilot and Flight Standardization Officer. During his successful career, he earned 11 Meritorious Service, Commendation & Achievement Medals for superior leadership, judgment, performance of duties and heroics in flight having saved 37 lives.



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