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Risky Business:


A Week Focusing on Risk Management's
Contributions to Higher Education

Drones: An Update on the 2016 FAA Regulations and How this Affects Your Institution

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Learning Objectives

- Obtain a working understanding of the 2016 FAA regulations
- Understand the obligations of institutions operating UAV
- Liability associated with UAV use on and off campus



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Why worry about Drones?



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Regulatory Status in the U.S. Today

General Requirements for Operators



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Three Non-Military Types of UAV Operations

Operational Requirements Vary

- Public Operations (Government controlled – includes public universities)
- Civil Operations (Commercial businesses, private universities, non-profits, etc.)
- Model Aircraft (Hobby or recreational use only)

- FAA Legal Department Memo of May 4th
 - Details legal interpretation relative to use of drones for:
 - Use of UAVs for hobby or recreational purposes at educational institutions and community-sponsored events; and,
 - Student use of unmanned aircraft related to instruction at accredited educational institutions
 - Has potential impact to all three UAV operator categories

14 CFR 107 – The new drone regulations

Released June 21, 2016, effective August 29, 2016

- More than a year in the making.
- Dictates the rules for the commercial use of small drones weighing under 55 pounds / 25 kilograms.

“With this new rule, we are taking a careful and deliberate approach that balances the need to deploy this new technology with the FAA’s mission to protect public safety.”

- Michael Huerta, FAA Administrator



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Part 107 Highlights

Some Key Operational Limitations

- Unmanned aircraft must weigh less than 55 lbs. (25 kg).
- Visual line-of-sight (VLOS) only
- Flights over any people not directly participating in the operation, unless they are under a covered structure or inside a covered stationary vehicle are not permitted.
- Daylight only operations, or civil twilight with appropriate anti-collision lighting
- Max groundspeed of 100 mph (87 knots)
- Max altitude of 400 feet above ground level (AGL) or, if above 400', remain within 400' of a structure.
- Minimum visibility of 3 miles from control station
- Ops within Class B, C, D and E airspace are allowed with ATC permission.
- No person may act as pilot-in-command or visual observer for more than one unmanned aircraft at a time.

Part 107 Highlights

Remote Pilot in Command Certification and Responsibilities

- Establishes a remote pilot in command position
- Small UAS operator must either hold a remote pilot airman certificate with a small UAS rating or be under the direct supervision of a person who does hold a remote pilot certificate.
- Remote pilot in command must:
 - Make available to the FAA, upon request, the small UAS for inspection or testing, and any associated documents/records required to be kept.
 - Report to the FAA within 10 days of any operation that results in at least serious injury, loss of consciousness, or property damage of at least \$500.
 - Conduct preflight inspection, to include specific aircraft and control station systems checks, to ensure the small UAS is in a condition for safe operation.
 - Ensure that the small UAS is properly registered as required by Part 91.203(a)(2).

What is needed to become a new remote pilot

Non-Part 61 Certificated Pilots

- Must be at least 16 years old
- Must be able to read, speak, write and understand English
- Must be in a physical and mental condition to safely operate a small UAS
- Must pass the initial Aeronautical Knowledge Exam at an FAA-approved Knowledge Testing Center
 - Available nationwide from August 29, 2016 – 3,300 scheduled themselves to take on first day!
- Complete/Submit form 8710-13 (FAA Airman Certificate and/or Rating Application)
 - May take 48 hours for test passing to be recorded
 - Application likely to be validated by FAA in about 10 days
- Pass TSA security background check
- New pilot receives instructions for printing temporary Airman Certificate (valid for 120 days)
 - Permanent Airman Certificate Arrives by mail.

What is needed to become a new remote pilot

Current Part 61 Certificated Pilots

- Hold a part 61 pilot certificate (other than student pilot).
- Complete a flight review within the previous 24 months.
- Complete a small UAS online training course provided by the FAA

This course assumes pilot has knowledge of Parts 61 and 91 and focuses on areas of Part 107 that are beyond the operational knowledge of Parts 61 and 91.

- Complete/Submit FAA form 8710-13



Part 107 Highlights

Aircraft Requirements and Model Aircraft

- FAA airworthiness certification is not required
- Part 107 does not apply to model aircraft that satisfy all the criteria specified in section 336 of Public Law 112-95.
 - Aircraft must be flown strictly for hobby or recreational use
 - Aircraft is operated in accordance with a community based set of safety guidelines
 - Aircraft is not more than 55 pounds unless otherwise certified through a safety program administered by a community-based organization
 - Aircraft is not operated in a manner that does not interfere with and gives way to any manned aircraft; and
 - When flown within 5 miles of an airport, the operator provides the airport operator and ATC (when ATC facility is located at the airport) with prior notice of the operation
 - Must also be flown within visual line of sight

Model Aircraft (Hobby/Recreation Only Flights)

- Strictly used for hobby/recreation flights
- Operated in line with general safety guidelines
 - Flights below 400 feet, visual line-of-sight etc.
- Permission from airport operator/control tower if flown within 5 miles of an airport
- Registration and markings
 - Applicable to all UAS between 0.55 and 55 pounds
 - New purchases must be registered prior to first flight
 - 500,000+ registrations as of August 2nd (FAA estimates approx. 1.5 drones per registrant)
 - Civil penalty of up to \$27,500, a criminal fine of up to \$250,000, and imprisonment up to 3 years for non-compliance.



Part 107 Waivers

Opportunity for expanded operations

- Presentation of a safety case allows FAA to review and grant certificates of waiver for some of the restrictions outlined in Part 107.
- Waiver request to provide description of proposed use requiring waiver and justification.
- Must apply via online portal at www.faa.gov/uas
- FAA urges applications submitted 90 days before waiver is needed.



Part 107 – What regulations can be waived?

Specific section of Part 107 that may be waived for individual operators

- 107.25 – Operation from a moving vehicle, boat, or aircraft
- 107.29 – Daylight only operations - Over 70 waivers already granted as of 9/7/16
- 107.31 – Visual line of sight aircraft operation - First waiver already granted
- 107.33 – Visual observer
- 107.35 – Operation of multiple small unmanned aircraft systems
- 107.37(a) – Yielding the right of way
- 107.39 – Operation over people - First waiver already granted
- 107.41 – Operation in certain airspace
- 107.51 – Operating limitations for small unmanned aircraft

There is no waiver available for ops carrying property of another on the drone for compensation or hire from a moving vehicle, boat or aircraft, or for ops beyond visual line of sight. Separately, there are no waivers available under Part 107 for aircraft over 55 lbs, aircraft carrying HAZMAT, or for fully autonomous operations.

What about exemptions and ops not permitted under Part 107?

Exemptions will still be available

- Exemptions will still be available for operations that aren't addressed under Part 107
 - All existing exemptions remain in effect.
- Operators can fly under their existing Section 333 Exemption / COA or under Part 107 at their option.

Requirements Common to ALL Operators

- Must not endanger persons or property on the ground
- Must give way to manned aircraft
- All operators are subject to legal enforcement action for careless and reckless operations



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Requirements Common to ALL Operators

- Must comply with all flight restrictions and Temporary Flight Restrictions (TFRs)
 - Your campus might be under one!
 - Stadium Flight Restriction
 - Commences one hour before the scheduled time of the event until one hour after the end of the event and is applicable to ALL aircraft
 - Applicable to a 3 nautical mile radius and up to 3,000 feet above ground level (AGL) of any stadium having a seating capacity of 30,000
 - Notable impact to MLB, NFL, NASCAR, INDY CAR, and NCAA Division I football
 - Waivers are available but require specific approvals and authorizations



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What Comes Next/ Where Are We?

Public and Commercial UAS Operations
Moving Ahead

Who Regulates UAS – FAA or State/Local Government or Both?

45 states considered 168 drone use related bills in 2015

- Some legal debate on the FAA's authority over "non-navigable" airspace
- State and local governments began passing laws and ordinances specific to UAS as early as 2013
- FAA releases "State and Local Regulations of Aircraft Systems (UAS) Fact Sheet" in mid-December
 - States that FAA has complete authority "to regulate the areas of airspace use, management and efficiency, air traffic control, safety, navigational facilities and aircraft noise."
 - Provides some non-specific examples of state and local laws affecting UAS for which consultation with the FAA is recommended, such as restrictions to flight altitudes or flight paths, and mandating UAS-specific equipment or training.

Who Regulates UAS – FAA or State/Local Government or Both?

- Several cities have passed laws placing stringent restrictions on drone use
- What does this mean?
 - It will need to be decided whether state/local laws conflict with the regulatory authority granted to the FAA by Congress
 - Can, or will, having multiple drone regulatory bodies in place (FAA, state, local gov't) have a negative impact on safety?

Something to continue watching...



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Exposures and Coverages

- Why the need for insurance?
- How are you covered today?
- What might you and need to change or modify?

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“The first step in the risk management process is to acknowledge the reality of risk.”

- - Charles Tremper

Liability Exposures

TRADITIONAL AVIATION EXPOSURES

- Bodily injury and property damage
- Consequential losses
- Catastrophic loss potential
- Non-owned use of unmanned aircraft – Not all operators are equal
- Personal Injury / Privacy

NON-TRADITIONAL AVIATION EXPOSURES

- Errors & Omissions/Professional Liability
- Cyber



Privacy Exposures

- Unreasonable searches/surveillance
- Trespassing
- Invasion of privacy
 - Intrusion upon seclusion
 - Publication of private facts
- Stalking and harassment
- Business privacy
- Personal injury coverage can be considered, but operator should have policies, procedures and guidelines in place for the collection, storage, use, and destruction of data collected by the aircraft, AND have good preflight risk mitigation procedures in place.
- February 2015 Presidential Memorandum released from White House
 - Established Executive Branch multi-stakeholder process to establish best practices for commercial use of UAS



Privacy and the FAA

Part 107 does not address privacy issues in the use of drones

- FAA does not regulate how UAS gather data on people or property.
- FAA encourages all UAS pilots to check local and state laws before gathering information through the use of drones.
- Some education on privacy during the pilot certification process.
- Education builds off of the privacy best practices published by the **National Telecommunications and Information Administration** in May.

NTIA's best practices

Voluntary Best Practice for UAS Privacy, Transparency, and Accountability

- Developed through a multi-stakeholder process involving UAS-affiliated entities, consumer advocacy and technology groups along with privacy related organizations as directed by the Obama Administration.
- Not law binding and do not take precedence over any federal or state law.
- Focuses on five main points:
 - Inform others of your use of UAS
 - Show care when operating UAS or collecting and storing covered data
 - Limit the use and sharing of covered data
 - Secure covered data
 - Monitor and comply with evolving federal, state, and local UAS laws

NTIA's Best Practice Appendix

"Guidelines for Neighborly Drone Use" – a common sense approach

- If possible, tell people you'll be taking pictures or video of them in advance.
- If you think someone has a reasonable expectation of privacy, don't violate that by taking pictures, video, or gathering data without a very good reason.
- Don't fly over private property without permission if you can easily do so.
- Don't gather personal data for no reason, or keep data longer than needed.
- If you keep sensitive data about other people, secure it against loss or theft.
- If asked to delete personal data by someone, do so, unless there is a good reason not to.
- If privacy, security, or safety concerns are raised, listen to them.
- Don't harass people with your drone.

Physical Damage Exposures

- Aircraft
- Payload
- Ground control equipment
- Spare parts



War Exposures

- Unmanned aircraft can face war risks
 - Malicious attack
 - Hi-jacking
 - Spoofing
 - Sabotage

- Very different exposure potential than what aviation underwriters are used to.



Underwriting Considerations

UAV underwriting is based on traditional aircraft underwriting foundation

- Almost all aviation underwriting stems from four basic points of risk analysis.
 - Operator experience
 - Make and model information
 - Purpose of Use
 - Location of Operations
- Values and limits required
 - Aircraft
 - Payload
 - Ground Equipment
- Operational procedures/risk mitigation items
 - Training



Use of UAV on campuses

- Teaching
- Research
- Operations
- Students
- Vendors
- Commercial operators
- Media
- Public



<https://inlocc.webhost.iu.edu/policies/drones.cfm>

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Pilot Licensing

- Dependent on use
 - Hobbyist/student in class setting
 - no license required
 - Teacher, research, operations
 - Part 107 License required
 - When does the line get crossed?



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Liability Coverage

- Do your existing policies provide coverage?
- Standard General Liability policy excludes aircraft
 - An exception to the exclusion may be present
 - Endorsement providing coverage for limited classes of UAV
 - Coverage may be dependent on use
 - Research and Education vs Operations
- Aircraft Liability insurance policy
 - Blanket coverage or scheduled UAV



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Control of your drone operations

- Inventory of drones
 - Model
 - Serial number
 - FAA registration number
- Registry of pilots
 - Who is licensed (part 107)
 - What level of rating



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Control of your airspace

- Filing of flight plans through central system
 - Review for risk and mitigations
- Notification to
 - Campus Police
 - Risk Management
 - Communications/Media Relations
 - Facility supervisor



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Control of your air space by others

- Where is the drone being operated from?
 - Your property
 - Private property (someone's backyard)
 - Public Street
- Reckless/Dangerous operation
 - over people
 - privacy
 - interfering with operations



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Claims Challenges / Claims Handling

Claims Challenges?

New and different

- New exposures/uses represent new claims scenarios
- Regulations and laws (FAA, State, Local)
- Manufacturer assistance
- Maintenance
- Who was the operator/PIC?
- Theft/Fire/Disappearance
- Underwriter/Broker/Insured intent vs. policy language...does it match?
- Valuation of components?
- Prior experience? How many UAV claims have been adjudicated? How many have you handled or helped to mitigate?



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Conclusions

The Future is Here

The Final Message


Steady growth in UAS activity throughout 2016 beyond

- No way for the FAA, Transport Canada, EASA, CAA or anyone else to know for certain how many UAS operators we will see
- We only know that with there being a potential benefit to nearly all industries, the number of potential UAS operators and types of exposures are immense
- We don't know all that is to come, so flexibility, adaptability, coverage development, and commitment to the unmanned industry are key
 - Regulations
 - Larger system commercial approvals/mass introduction and use
 - Loss trends
 - Societal acceptance
 - Future needs




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Questions/Discussion

Thank you!




Bring on tomorrow

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