Community College Risk Management Consortium
July 21–22, 2016

Understanding the Evolving Landscape of Drone Regulations and Risk Management
The ABCs of UAVs

July 2016
Drones are changing the landscape of daily life…
A “Drone”

A “Drone” by any other name:
- UAV - Unmanned Aerial Vehicle
- UAS - Unmanned Aircraft System
- RPA - Remotely Piloted Aircraft
- ROA - Remotely Operated Aircraft
- RPAS - Remotely Piloted Aircraft System

In all the excitement, it is important to remember that drones are aerial devices, and can present risks for aircraft (within the commercial or private sector), and the FAA apparently shares Congressional concerns on this topic.
Beyond the Hype

They are Amongst Us!

- 700 Drone sightings and/or near misses reported to the FAA in 2015 – just through the month of August.
- Up from 235 in all of 2014.
- One in five reported in California.
- Most around LAX.
One of the More Sophisticated UAV Operations

ROGUE DRONE SMASHES THROUGH MY WINDOW AND INTO MY HEAD
Seeing Industry Safety Literature
Government Jargon Simplified

• United States Code
  - Laws Created by Congress
  - “The Computer”

• Code of Federal Regulations (CFR)
  - “The Software”
Significance of National Airspace Systems (NAS)

What is the significance of our National Airspace Systems (NAS)?

- The most complex airspace in the world. Airlines, corporate, balloons, airships, and low flying helicopters.

- By law, the FAA cannot authorize an aircraft operation in the National Airspace without a certificated pilot in command at the aircraft controls (Title 49 of the United States Code).

- Exemptions granted in accordance with Section 333 carry the following requirement regarding the pilot in command (PIC) of the aircraft:

- Under this grant of exemption, a PIC must hold either an airline transport, commercial, private, recreational, or sport pilot certificate. The PIC must also hold a current FAA airman medical certificate and a valid U.S. driver’s license issued by a state, the District of Columbia, Puerto Rico, a territory, a possession, or the Federal government. The PIC must also meet the flight review requirements specified in 14 CFR § 61.56 in an aircraft in which the PIC is rated on his or her pilot certificate.
“Speaking of Control”
UAV Operations

Model Aircraft Operations

Hobby or recreational purposes only.

The FAA has partnered with several industry associations to promote Know Before You Fly, a campaign to educate the public about using unmanned aircraft safely and responsibly. Individuals flying for hobby or recreation are strongly encouraged to follow safety guidelines, which include:

- Fly below 400 feet and remain clear of surrounding obstacles
- Keep the aircraft within visual line of sight at all times
- Remain well clear of and do not interfere with manned aircraft operations
- Don’t fly within 5 miles of an airport unless you contact the airport and control tower before flying
- Don’t fly near people or stadiums
- Don’t fly an aircraft that weighs more than 55 lbs
- Don’t be careless or reckless with your unmanned aircraft – you could be fined for endangering people or other aircraft

Individuals who fly within the scope of these parameters do not require permission to operate their UAVs; any flight outside these parameters, including any non-hobby or non-recreational operation, requires FAA authorization.
UAV Operations
History

- 2012 – Congress passes FAA Modernization and Reform Act of 2012
- PL 112-95, Section 333 directs Secretary of Transportation to determine if UAS can operate safely in our NAS and if so, to establish requirements for the safe operation.
- February 2015 – FAA issues a NPRM
- 4600 public comments received
- 2016 – FAA issues actual rule adding Part 107 – Small UAS
- Will be effective August 29, 2016
Part 107

Part 107 allows UAS operations for many different non-hobby and non-recreational purposes without requiring airworthiness certification exemption, or a Certificate of Flight or Authorization.

- Personnel
- Equipment
- Operations
Airman Certification - Personnel

- Person exercising authority of PIC in compliance with Part 107 is considered a “remote pilot in command” (remote PIC)
- Prior to acting as a remote PIC, one must obtain a Remote Pilot Certificate with a UAS rating
- Licensed pilots with a flight review in previous 24 months only have to complete an on-line Part 107 training course
- Non-licensed pilots must pass an initial aeronautical knowledge test at an FAA approved testing center
- Both must complete the Remote Pilot Certificate and Rating application
- TSA automatically conducts a background security screening
- Recurrent training required within 24 months
Part 107 Highlights – Equipment & Operations

- Keep the UAS within VLOS
  - Can use a VO too
  - Can only use corrective lenses to do so
- Don’t fly over persons not directly participating in the operation or under a covered structure
- Daylight operations only
  - Twilight – must have NAV lights
- Maximum speed – 100 mph
- Maximum altitude – 400 feet
  - Can fly 400 feet above a building structure
- Weather minimums – 3 miles visibility
Part 107 Highlights – Equipment & Operations

- Can operate in controlled airspace with ATC approval
- External load operations allowed
  - Can’t carry hazardous materials
  - Transport of property for compensation or hire allowed
  - VLOS still applies
- Preflight checks required
- Must be registered
What’s New?

- **UAS Registration**
  - Effective December 21, 2015, anyone who owns a small drone, weighing more than .55 pounds, must register with the FAA.
  - Civil and criminal penalties apply for non-compliance.
  - Web-based registration for hobby and recreational operators - $5 fee applies.
  - Paper-based registration for commercial operators or if intent is to operate outside the U.S.
  - Valid for three years. Drone must be labeled with registration number.
  - Very small toys don’t require registration. Everything else does.
  - 500,000 people have registered their drones.
Drone Registration Label

How to Label Your UAS

Mark all aircraft with your registration number before you operate them. You can use:

- **Engraving**
- **Permanent Label**
- **Permanent Marker**

Register #
FA-000-001

Find registration number on the confirmation screen & in your user profile.

Number must be visible
(You can mark inside the battery compartment if it doesn’t require a tool to open.)
UAV Operations

Public Operations (Governmental)

- Public aircraft operations are limited by federal statute to certain government operations within U.S. airspace.

- Common public uses today include law enforcement, fire fighting, border patrol, disaster relief, search and rescue, military training, and other government operational issues.

- For public operations, the FAA issues a Certificate of Waiver or Authorization (COA) that permits public agencies and organizations to operate a particular aircraft, for a particular purpose, in a particular area.

- COAs are usually issued for a specific period – up to two years.
Operational Recommendations

Operating Owned UAVs

- Determine FAA operation category
  - Hobby and Recreational
  - Civil Operations (Non-Governmental) – Work/Business
  - Public Operations (Governmental)

- Apply for necessary Operational Authority

- Procure appropriate Insurance Coverage
  - See Insurance Solutions
Operational Recommendations

Non-Owned Operations

- Where you hire others to operate UAVs on your behalf
  - Fully vet operator’s qualifications
  - Obtain evidence of appropriate licensing

- Obtain evidence of Aircraft Liability Insurance through Certificate of Insurance
  - $1 Million CSL Minimum
  - To include you as Additional Insured

- Procure Non-Owned Aircraft Liability Insurance
  - Provides Excess or Primary Liability Coverage in event operators coverage non-responsive
Compilation of Crashes
Insurance Solutions
Insurance Solutions

Robust Insurance Market

- Welcome growth opportunity is perception
- Special policy forms and applications under development
- Large liability limits available (Primary & Excess)
- Special coverages offered
- Some standard exclusions removed recognizing unique characteristics of operations
- Not a great deal of concern – yet
- Some operational provisos showing up
  - Requirement to report use
  - Requirements for underlying limits
  - Requirements to demonstrate appropriate licensing
- Additional Insured/Certificate warranties
Insurance Solutions

Insurance Coverages

- UAV Hull & Liability
- UAV War Risks (Hull & Liability)
- UAV General Liability
- UAV Non-Owned Aircraft Liability
- Personal Injury
- Physical Damage for support equipment and camera systems
- Cargo Liability – think Amazon
- Emergency Expenses – fire, crash and rescue expenses
“Tell No Lies”