



## Drones and Utilities

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- This presentation provides information about the law. Legal information is not the same as legal advice, which involves the application of law to an individual's specific circumstances. The interpretation and application of the law to an individual's specific circumstance depends on many factors. This presentation is not intended to provide legal advice.
- The information provided in this presentation is drawn entirely from public information. The views expressed in this presentation are the authors' alone and not those of the authors' clients.

## Presenters



- **Greg Kunkle** and **Wes Wright** are Partners in the telecommunications practice group and Keller and Heckman.
- They assist corporate clients and trade associations with legal and regulatory matters before the Federal Aviation Administration and Federal Communications Commission.



## Background on FAA Treatment of Drones

- Current Restrictions – Commercial vs. Hobbyists
- 2012 FAA Reform Act
- Interim relief (agriculture, pipelines/power lines, film, flare stacks)
- Required Rulemaking
- Future Issues
- Enforcement

## Terminology

- Drone
- UAV – Unmanned Aerial Vehicle
- UAS – Unmanned Aircraft System
  - sUAS – Small UAS
- UVS – Unmanned Vehicle System
- Model or R/C Aircraft

## Types of Drones



## Commercial vs. Hobbyists

- Hobbyists
  - Previously not well defined
  - Operations Restricted
    - Under 400 feet
    - Line of sight
    - Away from airports
    - Less than 55 lbs.
- Private, internal use by a company is not hobby use

## Industry Uses

- Visual inspections – HD, thermal, multispectral, corona
  - Electric transmission and distribution lines
  - Power plants/substations
  - Natural gas transmission and distribution pipelines
  - Storage facilities and valves
- Surveying - LiDAR

## Industry Uses

- Gas leak detection
- Supply delivery
- Communications repeaters
- Wire stringing?



## Benefits

- Safety
  - Distance from equipment
  - Reduced fall hazard
  - Compare to conventional aircraft
- Lower cost
  - Fuel costs
  - Operating costs
  - Aircraft costs

## Benefits

- Speed/Versatility
- Environmentally friendly
  - Fuel consumption
  - Avoid impact to environmentally sensitive areas
  - Quiet

## FAA Authorizations

- Certificate of Waiver/Authorization
  - Arctic circle approved June 2014
- Special Airworthiness Certificate
  - Experimental Class
  - San Diego Gas & Electric approved July 2014
- Section 333 Exemptions
  - No longer used

## 2012 FAA Reform Act

- By September 30, 2015, FAA must adopt plan to safely accelerate the integration of civil drones into national airspace
- 18 Months after plan submitted - FAA must adopt rules allowing for civil operation of drones in the national airspace system
- FAA Roadmap

## FAA Test Beds

- **University of Alaska** - State monitoring, navigation, safety standards.
- **State of Nevada** - Operator standards and certification requirements, air traffic control procedures.
- **New York's Griffiss International Airport** - Sense and avoid capabilities, integrating UAS into congested airspace.
- **North Dakota Department of Commerce** - Airworthiness, and high reliability link technology.
- **Texas A&M University – Corpus Christi** - System safety requirements.
- **Virginia Polytechnic Institute and State University (Virginia Tech)** - Failure mode testing and identify and evaluate operational and technical risks areas.

## Section 333

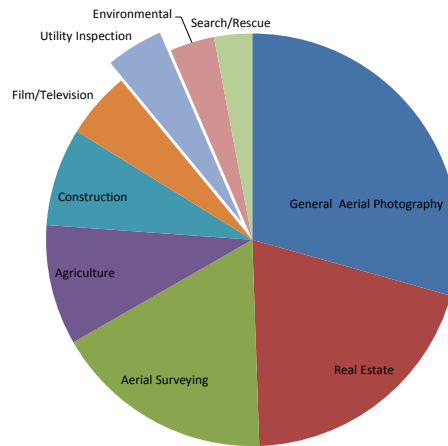
- Section 333 Exemptions
- June 2014 – FAA began considering Exemptions
- Targeted Four Applications
  - Film Industry
  - Precision agriculture
  - Power line and pipeline inspection
  - Oil and gas flare stack inspection

## Section 333

- September 2014 – FAA began granting Section 333 Exemptions
  - Thousands eventually granted



## First 1,000 Exemptions



## FAA Part 107

- June 2016 – FAA Adopts Part 107 Rules
  - Less than 55 lbs.
  - Visual line of sight
  - Daylight/twilight operations
  - 400 foot AGL, or 400 foot above structure if within 400 feet horizontally
  - Max speed 100 mph

## FAA Part 107

- No flight over people not involved in operation
  - Unless under covered structure or inside stationary vehicle
- Register aircraft
- Fly in class G airspace
  - Procedure for obtaining authorization in other classes
- Waivers available

## FAA Part 107

- Pilot must hold remote airman certificate with small UAS rating
  - Or be under supervision of certificate holder
  - Must be 16
  - Must pass knowledge exam
  - Current pilots can take online course

## Section 2209 Restrictions

- 2016 Act required FAA to adopt procedures to prohibit or restrict UAV flights near certain facilities:
  - Critical infrastructure, such as energy production, transmission, and distribution facilities and equipment.
  - Oil refineries and chemical facilities.
  - Amusement parks.
  - Other locations that warrant such restrictions.

## Section 2209 Restrictions

- FAA yet to adopt procedures
- No self-help allowed
  - Drones considered aircraft

## Future Issues

- Spectrum
- Privacy
- Data Management



## Future Issues

- Operational Issues
  - BVLOS
  - Night flights
  - Use in commerce

## Enforcement

- October 6, 2015 FAA proposed \$1.9MM fine against SkyPan International
  - 65 unauthorized flights
  - Aircraft lacked airworthiness certificate and SkyPan did not have COA
- Settled for \$200,000



## Questions/Discussion



**Thank you!**

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