The Growing Crop of Agricultural Accessory Uses: What You Can and Can’t Do

Game of Drones: What Are the Legal, Public Policy, and Civil Rights Issues?

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Agricultural Accessory Uses
What Is Agriculture?

“the science, art, or practice of cultivating the soil, producing crops, and raising livestock and in varying degrees the preparation and marketing of the resulting products cleared the land to use it for *agriculture*”
USED COWS FOR SALE PH. 682
An “accessory use” is a use which is clearly incidental to and customarily found in connection with and located on the same zoning lot as the principal use to which it is related. While the principal questions relating to accessory uses are most often raised in connection with a primary residential use, this is not always necessarily the case. Accessory uses may be found where the principal use is a farm, a commercial facility, a hospital, a church, or a school. There are few principal uses which do not carry with them permissive incidental uses.
But It Could Be Something Other than an Accessory Use

- Principal use (with limitations)
  - Must be combined with listed use
  - Floor area
  - Land coverage
  - Number of days
- Conditional use (KSA 19-2960; 12-755(3))
- Overlay zone (KSA 12-755(6))
“This act is enabling legislation for the enactment of planning and zoning. ... and is not intended to prevent the enactment or enforcement of additional laws and regulations on the same subject which are not in conflict with the provisions of this act.”

-KSA 12-741
And the Second “But”...

“...regulations adopted pursuant to this act shall not apply to the use of land for agricultural purposes nor the erection or maintenance of buildings thereon for such purposes so long as such land and buildings are used for agricultural purposes and not otherwise.”

-KSA 12-758
And the Second “But”...

“... nothing is this act shall be construed as authorizing a city to adopt regulations for land in excess of three acres which is used only for an agricultural purpose. ...”

-KSA 12-715b
And the Second “But”...

“Agricultural Purpose” means a purpose related to the production, harvest, exhibition, marketing, transportation, processing. ... of agricultural products. "Agricultural products" includes agricultural, horticultural, viticultural, and dairy products, livestock, wildlife, poultry, bees, forest products, fish and shellfish, and any products thereof, ... products, and any and all products raised or produced on farms. ...

-KSA 50-624
And the Second “But”...

“Farming means the cultivation of the land for crops, raising poultry, egg production, milk, fruit and horticultural crops, grazing, production of livestock but does not include timber, forest products, nursery or sod, contracting to spray, harvesting or other farm services.”

-KSA 17-5903
AFFIDAVIT OF AGRICULTURAL EXEMPTION

The State of Kansas has given Kansas counties the authority to develop zoning regulations for their unincorporated areas. However, as provided by K.S.A. 19-3960(d), the State declares that no zoning regulations shall apply to the use of land for agricultural purposes nor for the erection or maintenance of agricultural buildings as long as such agricultural buildings are used for agricultural purposes and no other. Dwellings, garages and other similar accessory buildings shall not be considered as agricultural buildings. In order to qualify for the agricultural exemption, it must be clearly demonstrated that the principal use of the land and of the proposed structure(s) is agricultural-related. This form must be notarized and submitted at the time of application. Copies of affidavits are not accepted.

I (We), ______________________, as owner(s) of the property listed below hereby declare and certify that this property is (or will be) used primarily for agricultural purposes and in conjunction therewith desire to place/construct a ______________________

Property Address (if assigned): ________________________________
Parcel Size (Acres): _________________________________________
Parcel ID Number: _______________________________________

In pursuit of an agricultural activity, the following information must be submitted:

1. The current amount and extent of agricultural use being made of the land. List intentions for the application. List the future use of the property.

2. The type and amount of crops and/or animals being raised on the land, presently and proposed for the future.

3. Estimated or projected annual productivity from agricultural activities performed in conjunction with this property.

4. How is the placement/construction of a ______________________ on the property necessary for the conduct of such agricultural use.

5. Will any other activity occur on this property besides agricultural? If so, list the activities.
Typically,

5. **Agriculture means** the use of a tract of land for the raising of crops, animal husbandry, dairying, pasturage, general farming, truck farming, cultivation of field crops, orchards, groves, raising fish, birds or poultry, and accessory uses, necessary for the carrying out of farming operations, including structures for storage, processing and the sale of products raised on premises. Agricultural uses shall not include the following:

   a. The operation or maintenance of greenhouses, nurseries, or hydroponic farms operated as a retail operation.

   b. Wholesale or retail sales as an accessory use, unless the same are permitted by these Regulations.

   c. Lands which are used for recreational purposes even though such properties may produce or maintain some of the plants or animals listed herein.

- Spring Hill, Kansas
Incidental to a Principal Use

- “Customarily incidental to”
  - not for a psychotherapist in a home (Mich.)

- Accessory living quarters
  - Trent v. City of Pittsburg, 5 Kan. App. 2d 543, 619 P.2d 1171 (1980), where the rental use of a dwelling located at the rear of a lot by two students, ostensibly employed as caretakers of the main residence, was prohibited under zoning ordinances permitting only one single-family residence per lot. The building's previous use, living quarters for houseworkers, had been permitted as an accessory use.
Agritourism

• Forster v. Town of Henniker, 2015 WL 3638597 (N.H. 2015) (finding that the statutory definition of “agriculture” did not include “agritourism” and therefore did not permit farm to host weddings).
Mobile Homes

Frequently, where a business's use of land is of an outdoors character, as in farming or the operation of a golf course, the maintenance of a mobile home or trailer on the property will be allowed as an accessory use, provided that a business justification, such as the need to shelter a night watchman or to house seasonal workers, is shown.
1. In the "A" Agricultural Districts, the following, or similar accessory uses are allowed:

A. Open or enclosed storage of farm materials, products or equipment; but not junk.

B. Any and all farm buildings, including, but not limited to, barns, stables, sheds, toolrooms, shops, bins, tanks and silos.

C. The use of a manufactured home as an accessory dwelling on land used for agricultural purposes when used by persons employed thereon, including their families. At no time shall a manufactured home or the land upon which it sits be intended and/or used as a rental unit in the "A" District.

“...we conclude that maintenance of a house trailer on defendants' golf course as sleeping quarters for groundskeepers qualifies as a valid accessory use under the Lake County zoning ordinance.”
  
  “The Lebanon zoning regulations do not recognize ‘housing for farm help’ as a distinct permitted use, and do not provide special regulations excepting ‘housing for farm help’ from the full application of the regulations. Consequently, the defendant ZBA was not obligated to permit the plaintiff to maintain the subject mobile home without subjecting it to the requirements of the zoning regulations.”
Wedding barn

- Kim and Bob Stroupe
  - Sedgwick County
  - 30 weddings/year
25501 West 63rd Street South
• 21 acres, Rural Residential
• With single-family residence
• Petition to rezone to Planned Unit Development
  – Weddings, family reunion, similar activates
  – Limited to 150 people per event
  – As need, up to 30 times per year
  – Not open to the general public
• More:
  – 2,706 sq. ft. events building
  – Parking lot
  – Live music
  – Alcoholic served
  – Indoor and outdoor preparation of food
  – Limited hours of operation
More:
  - Security possible
  - No music heard off-site
  - Buffers and setbacks
  - Tents
  - Portable toilets

Approved, subject to conditions
Agriculture Floating Zone

- Salem, Conn.
  - SECTION 30 – SPECIAL AGRICULTURE ZONE (1/01/05)
    - 30.1 INTENT The Town of Salem recognizes that agricultural uses are an asset to the town’s rural character. It is the intent of these regulations to establish a floating zone to ensure that those uses continue and expand, and to promote adaptive re-use of existing agricultural buildings. (4/01/07)
    - 30.2 GENERAL The minimum lot size in this zone shall be five (5) acres, in addition to the minimum acreage requirement of the underlying zone. The lot must not be located in whole or in part within five hundred (500) feet of the municipal boundary. (4/01/07) The intensity of all uses proposed within the Special Agriculture Zone shall be as deemed appropriate by the Commission.
Overlay Zone

• City of Highland, Kansas
  – (10) Allowed Uses. In Agriculture Overlay District, any non-industrial use may be permitted on a parcel of land or contiguous parcels under single ownership within 1,000 feet of the U.S. 36 Highway right-of-way.
Planned Development District

- Southampton, Long Island, New York

Agricultural Planned Development Districts

Agricultural Planned Development Districts (330-246G) can also send TDR rights, and development on these parcels must also meet a required Open Space Percentage, as follows:

Yield Allocation Table For Lands Within an Agricultural Planned Development District

<table>
<thead>
<tr>
<th>Zoning District</th>
<th>Minimum Lot Area of Zone</th>
<th>Development Yield Factor</th>
<th>Required Open Space Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR-200</td>
<td>200,000</td>
<td>0.22</td>
<td>65%</td>
</tr>
<tr>
<td>CR-120, R-120</td>
<td>120,000</td>
<td>0.36</td>
<td>65%</td>
</tr>
<tr>
<td>CR-80, R-80</td>
<td>80,000</td>
<td>0.55</td>
<td>50%</td>
</tr>
<tr>
<td>CR-60, R-60</td>
<td>60,000</td>
<td>0.73</td>
<td>35%</td>
</tr>
<tr>
<td>CR-40, R-40</td>
<td>40,000</td>
<td>0.92</td>
<td>35%</td>
</tr>
</tbody>
</table>

For full details on the specifics of this program, consult with Planning Staff as well as Southampton Town Code 330-2441.
Potato harvesting this month for Sagaponack Farm Distillery on Long Island.
Lindsay Morris for The New York Times
• One Potato Agricultural Planned Development District

  – Purpose and objectives. The One Potato Agricultural PDD has been structured to accomplish the finding and purpose established by the Town Board as part of Article XXVI, Planned Development District, of the Town Code. This Agricultural PDD also supports the implementation of the Town's Comprehensive Plan, 1999 Vision Goals for Agriculture and the subsequent Agricultural Opportunities Subdivision Generic Environmental Impact Statement.
Drones

Special thanks to Katheryn M. Rattigan of Robinson & Cole LLP for the content of many of the slides; and to Ann Gergen, Executive Director, Association of Governmental Risk Pools (AGRiP); Attorney Sezen Oygar Jones, Senior Policy Manager, AirMap; Jordan Peterson, RLA, LEED AP, Founder | Director Lift Aerial Marketing, LLC, ColeJenest & Stone; and David McGuire, Esq., Legislative and Policy Director & Interim Executive Director, American Civil Liberties Union of Connecticut, for the use of their slides from the American Planning Association National Planning Conference 2017.
Overview

• What is a Drone?
• Why Drones?
• Laws Up in the Air
  – Federal Aviation Administration (FAA)
  – FAA Modernization and Reform Act of 2012
  – FAA Part 107 Regulations (Small UAS Rule)
• Violations/Penalties and Enforcement
• Privacy & Security Implications
• Vulnerability to Cyber-Attacks
• Other Legal Considerations
What Is a Drone?

- Unmanned aerial systems (UAS) also known as drones:
  - Four, six, or eight rotary blades
    - More blades, more lift
  - Often connected to Wi-Fi and GPS
Why Drones?

- Lightweight
- Hand-operated/remote-controlled
- High-resolution cameras and recording devices
- Share information in real-time (more knowledgeable decision-making)
• Navigation independently via location intelligence services
• Long operational duration
• Capture images and videos that are typically difficult to obtain
• Perform in challenging conditions (eliminating or reducing risk and injury to humans)
• Energy efficient technologies (some cases, solar powered)
What Are the Challenges in Implementing Drones into the National Airspace?

Answer: Regulatory Compliance
Laws Up in the Air

• Federal Aviation Administration (FAA) has regulatory authority over use of drones
• FAA Modernization and Reform Act of 2012
  – Enacted on February 14, 2012
  – Authorized appropriations to the FAA from Fiscal Year 2012 through Fiscal Year 2015
  – Sought to improve aviation safety and capacity of the national airspace system, provide a framework for integrating new technology safely into our airspace, provide a stable funding system, and advance the implementation of the Next Generation Air Transportation System (NextGen)
Legal Definition of Unmanned Aircraft System

• UAS or unmanned aircraft system is the unmanned aircraft and the equipment necessary for the safe and efficient operation of that aircraft.

• An unmanned aircraft is a component of a UAS.
  – Aircraft operated without the possibility of direct human intervention from within or on the aircraft (Public Law 112-95, § 331(8))
$127 billion

economic impact of drone industry over the next several years
BY THE NUMBERS

Unmanned Aircraft Registration

2,000 new drones are registered with the FAA every day

2x more unmanned aircraft are registered with the FAA than manned aircraft
BY THE NUMBERS

In the First Six Weeks:

13,000+

people signed up to take the Part 107 knowledge test
The FAA Expects:
1.3 million licensed Part 107 drone pilots by 2020
CITIES ARE ALREADY PUTTING DRONES TO WORK

MODESTO, CA

JOSHUA, TX

TAMPA, FL

NEW YORK CITY

SOMERVILLE, MA

ACROSS MINNESOTA
Aerial mapping

Building inspection

Disaster management

Code enforcement
ON THE HORIZON

Remote identification

Critical infrastructure

Flight over people

Low altitude authorization and notification capability
Applications in Planning
EARLY APPLICATIONS OF AERIAL IMAGERY
FIRST AERIAL PHOTOGRAPH – BOSTON, 1860 FROM HOT AIR BALLOON

SOURCE: THE SMITHSONIAN, JAMES WALLACE BLACK
EARLY APPLICATIONS OF AERIAL IMAGERY

1906 POST-EARTHQUAKE SAN FRANCISCO FROM A 50-LB CAMERA ELEVATED BY 9 KITES

GEORGE R. LAWRENCE PHOTO ARCHIVE
EARLY APPLICATIONS OF AERIAL IMAGERY
BAVARIAN PIGEON CORPS (1903) SPY PHOTOGRAPHY

SOURCE: FRANKFURT PHOTO ARCHIVE
EARLY APPLICATIONS OF AERIAL IMAGERY
LAND DEVELOPMENT PATTERNS, LEVITTOWN 1957 FROM FIXED-WING AIRCRAFT

SOURCE: STATE MUSEUM OF PENNSYLVANIA
MODERN UAVs

X-47 MILITARY DRONE
eBee RTK MAPPING / SURVEYING DRONE

BLACK HORNET PD-100 MICRODRONE

DJI INNOVATIONS, INSPIRE 2 PROFESSIONAL
ARCHITECTURAL + LANDSCAPE DESIGN AND MARKETING
PEARL DISTRICT WATER TOWER, PORTLAND OR
HUMAN TRANSPORTATION
EHANG 184 UAV PERSONAL TRANSPORT, DUBAI

SOURCE: WASHINGTON POST
MASS MEDIA + JOURNALISM
DOCUMENTATION OF WAR-TORN NEIGHBORHOODS IN HOMS, SYRIA
Civil Rights Implications
Domestic Drone Use Raises Issues

- Expectation of privacy in the digital age
- Government surveillance
- Regulation of private drone use
- The role of state government in crafting reasonable regulations
Drones Implicate the First Amendment and the Fourth Amendment

• First Amendment protects free speech, freedom of association and free press.

• Fourth Amendment safeguards Americans’ privacy and prevents excessive government intrusion by prohibiting “unreasonable searches and seizures.”
Drone Laws Cannot Infringe First Amendment Rights

• Constitution protects citizens from the government, not the other way around.
• Private drone regulations must be well-reasoned, thoughtful and narrowly drawn in response to specific harms that private use would cause.
• Regulations must protect the constitutional right of the public to photograph anything visible from a public vantage point.

• If regulations target certain speakers or viewpoints, it will be subject to the highest level of constitutional scrutiny and will likely be deemed unconstitutional under the First Amendment.
**Drones Erase “Natural Limits” on Aerial Surveillance**

**Manned aircraft**
- Expensive
- Requires pilot’s license and training
- Require licensed
- Other costs include maintenance, storage etc.
- High expenses ensures the government only uses air surveillance when necessary

**Drones**
- Affordable
- Easy to operate
- No training requirements
- No storage costs
- Low costs and great capabilities will lead to mass adoption and regular use
Fourth Amendment
Safeguards Americans’ privacy and prevents excessive government intrusion by prohibiting “unreasonable searches and seizures.”
Drones Make New Forms of Privacy
Invasion Possible

• Drones can be silent enabling surveillance without notice.
• Drones can maneuver into intrusive places helicopter can’t
  – Hover outside a third story window
  – Fly into a garage
• Drones can be equipped with many technologies
  – Facial recognition
  – License plate scanners
  – Radio frequency ID reader
Fourth Amendment Jurisprudence

• We are likely years away from US Supreme Court case law on drones.

• *California v. Ciraolo*, 476 U.S. 207 (1986) – Held that warrantless aerial observation of a person's backyard did not violate the Fourth Amendment to the United States Constitution.
  
  – Police may claim the right to operate drones for individual surveillance without a warrant, based on U.S. Supreme Court rulings in the 1980s that permitted manned aerial surveillance from airplanes and a helicopter without a warrant.

• *Kyllo v. United States*, the Supreme Court held the warrantless search of a home conducted from outside the home using thermal imaging violated the Fourth Amendment. The Court held that, “in the sanctity of the home, all details are intimate details”—it didn’t matter that the officers did not need to “enter” the home to “see” them.
SCOTUS Recognizes New Privacy-Invasive Technologies

- The US Supreme Court has signaled that the rapid evolution of technology has changed the playing field.
  - In *United States v. Jones*, the Court found that police conducted an unlawful search and seizure in violation of the Fourth Amendment when they deployed a GPS device to track a suspect’s vehicle without a warrant.
Where Will Courts Land on Drone Surveillance?

• The large and evolving body of Fourth Amendment law governing surveillance gives us hints about where courts will land on drones.

• The traditional Fourth Amendment framework will likely be applied but there are many moving parts for a court to review in determining the reasonableness of a drone search:
  – Location of the search (home, backyard, public etc.)
  – Surveillance equipment (high-resolution video cameras, microphones, night vision cameras and infrared or heat-sensing devices)
  – Society’s expectation of privacy in the digital age
Resources...

– ACLU Privacy and Technology Project
  • https://www.aclu.org/issues/privacy-technology/surveillance-technologies
– Electronic Frontier Foundation
  • https://www.eff.org/
– Congressional Research Service report on drones
  • https://fas.org/sgp/crs/natsec/R42701.pdf
– Federal Aviation Administration
  • http://www.faa.gov/uas/
Elements of Local Regulation

• Public use regulated by FAA
• State laws may apply
• City and county, too
• Local regulations may need to consider:
  – Trespass
  – Public safety
  – Records retention
  – Hunting

• Disaster response uses
• Military facility exclusions
Risk Management

- Risk management practice
- Who is covered by what insurance?
- What is covered?
What are the risks of loss, will they be covered by insurers, and how will Courts view drone use (more or less risky than alternatives)?

As recreational drone use becomes more prevalent, will local governments pass nuisance laws that might also impact public uses?
<table>
<thead>
<tr>
<th>HAZARD</th>
<th>PROBABILITY</th>
<th>SEVERITY</th>
<th>RISK LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Conflict with other traffic</td>
<td>Seldom</td>
<td>Catastrophic</td>
<td>High (8)</td>
</tr>
<tr>
<td>2. Conflict during execution of lost link procedures</td>
<td>Seldom</td>
<td>Catastrophic</td>
<td>High (8)</td>
</tr>
<tr>
<td>3. Weather/Wind/Icing</td>
<td>Occasional</td>
<td>Critical</td>
<td>High (7)</td>
</tr>
<tr>
<td>4. Failure of Command Link</td>
<td>Likely</td>
<td>Moderate</td>
<td>Medium (9)</td>
</tr>
<tr>
<td>5. UAS Mechanical failure</td>
<td>Seldom</td>
<td>Critical</td>
<td>Medium (11)</td>
</tr>
<tr>
<td>6. UAS Software failure</td>
<td>Seldom</td>
<td>Critical</td>
<td>Medium (11)</td>
</tr>
<tr>
<td>7. Failure of Air Traffic Control Radar</td>
<td>Seldom</td>
<td>Moderate</td>
<td>Low (14)</td>
</tr>
<tr>
<td>8. Failure of Air Traffic Control Communications</td>
<td>Seldom</td>
<td>Moderate</td>
<td>Low (14)</td>
</tr>
<tr>
<td>9. Improper Route Planning/Scheduling</td>
<td>Seldom</td>
<td>Moderate</td>
<td>Low (14)</td>
</tr>
<tr>
<td>10. Improper Mission Plan development</td>
<td>Unlikely</td>
<td>Critical</td>
<td>Low (15)</td>
</tr>
<tr>
<td>11. UAS systems failures</td>
<td>Unlikely</td>
<td>Critical</td>
<td>Low (15)</td>
</tr>
<tr>
<td>12. Improper Command link settings</td>
<td>Unlikely</td>
<td>Critical</td>
<td>Low (15)</td>
</tr>
<tr>
<td>13. Improper Communication system settings</td>
<td>Unlikely</td>
<td>Critical</td>
<td>Low (15)</td>
</tr>
<tr>
<td>14. Inadequate Information display systems</td>
<td>Unlikely</td>
<td>Critical</td>
<td>Low (15)</td>
</tr>
<tr>
<td>15. Position error</td>
<td>Unlikely</td>
<td>Moderate</td>
<td>Low (16)</td>
</tr>
</tbody>
</table>
Commercial Use of UAS

- Three ways to fly a UAS for commercial purposes:
  - Follow the requirements of the Small UAS Rule (Part 107)
  - Follow the rules of your Section 333 grant of exemption
  - Obtain an airworthiness certificate for the aircraft

- ALL UAS flown for commercial purposes must be registered by the individual owner ($5 each)—name, address, e-mail address, make, model and serial number
Small UAS Rule (Part 107)

- Effective August 29, 2016
Small UAS Rule (Part 107) (cont’d)

OPERATIONAL LIMITATIONS

• Weigh 55 lbs. or less
• Visual line-of-sight (VLOS) only
  – Must remain within VLOS of the remote pilot in command and the person manipulating the flight controls of the small UAS
  – Alternatively, the unmanned aircraft must remain within VLOS of the visual observer

• At all times the small unmanned aircraft must remain close enough to the remote pilot in command and the person manipulating the flight controls of the small UAS for those people to be capable of seeing the aircraft with vision unaided by any device other than corrective lenses

• May not operate over any persons not directly participating in the operation, not under a covered structure, and not inside a covered stationary vehicle
Small UAS Rule (Part 107) (cont’d)

• Daylight-only operations, or civil twilight (30 minutes before official sunrise to 30 minutes after official sunset, local time) with appropriate anti-collision lighting
• Must yield right of way to other aircraft
• May use visual observer (VO) but not required
• Maximum groundspeed of 100 mph (87 knots)
• Maximum altitude of 400 feet above ground level or, if higher than 400 feet AGL, remain within 400 feet of a structure
Small UAS Rule (Part 107) (cont’d)

• Minimum weather visibility of 3 miles from control station
• Operations in Class B, C, D, and E airspace are allowed with the required permission
• Operations in Class G airspace are allowed without permission
• No person may act as a remote pilot in command or VO for more than one unmanned aircraft operation at one time
• No operations from a moving aircraft
• No operations from a moving vehicle unless the operation is over a sparsely populated area
• No careless or reckless operations
• No carriage of hazardous materials
Small UAS Rule (Part 107) (cont’d)

• Requires preflight inspection by the remote pilot in command

• No operation by person who knows or has reason to know of any physical or mental condition that would interfere with the safe operation of a small UAS

• External load operations are allowed if the object being carried by the unmanned aircraft is securely attached and does not adversely affect the flight characteristics or controllability of the aircraft
Small UAS Rule (Part 107) (cont’d)

• Transportation of property for compensation or hire allowed IF
  – The aircraft, including its attached systems, payload and cargo weigh less than 55 pounds total;
  – The flight is conducted within visual line of sight and not from a moving vehicle or aircraft; and
  – The flight occurs wholly within the bounds of a State and does not involve transport between (1) Hawaii and another place in Hawaii through airspace outside Hawaii; (2) the District of Columbia and another place in the District of Columbia; or (3) a territory or possession of the United States and another place in the same territory or possession.

• Most of the restrictions are waivable if the applicant demonstrates that his or her operation can safely be conducted under the terms of a certificate of waiver (Part 107 Waiver)
Small UAS Rule (Part 107) (cont’d)

• To qualify for a remote pilot certificate, a person must:
  – Demonstrate aeronautical knowledge by either:
    • Passing an initial aeronautical knowledge test at an FAA-approved knowledge testing center; or
    • Hold a part 61 pilot certificate other than student pilot, complete a flight review within the previous 24 months, and complete a small UAS online training course provided by the FAA.
  – Be vetted by the Transportation Security Administration.
  – Be at least 16 years old.

• Temporary Certification within 10 business days (then after vetted by TSA, certification delivered)
Small UAS Rule (Part 107) (cont’d)

• A 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 under the rule.
  – 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 a 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 unmanned aircraft complies with the existing registration requirements

• A remote pilot in command may deviate from the requirements of this rule in response to an in-flight emergency
Aircraft Requirements

- FAA airworthiness certification is not required. However, the remote pilot in command must conduct a preflight check of the small UAS to ensure that it is in a condition for safe operation.
Part 107 Waivers

• The waiver application asks how you intend to safely conduct your operation.
• Completed through FAA’s online portal
• As of January 23, 2017, FAA issued 318 Part 107 waivers (mostly for operation at night)
Part 107 Waivers (cont’d)

- The ‘waivable’ sections of Part 107 are:
  - Operations from a moving vehicle or aircraft (§ 107.25);
  - Daylight operation (§ 107.29)
  - Visual line of sight aircraft operations (§ 107.31)
  - Visual observer (§ 107.33)
Part 107 Waivers (cont’d)

- Operation of multiple UAS (§ 107.35)
- Yielding right of way (§ 107.37);
- Operation over people (§ 107.39)
- Operation in certain airspace (§ 107.41)
- Operating limitations (i.e., visibility) (§ 107.51)
Part 107 Waivers (cont’d)

• CNN received first ever approval to fly drones over people
• Nightingale Intelligent Systems (robotic aerial security) and Airobiotics (automated industrial drones) received first approvals to fly drones at night
Section 333 Exemptions

- Section 333 Exemptions
  - Remain valid until its expiration date
  - Continue flying following the conditions and limitation in the exemption
  - May elect to operate under Part 107 but must obtain a remote pilot certification and follow all of the Part 107 operating rules
Penalties for Violation

• Failure to register violations
  – Regulatory and criminal penalties
  – Civil penalties up to $27,500
  – Criminal penalties up to $250,000 and/or imprisonment for up to 3 years

• Operational violations
  – There is no one-size-fits-all enforcement action for violations. All aspects of a violation will be considered, along with mitigating and aggravating circumstances surrounding the violation. In general, the FAA will attempt to educate operators who fail to comply with registration requirements. However, fines will remain an option when egregious circumstances are present.
Enforcement

• From aerial photographers, to journalists and even tornado researchers
• The range of fines (and settlements) starts at $400, and reaches $200,000 (originally $1.9 million against SkyPan)
• If you are flying your drone on the East Coast, the FAA’s eastern region office seems to be the most active in this area of enforcement so operate your drone properly and safely. Otherwise, there were only a few isolated fines in Texas, Alabama and Puerto Rico.
Enforcement (cont’d)

• SkyPan International Inc. (SkyPan), an aerial photography company (originally fined $1.9 million)—October 2015
  – For carrying out 65 unauthorized drone flights from March 2012 to December 2014
  – Flew its drones over highly populated cities, such as New York City and Chicago, in “congested airspace” and allegedly “endangered the safety of [the] airspace”
  – The drone flights did not have two-way radio capabilities, or altitude reporting equipment, which are both required under FAA drone regulations
  – Did not have an airworthiness certificate or effective registration for its drones.
  – Recently settled this with FAA for $200,000 and conditions like aiding in creating awareness among the public on safe drone operations.
Enforcement (cont’d)

FOIA Request Response from FAA (June 2016)

• Austin, Texas, August 30, 2014, Shawn Phillip Wyse; $1,100;
• Tuscaloosa, Alabama, November 14, 2015, Gregory Taylor; $1,100;
• Queens, New York, May 25, 2014, Clinton Bascom; $1,100;
• San Juan, Puerto Rico, October 18, 2015, Marcos Plaja-Ferreira and Alberto Haber-Flores; $1,100 each;
• US Coast Guard Housing Complex Rio Bayamon, Puerto Rico, Jorge Lubo, July 5, 2015; $1,100;
• Fairfield Avenue and Fort George Hill (Bronx), Wilkens Mendoza, July 7, 2014; $1,100;
• Capitol Building, Albany, New York, Adam Rupeka, September 17, 2015; $1,100;
Enforcement (cont’d)

• Portside Apartments, East Boston, Jose Paderes, August 30, 2015; $1,100;
• Manhattan, New York, July 7, 2014, Remy Castro; $1,600;
• Arlington, Texas, June 8, 2014, Robert Eddelman; $2,200;
• 290 Central Avenue, Brooklyn, Isaac Rosa, September 17, 2014; $2,200;
• 38th Street between 3rd Avenue and Lexington Avenue, Manhattan, David Zablidowski, September 30, 2013; $2,200;
Enforcement (cont’d)

- Citi Field, Henry Wolters, May 6, 2015; $2,200;
- Billie Jean King National Tennis Center, Queens, Daniel Verley, September 3, 2015; $2,200;
- Washington DC, (Polo Fields in West Potomac Park), Damian Dizard, March 25, 2015; $3,300;
- West Potomac Park, Washington DC, Monica Singleton, March 25, 2015; $3,300;
- Lafayette Park, Washington DC, Ryan MacDonald, May 14, 2015; $4,400;
Enforcement (cont’d)

- Washington D.C., (G Street and 10th St NW) Shawn Usman, January 26 2015; $5,500;
- University of Virginia, Charlottesville, Raphael Pirker, April 13, 2012; $10,000;
- 441 East Fordham Road, Bronx NY, Xizmo Media Productions, May 16, 2015; $18,700;
- All over Manhattan, SkyPan; $1.9 Million; and
- Coney Island Boardwalk, David Quinones, July 4, 2015; Surrendered Pilot’s license.
Privacy + Security Implications

• Although Part 107 does not specifically deal with privacy issues, and the FAA does not (and has not agreed to) regulate how UAS gather data on people or property, the FAA “strongly encourages all UAS pilots to check local and state laws before gathering information through remote sensing technology or photography.”

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Privacy + Security Implications (cont’d)

• Recommended privacy guidelines issued in May 2016
  – By privacy groups and industry stakeholders that were participating in the National Telecommunications & Information Administration (NTIA) Multi-Stakeholder process released a set of best practices for commercial and private drone use. Participants included Amazon, AUVSI, Center for Democracy and Technology, Consumer Technology Association, CTIA, FPF, Intel, X (formerly Google X), New America’s Open Technology Institute, PrecisionHawk, SIIA, Small UAV Coalition, and many media organizations
Privacy + Security Implications (cont’d)

– The voluntary best practices:

1. Inform others of your use of drones (i.e., where reasonable, provide prior notice to individuals of the general timeframe and area where you may anticipate using a drone to collect identifiable data);

2. Show care when operating drones or collecting and storing personally identifiable data (i.e., retain only information that you must retain and de-identify information when possible);

3. Limit the use and sharing of identifiable data;

4. Secure identifiable data; and

5. Monitor and comply with evolving federal, state and local drone laws and regulations.
Vulnerability to Cyber-Attacks

- Thriving community of ‘drone hackers’ already exists
- Threats to Security
  - Unencrypted data links from command to control and navigation
  - Particularly vulnerable to jamming, interception and manipulation (and equipment for this is relatively low cost)
  - GPS vulnerability/spoofing
  - Software changes during maintenance – could corrupt programming or introduce malware
Vulnerability to Cyber-Attacks (cont’d)

• Threats are evolving rapidly
  – After market models pose threat to security
  – Current UAS designs have different threats than future designs

• No set FAA standards for security
  – FAA recommends using the NIST (National Institute of Standards and Technology) framework as a primary standard
  – Also look to RTCA (Radio Technical Commission for Aeronautics) for security standards

• NOTE: National Airspace is classified as a national critical infrastructure
Other Legal Considerations

• Contracting with UAS pilots/operators and/or UAS vendors
  – Review contracts to ensure compliance with FAA regulations
  – Indemnification
  – Insurance
• Implement a UAS Privacy + Security Policy
• Insure UAS operations
• Determine which (if any) Part 107 Waivers are Needed
• Create system for keeping up to speed with local, state and federal laws
Questions?

Call or email:

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www.dataprivacyandsecurityinsider.com
PREEMPTION

Preempted by the FAA

• Laws related to equipage of the aircraft.

• Laws related to knowledge testing or training.

• Laws regulating any airspace that can be deemed as navigable airspace for manned aircraft.

• Laws that are so difficult to comply with that they amount to a prohibition on operations
Preempted by the FAA

- Outright bans on drones
- Limiting drones to narrow bands of airspace, such as 100 feet above the ground
- Requiring a flight permit that is subject to a lengthy approval process
- Requiring that drones have certain types of equipment like transponders or “geofencing”
- Requiring that operators in the city take a flight test
Institute for National Security and Counterterrorism, Syracuse University, “Domesticating the Drone”

http://uavs.insct.org/local-regulation/
National League of Cities
“Cities and Drones”

Paradise Valley, Arizona

- Not under 500’ without owner permission
- Not over public property without a permit
- Commercial users must register

1. “Commercial Use” means the use of an Unmanned Aerial Vehicle within the Town for a commercial purpose, including aerial photography, aerial mapping, or geospatial imaging.
Barstow, California

- Not within 50’ of a right-of-way
- Does not prohibit model aircraft
- Privacy-oriented
Berkeley, California

• Moratorium adopted for one year banning police use
12.36.050 - Prohibited acts. No person, group or organization in any park or recreational area shall:

... 

P. Use unmanned aircraft systems (drones) of any size
Los Angeles, California

- Can’t fly above 400’
- Must be visual line of sight
Manhattan Beach, California

- Modelled after Los Angeles and Beverly Hills ordinances
Rancho Mirage, California

- May not fly below 400’ anywhere, except over a single residence with owner’s permission and with a permit
Cherry Hills Village, Colorado

• Commercial operators authorized by FAA exempt
Residents in the Colorado town have voted down a unique proposal that highlighted displeasure with government surveillance and would have allowed townspeople to get licenses to shoot down drones in local airspace.”
Bonita Springs, Florida

“Unmanned aircraft. Any person who obtains a special event permit may use a drone to photograph their special event in the park during the course of the event.”
“This section is intended to promote public safety and protect people attending large venue public events from the flying of unmanned aircraft systems ("UAS") in and over such large public events.”
Orlando, Florida

- Restrictions near city-owned parks, schools, and certain venues, and gatherings of more than 500 people
- Indemnification
- Insurance
“Commercial UAS flight. A flight of a UAS for commercial purposes that has been authorized or approved by the FAA and the operator of such UAS has a FAA standard or special airworthiness certificate; or a Certificate of Waiver Authorization from the FAA; or an exemption under Section 333 of the FAA Modernization and Reform Act of 2012; or other verifiable authorization from the FAA granting permission for a UAS flight or flights.”
Sec. 42-55. - Use of engine-powered models, toys and unmanned aerial systems.

It shall be unlawful for any person to start, fly or use any fuel-powered engine, jet-type or electric powered model aircraft, boat or rocket or like powered toy or unmanned aerial system, except at those areas designated by the county for such use and then only in accordance with such rules, regulations and restrictions established by the director or the director's authorized agent.
Chicago, Illinois

• Over homes with permission
• Exempts FAA authorized
Let moratorium expire: “Ald. Rainey clarified that the moratorium has expired and the Committee is voting not to renew the moratorium because the state and federal laws regarding drones are sufficient.”
Manhattan, Illinois

- Exempts commercial use if registered
§ 109A.02 - OPERATION OF DRONES PROHIBITED. The operation of a drone within one hundred (100) feet of the perimeter of any village property or on any village right-of-way during a special event is hereby prohibited.
Barnstable, Massachusetts

Section 401A-6(C) Prohibited Activities: “Using, launching, landing or operating an unmanned aircraft from, or on, land or waters associated with any of the Town of Barnstable bathing beaches is prohibited except as approved in writing by the Town Manager.”
Northampton, Massachusetts

BE IT FURTHER RESOLVED, that the City of Northampton affirms that, within the city limits, the navigable airspace for drone aircraft shall not be expanded below the long-established airspace for manned aircraft; and
St. Bonifacius, Minnesota

- No operation in the City’s airspace, except...

c. it is operated only within the boundaries of an individual’s real property, and has no surveillance capabilities.
Bernards Township, New Jersey

• No drones in the parks or recreational facilities:
  “j. The flying and/or launching of unmanned aircraft by the public, including model or remote control airplanes, helicopters, recreational drones and rockets, is prohibited. This shall not prohibit any federal, state, county or municipal agency, law enforcement agency or emergency services organization from the use of drones and unmanned aircraft for any lawful and authorized purpose pursuant to applicable regulation.”
3-12.2 Regulations.

a. Except as otherwise provided in subsection 3-12.3, drones and unmanned aircraft are prohibited from being launched from any government or public buildings, property, or parks within the Township or landing on any government or public buildings, property, or parks within the Township.

b. Except as otherwise provided in subsection 3-12.3, drones and unmanned aircraft are prohibited from operating or flying in any airspace below four hundred (400) feet within the airspace over any government or public buildings, property, or parks within the Township.

(Ord. No. 2015-16)

3-12.3 Exceptions.

a. This section shall not prohibit the constitutional use of drones and unmanned aircraft by any law enforcement agency or emergency services organization of or servicing the Township, the State of New Jersey, or the United States of America for lawful purposes and in a lawful manner.

b. This section shall not prohibit any Federal, State, County or municipal agency from the use of drones and unmanned aircraft for any lawful and authorized purpose pursuant to applicable regulation.

c. This section shall not prohibit the use of unmanned aircraft by any Federal, State, County or municipal agency, including, but not limited to, law enforcement and emergency services agencies, for lawful purposes and in a lawful manner.

(Ord. No. 2015-16)
New York, New York

• Unregulated?
Orchard Park, New York

- No operations near certain open-air events, except with written permission by the town
Syracuse, New York

• No operations by the City until federal and state law further developed
Kannapolis, North Carolina

- No operations in parks
Grand Forks, North Dakota

- No operations, with some exceptions for law enforcement, emergencies, etc.
- Drone assisted policing
Celina, Ohio

• Operations permissible with City’s permission granted by Safety-Service Director
Cleveland, Ohio

- Registration with FAA and notification of airport control
Pittsburgh, Pennsylvania

• No operations in parks
Aberdeen, South Dakota

• Restrictions, but permissible by property owners and with their permission
Charlottesville, Virginia

- David Swanson anti-drone regulation received, but not acted on
1.30.020 Restrictions on Gathering Evidence.

No County department or agency shall use a drone or other unmanned aircraft to gather evidence or other information pertaining to criminal conduct or conduct in violation of a statute, ordinance, regulation or rule, except as authorized by state and federal law.
Seattle, Washington

- Restricts City's use
- Also, restricted in parks
Antigo, Wisconsin

- UAV testing and training at Langlade County Airport supported
Chetek, Wisconsin

- Flight level restrictions in the airport zone
Green Bay, Wisconsin

- May not fly “below an altitude of 400 feet within the designated boundaries of a special event during the scheduled time of the event. This subsection shall not apply to authorized public safety agencies or operators having obtained approval from the event organizer or from the Federal Aviation Administration.”
Outagamie County, Wisconsin

- Requires UAV operations at the airport to comply with FAA and county ordinances
Questions and, 
we hope, 
some answers...