



## Public Agency Drone Use in Minnesota:

*Navigating the changing rules and regulations that  
guide UAS (drone) use by a public agency*

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We all have a stake in **A→B**










## Aircraft defined

“Aircraft” means any contrivance now known or hereafter invented, used, or designed for navigation of or flight in the air, but excluding parachutes. (MN Statute 360.013)














## What is an UAS/UAV/Drone?

- Unmanned Aircraft System (UAS)
- Unmanned Aerial Vehicle (UAV)
- Remotely Piloted Aircraft (RPAS)

**Pirker case:** An unmanned aircraft is an aircraft operated without the possibility of direct human intervention from within or on the aircraft.



**FAA Part 107:**

- Affirmed *Pirker* interpretation
- An Unmanned Aircraft System (UAS) is a small unmanned aircraft and its associated elements











## Jurisdiction

- FAA has exclusive jurisdiction over the National Airspace (NAS)
  - FAA defines this as “above the grass”
- The State has jurisdiction over what happens on the ground:
  - regulating Aircraft, Airmen, and Airports under Minn. Stat. Chapter 360
- Law enforcement’s role– Protect and Serve











## FAR Part 107 Operating Requirements

FAA Requires:

- ▶ Aircraft registration
- ▶ Knowledge test
  - 16 years or older
  - Pass a TSA background check
  - or Pilot's License + course



Minnesota requires:

- ▶ Aircraft registration
- ▶ Commercial Operator License
- ▶ Insurance



## FAR Part 107 Flight Restrictions

Current FAA Regulations require:

- ▶ UAS weighs less than 55 lbs
- ▶ Daylight and visual line of sight
- ▶ May not operate over people or moving vehicles
- ▶ Maximum of 400 feet or within 400 feet of a structure
- ▶ ATC permission in Class B, C, D, and E airspace
- ▶ Must report accidents or face \$500 fine
- ▶ TFR over stadiums that hold 30,000 or more
- ▶ Permission from airports within 5 miles



## Things to consider: Safety

- ▶ **SAFETY!!!** You have to consider an area 360° around your operation, not just the object of the UAS flight.
  - What do the rules allow?
  - How will you stay in compliance with the rules?
  - Do you need an exception? If so...
  - Apply for a COA with sufficient lead time.



## Things to consider: Location

- ▶ Is your operation within 5 miles of an **AIRPORT**?
- ▶ Is your operation in or around a **NATIONAL PARK**?
- ▶ Is your operation around a **HOSPITAL**?
- ▶ Is your operation around a **STADIUM**?



## Things to consider: Public Perception



- ▶ Will this make the news because:
  - We want to advertise our cutting edge programs.
  - The neighbors are complaining that we are spying on them.
  - We had a crash and it involved ...
- ▶ How will we protect private data?
  - If we are collecting data, how do we keep from getting pictures of the public?
  - If we do get the public, how do we address the privacy issues involved?



## Using UAS for Education

- ▶ FAA Memorandum Dated May 4, 2016
- ▶ Allows students to be considered Model Aircraft operators for use in Aviation Related Coursework or for Film, etc where the use of the UAS is a part of the Coursework.
- ▶ Use of the UAS to produce a product, including research being conducted by the professor is not considered Model Operations.
- ▶ Use of the teacher is subject to greater scrutiny and educational institutions should read this guidance closely.



## Excerpt from FAA Memorandum

Therefore, we find that the use of small unmanned aircraft by students at accredited educational institutions as a component of science, technology and aviation-related educational curricula or other coursework such as television and film production or the arts more closely reflects and embodies the purposes of "hobby or recreational" use of model aircraft and is consistent with the intent of section 336 of the FMRA. Accordingly, the FAA concludes that student use of UAS at accredited educational institutions as a component of their science, technology and aviation-related educational curricula, or other coursework such as television and film production or the arts, is "hobby or recreational use" within the meaning of the FMRA. The student is, however, responsible for meeting and complying with all other elements required for lawful model aircraft operations pursuant to Section 336 of the FMRA, including the student not receiving any form of compensation (including reimbursement of costs, honorarium, etc.) directly or incidentally to his or her operation of the model aircraft.<sup>9</sup>

### Faculty Use of Model Aircraft



## Using UAS for Research

- ▶ Public aircraft operations=operations that do not have a commercial purpose
- ▶ "governmental function" means an activity undertaken by a government:
  - national defense
  - intelligence missions
  - firefighting
  - search and rescue
  - law enforcement (including transport of prisoners, detainees, and illegal aliens)
  - aeronautical research
  - biological or geological resource management.



## Accident Reporting

- ▶ Required to report to the FAA within 10 days of accident that causes \$500 or more damage or serious bodily injury
- ▶ May require law enforcement involvement for reporting purposes



## Things You Can't Do With Aircraft in MN

- ▶ Minn. Stat. §360.075 creates misdemeanor:
  - Operate over land or water without consent of owner
  - Operate without license and registration
  - Damages or interferes with other aircraft
  - Operates in a willful or wanton disregard for the safety of persons or property
  - Carries an explosive
  - Discharges a gun or weapon
  - Dropping objects
  - Endangering or killing wildlife
  - Etc...



## Flight Liability: MN Law

- ▶ Minn. Stat. § 360.012 subd. 3:
  - "Flight in aircraft over the lands and water of this state is lawful, **unless at such low altitude as to interfere with the then-existing use to which the land or water**, or the space above the land or water, is put by the owner, or unless so conducted as to be **imminently dangerous or damaging to persons or property** lawfully in the land or water beneath..."
- ▶ Minn. Stat. § 360.012 subd. 4: Strict Liability
  - "The owner of every aircraft which is operated over the lands or waters of this state is **absolutely liable for injury or damage to persons or property on the land or water beneath**, caused by the ascent, descent, or flight of the aircraft, or the dropping or falling of any object therefrom, whether such owner was negligent or not, unless the injury or damage is caused in whole or in part by the negligence of the person injured..."



## Flight Liability: FAA Penalties

- ▶ Civil penalties up to \$27,500
- ▶ Criminal penalties including fines up to \$250,000 and/or imprisonment for up to three years



## Resources

- ▶ User Resources
  - [Knowbeforeyoufly.org](http://Knowbeforeyoufly.org)
  - [uavcoach.com](http://uavcoach.com)
- ▶ FAA Resources
  - [Section 333 Exemptions](#)
  - [Publically Released COAs](#)
- ▶ [MnDOT Aeronautics](#)



## Questions?

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