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Business Advocate℠

a community for collaboration

This is a basic safety class, not an accredited course.
Focusing primarily on workplace education and safety

Promoting the Safe Use of Aerial Drones in the Workplace

Protect yourself and others by learning to fly safely!

A Safety Orientation on Drone Use

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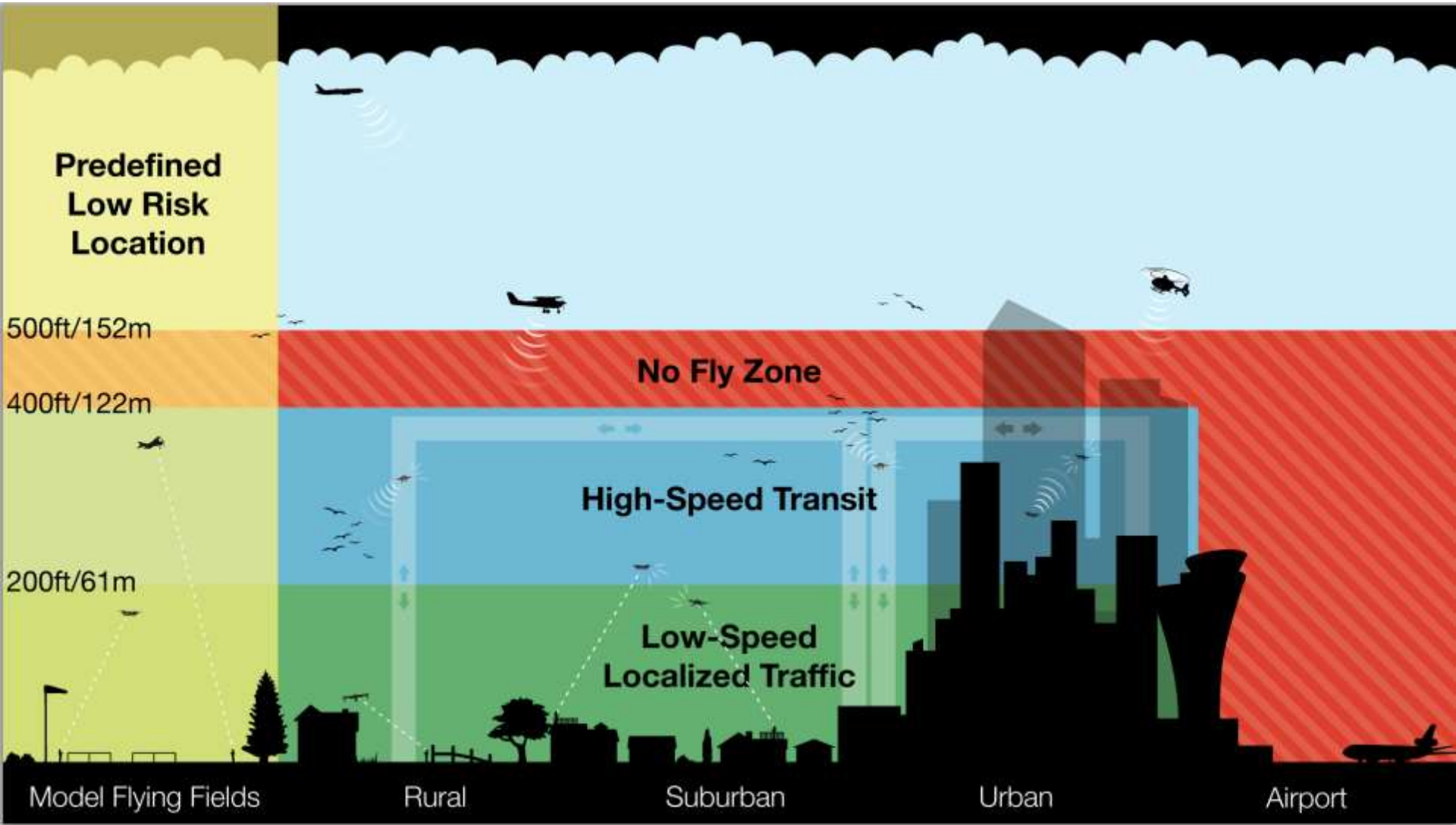
National Air Space Regulations

- FAA Advisory Circular 91-57A defines Model Aircraft Operating Standards (Not Commercial)
- Pilot License, FAA 333 exemption and Air Worthiness Certificate needed to fly Commercially
- Temporary Flight Restrictions are found at http://tfr.faa.gov/tfr2/list.html
- Notices to Airman are found at: https://www.faa.gov/air_traffic/publications/notices/
- AeroNav is the authority on airspace conditions; www.faa.gov/air_traffic/flight_info/aeronav/

Possible Airspace Configuration with High Speed Delivery Zone

Not Actual Law Yet!
This has only been proposed by industry



Local Regulations

- https://www.flsenate.gov/Laws/Statutes/2015/934.50 established no surveillance by law enforcement using a drone without a warrant
- SB 766 effective 7-1-15 Drones can't be used to violate a person's reasonable expectation of privacy, by ANYONE or ANY ENTITY.
- New laws are being drafted to increase personal responsibility and liability like SB 642, recently considered, defining a drone as a "Dangerous Instrumentality" That the operator should be held liable for.
- None of these bills limit Liability for damages, creating a rare opportunity for large damage awards to plaintiffs.
- Local municipalities may restrict where drone operations may take-off and land from; like parks. In some cases all public spaces are being considered for total bans. HOA's and private clubs are also testing the waters to see if they can restrict the use of aerial drones

NO DRONE ZONE

Federal Aviation Administration

What are my Rights? Responsibilities?

- The standard (generally) is reasonable expectation of privacy. Which means whether a person reasonably expected that their actions in a specific place would be private. Typically: inside the home; fenced in or remote area.
- Anyone can use a cellphone to video your public antics, and they can use a Drone to record these events, as long as they are not breaking a local ordinance, or Private Community regulation that is in effect.
- Using a drone to video the neighbor from "Over the Fence" is not allowed. Not by government, not by private investigators, exes, or any civilian authority like a condo Board Member. That violates a persons right to expect privacy. See F.S. 934.50.
- Be Polite to others. Always ask permission, and do not Fly near people, pets.
- Safeguard any Media that you record, or be responsible for damages if leaked. Delete recordings of other people, if not given permission.
- Be polite at all time, or risk losing the right to Fly in the National Air Space!
- All owners of drones that weigh more than ½ pound must be registered at https://registermyuas.faa.gov/ and the number must be on each aircraft. Only Commercial owners must register the aircraft separately.

Get a professionally produced
Registration Label for your drone
FA349EA4M4M
FA349EA4M4M

Some of the Major Concerns

- Don’t fly in Strong Winds or Bad visibility
- Wi-Fi networks disrupt radio control
- Must adhere to all TFR’s and Air Space regulations.
- Use eye protection around equipment.
- Use prop guards if flying indoors or near structures.
- Never used frayed cords, bulging batteries or unsafe equipment.
- Spectators are too distracting to a pilot.
- Never fly with chipped or nicked props, as they can shatter in flight and cause personal injury.
- Florida UAS Laws primarily address privacy issues!

FAA Has 3 Categories of Pilots

- **Hobbyist – Enthusiast** is a person who is using the equipment for personal enjoyment and recording personal events like a birthday party.
- **Civil Operations (Commercial)** use is defined as “when the equipment is used for gain”; whether monetary, or for advertising or barter.
- **Public Operations** use is police, fire, university or most public agencies using this equipment for public good.

VP
RE/MAX
www.robart.com

FAA Drone Hobbyist Guidelines

- Daylight Operation only. The best place to fly is an approved airstrip.
- Must fly within visual line of sight, not FPV and not with Visual Assistance
- Cannot fly within 5 miles of an airport without permission
- 400 foot Max Ceiling, but must give all other aircraft right of way
- Craft must weigh under 55lbs with payload
- Cannot fly above people, except operator Don't fly above stadiums or events.
- Max airspeed of 100 MPH
- Minimum Weather Visibility of 3 miles from Base Station
- No person may act as an operator or VO for more than one unmanned aircraft operation at one time.
- No careless/ reckless operations. Should get flight safety certified on aircraft
- Requires preflight inspection by the operator. Responsible for safe operating condition, maintaining proper fuel or battery levels, etc.
- A person may not operate a small unmanned aircraft if he or she knows or has reason to know of any physical or mental condition that would interfere with the safe operation of a small UAS

Know Before You Fly

DO:
FLY YOUR UNMANNED AIRCRAFT BELOW 400 FEET

DO:
FLY WITH LOCAL CLUBS

DO:
INSPECT YOUR AIRCRAFT BEFORE YOU FLY

DO:
TAKE A LESSON BEFORE YOU FLY

DON'T:
FLY YOUR UNMANNED AIRCRAFT BEYOND LINE OF SIGHT

DON'T:
FLY NEAR AIRPORTS OR ANY MANNED AIRCRAFT

DON'T:
FLY NEAR PEOPLE *or* STADIUMS

DON'T:
BE CARELESS *or* RECKLESS. YOU COULD BE FINED IF YOU ENDANGER PEOPLE OR OTHER AIRCRAFT

DON'T:
FLY ANYTHING THAT WEIGHS MORE THAN 55 LBS.

DON'T:
FLY FOR PAYMENT *or* COMMERCIAL PURPOSES UNLESS SPECIFICALLY AUTHORIZED BY THE FAA

www.faa.gov/uas • www.knowbeforeyoufly.org

SMALL UAV COALITION
A Partnership for Safety & Innovation

AMA
ACADEMY OF MODEL AERONAUTICS

AUVSI
ASSOCIATION FOR UNMANNED VEHICLE SYSTEMS INTERNATIONAL

Federal Aviation Administration

Know before you fly a Drone HOW to fly!

- Practice on a computer Flight Simulator Program at home before you Fly.
- The knowbeforeyoufly.org website has valuable info definitions and resources
- The AMA (Academy of Model Aeronautics) is a national club that promotes safe flying and good communication with it's members. Often required to fly in parks.
- YouTube offers a lot of videos on how to fly different aircraft
- Local Radio Controlled Hobby Clubs offer wisdom, guidance and free advice. Sometimes they even offer free training, mentoring programs and coaching (e.g. Palm Beach Radio Control Flyers Association, RC Bush Pilots)
- Learn where NOT to fly first; 5mi of Airports, government buildings, over crowds or roadways.
- Fly with 2 people; the Operator and a flight Commander who watches out for other craft, nearby dangers or anomalies and tells you how to avoid them.
- Always keep your craft within visual range, and below 400 ft., preferably below 200 ft. ALWAYS avoid other aircraft by giving them the right of way; especially give manned aircraft the right of way. Lives are depending on it.
- Return the aircraft to the ground by the time your battery or fuel is at 25% capacity, so you can land amid any exceptional circumstances.

FAA Know B4UFLY Campaign

- http://knowbeforeyoufly.org/
- https://www.faa.gov/uas/b4ufly/
- App available for Apple & Android Phones
- Website offers videos, brochures and signage that you can print out for No Fly Zones, etc.

Commercial Drone Use Regulations

- Drone pilot must be FAA certified aircraft pilot
- Pilot must have 333 exemption and COA to fly drones
- 333 Exemption must list drones and radios to be used as well as flight procedures, etc.
- Pilot must have current health certificate
- Pilot must carry insurance on each aircraft (+-$100/mo)
- 2nd operator must be present at all times as Visual Observer.
- Flight records must be maintained and submitted to FAA each month, with Crashes reported within 1 day.

Dutch Government successfully used Aerialtronics drones to control traffic
The Hague, Netherlands, Wednesday, July 1, 2015

DATAhawk

Public or Government Use

- The FAA, and frankly everyone, approves of the safe use of this technology by trained professionals in the public sector who only use it for the benefit of the public. (e.g. disaster recovery, Search and Rescue missions, etc.)
- Agency must apply for and receive a COA. The COA allows an operator to use a defined block of airspace and includes special safety provisions unique to the proposed operation.
- This link shows how the flow-chart of determination works: https://www.faa.gov/uas/public_operations/media/Decision_Flowcharts_for_PAO.pdf
- Public Use is determined on a Flight by Flight basis, requiring supporting documentation be maintained.
- Nothing in the law prevents an agency from being sued.
- Must not use drones or developing technology to violate a persons expectation to privacy, (especially in Florida).

Drone Costs, Configurations and Concerns

- A typical small home use drone with smart flight controls and FPV will cost you from $1000 to $4500 depending on manufacturer selected, options, camera used, etc. (Yuneeq, DJI, Aquacopter, Etc.) Anyone can fly in minutes.

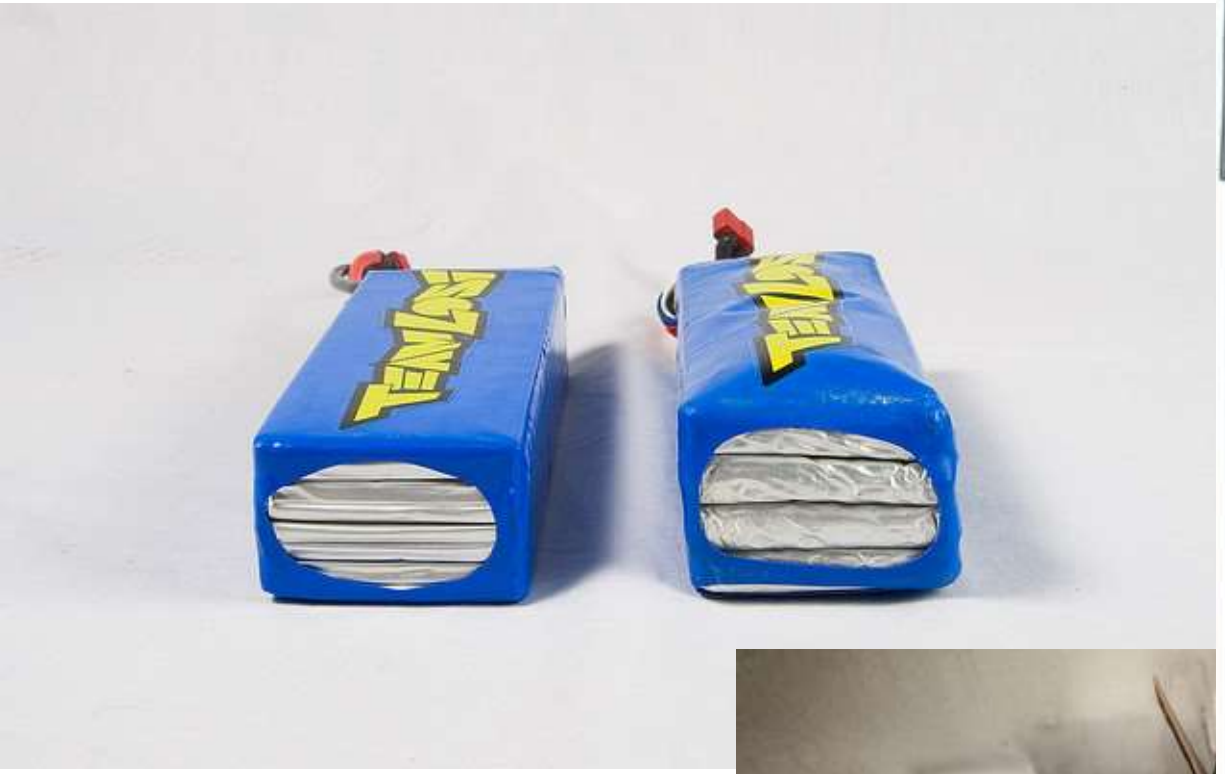
- A medium investment, which will do Professional Cinematography, will run $5,000 - $75,000, and takes several days or weeks to learn how to use.

Palm Beach Drone - Civilian UAV Resources

- Drones require fuel or Battery Storage, hazardous conditions exist.
- Legal and insurance issues are in early stage of development

Lipo Battery Use, Charging, Discharging & Storage

- Lithium Polymer (LiPo) batteries are used in most RC applications because of their ability to “Release” all of their energy very quickly, and they recharge very quickly.
- LiPo batteries can catch fire, although not often.
- LiPo fires are extremely hard to contain, as they are a chemical fire.
- ALWAYS charge and discharge LiPo batteries in a Fire Resistant Charging Bag to avoid being injured and loss of property.
- Never store LiPo batteries with a Full Charge; discharge to ½ charge
- Store Batteries in a Fire Resistant Charging Bag when not in use.
- Land the plane or copter when battery strength is reduced to 25%
- Unplug batteries from Aircraft when not in use.
- Bulging LiPo batteries are showing signs of being compromised.
- A fire safe would be advisable if numerous LiPo batteries are to be stored.



LIPO-SAFE
WARNING!
• Never leave charging battery unattended.
• Always ensure the battery is on a non-flammable surface.
• Ensure flap is sealed while charging.
• The LIPO SAFE is intended to reduce the chances of damage in the event of a lipo fire.

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1. Insurance

1. ***Does pilot have insurance?***
2. ***Does company the pilot works for have insurance?***
3. ***Do you / your company have insurance?***
4. ***Does your client have insurance***

Policy must cover aircraft and aerial activities

A "regular" CGL is going to exclude aircraft

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2. Commercial Use: Doesn't Mean Sky is the Limit!

1. ***Anything done with a commercial purpose is going to require a Section 333 exemption.***

2. ***500 Feet Rule - stay 500 feet away from non participating people and buildings - unless (a) protected or permission granted and (b) pilot made safety assessment***

3. ***FAA, DOT, PBSO can tell you to land it.***

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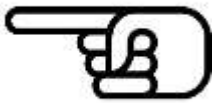
Lilly Pulitzer Drone Shoot

Photo credit: Lilly Pulitzer / Instagram

3. Laws & Liability

1. ***Personal Injury (negligence / negligence per se)***
2. ***Trespass***
3. ***Invasion of Privacy***
4. ***Publication of Private Fact***
5. ***F.S. 934.03 – Crime to Record Communications***
6. ***F.S. 934.50 – Drone law: injunction, damages, fees***

Not flawless, but a good start to confirm it is legal to fly where you are



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Summary

- Self govern while surveilling, filming or flying drones around others. If not, these privileges will be stripped from us as private Citizens.
- Establish procedures for employees, that insist on professional use and courtesy when dealing with the sensitivities that surround surveillance activities or the use of Robotic Drone Technologies.
- Joining the AMA and a local Radio Control Hobby Group can put you on the Fast Track to learning about drone safety, how to fly & even saving money on repairs and parts.
- Learning how to fly any new aircraft on a $150-200 flight simulator program saves you costly, not to mention embarrassing, crashes and expenses. (Real Flight & Futaba or Phoenix & Spectrum, etc.)
- Since the integration of drones into our lives is imminent, and we want the experience to be positive, we must all do our part to be polite, courteous, and respectful of others Privacy and concerns.
- We must establish reasonable social morays & Rules that govern an acceptable use of surveillance & drone use in our communities.
- We should NOT create fear or allow abuse of any new Technology, especially in the workplace. Always demand professionalism!

Resources & Links

- http://www.palmbeachrc.com/ Radio Control Assn
- http://www.modelaircraft.org/ AMA
- http://www.faa.gov/uas/
- https://www.faa.gov/documentLibrary/media/Advisory_Circular/AC_91-57A.pdf
- http://www.faa.gov/uas/nprm/
- http://www.faa.gov/uas/public_operations/
- http://www.faa.gov/uas/model_aircraft/
- http://www.faa.gov/airports/southern/
- http://flighttraining.aopa.org/learntofly/works/airspace.html
- http://www.droneSmart.US For International Aerospace links.
- http://www.palmbeachdrone.com/links/ for important links.
- http://knowbeforeyoufly.org/
- http://www.internationaldronecommunity.org/

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