

11/15/15

Task

Force

Meeting

<TARGET><BILL></BILL><SUBJECT>11-15-15 Task Force
Meeting</SUBJECT><COMM><TARGET></COMM></TARGET>

Ginger Blaisdell

From: Ginger Blaisdell
Sent: Thursday, November 05, 2015 10:09 AM
To: Rep. Shelley Hughes
Subject: agenda with notes in red

Call in 844-586-9085

Thursday Nov 5 @ 1pm (hoping to finish by 2pm)

AGENDA

Newsworthy updates

- USDOT requiring hobbyists to register drones
- Page 3: public comments regarding UAS registration are due tomorrow Nov 6 but will likely remain open longer
- Page 10: new drone air traffic control system under 500 feet may be the answer to drone delivery issues and hobby flights
- Page 12: insurance is becoming more readily available for drones
- Page 14: judge rules OK to man shooting down drone

Subcommittee reports from:

- Mike O'Hare – State COA
- Steve Colligan – hobbyist certification/licensure and retailer rules
- Steve Wackowski – 3-D Airspace zero to 500 feet
Dan Wayne, Legal Svcs, will be available for comments on his research (documents to be final today)

Final version of "Alaska's Drone Operator Safety and Privacy Guidelines"

- Black and white copy will be sent to list serve with reference to www.alaskadrones.org for color copy due to file size

Upcoming events and meetings

- Jay Skaggs Nov 18, Economic Interest Bar-b-Queue
 - Ethan Tyler and Christie Bell are working to host a morning presentation session
 - Afternoon at Jay's house with 5pm bar-b-queue
 - 15046 East Lake Ridge Drive, Eagle River 99577
 - Encourage everyone to attend – RSVP with Ginger or Jay
- AK Chiefs of Police Leadership meeting Nov 30-Dec 1
 - UAS LTF will have 15 minute session
 - Privacy guidelines
 - FAA law enforcement rules
 - State law (HB255)
 - How to enforce inappropriate drone operators

*Nolan Claudia
UAA*

*Chief of Staff
Office of Representative Shelley Hughes
Serving Greater Palmer
Capital Building Room 13*

SITE: Offnet

COMMITTEE: JUNM

DATE: 11/5/15

**SUBJECT OF MEETING: Unmanned
Aircraft Systems Task Force**

Update #1

TESTIFY KEY:

Y = yes

LO = Listen only

? = Available for questions

NAME	COMMUNITY	REPRESENTING/AFFILIATION	DO YOU WANT TESTIFY
Steve Wackowski		Task Force Member	
Rep Hughes			
Bob May		Task Force Member	
Ethen Tyler		Task Force Member	
John Nevadomsky		Task Force Member	
Steve Strait		Task Force Member	
John Parker		Task Force Member	
Steve Colligan		Task Force Member	
Ro Bailey		Task Force Member	

~ 13 pages

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US to Require that Hobbyists Register Drones



Federal officials plan to announce on Monday that all drones will have to be registered with the U.S. Transportation Department, Fortune has learned.

U.S. Transportation Secretary Anthony Foxx and F.A.A. Administrator Michael Huerta will hold a press conference in Washington D.C. to explain the government's plans to create a new registration system that all drone buyers will be required to use, according to a source familiar with the situation.

The plan adds hobbyists to those who must register their drones with the government. Previously, only commercial drone users had to register their aircraft with the F.A.A. after getting the authorization to fly.

Drone industry leaders from trade groups and manufacturers will join government officials during the announcement. The plan calls for creating a task force that includes members of the government and the drone industry to create the registry, the source said.

The initiative to create a centralized system for collecting drone registrations has been in the works for the past few weeks. Government officials have been contacting drone makers and industry groups about it over the past few days, the source said.

The drone registration system is supposed to be debut around the Thanksgiving holiday.

The Transportation Department declined to comment on the specifics of the announcement to Fortune, but confirmed that the department will “make an important safety announcement about the use of Unmanned Aircraft Systems” on Monday.

It’s unclear what penalties drone owners will face for failing to register their aircraft. Nor is it clear whether all drones must be registered or just ones that are beyond a certain size.

Michael Drobac, the executive director of the Small U.A.V. Coalition, a drone advocacy group whose members include Google, Amazon, and camera maker GoPro, told Fortune that he is concerned with the proposed regulations. Both Amazon and Google are working on drones for delivering products ordered online to customers’ doorsteps.

“I have great concerns that the F.A.A. and D.O.T. won’t come up with something that will help us move us forward as a country in advancing this technology on their own,” Drobac said. “This has to be led by industry.”

Source: Fortune

G+1



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US DoT Seeks Public Comments on UAS Registration



In a surprise move, DOT just published a document, *Clarification of the Applicability of Aircraft Registration Requirements for UAS and Request for Information Regarding Electronic Registration for UAS*, to the Federal Register. DOT is soliciting recommendations on all aspects of the UAS registration process, including which UAS should be exempt from the registration requirement.

The clarification and request for information requests that comments be received within 15 days after publication in the Federal Register, which is November 6, although the comment period reportedly will remain open for the near future. Of course, given the Secretary's expedited timeline, comments submitted after November 6 will be less likely to influence the recommendations made by the UAS registration task force. [Click here](#) to access the original document and post a comment.

In addition to clarifying applicable statutory requirements regarding UAS registration, DOT is requesting "information and recommendations regarding what information and registration platform would be appropriate for UAS registration and ways to minimize the burden to the regulated community." DOT is also requesting comments on which UAS, in terms of weight or performance

capabilities, should remain exempt from the registration requirements because of the negligible risk they pose to the national airspace system (NAS).

To facilitate the task force's work in developing UAS registration procedures, DOT is requesting information and data from the public in areas such as:

- At what point should registration occur (e.g. point-of-sale or prior-to-operation)? How should transfers of ownership be addressed in registration?
- Consistent with past practice of discretion, should certain UAS be excluded from registration based on performance capabilities or other characteristics that could be associated with safety risk, such as weight, speed, altitude operating limitations, duration of flight? If so, please submit information or data to help support the suggestions, and whether any other criteria should be considered.
- How should a registration process be designed to minimize burdens and best protect innovation and encourage growth in the UAS industry?
- Should the registration be electronic or web-based? Are there existing tools that could support an electronic registration process?

Whether you are a UAS manufacturer, operator, or user, the comment period offers all industry stakeholders an opportunity to shape UAS regulation and policy.

Source: Hogan Lovells



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Posted in [Regulatory Matters](#) on [October 26, 2015](#) by [The Editor](#). [3 Comments](#)

← [MAPPS JOINS FAA REGISTRATION TASK FORCE](#)

[UAV OPERATOR SUPPORTS UK AERODROME COMMUNITY](#) →

3 COMMENTS

Angelo

October 26, 2015 at 18:35

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FAA Administrator Opens UAS Registration Task Force Meeting



The Unmanned Aircraft Systems (UAS) Registration Task Force completed its first day of work. FAA Administrator Michael Huerta kicked off the Task Force with remarks that outlined the group's objectives and expectations. The FAA briefed participants on the current statutory requirements and international obligations for aircraft registration before the group began initial discussions on a streamlined registration process and minimum requirements for UAS that need to be registered. The Task Force will continue deliberating on Wednesday.

Here are FAA Administrator Michael Huerta's remarks as prepared:

Unmanned aircraft use has increased dramatically in recent years. With this surge in popularity has come growing concerns about their safe operation in our nation's airspace.

In recent months, we've seen an increase in reports of UAS coming too close to manned aircraft and airports. Some have interfered with wildfire fighting in California, and one crashed into a stadium during a U.S. Open tennis match.

These incidents make it clear: we must work harder to ensure a strong culture of safety and responsibility among unmanned aircraft enthusiasts.

There's no single solution for how we do this. The integration of unmanned aircraft is multi-faceted, and our approach must be as nimble as the technology itself.

One tool we're going to use is registration - and that's why we're here today.

Unmanned aircraft have countless potential uses - from package delivery to tasks that are dangerous for people or manned aircraft to perform. No one wants to see this promising technology overshadowed by an incident or accident that could easily be avoided with proper training and awareness of the safety principles that are now second nature in manned aviation.

We invited you to assist us on this task force because each of you brings extensive knowledge about unmanned aircraft, technology, public policy and the aviation industry. You represent a wide range of viewpoints. And you are all united by a common goal: the safe integration of unmanned aircraft.

We're hopeful this task force can provide the FAA guidance on some important questions as to how we determine the best way to register aircraft under 55 pounds:

- How do we make registration as easy as possible for consumers while providing accountability?
- What products should we exclude from registration based on weight, speed, altitude and flying time?
- What information should we collect during the registration process, and what should we do with the data?
- Should every unmanned aircraft sold have its own serial number, or how to tie particular aircraft to a particular user?
- Should the process include a formal education component before an aircraft can be registered?
- Should registration be retroactive and apply to unmanned aircraft that are now in the system?
- Should there be an age requirement for registration?

Ultimately, we want to make registration as easy as possible for consumers, to relieve them of the complexity associated with registering larger, manned aircraft.

Your recommendations will be invaluable as the FAA moves quickly to stand up this new system.

We're working on a tight timetable – Secretary Foxx set a deadline of November 20th for the task force to complete its recommendations. This reflects the urgency of the task at hand.

The holidays are weeks away, and unmanned aircraft are going to be a popular gift item. By some estimates, 700,000 new aircraft could be in the homes of consumers by the end of the year. This means unmanned aircraft could soon far outnumber manned aircraft operating in our nation's airspace.

Many of these new aircraft are bringing new users to aviation – most with little or no experience with aviation regulations.

Registration will give us an opportunity to educate new operators about airspace rules so they can use their unmanned aircraft safely. It will also help us more easily identify and take enforcement action against people who intentionally violate the rules or operate unsafely. A perfect example of this occurred last week, when a drone carrying mobile phones, drugs and hacksaw blades crashed into a prison yard in Oklahoma. Perhaps registration would have helped authorities quickly identify the owner.

We realize that most people want to use their aircraft safely for enjoyment. Registration benefits users and the government alike because it encourages education while providing a mechanism for helping the FAA fulfill its mission of keeping the nation's skies safe.

I recently announced the FAA's new Compliance Philosophy, which uses education and training to ensure we have safe operators.

At the same time, this doesn't mean we're going to go easy on enforcement.

But in cases where we find simple mistakes or a lack of understanding, we'll use tools like training and education to ensure compliance with the regulation and compliance with the standard.

This starts with giving operators the tools and knowledge they need to fly safely. Toward this end, we released the beta version of a new smartphone application called "B4UFLY," which alerts UAS operators to restrictions or requirements in effect at their current or planned flight location.

The FAA and its government and industry partners are also conducting outreach through the Know Before You Fly and No Drone Zone campaigns, most notably during the recent visit by the pope.

But for those who don't follow the rules, we need to continue our enforcement efforts.

Last month, the FAA proposed a \$1.9 million civil penalty against a company that we allege knowingly conducted dozens of unauthorized flights over Chicago and New York. This sends a clear message to others who might pose a safety risk: Operate within the law or we will take action.

As registration, education and enforcement focus on enhancing safety around recreational use, we're also working to put a commercial regulatory framework in place.

Earlier this year, we proposed a rule that would routinely allow small unmanned aircraft operations we know to be safe, and we plan to finalize it by late spring.

Meanwhile, we're approving requests for commercial operations on a case-by-case basis. To date, we've approved more than 2,200 authorizations that allow unmanned aircraft to be used for a wide variety of different purposes.

Under our Pathfinder program, we're working with industry to determine how to safely expand unmanned aircraft operations beyond the parameters of our proposed rule. BNSF Railway recently used an unmanned aircraft to inspect miles of its tracks in New Mexico, demonstrating beyond visual-line of sight capabilities. The flight marked the first of what we hope will be many successful Pathfinder tests and flights.

Integrating unmanned aircraft into our nation's airspace is a big job, and it's one the FAA is determined to get right. We know that we need to work closely with our partners in government and the private sector for this to succeed. This task force is a sign of our commitment to that partnership and we thank you for your work.

Please think big, and think outside the box. Take the interests of all stakeholders, of everyone who will be affected by registration, into consideration, and you need to factor that into your conversations and deliberations. And please - do not worry about achieving perfection. Your ideas will enable us to lay the groundwork for registration, but by no means is it the last word on registration.

You have a lot to accomplish in the next three days. I have no doubt this group will be able to meet the challenge, and I look forward to your recommendations. Given the urgency of this issue,

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the DOT and the FAA will move quickly to consider your suggestions as we create a registration system that works for the FAA, consumers, and the safety of our nation's airspace.

Thank you again for dedicating the time to this important undertaking.



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Posted in [Regulatory Matters](#) on [November 4, 2015](#) by [The Editor](#). [Leave a comment](#)

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DigitalGlobe Helps Create Drone Air Traffic Control



Data mined from DigitalGlobe's satellite images are at the center of a system that could change how drones operate in the U.S. and globally.

The Low Altitude Traffic and Airspace Safety, or LATAS, uses Verizon's LTE cellular network, Harris' satellite-based surveillance systems and information gleaned from Westminster-based DigitalGlobe's high-resolution Earth imagery to help unmanned aerial vehicles — or UAVs, more commonly called drones — identify and avoid obstacles and safely navigate the airspace.

LATAS, developed by Raleigh, N.C.-based PrecisionHawk, recently completed initial testing and is under review by the Federal Aviation Administration and NASA.

Think of LATAS as air traffic control for flying robots, complete with social media integration — it has real-time tracking, a “geofencing” feature that won’t allow drone flight in prohibited airspaces, and even offers live streaming.

“Anybody can fly a drone — maybe not today, but it’s trending in that direction — and we need a technological solution to keep them from running into each other, people, bridges, buildings and even into aircraft,” Shay Har-Noy, DigitalGlobe’s senior director of Geospatial Big Data, said in an interview.

DigitalGlobe has undergone a self-described “strategy shift” in recent months to target new ways to make money from its imagery.

One of these growth areas is the Geospatial Big Data program, or GBD, which is expanding as new applications are discovered. Although Har-Noy could not specify exact numbers, he said this will definitely result in job gains in Colorado.

GBD harnesses the power of DigitalGlobe’s fleet of satellites, which capture photos of about 2 million square miles per day. Each image contains topographical and other information that can be used to guide LATAS.

“Instead of just these giant images of the state of Colorado, we can tell them where the trees are, where the water is, where the mountains are,” Har-Noy said. “There are all these kinds of very practical concerns you can now solve.”

For now, the next step for LATAS is to continue testing until it gains FAA blessing. The team has the ambitious goal to eventually develop and implement the system globally for safe, efficient operation of UAVs.

“We don’t have all the answers,” Har-Noy said. “We just want to have a path.”

DigitalGlobe currently employs 1,256 people — about 1,200 in Colorado — and about 380 contractors across eight locations worldwide. It recently moved into a new 482,000-square-foot Westminster headquarters.

Source: Denver Business Post

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American International Group Offers Drone Insurance



American International Group, one of the nation's leading property/casualty insurance carriers, is taking on the emerging risk as more and more US retailers – including Amazon and Wal-Mart – seek and are granted FAA approval to operate drones.

In a conference Monday hosted by business software provider Oracle, AIG Chief Technology Officer Mike Brady announced that the insurer has started offering coverage for any damage caused by drones and injuries to drone operators.

“Clearly with that many drones in the airspace you run a risk, so AIG actually now offers drone insurance to our commercial customers,” Brady said.

The policies are offered through AIG's excess and surplus subsidiary Lexington Insurance Company and bear many similarities to auto insurance plans, covering both “broad physical damage” and “third party liability coverage.” However, as they are written especially for drones, the policies also cover drone “operators” and on-ground crew members, as well as electronic malfunctions and component failure.

The coverage excludes problems such as hijacking, unlawful seizure, hacking or “spoofing.”

Drones weighing up to five pounds with a wingspan of up to three feet are covered, though pricing information is not immediately available.

The move to offer drone coverage comes just one month after a *Fortune* magazine report suggested that lack of viable insurance options could threaten the entire industry. And as it is already predicted to generate billions of dollars in economic impact over the next 10 years, it's important that market players come forward soon.

Previously, insurers have cited significantly liability and a lack of regulatory guidelines as making it difficult for underwriters to craft well-rounded products for drone manufacturers and operators.

K insurance house Lloyd's has even gone on record saying risk pricing for drones is extremely difficult in view of their emerging status and inherent issues like third-party liability for physical damage, to say nothing of a lack of meaningful data and risk metrics.

Others in the industry agree.

"Unfortunately, there are big questions and not enough answers," Tom Karol, a general counsel for the National Association of Mutual Insurance Companies, told *Fortune*. "There needs to be more clarity on how people will use these, and what will be allowed and won't be allowed is a big issue."

Those monitoring insurer appetites, however, suggest that carriers will not begin to embrace privacy concerns as part of drone liability policies until state and federal legislation becomes clearer on expectations and legality surrounding drones.

"I'm constantly following up with my standard carriers to see if their appetite for drones has changed," said Evan Garmon, a commercial insurance specialist with Harpenau Insurance in Louisville, Kentucky. "Until the regulation and laws in the United States surrounding the small unmanned aircraft systems industry stabilize, many standard insurance companies will stay out of the market.

"Once they do, I plan to be on top of the change to offer better policies for my clients."

Source: [Insurance Business America](#)



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CNET > Tech Culture > Judge rules man had right to shoot down drone over his house

Judge rules man had right to shoot down drone over his house

Technically Incorrect: A Kentucky judge dismisses all charges against William Merideth, saying the drone was an invasion of privacy.

by Chris Matyszczyk @ChrisMatyszczyk / October 28, 2015 11:13 AM PDT

Technically Incorrect offers a slightly twisted take on the tech that's taken over our lives.

It was a case that gripped the nation. Or at least Kentucky.

Should it have temporarily escaped your pressured memory, William Merideth in July said he saw a drone flying above his property in Hillview, Kentucky.



William Merideth shot down a drone legally, a judge decides.

WDRB-TV screenshot by Chris Matyszczyk/CNET

He believed it was spying on his 16-year-old daughter who was sunbathing in the garden. So he took out his shotgun and blasted the drone out of the sky. He was arrested for wanton endangerment and criminal mischief.

Now a Kentucky court has declared Merideth an innocent man. Bullitt County District Court Judge Rebecca Ward on Monday dismissed all charges against Merideth, reported local TV station WDRB-TV.

The drone's owner, David Boggs, had produced flight data that insisted his machine had been flying higher than Merideth had claimed.

The judge, however, seems not a fan of big data. She's a woman of the people. She declared that two human witnesses saw the drone below the tree line. This evidence was, to her, conclusive. To her, this was an invasion of Merideth's privacy.

Amateur drones hovering willy-nilly have disturbed more than just private citizens. Airline pilots' reports of drone close-calls on takeoff and landing have increased exponentially over the past year.



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This summer, amateur drones flew over California wildfires, purely to capture dramatic pictures. This grounded helicopters which were desperately trying to drop water on the flames. There's still a \$75,000 reward for anyone who leads authorities to those responsible.

The FAA's recommendations include not flying above 400 feet. "Don't be careless or reckless with your unmanned aircraft -- you could be fined for endangering people or other aircraft," the agency adds.

More Technically Incorrect

- Microsoft wants to make you feel good about dumping your MacBook
- Twitter launches a TV ad for Moments, and it's a touch crazy
- Microsoft delighting almost as much as Apple, study says

For his part, Merideth believes his case should never have gone to court.

"I don't encourage people to just go out and start blasting stuff for no reason," he told WDRB. "But three times in one day, three times over the course of a year, six times total, over one property? That's not right, that's harassment."

Boggs is reportedly considering his legal options.

Once Amazon and other retailers begin their deliveries by drone, there will surely be an almost permanent buzzing in the sky. How will people know whether the thing that's overhead is spying on them or merely delivering fresh underwear or zucchini to the nice people next door.

Every time technology thinks it's solving a problem, or at least creating new forms of entertainment, it brings with it new annoyances and potential for conflict.

This isn't necessarily a good thing in a nation where so many people own guns.

Tags: Technically Incorrect, Tech Culture, Gadgets, Drones

Discuss: Judge rules man had right to shoot down drone...

101 Comments

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October 7, 2015 teleconference meeting of the UAS LTF subcommittee on Hobbyist Endorsements and Retailer Education Requirements:

Members attending meeting:

Bob May
Steve Colligan
Steve Wackowski
Ethan Tyler
Representative Hughes
John Nevadomsky
Ginger Blaisdell, task force staff

Invited Presenters:

Dave Matthewson, Executive Director AMA
Richard Hansen, AMA Government Affairs
Arthur Cunningham, AMA
Archie, AMA
Jay Skaggs, FAA Alaska

Meeting called to order by subcommittee chair, Steve Colligan at 10am via webinar presentation and teleconference.

Steve Colligan: Introduction and remarks

Richard Hansen:

Know Before You Fly campaign is focused on the consumer

- Manufacturers and distributors are beginning to include the flyers in packaging
- AMA is working with major retailers to provide the KBYF information to educate consumers on pilot safety

The AMA is focusing on the platform (aircraft equipment) that has the capability to go beyond visual line of sight for the next level of hobbyist education.

AMA is reviewing 2 classifications for pilots: rotary and fixed-wing. They are looking at liability insurance offerings to hobbyists, and safety awareness (knowledge and operational skills) endorsement.

Personal (hobby) use would fall under the AMA program while commercial applications are still governed by the FAA.

AMA is developing a computer-based education and endorsement on-line program. A pilot would take an on-line test to assess knowledge and includes questions to assess the individual's self-validation of operational skills. The on-line program will also allow for flight data downloads to manage flight records for hobbyists.

AMA Membership fees:

Annual cost of membership is \$58 adult (being raised to \$75 adult)

Annual cost of subscription for data and test/endorsement \$19.95

Recurring tests in continuing years will include law changes – frequency of testing to be determined

Model Aviation Student Clubs pay a flat fee for a set number of students – typically are universities and schools

Youth membership until age 19 is free (currently 50,000 student memberships nationwide)

Family membership is one adult at full annual fee, additional adult at \$38.00 annually, children free

AMA is looking at sUAS pilot training programs around the US to encourage flight safety but will still require hobbyist to take proficiency and knowledge test through AMA to be endorsed. The United Kingdom requires an operator proficiency skills test – the AMA is looking into this.

An endorsement/ID card would be issued by AMA for qualifying hobby pilots.

AMA offers liability insurance (through an underwriter) after achieving knowledge and proficiency endorsement. Insurance underwriters have offered a discounted premium on those with the endorsement.

There is a grey area transitioning from hobby to business.

- AMA is focusing on the capabilities of the aircraft more than hobby VS business
- Beyond visual line of sight is the critical differentiator in capabilities

AMA will offer to register your aircraft through the membership website.

Is the registration data public information?

- It might be provided to the FAA upon request but not to general public
- Public could go through AMA to identify specific aircraft if requested
- Many platforms require the owner to register with the manufacturer in order to download the firmware – this would require personal ID of the aircraft owner
- How would the manufacturer data become available to law enforcement?

Field examiners offering proficiency tests:

- Are they volunteers or will there be additional costs?
- AMA is not convinced that this level of oversight is necessary for hobby pilots – they are leaning toward self-validation of competency.

Is there a pilot training center in Alaska?

- Steve Colligan is working on this as part of his business.

- UAF trains pilots and certifies them depending on what kind of platform they are operating.

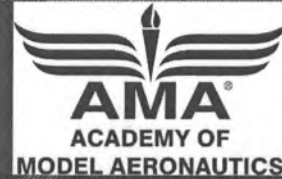
Timeline for AMA endorsement is early January 2016 with the mapping and flight logging coming later in the year.

The primary difference between the Know Before You Fly and the AMA membership with endorsement is that KBYF is a “first blush” on safety and the endorsement is more advanced.

Meeting adjourned 11:07am

A followup meeting will be scheduled.

Academy of Model Aeronautics
October 7, 2015



**sUAS Program For
FPV and Semi-Automated Flight
For
Personal and Purposeful Use**

Individual Elements

Legitimacy
Education
Training
Safety
Registration/Endorsement
Classification
Insurance
Program Support/Advocacy
Media
Marketing

Legitimacy

- Current FAA policy precludes the operation of sUAS for anything other than recreational purposes without specific authorization.
- The purposeful use of sUAS is becoming prevalent in the US and growing at an astounding rate.
- AMA believes the safety considerations for the use of sUAS are the same no matter if operated for recreational or purposeful use.
 - Similar to the Academy's existing MA safety program, AMA's sUAS community-based program will provide a safety structure that will allow the purposeful use of sUAS to occur in a safe and responsible manner.
 - AMA will petition the FAA to recognize AMA community-based program as an effective and accepted means of allowing the purposeful use of sUAS in the national airspace.

Education

- Public access to all safety guidelines.
- Computer based learning management system.
 - Member's Only access to the testing and endorsement system.
- Individual module topics would include.
 - Learning the NAS.
 - Current relevant regulations.
 - Safety.
 - Fly friendly (Ethical, noise, nuisance, privacy, surveillance).
 - Best practices for common applications (i.e. photography).
 - Community involvement (search & rescue, emergency Response, disaster relief, etc.)
 - Other non-regulatory or safety issues.

Education (continued)

- Online training syllabus for those that choose not to take an authorized training facility course.
 - Flight proficiency.
 - Flight test (fixed wing, single-rotor, multi-rotor).
- Develop University MASC program (UMASC) for universities & colleges.
- Educate clubs and members.

Training

- Create a nationwide network of AMA Affiliated Training Centers.
 - AMA would put the center on a list of recommended facilities.
 - AMA would review and endorse programs.
 - Center would have to teach to AMA minimum standards. Both written and practical (flying).
 - All participants in Training Center programs must be AMA members.
 - Program completion would be validated through AMA's online system.
 - Members would gain sUAS endorsements by participating in the program.

Safety Program

- Foundation will be AMA's existing safety guidelines.
- Stand alone (discipline specific) safety program for sUAS.
- Customized for specific use.
 - Personal use (filming family, recreational activities, special events, general photography).
 - Purposeful use (community service, search & rescue, public safety support, survey of personal property, casual journalism, amateur photography).

Endorsements

- Successful completion of online education program.
- Completion of affiliated training program.
- Review of AMA Safety Program content.
- Participatory based online testing.
- Cost aggregation with tuition at affiliated center.
- Individual endorsements for fixed wing, heli, and multi-rotor.
- Field validation (appointed field examiners).
- Self attestation.

sUAS Endorsements



Special sUAS Membership Classification

- Participatory based, annual renewal.
- Supplemental to AMA membership (Adult, Senior, Junior).
- Availability of sUAS endorsements.
- Access to affinity benefits (Insurance).
- Additional sUAS program benefits

Insurance

- Personal liability coverage for sUAS and MA operations.
 - \$2.5 million coverage for recreational use.

- Individually customized policyholder coverage (liability/comprehensive) for sUAS business use through AMA's affinity partner.
 - AMA rate would be more favorable than might otherwise be achieved.
 - Additional discounts with endorsements and/or endorsements from an affiliated training center.

Program Support/Advocacy

- Increase advocacy reach to include this community.
- Dedicated staff to manage community.
- Increased involvement in conventions and seminars.
- Partner with AUVSI and other relevant organizations.

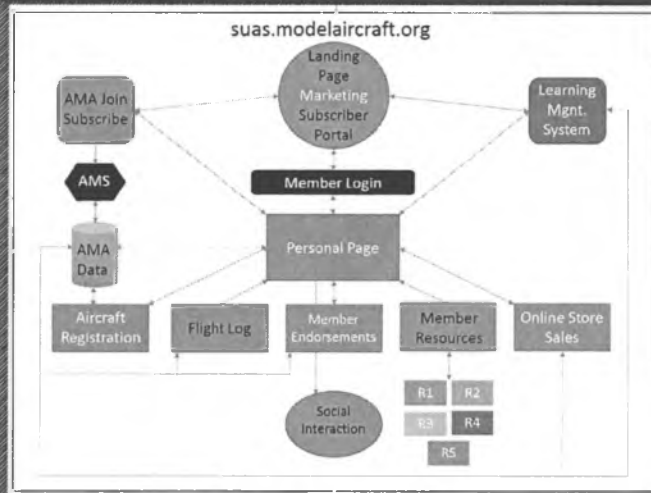
Media

- AMA Today style monthly E-Zine.
 - Auto-populated.
- Continued content in *Model Aviation* magazine.
- Continued content in *Park Pilot* magazine.
- Webinars/Podcasts on relevant topics.
- Instructional videos (potential topics could be terms, definitions, describe platforms, etc.)
- Blogs, videos and other member exclusive content available in the subscriber area.
- Social media / subscriber interaction within the subscriber area.

Marketing

- Join/Renew Landing Page.
- Join/Renew dedicated page (precursor to a microsite).
- Dedicated sUAS Microsite (suas.modelaircraft.org)
- Wherever you fly; Whatever you fly campaign to the community.
- Engagement of manufacturers.
- Outreach through drone user sites/media.
- Marketing in industry related but non MA publications.
- Possible agreements with AUVSI.
- AMA info in boxes pointing to AMA.
- Establish sUAS events, activities, and competitions.

sUAS Website



3-D Airspace

~ 7 pages

Members in attendance 3-D airspace subcommittee, October 12, 2015

Steve Wackowski, chair

Steve Colligan

Steve Strait

Representative Hughes

John Parker

Dan Wayne, Legislative Legal Svcs

Ginger Blaisdell, staff

Absent: Bob May, John Binder, Senator Micciche

At the last meeting of the UAS Task Force in Fairbanks, there was concern expressed by a member of the public who experienced low flying manned aircraft and was concerned about UAS flying over his private property.

Slide #2

Cuius est solum, eius est usque ad caelum et ad inferos

("For whoever owns the soil, it is theirs up to Heaven and down to Hell.")

- Until the early 1900's, this legal clause established precedence for managing airspace for landowners.
- Times have changed so airspace management has changed during the industrial era.

Slide #3

Is the US code that gives the FAA the mandate to manage the airspace

- Declares that a citizen, but not his property, can navigate the airspace.

Slide #4

The court held that all of the navigable airspace in this country is within the sole domain of federal regulation.

- "The United States government has exclusive sovereignty of airspace of the United States."
- Recommends clicking on the link provided and reading about the court case of US vs. Causby
 - Causby was a farmer with farmland next to a WWII training ground where aircraft were interfering with his farming activities (his chickens)

Slide #5

Shows an image of flight zones by altitude – this airspace chart was proposed by Amazon (similar to Google X)

- The X axis (bottom of the image) shows the model flying, rural, suburban, urban and airport airspace
- This concept is still in its infancy and will need more vetting and is predicated on sense and avoid technology

Slide #6

Generally, from the industry, "everyone stressed that one set of standards is preferred – even if state laws may be more favorable to industry.

- Big industry have and will likely lobby against any state that tries to introduce its own airspace standards/rights that differ from the FAA/national rules.
- E.g. lobbied for the Governor of California to veto latest drone bill

Maybe Leg Legal could research what Alaska could do to gain sovereignty over airspace?

Shelley Hughes – can we explore an 'opt in' clause

- 'down to the ground' isn't substantiated in slide #4 because it states "The act defines navigable airspace as airspace above the minimum altitudes of flight...including airspace needed to ensure the safety in the takeoff and landing of aircraft."
- Dan Wayne – statute says the US govt has exclusive sovereignty of airspace of the United States but that the citizen has right of transit through the navigable airspace – so it seems that the govt has authority over all airspace and citizens can transit above 500 feet (in some places it would be 1,000 feet)
- John Parker – the FAA claims domain to all airspace to the ground but they are relinquishing the non-navigable airspace (400' and below) through the 333 exemptions – we may need to talk with the FAA (RTCA) to better understand their intent over this airspace
- Steve Wackowski – assumes that the FAA would not be willing to give up their powers over safety in the airspace but understands that one concern is privacy rights of citizens. There may be the ability to beef up other laws, such as harassment and stalking, to incorporate UAVs.
- Shelley Hughes – there may not be consistency for industry if individual citizens choose to allow UAS traffic above their private property
- Steve Colligan – my fear is another level of bureaucracy over rights of way and public projects. We need to look at loitering and reasonable expectation of privacy, not to make industry projects more expensive.

Steve Wackowski – discussion on range space that allows industry to fly. Maybe ACUASI could elaborate more on the workings of the test range.

Shelley Hughes – met with law enforcement officials last week and loitering can occur in public and private areas and establishes different tolerances for loitering. Within the parameters of the FAA will there be loitering addressed?

- Can a property owner allow hovering, filming, recording over their private property? Excusing a UAS pilot from a loitering law? Maybe lease airspace to the industry?
- John Parker – wouldn't work because the cameras will extend beyond the boundaries of the property and it could extend into multiple properties and airspace leases.
- Steve Colligan – swath of data requires a 75% overlap so could extend into other property boundaries.

- Steve Colligan – would like a better clarification of laws regarding audio recording and video recording and loitering infringements whether in public or on private property compared to traveling across the property. Need legal clarification.
- Dan Wayne – one party conversation doesn't violate the law. Eavesdropping could constitute breaking a law. Videoing could be a greater concern.
- Doesn't matter if it's using a cell phone, recorder, camera or drone.

Steve Strait

1. Slide #5 does not provide an allowance for flight over water where there is no minimum altitude consideration
 2. If a state were to take the lead it would be a cause for concern but we should be working with our congressional delegation to be active in the FAA regulations
 3. Privacy, loitering; every incident seems to be unique and we may need to let the courts figure it out.
- John Parker said that he's been working with FAA and looking for ways to agree on airspace rulings

Shelley Hughes

- Private property has laws that have to be followed even on your private property.
- Can the private property owner own any of the space above his property but still follow the rules of the FAA?

Steve Wackowski – how were the federal highway system laws established (driver's licensing and road laws). This might be similar to the path of UAS in the NAS.

Request for Dan Wayne:

Is the ground up considered navigable airspace, court precedence vs statute?

- Causby case
- Does the flight interfere with use and enjoyment of your land? Altitude considerations?
- This is different than the question of privacy. A drone operator could meet the elements of an offense if there was a determination of harassment or stalking (explicit images, etc.).

Does the one party consent rule in Alaska include video as well as audio?

Shelley Hughes

We could introduce a resolution that promotes industry/economic development that declares that certain lands (airspace above lands) are open for UAS testing.

- Economic development driver over state lands.
- Bring in Fish and Game regarding animal harassment.
- Steve Colligan is currently leasing airspace over state lands – includes a COA approval – leasing land space contingent with COA approval for the airspace above that property
- Statements for inclusion in a resolution should be provided to Ginger sooner rather than later for bill drafting completed prior to session start in January 2016.

3-D Airspace Subcommittee Discussion Points

12 Oct 2015

State of Alaska UAS Task Force

Agenda

- Federal Statute
- Thoughts from Industry
- Others?
- Way forward



Cuius est solum, eius est usque ad caelum et ad inferos
("For whoever owns the soil, it is theirs up to Heaven and down to Hell.")

49 U.S. Code § 40103 - Sovereignty and use of airspace

(a) Sovereignty and Public Right of Transit.—

(1) The United States Government has exclusive sovereignty of airspace of the United States.

(2) A citizen of the United States has a public right of transit through the navigable airspace. To further that right, the Secretary of Transportation shall consult with the Architectural and Transportation Barriers Compliance Board established under section 502 of the Rehabilitation Act of 1973 (29 U.S.C. 792) before prescribing a regulation or issuing an order or procedure that will have a significant impact on the accessibility of commercial airports or commercial air transportation for handicapped individuals.

(b) Use of Airspace.—

(1) The Administrator of the Federal Aviation Administration shall develop plans and policy for the use of the navigable airspace and assign by regulation or order the use of the airspace necessary to ensure the safety of aircraft and the efficient use of airspace. The Administrator may modify or revoke an assignment when required in the public interest.

(2) The Administrator shall prescribe air traffic regulations on the flight of aircraft (including regulations on safe altitudes) for—

(A) navigating, protecting, and identifying aircraft;

(B) protecting individuals and property on the ground;

(C) using the navigable airspace efficiently; and

(D) preventing collision between aircraft, between aircraft and land or water vehicles, and between aircraft and airborne objects.

(3) To establish security provisions that will encourage and allow maximum use of the navigable airspace by civil aircraft consistent with national security, the Administrator, in consultation with the Secretary of Defense, shall—

(A) establish areas in the airspace the Administrator decides are necessary in the interest of national defense; and

(B) by regulation or order, restrict or prohibit flight of civil aircraft that the Administrator cannot identify, locate, and control with available facilities in those areas.

(4) Notwithstanding the military exception in section 553 (a)(1) of title 5, subchapter II of chapter 5 of title 5 applies to a regulation prescribed under this subsection.

(c) Foreign Aircraft.— A foreign aircraft, not part of the armed forces of a foreign country, may be navigated in the United States as provided in section 41703 of this title.

(d) Aircraft of Armed Forces of Foreign Countries.— Aircraft of the armed forces of a foreign country may be navigated in the United States only when authorized by the Secretary of State.

(e) No Exclusive Rights at Certain Facilities.— A person does not have an exclusive right to use an air navigation facility on which Government money has been expended. However, providing services at an airport by only one fixed-based operator is not an exclusive right if—

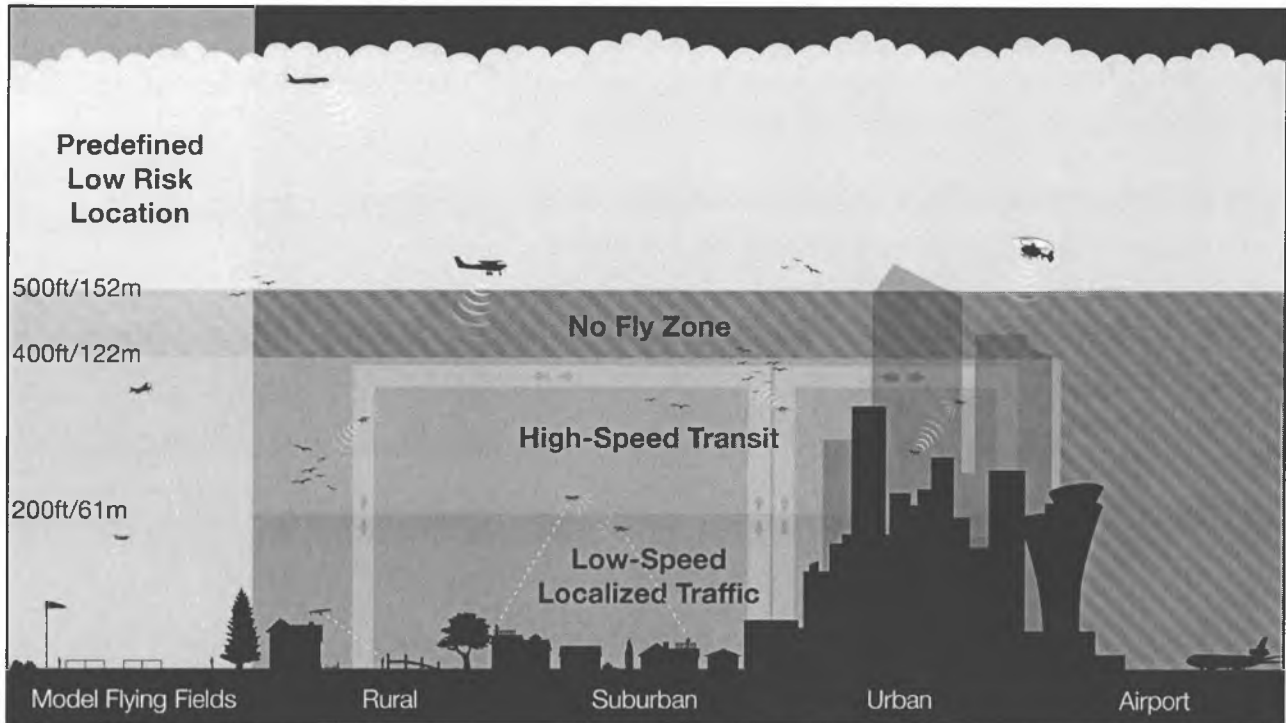
(1) it is unreasonably costly, burdensome, or impractical for more than one fixed-based operator to provide the services; and

(2) allowing more than one fixed-based operator to provide the services requires a reduction in space leased under an agreement existing on September 3, 1982, between the operator and the airport.

AOPA: “Small Airports and the Law”

The court held that all of the navigable airspace in this country is within the sole domain of federal regulation. It quoted the Federal Aviation Act that provides: "The United States Government has exclusive sovereignty of airspace of the United States." The act defines navigable airspace as "airspace above the minimum altitudes of flight...including airspace needed to ensure the safety in the takeoff and landing of aircraft."

**[http://www.aopa.org/News-and-Video/All-News/2000/November/1/Pilot-Counsel-\(11\)](http://www.aopa.org/News-and-Video/All-News/2000/November/1/Pilot-Counsel-(11))*



Thoughts from Industry

- Spoke with Google, Amazon, AVUSI and others
 - *Everyone stressed that one set of standards is preferred – even if state laws may be more favorable to industry*



Other Input/Way Forward?

Ginger Blaisdell

From: Ro Bailey <rbailey11@alaska.edu>
Sent: Friday, October 23, 2015 2:36 PM
To: Ginger Blaisdell; O'Hare, Michael F (MVA); John Binder - Dep Com DOT; Steven Adams; John 'Nevada' Nevadomsky
Subject: Fwd: Anchorage Meetings

Hi, all,

Here's the question I sent to Tom Burgess of DHS. For future reference, his contact info is at the end of his initiating email of this string.

Ro

Ro Bailey, Director
Pan-Pacific UAS Test Range Complex (an FAA Test Site), and
Associate Director
Alaska Center for Unmanned Aircraft Systems Integration - RDT&E
Geophysical Institute
University of Alaska Fairbanks
PO Box 757320
Fairbanks AK 99775
907-322-2255

----- Forwarded message -----

From: **Ro Bailey** <rbailey11@alaska.edu>
Date: Fri, Oct 23, 2015 at 2:32 PM
Subject: Re: Anchorage Meetings
To: "Burgess, Thomas" <[REDACTED]>

Hi, Tom,

Our Alaska Legislative UAS Task Force has just started a subcommittee to examine how best to set up the various involved state agencies with a UAS program for response to disasters. We had our first meeting (telecon) this afternoon, to start working on requirements, mission sets, who might do what, and funding. I told them about the Resilience work you were doing, and the expected resulting ability to use FEMA funding, but didn't have many details. Could I get a copy of the report? and regarding the FEMA funding, is that reimbursement only, or would it also potentially support costs of establishing the capability?

I will be in Anchorage next Mon-Wed for some appointments with a fair amount of free time. If you are in town and have some time, I'd love to meet you, bring you up to speed on what we are doing, and see what else I might learn about the resilience program.

All the best,

Alaska's Drone Operator Safety and Privacy Guidelines

Prepared by the UAS Legislative Task Force
29th Alaska State Legislature
November 5, 2015



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Alaska's Drone Operator Safety and Privacy Guidelines

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Unmanned Aircraft Systems (UAS) Legislative Task Force

TASK FORCE MEMBERS

Representative Shelley Hughes, Co-Chair

Senator Peter Micciche, Co-Chair

Ethan Tyler, Commissioner Designee, Department of Commerce,
Community Economic Development

Mike O'Hare, Commissioner Designee, Department of Military and
Veterans' Affairs

Lieutenant Steve Adams, Commissioner Designee, Department of
Public Safety

John Binder, Commissioner Designee, Department of
Transportation and Public Facilities

Ro Bailey / John "Nevada" Nevadomsky, University of Alaska Fairbanks,
ACUASI and PPUTRC

Steve Strait, Aviation Advisory Board, organization representative

Steve Colligan, Academy of Model Aeronautics, organization
representative

John Parker, Integrated Robotics Imaging Systems, industry
representative

Steve Wackowski, Tulugaq II, industry representative

Bob May, Gallery Lodge, Kasilof, public representative

Many thanks to those who have contributed:

Ginger Blaisdell, Staff to Rep. Hughes, Aide to Legislative Task Force

Jay Skaggs, FAA UAS Integration Office, Anchorage, Alaska

DISCLAIMER: The purpose of this publication, "Drone/UAS Operator Safety Guidelines and FAQ's About Privacy" is to provide informational aid and overview of certain federal and state laws that may apply to drone/UAS operation. This publication is not intended to provide legal advice or a comprehensive review of all federal and state laws relating to drone/UAS operation. Laws will almost certainly change, particularly in the rapidly developing areas of the law at the federal and state level regarding drone/UAS operation. Before a person operates a drone/UAS, or pursues a legal claim related to drone/UAS operation, it is the sole responsibility of that person to review applicable laws, and seek legal advice if necessary, regarding the person's rights and liabilities. The publishers of this publication disclaim all liability and are not responsible for damages related to the contents of this publication.

Alaska's Drone Operator Safety and Privacy Guidelines

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SAFETY: FAA AND THE ROLE OF LAW ENFORCEMENT

The FAA promotes voluntary compliance by educating individual UAS operators about how they can operate safely under current regulations and laws. The FAA also has a number of enforcement tools available including warning notices, letters of correction, and civil penalties. The FAA may take enforcement action against anyone who conducts an unauthorized UAS operation or operates a UAS in a way that endangers the safety of the national airspace system. This authority is designed to protect users of the airspace as well as people and property on the ground.

However, State and local Law Enforcement Agencies (LEA) are often in the best position to deter, detect, immediately investigate, and, as appropriate, pursue enforcement actions to stop unauthorized UAS operations. Although the FAA retains the responsibility for enforcing FAA's regulations, FAA aviation safety inspectors, who are the agency's principal field elements responsible for following up on these unauthorized and/or unsafe activities, will often be unable to immediately travel to the location of an incident.



While the FAA must exercise caution not to mix criminal law enforcement with the FAA's administrative safety enforcement function, the public interest is best served by coordination and fostering mutual understanding and cooperation between governmental entities with law enforcement responsibilities. Although there are Federal criminal statutes that may be implicated by some UAS operations (see 49 U.S.C. § 44711), most violations of the FAA's regulations may be addressed through administrative enforcement measures. As with any other civil or criminal adjudication, successful enforcement will depend on development of a complete and accurate factual report contemporaneous with the event.

Although not an exhaustive list, law enforcement officials, first responders and others can provide invaluable assistance to the FAA by taking the following actions:

1. Witness identification and interviews
2. Identification of the drone operator
3. Viewing and recording the location of the event
4. Identifying sensitive locations, events, or activities
5. Notification to FAA Regional Operation Center
6. Evidence collection

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ALASKA'S KNOW-BEFORE-YOU-FLY DRONE SAFETY GUIDELINES

What is recreational use of a sUAS (Drones)? Recreational use is the operation of a sUAS for personal interests and enjoyment, and not for compensation or hire. For example, using a sUAS to take photographs for your own personal use would be considered recreational; using the same device to take photographs or videos for compensation or sale to another individual would be considered commercial. You should check with the [FAA](#) for further determination as to what constitutes commercial sUAS operation.

SAFETY GUIDELINES FOR RECREATIONAL USERS OF sUAS (DRONES)

- Users should follow community-based safety guidelines, as developed by organizations such as the Academy of Model Aeronautics (AMA)
- Users should fly no higher than 400 feet and remain below surrounding obstacles when possible
- Users must be able to see their sUAS at all times, and use an observer to assist them if needed
- Users should remain well clear and must not interfere with manned aircraft operations, must see and avoid other aircraft and obstacles at all times, must avoid any activity that would cause a manned aircraft pilot to divert from planned operations, and must give way to all other aircraft at all times.
- Users must not intentionally fly over unprotected persons or moving vehicles, and should remain at least 25 feet away from individuals and vulnerable property
- Users must contact the airport or control tower before flying within five miles of an airport
- Users should be aware that in addition to public airports, Alaska has many private airstrips as well as bodies of waters used for take-off and landing by float planes and should not fly a UAS in the vicinity of these locations
- Users should not fly a UAS weighing more than 55 lbs unless it's certified by an aeromodelling community-based organization.
- Users should not fly in adverse weather conditions such as in high winds or reduced visibility
- Users must not fly under the influence of alcohol or drugs
- Users should ensure the operating environment is safe and that the operator is competent and proficient in the operation of the sUAS
- Users should not operate on or fly over private property without first obtaining permission from the property owner and/or tenant
- Users should not fly near or over sensitive infrastructure or property such as power stations, water treatment facilities, correctional facilities, heavily traveled roadways, government facilities, etc.
- Users should not conduct surveillance or photograph persons in areas where there is an expectation of privacy without the individual's permission (See AMA's privacy policy at <http://www.modelaircraft.org/privacy.aspx>).

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Frequently Asked Questions: Privacy

FAQ 1 WHEN DOES A FLYING DRONE BREACH PRIVACY?

All Alaskans have a reasonable expectation of privacy to live without fear of unwarranted personal invasion. With equal importance, Alaskans enjoy the right to be left alone. The definition for **Reasonable Expectation of Privacy** directly relates to law enforcement requirements to obtain a warrant before actions of search and seizure.

The **United States Constitution Fourth Amendment** forbids the government from performing warrantless and unreasonable searches of any area in which a person maintains a reasonable expectation of privacy. **Alaska's Constitution** guarantees Alaskans the right to privacy. Article 1, Section 22 states, "The right of the people to privacy is recognized and shall not be infringed. The legislature shall implement this section." The legislature has a long-standing history of protecting Alaskans' privacy by instituting **statutes** regarding stalking, harassment, indecent viewing, sending explicit images, and misusing confidential information. The UAS Legislative Task Force (UASLTF) continues to review these protections particularly as they relate to unmanned aircraft systems.

The UASLTF has prepared this document to address privacy guidelines with respect to drones and to educate UAS operators and citizens. We will look at privacy as it pertains to the specific act of intrusion into another's privacy, the prevention of intrusion into one's own privacy, and/or the act of exposing elements of one's privacy against an individual's will. This concept is recognized as "**the right to be left alone.**"

Private Citizen: Please recognize that individuals experience different levels of sensitivity to interruption of privacy. Was the drone flight intentionally directed at you or just passing through? Do you believe the operator of the drone was flying in an inappropriate way? Be as specific as possible so that you can report the incident to local law enforcement.

Drone Operator: Will you be perceived as intruding on someone's privacy? Would you act in-person as you do with your drone? Be courteous and respectful to others.



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FAQ 2 MY NEIGHBOR IS SUNBATHING ON HER DECK AND MY SON IS FLYING HIS DRONE...



Although the FAA governs the airspace from the ground up, help your son understand courteous flying so he doesn't disturb the neighbors or fly somewhere he shouldn't. He should never hover over your neighbor's yard.

Know Before You Fly provides recreational flying rules for hobby pilots: the complete rules can be found at www.alaskadrones.org.

Private Citizen: The FAA governs the airspace from the ground up regardless of whether the property owner is private, public, corporate, or government. While we enjoy a sense of privacy on our property, we may not control what occurs above our heads.

Drone Operator: Fly with respect. Don't fly your drone where people typically expect privacy. Don't use your drone to harass people. In public areas, don't invade people's personal space and their solitude.

Example: Someone is flying their drone and interrupting my relaxing evening barbecuing in my backyard. They won't stop even when I "shoo" it away...

What Can I Do? Try to identify where the drone operator is located. Provide as much information as possible to local law enforcement. This might be a situation of harassment.



Alaska's Drone Operator Safety and Privacy Guidelines

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FAQ 3 CAN I SHOOT IT DOWN IF IT'S FLYING OVER MY HOUSE?

Remember that a drone is someone else's personal property. It's best to know:

- Why is a drone flying over your property?
- Is it violating the law?
- Who and where is the drone operator?

If you shoot it down or damage it, you may be liable for:

- Destruction of property
- Discharging a weapon in a restricted area

If you think a drone operator is in violation of the law, immediately contact your local law enforcement agency, and provide as much detail as you can about the encounter.



Private Citizen: The value associated with a recreational drone could be \$25 to much more than \$1,000. The FAA is rapidly authorizing commercial use, so that a small drone could be carrying specialized equipment and cost more than \$100,000. Both the hobby drone and the commercial drone may look very similar as you view it from the ground.

Drone Operator: Before you fly over private property, consider the impact of your flight on someone's privacy. Obtain the owner's permission if you plan to hover and take photos or video. If you do not have permission, data you capture should not exceed what a smart phone could capture from a public viewpoint or area nearby. Avoid flying over populated areas.

What Does Federal Law Say?

18 U.S.C. § 32: Federal law governing the National Air Space states that it is a Federal Offense to discharge a firearm at or in the direction of an aircraft. In effect, anyone purposefully shooting at a UAS, is breaking Federal Law, not just State Law or Local Ordinance. 18 USC 32 states that a person shooting down a government or commercial drone would constitute a violation of 18 U.S.C. § 32, that anyone who damages or destroys any aircraft in flight in the United States has committed a crime punishable by up to twenty years in prison or a fine of up to \$250,000.

Federal law states in part: "Whoever willfully...sets fire to, damages, destroys, disables, or wrecks any aircraft in the special aircraft jurisdiction of the United States or any civil aircraft used, operated, or employed in interstate, overseas, or foreign air commerce...shall be fined under this title or imprisoned not more than twenty years or both."

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Alaska's Drone Operator Safety and Privacy Guidelines

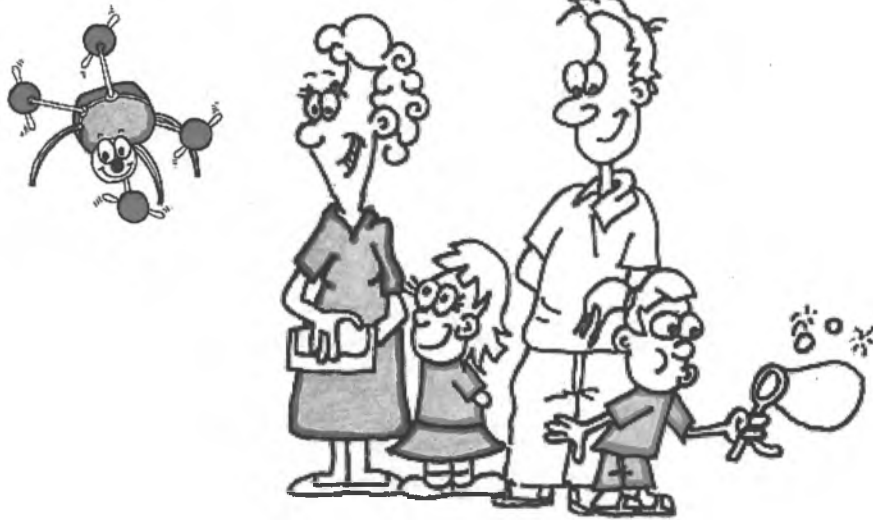
Incident Reporting: FAA Aviation Safety Hotline 907-271-2000 or contact your local law enforcement agency

FAQ 4 WHAT IF A DRONE IS PHOTOGRAPHING THROUGH MY WINDOW OR HOVERING AROUND MY HOUSE?

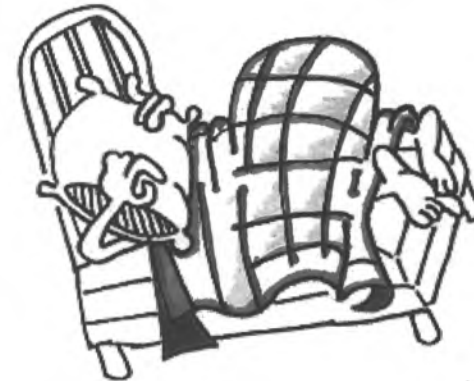
If you feel threatened or concerned, contact local law enforcement. Alaska has laws that address stalking and "peeping Tom" activities.

Private Citizen: A camera mounted on a drone may be treated in the same way as another camera. If an individual is flying a drone in such a way that you feel violated, local law enforcement should be contacted.

Drone Operator: Enjoy your drone with your family and friends who welcome its presence. When you don't have permission, don't hover and capture images that you couldn't capture on your smart phone while walking down the street, or from a nearby building, or from a manned aircraft overhead.



Welcomed Drone: The family drone hovering and taking a portrait when grandma comes to visit.



Unwelcomed Drone: It wasn't a bad dream and the buzzing sound was not your alarm clock. The drone was spying through the bedroom window. Who knows where the pilot is and how those pictures might be used?

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FAQ 5 THE NEIGHBOR IS CHASING MY DOG WITH HIS DRONE!

Although the pet's owner may have introduced his dog to a flying toy, the noise and unfamiliarity of the neighbor's drone buzzing around could frighten Fido and could be considered harassment. If the dog swats the drone out of the sky and chews it up, would it be considered damaging another's personal property or self-defense by the dog? Who is harassing who? Did the incident occur on the dog owner's property or in a public place? There are many factors to consider.

Private Citizen: Know and follow your local animal control laws. If you are in a public area such as a local park, keep your pet away from people flying model aircraft.

Drone Operator: Harassing an animal may come with criminal penalties. Be smart and protect your expensive piece of technology from animals that might view your drone as a threat and attack it.



FAQ 6 WHAT CAN I DO IF THE DRONE'S "BUZZING" IS ANNOYING ME?

A drone typically makes less noise than a standard lawn mower, so fortunately you probably won't find the noise overbearing. But if the noise is annoying, likely the drone is too "near ears" and should be redirected away from people. If the drone is flown during locally recognized waking hours, a drone is probably not in violation of a noise ordinance. If the drone operator is flying too close to people he should be reported to the FAA or local law enforcement for unsafe operations or a situation of harassment.

Private Citizen: Many annoying noises are allowable in both public and private areas. The decibel limit separating acceptable noise level is generally compared to the noise of a standard lawn mower or small engine.

Drone Operator: The drone's buzzing may not be the only problem. The proximity of the aircraft to another person and the length of time in that proximity may be the real issue. This could be a situation of harassment. Be courteous to others, don't hover your UAS "near ears," and stay away unless invited.



Alaska's Drone Operator Safety and Privacy Guidelines

Incident Reporting: FAA Aviation Safety Hotline 907-271-2000 or contact your local law enforcement agency

FAQ 7 I UNDERSTAND WHY IT'S NOT SAFE TO FLY A DRONE NEAR HEAVY TRAFFIC BUT WHAT ABOUT PRIVACY?

A drone flying near traffic could distract drivers and create unsafe driving conditions including accidents. Drivers should keep their eyes on the road, and drone operators should keep their UAS away from traffic.

Private Citizen: If you see one, keep your eyes on the road. Pull over to report it to local law enforcement if you think it's creating unsafe conditions or collecting data inappropriately.

Drone Operator: Flying over roads can cause distraction and potential automobile accidents on a road system. Not only are drones dangerous over busy traffic but most drivers don't want to be GPS tracked and photographed. Don't fly your drone near high traffic roadways.



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FAQ 8 WHAT PRIVACY CONCERNS CAN THERE BE WHEN YOU'RE IN A CROWD?



Sometimes photographing a crowd could result in the capture of inadvertent images. If the drone photographs Captain Blowhole with a catch beyond his limit, that image could be provided to the authorities for legal review.

Private Citizen: Typically, if you're in a crowd, privacy is limited. Although the safety concerns are paramount when a drone is flying above a crowd, the photography could identify something that a citizen would not want shared, such as the map to Clyde's secret fishing hole.

Drone Operator: During the fishing season, don't photograph Clyde's map to his secret fishing hole! Even if something is visible in a public area, realize a person might not want a camera zooming in on him. Clyde would like his fishing hole to remain a secret.



Alaska's Drone Operator Safety and Privacy Guidelines

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FAQ 9 WHAT SAFETY CONCERNS ARE MOST PREVALENT AROUND CROWDS?

"No Drone Zone" announcements have been made at public events to insure the safety of participants and the public. Drone operators have been asked to leave their drones at home during many major events such as: the Super Bowl, forest fires, Olympic qualifying meets, and many other crowd-gathering events.

If you want to find restrictions that may have been posted, check with the nearest FAA airport tower or look at <https://pilotweb.nas.faa.gov/PilotWeb/> for notices to airmen (NOTAMs) for information regarding manned and unmanned flight events occurring in a designated area.

Private Citizen: Safety concerns are paramount when a drone is flying above a crowd. Many unforeseen circumstances can occur that might result in injury. If you see a drone, stay at least 25 feet away from it.

Drone Operator: If the drone was to fall out of the sky it could injure a bystander. The drone could also compromise the safety of the crowd by interfering with the activity or distracting people, thus rendering them unaware of happenings nearby. Keep your drone a minimum of 25 feet from a person. If a crowd is in the general vicinity of your flight, make sure your drone is far enough away that if the battery dies or you lose control of your UAS that it won't fall on anyone. Never fly your drone over or near a crowd intentionally.



Disclaimer: The purpose of this publication, "Drone/UAS Operator Safety Guidelines and FAQ's about Privacy" is to provide informational aid and overview of certain federal and state laws that may apply to drone/UAS operation. This publication is not intended to provide legal advice. Please see full disclaimer on first and final pages. Published: Nov 5, 2015

Alaska's Drone Operator Safety and Privacy Guidelines

Incident Reporting: FAA Aviation Safety Hotline 907-271-2000 or contact your local law enforcement agency

FAQ 10 HOW WILL THE PHOTOS OR VIDEO BE STORED OR USED?

Inappropriate use of images or data captured by technological devices understandably concern Alaskans. If you believe someone has obtained images or data illegally or plans to use them illegally, contact local law enforcement. Be able to answer the following questions: Is the drone operator taking inappropriate images? Are images being used in an inappropriate way? Are the images being used for personal gain? Was personal information stolen?

Examples of inappropriate image gathering could include:

- A drone records your PIN over your shoulder while you are at the ATM.
- A drone records images through your office window of a newly signed contract.
- A drone peers through the window while your child is napping.

Private Citizen: Many recreational drone operators have posted video and pictures on social media sites. Enjoy this new interesting form of photography. If you come across footage that you believe may be a violation of privacy, contact local law enforcement.

Drone Operator: If you are photographing something with your drone in a place where you would not be welcomed if you were taking pictures in-person, your drone should not be there. Make sure you don't save or post footage that breaches someone's privacy.

FAQ 11 WHAT HAPPENS IF A DRONE CAPTURES INADVERTENT IMAGES?

Private Citizen: What happens if a drone captures inadvertent images and those images are posted on social media or reveal something questionable? Photographing in a public area could result in capturing an image that may not have been planned. The image of a person not wanting to be photographed may not be a breach of privacy since it occurred in public.

Drone Operator: Be aware of and be sensitive to what you are photographing. Are you capturing proprietary information? If you capture an image of someone appearing to break the law, you may want to surrender images to local authorities. Some people may not want to be photographed and their expectation of privacy could result in an angry situation. Again, if you are photographing something in a place where you would not be welcomed in-person, redirect your drone elsewhere.



Alaska's Drone Operator Safety and Privacy Guidelines

Incident Reporting: FAA Aviation Safety Hotline 907-271-2000 or contact your local law enforcement agency

CAN I USE A DRONE FOR MY BUSINESS?

Aircraft continue to advance technologically and many people are waiting for the opportunity to use drones as part of business. Today, the FAA prohibits commercial use of Unmanned Aircraft Systems (UAS) unless the business has been granted a waiver to use the aircraft for specific purposes in the business. Businesses are beginning to receive authorization to use UAS for commercial use.

You must obtain authorization from the FAA if you want to use your drone for commercial purposes. The time will come when safety concerns have been well-vetted and business use will become commonplace, but at this time, you must have prior FAA approval.

**Thank you for reviewing these guidelines!
Know your rights and your responsibilities.**

Now go enjoy life in a world
where UAS technology is changing daily
and where the UASLTF continues to look out for you!

Alaska's Drone Operator Safety and Privacy Guidelines

Incident Reporting: FAA Aviation Safety Hotline 907-271-2000 or contact your local law enforcement agency

CONTACT INFORMATION AND ALASKA STATUTES

Please visit the following web sites for additional information:

Federal Aviation Administration, www.faa.gov/uas

Academy of Model Aeronautics, www.modelaircraft.org

Alaska State Legislature, www.alaskadrones.org

University of Alaska Fairbanks, www.acuasi.alaska.edu

FAA UAS Test Range, www.acuasi.alaska.edu/pputrc

To report suspicious behavior of a drone and its operator, please contact your local law enforcement authority.

Alaska statutes that could be applied to inappropriate drone use:

AS 11.61.116 Sending an explicit image of a minor

AS 11.61.120(a)(6) Harassment, publishing or distributing certain images

AS 11.61.123 Indecent viewing or photography

AS 11.41.270 Stalking, nonconsensual conduct prohibits monitoring by technical means

AS 45 Personal Information Protection Act

AS 11.76.113 and AS 11.76.115 Misconduct involving confidential information in the first and second degree

DISCLAIMER: The purpose of this publication, "Drone/UAS Operator Safety Guidelines and FAQ's About Privacy" is to provide informational aid and overview of certain federal and state laws that may apply to drone/UAS operation. This publication is not intended to provide legal advice or a comprehensive review of all federal and state laws relating to drone/UAS operation. Laws will almost certainly change, particularly in the rapidly developing areas of the law at the federal and state level regarding drone/UAS operation. Before a person operates a drone/UAS, or pursues a legal claim related to drone/UAS operation, it is the sole responsibility of that person to review applicable laws, and seek legal advice if necessary, regarding the person's rights and liabilities. The publishers of this publication disclaim all liability and are not responsible for damages related to the contents of this publication.

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Alaska's Drone Operator Safety and Privacy Guidelines

Incident Reporting: FAA Aviation Safety Hotline 907-271-2000 or contact your local law enforcement agency

Alaskans guard their personal privacy very seriously. How do we define privacy when it comes to Unmanned Aircraft Systems (UAS) commonly known as drones? Because of the rapid development of UAS technology, this question is being contemplated worldwide, and new boundaries must be identified. A threat to safety can be pinpointed more easily because a person can see the aircraft, operator and its effects; on the other hand, a threat to privacy is not so easily pinpointed because it involves thought, sentiment, emotion and perception. It is important operators and citizens understand drone guidelines. This publication was created by the State of Alaska Unmanned Aircraft Systems Legislative Task Force for this purpose.

Read. Share. Enjoy your drone!

Disclaimer: The purpose of this publication, "Drone/UAS Operator Safety Guidelines and FAQ's about Privacy" is to provide informational aid and overview of certain federal and state laws that may apply to drone/UAS operation. This publication is not intended to provide legal advice. Please see full disclaimer on first and final pages. Published: Nov 5, 2015

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MEMORANDUM

November 4, 2015

SUBJECT: Airspace and video recording restrictions on unmanned aircraft systems (Work Order No. 29-LS1146)

TO: Representative Shelley Hughes
Attn: Ginger Blaisdell

FROM: Daniel C. Wayne 
Legislative Counsel

You have asked two questions.

1. Does the federal government have jurisdiction over private airspace, including the airspace above private dwellings? The answer is yes. Under 49 U.S.C. 40103(a), "[T]he United States Government has exclusive sovereignty of airspace of the United States." In addition, 49 U.S.C. 40103(b)(2) reads, in part:

(2) The Administrator shall prescribe air traffic regulations on the flight of aircraft (including regulations on safe altitudes) for--

...

(B) protecting individuals and property on the ground;

...

Although it is sometimes argued that model aircraft are not "aircraft" for purposes of 49 U.S.C. 40103, the National Traffic Safety Board recently clarified otherwise, as follows:

Title 49 U.S.C. § 40102(a)(6) defines "aircraft" as "any contrivance invented, used, or designed to navigate, or fly in, the air." Similarly, 14 C.F.R. § 1.1 defines "aircraft" for purposes of the FARs, including § 91.13, as "a device that is used or intended to be used for flight in the air." The definitions are clear on their face. Even if we were to accept the law judge's characterization of respondent's aircraft, allegedly used at altitudes up to 1,500 feet AGL for commercial purposes, as a "model aircraft," the definitions on their face do not exclude even a "model aircraft" from the meaning of "aircraft." Furthermore, the definitions draw no distinction between whether a device is manned or unmanned. An aircraft is "any"

"device" that is "used for flight." We acknowledge the definitions are as broad as they are clear, but they are clear nonetheless.^[1]

Although the federal government has jurisdiction to regulate airspace from the surface on up, private land owners retain certain rights in connection with airspace that is above their property. In *United States v. Causby*, the U.S. Military had begun flying as low as 83 feet above a chicken coop in the Causby family's yard, distressing the chickens so much that some of them died, prompting the family to allege an unconstitutional taking of their property. The U.S. Supreme Court held that a long established common-law rule—that private land owners owned the airspace above their land from the surface to a point extending indefinitely upward—had no place in the modern world.² However, the Court said that the military flights were "so low and so frequent as to be a direct and immediate interference with the enjoyment and use of the land."³ The Court said:

We have said that the airspace is a public highway. Yet it is obvious that if the landowner is to have full enjoyment of the land, he must have exclusive control of the immediate reaches of the enveloping atmosphere. Otherwise buildings could not be erected, trees could not be planted, and even fences could not be run. The principle is recognized when the law gives a remedy in case overhanging structures are erected on adjoining land.^[4]

Gregory S. McNeal, author of *Drones and Aerial Surveillance: Considerations for Legislators* wrote recently of the decision:

The *Causby* opinion thus created two types of airspace, the public navigable airspace, a "public highway" in which the landowner could not exclude aircraft from flying, and the airspace below that which extends downward to the surface, in which landowners held some right to exclude aircraft. This discussion brings into focus the possibility that a landowner may exclude others from entering the low altitude airspace above their property, and as such may exclude drones (whether government or civilian operated) from entering that airspace. But, if such rights in fact exist, at what altitude are such property rights triggered? Unfortunately there is very little clarity on this point. The Supreme Court referred to this airspace

¹ *Huerta v. Pinker*, Docket CP-217, NTSB Order No. EA-5730 (November 17, 2014).

² *United States v. Causby*, 328 U.S. 256 (1946).

³ *Id.*, 328 U.S. 256, 266 (1946).

⁴ *Id.*, 264 (1946).

as the "immediate reaches" above the land, into which intrusions would "subtract from the owner's full enjoyment of the property."⁵

There may be other legal or constitutional protections from unmanned air systems. The U.S. Supreme Court has recognized that an expectation of privacy protecting persons from searches by the government extend to certain areas near a dwelling, including the adjacent "curtilage."⁶ The Court described curtilage as follows:

"At common law, the curtilage is the area to which extends the intimate activity associated with the 'sanctity of a man's home and the privacies of life.'" The protection afforded the curtilage is essentially a protection of families and personal privacy in an area intimately linked to the home, both physically and psychologically, where privacy expectations are most heightened.⁷

In that case, the Court upheld an aerial search by the government from a height of 1000 feet over Ciraulo's private property, however, based on a finding that 1000 feet is within "publically navigable airspace." The Court concluded:

Any member of the public flying in this airspace who glanced down could have seen everything that these officers observed. On this record, we readily conclude that respondent's expectation that his garden was protected from such observation is unreasonable and is not an expectation that society is prepared to honor.⁸

A year later the U.S. Supreme Court explained that, with regard to curtilage questions, certain factors have bearing on the "centrally relevant consideration—whether the area in question is so intimately tied to the home itself that it should be placed under the home's 'umbrella' of Fourth Amendment protection." The Court said those factors include: (1) "the proximity of the area claimed to be curtilage to the home," (2) "whether the area is included within an enclosure surrounding the home," (3) "the nature of the uses to which the area is put," and (4) "the steps taken by the resident to protect the area from observation by people passing by."⁹

⁵ Pages 8 - 9 (November 11, 2014). Brookings Institution: The Robots Are Coming: The Project on Civilian Robotics, November 2014; Pepperdine University Legal Studies Research Paper No. 2015/3.

⁶ *California v. Ciraulo*, 476 U.S. 207 (1986).

⁷ *Id.*, 212 - 213 (citations omitted).

⁸ *Id.*, 213 - 214.

⁹ *United States v. Dunn*, 480 U.S. 294, 301 (1987).

In 1986, during the same term as *Ciraulo*, (cited above) the Supreme Court in *Dow Chemical Co. v. United States* confronted the question of whether aerial photography by the government from above an industrial site was a search, and whether the search was subject to the warrant requirement under the Fourth Amendment of the U.S. Constitution.¹⁰ The Court held that "the taking of aerial photographs of an industrial plant complex from navigable airspace is not a search prohibited by the Fourth Amendment."¹¹ The Court distinguished the facts in *Dow* from hypothetical future cases—where technology might be used to penetrate walls or windows to obtain information that an unaided human eye is not able to obtain—as follows:

Here, EPA was not employing some unique sensory device that, for example, could penetrate the walls of buildings and record conversations in Dow's plants, offices, or laboratories, but rather a conventional, albeit precise, commercial camera commonly used in mapmaking. The Government asserts it has not yet enlarged the photographs to any significant degree, but Dow points out that simple magnification permits identification of objects such as wires as small as 1/2-inch in diameter.

It may well be, as the Government concedes, that surveillance of private property by using highly sophisticated surveillance equipment not generally available to the public, such as satellite technology, might be constitutionally proscribed absent a warrant. But the photographs here are not so revealing of intimate details as to raise constitutional concerns. Although they undoubtedly give EPA more detailed information than naked-eye views, they remain limited to an outline of the facility's buildings and equipment. The mere fact that human vision is enhanced somewhat, at least to the degree here, does not give rise to constitutional problems. An electronic device to penetrate walls or windows so as to hear and record confidential discussions of chemical formulae or other trade secrets would raise very different and far more serious questions; other protections such as trade secret laws are available to protect commercial activities from private surveillance by competitors.

In some search and seizure cases where "naked-eye" observation was enhanced by technology, courts have found the search to be unreasonable and violative of the Fourth

¹⁰ 476 U.S. 227 (1986).

¹¹ *Dow Chemical Co. v. United States*, 476 U.S. 227, 238 (1986). Note, however, that at least one court has declined to apply *Dow*, as well as *Ciraulo*, (cited above) to search and seizure cases involving an expectation of privacy within a residence, on the basis that a state constitution may provide greater protection of privacy than the protection provided by federal law. *People v. Mayoff*, 42 Cal. 3d 1302, 1310-14, 729 P.2d 166, 170-73 (1986).

Amendment to the U.S. Constitution. For example, as noted in the following excerpt from *Kyllo v. United States*, the Court found that the use of sense-enhancing technology (thermal imaging) to gather information regarding the interior of a home was a search—analogue to a physical intrusion into a home without a warrant—and therefore the evidence obtained should be suppressed. The Court said:

The present case involves officers on a public street engaged in more than naked-eye surveillance of a home. We have previously reserved judgment as to how much technological enhancement of ordinary perception from such a vantage point, if any, is too much. While we upheld enhanced aerial photography of an industrial complex in *Dow Chemical*, we noted that we found "it important that this is *not* an area immediately adjacent to a private home, where privacy expectations are most heightened."

It would be foolish to contend that the degree of privacy secured to citizens by the Fourth Amendment has been entirely unaffected by the advance of technology. For example, as the cases discussed above make clear, the technology enabling human flight has exposed to public view (and hence, we have said, to official observation) uncovered portions of the house and its curtilage that once were private. The question we confront today is what limits there are upon this power of technology to shrink the realm of guaranteed privacy.

* * *

Where, as here, the Government uses a device that is not in general public use, to explore details of the home that would previously have been unknowable without physical intrusion, the surveillance is a "search" and is presumptively unreasonable without a warrant.¹²

Interestingly, after *Dow* the Court held (in *Florida v. Jardines*) that even when law enforcement's observation of a dwelling is enhanced by a police dog sniffing for evidence after being dispatched to a location within the curtilage surrounding the dwelling, the observation is a search subject to the warrant requirement. The Court said:

The Fourth Amendment "indicates with some precision the places and things encompassed by its protections": persons, houses, papers, and effects. The Fourth Amendment does not, therefore, prevent all investigations conducted on private property; for example, an officer may (subject to *Katz*) gather information in what we have called "open fields"—even if those fields are privately owned—because such fields are not enumerated in the Amendment's text.

¹² *Kyllo v. United States*, 533 U.S. 27, 33 - 41 (2001) (emphasis in original, internal citations omitted).

But when it comes to the Fourth Amendment, the home is first among equals. At the Amendment's "very core" stands "the right of a man to retreat into his own home and there be free from unreasonable governmental intrusion." This right would be of little practical value if the State's agents could stand in a home's porch or side garden and trawl for evidence with impunity; the right to retreat would be significantly diminished if the police could enter a man's property to observe his repose from just outside the front window.

We therefore regard the area "immediately surrounding and associated with the home"—what our cases call the curtilage—as "part of the home itself for Fourth Amendment purposes."¹³

In that case, the Court acknowledged that private individuals and law enforcement officers alike are free to approach the front door of a dwelling in many instances, without express permission or invitation, but explained limits on that freedom as follows:

"A license may be implied from the habits of the country," notwithstanding the "strict rule of the English common law as to entry upon a close." We have accordingly recognized that "the knocker on the front door is treated as an invitation or license to attempt an entry, justifying ingress to the home by solicitors, hawkers and peddlers of all kinds." This implicit license typically permits the visitor to approach the home by the front path, knock promptly, wait briefly to be received, and then (absent invitation to linger longer) leave. Complying with the terms of that traditional invitation does not require fine-grained legal knowledge; it is generally managed without incident by the Nation's Girl Scouts and trick-or-treaters. Thus, a police officer not armed with a warrant may approach a home and knock, precisely because that is "no more than any private citizen might do."

But introducing a trained police dog to explore the area around the home in hopes of discovering incriminating evidence is something else. There is no customary invitation to do *that*. An invitation to engage in canine forensic investigation assuredly does not inhere in the very act of hanging a knocker.³ To find a visitor knocking on the door is routine (even if sometimes unwelcome); to spot that same visitor exploring the front path with a metal detector, or marching his bloodhound into the garden before saying hello and asking permission, would inspire most of us to—well, call the police. The scope of a license—express or implied—is limited not only to a particular area but also to a specific purpose. Consent at a traffic stop to an officer's checking out an anonymous tip that there is a body in

¹³ *Florida v. Jardines*, 133 S. Ct. 1409, 1414 (2013) (internal citations omitted).

the trunk does not permit the officer to rummage through the trunk for narcotics. Here, the background social norms that invite a visitor to the front door do not invite him there to conduct a search.¹⁴

A court may extend an analysis similar to the ones in *Kyllo* and *Florida v. Jardines* to the use of UAS to enhance naked-eye observation of a dwelling. If so, it may determine that an uninvited UAS has very limited legal license to enter the curtilage surrounding a dwelling or from there to observe or record images or sounds that are inside the dwelling.

In *Florida v. Riley*, the U.S. Supreme Court upheld the search of a greenhouse in someone's private yard, conducted from a helicopter flying 400 feet above the yard, partly because the helicopter was flying in what the Court determined was navigable airspace, and since any member of the public would be free to fly over the property and observe from that height, it was not unconstitutional for the government to do so as well.¹⁵ In a concurring opinion, Justice Sandra Day O'Connor said:

Because there is reason to believe that there is considerable public use of airspace at altitudes of 400 feet and above, and because Riley introduced no evidence to the contrary before the Florida courts, I conclude that Riley's expectation that his curtilage was protected from naked-eye aerial observation from that altitude was not a reasonable one. However, public use of altitudes lower than that—particularly public observations from helicopters circling over the curtilage of a home—may be sufficiently rare that police surveillance from such altitudes would violate reasonable expectations of privacy, despite compliance with FAA air safety regulations.¹⁶

Very recently, in a case in New Mexico involving an aerial search by the government with a manned aircraft, the New Mexico Supreme Court discussed *Riley* and said:

First, unobtrusive aerial observations of space open to the public are generally permitted under the Fourth Amendment. Even a minor degree of annoyance or irritation on the ground will not change that result.

...

Our second conclusion, however, is that when low-flying aerial activity leads to more than just observation and actually causes an unreasonable intrusion on the ground—most commonly from an unreasonable amount of wind, dust, broken objects, noise, and sheer panic—then at some point

¹⁴ *Id.*, 1415 -1416 (emphasis in the original) (internal citations and original footnotes omitted).

¹⁵ *Florida v. Riley*, 488 U.S. 445 (1989).

¹⁶ *Id.*, 455.

courts are compelled to step in and require a warrant before law enforcement engages in such activity.

. . . as the U.S. Supreme Court said in *Riley*, an observation will not always be lawful under the Fourth Amendment simply because the plane is operating within navigable airspace. *Riley*, 488 U.S. at 451, 109 S.Ct. 693.

. . .
we conclude that the official conduct in this case went beyond a brief flyover to gather information. The prolonged hovering close enough to the ground to cause interference with Davis' property transformed this surveillance from a lawful observation of an area left open to public view to an unconstitutional intrusion into Davis' expectation of privacy. We think what happened in this case to Davis and other persons on the ground is precisely what *did not* occur in either *Ciraolo* or *Riley* and what *did* occur in both *Oglialoro* and *Pollock*. Accordingly, we hold that the aerial surveillance over Davis' property was an unwarranted search in violation of the Fourth Amendment.¹⁷

The New Mexico Supreme Court further noted in *Davis*, that New Mexico's state constitution explicitly creates a constitutional right of privacy in that state, and implied that consideration of privacy interests under that provision might require a different kind of analysis than one based on intrusiveness, in a case involving UAS. But the court declined to speculate further about UAS because the case before the Court involved surveillance by manned helicopters.¹⁸ Under art. I, sec. 22, Constitution of the State of Alaska, the "right of the people to privacy is recognized and shall not be infringed," and under art. I, sec. 14, Constitution of the State of Alaska, "unreasonable searches and seizures" are prohibited.¹⁹ The Alaska Supreme Court has held that the right to privacy

¹⁷ *State v. Davis*, No. S-1-SC-34548, 2015 WL 6125580, at pages 10 - 13 (N.M. Oct. 19, 2015).

¹⁸ *Id.*

¹⁹ Generally, a warrant is required in order for the state to search private property in Alaska. Alaska courts have recognized exceptions, however, including a search of abandoned property, a search in pursuit of a fleeing felon, a search to avoid destruction of a known sizable item, a pre-incarceration "inventory" search, a search where voluntary consent has been granted, a search in rendering emergency aid, a "stop and frisk" search, and a search incident to arrest. Harrison, *Alaska's Constitution: A Citizen's Guide*, 5th Ed., at 32.

under the Alaska Constitution is broader in scope than that under the federal constitution.²⁰

In my opinion, a court in Alaska would consider law enforcement use of a UAS to conduct surveillance inside a dwelling, from a location outside of the dwelling, is a search. Searching a person's home implicates the right to privacy and protection against unreasonable search and seizure under the United States Constitution and the Constitution of the State of Alaska. In *Ravin v. State*, the Alaska Supreme Court found the right to privacy in the home to be a right of the highest importance and most deserving of constitutional protection. In *Ravin*, the Court wrote "[T]he home, then, carries with it associations and meanings which make it particularly important as the situs of privacy. Privacy in the home is a fundamental right, under both the federal and Alaska constitutions."²¹

As noted by the US Supreme Court in *Florida v. Jardines*, cited above, there is a common law right for a member of the public, including a police officer, to approach a residence via the normal methods of ingress and egress. This right can apply even when "No Trespassing" signs have not been posted, according to the Alaska Court of Appeals, in *Michel v. State*.²² The Court held that "the law presumes that a homeowner generally consents to 'allow visitors to take reasonable steps to make contact with the occupant,'" and this presumption "can be overcome only when a homeowner manifests a clear intent to prohibit all visitors from even approaching the house."²³ In *Michel*, a state trooper approached a residence that was not visible from the highway via a 300-yard-long driveway that had four "no trespassing" signs posted, knocked on the door, and eventually gained a search warrant based on observations made while talking to the homeowner. The court agreed with other state courts that found that "No Trespassing" signs do not, by themselves, manifest a homeowner's intent to keep away all visitors. Under the circumstances of *Michel*—a long driveway in rural Alaska—the court found that a visitor would reasonably conclude that the "No Trespassing" signs were aimed at people who might be tempted to use the driveway as an access route for their own purposes such as hunting, camping, or hiking, and were not directed at prohibiting entry by people visiting for social or commercial purposes.²⁴

²⁰ *Woods & Rohde, Inc. v. State, Dep't of Labor*, 565 P.2d 138, 150 (Alaska 1977).

²¹ *Ravin v. State*, 537 P.2d 494, 504 (Alaska 1975).

²² *Michel v. State*, 961 P.2d 436 (Alaska Ct. App. 1998).

²³ *Id.*, 438.

²⁴ *Id.*

2. Does the one party consent exception to the legal prohibition on secretly recording a conversation apply to videos? The answer is yes, probably. Generally, the undisclosed recording by one party to a conversation is lawful in the State of Alaska.²⁵ However, it is difficult to see how this would be applicable to a recording made by a UAS since neither the UAS nor the person operating it is likely to be identifiable as a party to the recorded conversation. Furthermore, the rule applies only to conversations, not to private and nonverbal communication or activities.

According to one recent report:

UAS, commonly referred to as "drones," can range from the size of an insect—sometimes called nano or micro drones—to the size of a traditional jet. Drones can be outfitted with an array of sensors, including high-powered cameras, thermal imaging devices, license plate readers, and laser radar (LADAR). In the near future, drones might be outfitted with facial recognition or soft biometric recognition, which can recognize and track individuals based on attributes such as height, age, gender, and skin color. In addition to their sophisticated sensors, the technical capability of drones is rapidly advancing.^[26]

The evolving surveillance capabilities of drones, and the growth in their affordability and availability, raises a number of issues related to privacy, as it becomes possible for a person to be surveilled in their home by law enforcement and other persons, government and non-government, in a manner and to a degree that has not been possible until recently.

Margot E. Kaminski writes, in *Drone Federalism: Civilian Drones and the Things They Carry*:

One intuition that frequently arises in privacy cases, both under tort law and under the Fourth Amendment, is that the location of the recording matters. A First Amendment right to record is most likely to outweigh privacy concerns in a public space, where one person's privacy collides with other peoples' experience and memory.^[27]

Her prediction that a court may determine that a private individual has a first amendment right under the U.S. Constitution, to make an audio or video recording, is not without

²⁵ *State v. Murtagh*, 169 P.2d 200, 208 (Alaska Ct. App. 1997).

²⁶ *Congressional Research Report: "Domestic Drones and Privacy: A Primer,"* page 3, by Richard M. Thompson II, Legislative Attorney (March 30, 2015).

²⁷ 4 *California Law Review* 57, 62 - 63 (2013).

support in case law. One federal court has said:

"The act of making an audio or audiovisual recording is necessarily included within the First Amendment's guarantee of speech and press rights as a corollary of the right to disseminate the resulting recording. The right to publish or broadcast an audio or audiovisual recording would be insecure, or largely ineffective, if the antecedent act of making the recording is wholly unprotected."^[28]

However, when it comes to recordings made by law enforcement, courts in Alaska have focused on the right to personal privacy, under art. I, sec. 22, Constitution of the State of Alaska, and the prohibition, under art. I, sec. 14, Constitution of the State of Alaska, on "unreasonable searches and seizures." In *State v. Glass*, a police informant took part in a private conversation with a suspected drug dealer, while wearing an electronic transmitter so the police could secretly record the conversation.²⁹ The Alaska Supreme Court upheld a warrant requirement, and holding that "one who engages in a private conversation is . . . entitled to assume that his words will not be broadcast or recorded absent his consent or a warrant."³⁰ The Court found that at the time of a conversation a party to it knows his or her words might be repeated later by another party who is present, but does foresee that his or her voice will be recorded or broadcast secretly.³¹

In *State v. Page*, the police secretly recorded a drug transaction between a police informant and a suspect, intentionally with only video, no audio, by hiding a camera in the informant's apartment ahead of time.³² The Court held that a party in a private conversation has a right to visual privacy under the Constitution of the State of Alaska, and the police should have obtained a warrant even though the sound on the video camera was turned off.³³

In a later case, involving the use of a hidden video camera in a workplace, the Alaska Supreme Court described a two part test for determining whether surveillance assisted by

²⁸ *ACLU v. Alvarez*, 679 F.3d 583, 595 (7th Cir. 2012) cert. denied, 133 S. Ct. 651 (2012).

²⁹ *State v. Glass*, 583 P.2d 872, 874 (Alaska 1978).

³⁰ *Id.*, 875

³¹ *Id.*, 877.

³² *State v. Page*, 911 P.2d 513, 515 (Alaska App. 1996).

³³ *Id.*

technology is a search. The Court said:

The United States and Alaska Constitutions prohibit not only unreasonable physical searches, but also unreasonable technological searches. Thus placing a hidden video camera in a house in order to record activities there without a warrant is prohibited just as is a warrantless entry to search for evidence. But not all technological monitoring of places or individuals is regarded as a search for constitutional purposes. Photographing a person as she walks in a public park does not raise constitutional concerns. But photographing a person in an enclosed public restroom stall is a search.^[34]

The general test used to determine whether particular technological monitoring is a search is the expectation of privacy test. Under this test courts ask: "(1) did the person harbor an actual (subjective) expectation of privacy, and, if so, (2) is that expectation one that society is prepared to recognize as reasonable?"^[35]

The Court said that answering the question posed in the second part of this test requires, in each case, considering the facts, including the police conduct involved, and "assessing the nature of a particular practice and the likely extent of its impact on the individual's sense of security balanced against the utility of the conduct as a technique of law enforcement." The Court determined that the public nature of the location in *Cowles* tipped the balance in favor of the government in that case, noting the following:

Cowles's desk could be seen by members of the public through the ticket window and the open door, and by her fellow employees who were walking around the office almost continuously during the videotaping. Activities that are open to public observation are not generally protected by the Fourth Amendment. "What a person knowingly exposes to the public, even in his own home or office, is not a subject of fourth amendment protection."^[36]

The Court also discussed the difference between private locations and public locations, and said:

. . . a person engaging in illicit conduct in a doorless restroom stall may have a reasonable expectation that she will not be observed from a hidden vantage point above her, even though it would have been unreasonable for

³⁴ *Cowles v. State*, 23 P.3d 1168, 1170 (Alaska 2001) (internal citations omitted).

³⁵ *Id.*, (internal citations omitted).

³⁶ *Id.*, 1171 (internal citations omitted).

her to expect that she would not be seen through the doorless opening. Where incriminating conduct occurs in a public area, however, participants in that conduct already risk observation, and so have "no constitutional right . . . to demand that such observation be made only by some person of whose presence they [are] aware."³⁷

This suggests that in at least some circumstances a person in Alaska may have a right, regardless of the one-party consent exception, against an audio or video recording of their private conduct being made by a person of whose presence they are not aware. This may be further supported by the holding by the Alaska Court of Appeals, in *State v. Boceski*, that when a police officer eavesdrops using only the officer's natural senses, "the prevailing rule is that such uses of the senses 'made from a place where a police officer has a right to be do not amount to a search in the constitutional sense.'"³⁸ Under the federal wiretap statute, it is unlawful for anyone to intentionally intercept an "oral communication"³⁹ by a person "exhibiting an expectation that such communication is not subject to interception under circumstances justifying such expectation" ⁴⁰ There are various exceptions to the prohibition, including exceptions for one party consent and law enforcement in some circumstances. Alaska has similar prohibitions under AS 42.20.300 - 42.20.390, and a similar exception for one party consent.⁴¹ Nothing suggests that these

³⁷ *Id.*, 1172 (internal citations omitted).

³⁸ *State v. Boceski*, 53 P.3d 622, 625 (Alaska Ct. App. 2002) (internal citations omitted).

³⁹ 18 U.S.C. 2511(1)(a).

⁴⁰ 18 U.S.C. 2510(2).

⁴¹ AS 42.20.320(a) reads

(a) Except for a party to a private conversation, a person who receives or assists in receiving, or who transmits or assists in transmitting, a private communication may not divulge or publish the existence, contents, substance, purport, effect, or meaning of the communication, except through authorized channels of transmission or reception

- (1) to the addressee or the agent or attorney of the addressee;
- (2) to a person employed or authorized to forward a communication to its destination;
- (3) to proper accounting or distributing officers of the various communicating centers over which the communication may be passed;
- (4) to the master of a ship under whom the person is serving;
- (5) to another on demand of lawful authority; or
- (6) in response to a subpoena issued or order entered by a court of competent jurisdiction.

prohibitions and (for recording conversations) the one party consent exception do not apply to UAS.

Under AS 12.37 law enforcement is granted authority to secretly intercept private communications and record them electronically, after obtaining a warrant, subject to certain limitations on the use and retention of the recorded information. The electronic recording can be audio or video. The Alaska Supreme Court has said that the legislative history of AS 12.37 was enacted to parallel the federal law under 18 U.S.C. §§ 2510 - 21, which provides for exceptions to the general prohibition against the interception of communications unless at least one party consents.⁴² 18 U.S.C. 2511(2)(d) reads:

(d) It shall not be unlawful under this chapter for a person not acting under color of law to intercept a wire, oral, or electronic communication where such person is a party to the communication or where one of the parties to the communication has given prior consent to such interception unless such communication is intercepted for the purpose of committing any criminal or tortious act in violation of the Constitution or laws of the United States or of any State.

AS 42.20.310 (Eavesdropping) reads:

- (a) A person may not
- (1) use an eavesdropping device to hear or record all or any part of an oral conversation without the consent of a party to the conversation;
 - (2) use or divulge any information which the person knows or reasonably should know was obtained through the illegal use of an eavesdropping device for personal benefit or another's benefit;
 - (3) publish the existence, contents, substance, purport, effect, or meaning of any conversation the person has heard through the illegal use of an eavesdropping device;
 - (4) divulge, or publish the existence, contents, substance, purport, effect, or meaning of any conversation the person has become acquainted with after the person knows or reasonably should know that the conversation and the information contained in the conversation was obtained through the illegal use of an eavesdropping device.
- (b) In this section "eavesdropping device" means any device capable of being used to hear or record oral conversation whether the conversation is conducted in person, by telephone, or by any other means; provided that this definition does not include devices used for the restoration of the deaf or hard-of-hearing to normal or partial hearing.

⁴² *Bachlet v. State*, 941 P.2d 200, 208 (Alaska Ct. App. 1997).

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Although a one party consent exception under federal or state law may apply in particular circumstances, keep in mind, that, as with any recording made without the consent of all parties, the one-party consent exceptions do not allow unrestricted use of a recording, whether audio or video. And, keep in mind that the warrant requirements under state and federal constitutions, as discussed in *Glass, State v. Page, Cowles* and the other authorities cited above may further limit the use of a one party consent exception by law enforcement. Finally, notwithstanding the one-party consent, a person may be held liable, criminally or civilly, depending on the facts, for the misuse of recorded audio or video material; the one-party consent exception does not legalize stalking, harassment, or trespass when it would otherwise be a crime.⁴³

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⁴³ The potential private criminal use of UAS is discussed more fully in a previous memorandum to you from this office, authored by Legislative Counsel Hilary Martin, dated June 8, 2015, entitled "Unmanned Aircraft Systems."