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**and
Legal**

**Getting Awesome Shots:
Drone Law Primer**

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This primer is accompanied by an oral presentation and is not to be relied upon for legal advice.

Overview

Although drone technology has been around for decades, popular use of drones is still relatively new. Accordingly, federal and state law regarding drone use is still evolving and the boundaries of legal drone use are currently unclear.

At the federal level, the Federal Aviation Administration (“FAA”) regulates the use of public (governmental) and civil (non-governmental) drones to ensure safety and prevent interference with aircraft operation and enforces safe operation of recreational drones. Although the FAA regularly grants authorization for government use of drones for various activities, to date the FAA has not adopted a comprehensive process for granting authorization to operate civil drones (often referred to as commercial use). Thus, use of civil drones (at least the use of civil drones authorized by the FAA) is still relatively new and various legal issues related to drone use – including First, Fourth, and Fifth Amendment issues – remain largely untested in the courts. The FAA’s announcement of its notice of proposed rulemaking regarding the safe civil use of small drones in February 2015 has increased discussion about drones and fundamental rights. At the state level, some but by no means all states have adopted laws that seek to protect certain fundamental rights from drones.

This primer provides an overview of federal and state law related to drone use as of September 2, 2015.

I WHAT IS A DRONE?

- The FAA Modernization and Reform Act of 2012, Pub. L. No. 112-95, § 331 (“FMRA”) defines “unmanned aircraft” to mean “an aircraft that is operated without the possibility of direct human intervention from within or on the aircraft.” An “unmanned aircraft system” (“UAS”) is the unmanned aircraft and its “associated elements (including communications links and the components that control the unmanned aircraft) that are required for the pilot in command to operate safely and efficiently in the national airspace system.”
- In common parlance, “UAS” is known as a “drone.” However, industry advocates attempt to avoid the term “drone” because it is often associated with images of warlike robots.
- Drones can range in size from the size of an insect to the size of traditional jet.
- Drones can be outfitted now with sensors, cameras, thermal imaging devices, license plate readers, and laser radar and may be outfitted in the future with any number of developing technologies.
- As a result of the technology that can be outfitted on a drone, privacy issues related to the use of drones are a source of major concern and debate.

II REGULATORY FRAMEWORK & DEVELOPMENT

A) *Federal Regulatory Framework:*

- The federal government controls the use of airspace pursuant to the Supremacy Clause as effected through aviation law that preempts state and private property laws.
- Under 49 U.S.C. § 40103(b)(1),(2), the FAA is authorized (1) “to ensure the safety of aircraft and the efficient use of airspace,” and (2) to govern the flight of aircraft for purposes of “navigating, protecting and identifying aircraft,” and “protecting individuals and property on the ground.”
- In addition, 49 U.S.C. § 44701(a)(5) directs the FAA to prescribe regulations that the FAA “finds necessary for safety in air commerce and national security.”
- On the basis of this statutory authority, the FAA currently prohibits the use of non-recreational UAS in navigable airspace without its permission.¹
- In 2012, Congress enacted the FMRA, directing FAA to produce comprehensive UAS regulations to “safely accelerate the integration of civil unmanned aircraft systems into the national airspace system” no later than September 30, 2015² and to “develop and implement operational and certification requirements for the operation of public unmanned aircraft systems in the national airspace” no later than December 31, 2015.³ Additionally, Congress prohibited FAA to issue any rule or regulation related to the use of certain “model aircraft” when flown under specific circumstances.⁴
- In addition to safety concerns, drone use implicates the First and Fourth Amendments in terms of media use and privacy concerns. Although there have been federal efforts to pass legislation to require law enforcement to obtain a warrant before using drones for searches,⁵ no proposed federal legislation has been enacted to date. And, Congress has not explicitly directed FAA or any other federal entity to consider privacy issues related to drone use.
- On February 23, 2015, the FAA’s Notice of Proposed Rulemaking (“NOPR”) regarding small civil drones was issued in the *Federal Register*.⁶ The proposed rule focuses primarily on safety concerns related to drone use.
- On February 15, 2015, the President issued a memorandum addressing the use of drones, including the use of drones as impacting privacy, civil rights, and civil liberties.⁷ This

¹ Unmanned Aircraft Operations in the National Airspace System, 72 Fed. Reg. 6689 (Feb. 13, 2007) (to be codified at 14 C.F.R. pt. 91).

² FAA Modernization and Reform Act of 2012, Pub. L. No. 112-95, § 332(a)(1), (3), 126 Stat. 11, 73.

³ *Id.* § 334(b).

⁴ *Id.* § 336. Model aircraft are aircraft flown strictly for hobby or recreational purposes. Interpretation of the Special Rule for Model Aircraft, 79 Fed. Reg. 36,172 (June 25, 2014) (to be codified at 14 C.F.R. pt. 91).

⁵ *E.g.*, Drone Aircraft Privacy and Transparency Act of 2013, S. 1639, 113th Cong. (2013); H.R. 2868, 113th Cong. (2013); Preserving Freedom from Unwarranted Surveillance Act of 2013, H.R. 972, 113th Cong. (2013); Preserving American Privacy Act of 2013, H.R. 637, 113th Cong. (2013).

⁶ Operation and Certification of Small Unmanned Aircraft Systems, 80 Fed. Reg. 9544 (proposed Feb. 23, 2015) (to be codified at 14 C.F.R. pts. 21, 43, 45, 47, 61, 91, 101, 107, 183).

memorandum, *inter alia*, directed “the Department of Commerce, through the National Telecommunications and Information Administration, and in consultation with other interested agencies, [to] initiate [a] multi-stakeholder engagement process to develop a framework regarding privacy, accountability, and transparency for commercial and private UAS use.” The goal of this multi-stakeholder process is to develop a set of voluntary best practices to address privacy concerns related to commercial and private drone use.⁸

- To date, Congress has not enacted any federal law regulating the privacy impacts of drones, the courts have not ruled on the constitutionality of drone surveillance, and the FAA’s guidance and proposed rule related to small civil drone use does not include privacy-related provisions.

B) FAA’s Regulatory Development:

- The FAA interprets its existing statutory authority and regulations to prohibit operation, for purposes of flight, of civil small unmanned aircraft, if: (1) it is not registered (49 U.S.C. § 44101(a)), (2) it does not possess an airworthiness certificate (49 U.S.C. § 44711(a)(1)), and (3) the airman operating the aircraft does not possess an airman certificate (49 U.S.C. § 44711(a)(2)(A)). However, the FAA recognizes that its current processes for issuing airworthiness and airman certificates were designed to be used for manned aircraft and do not take into account considerations associated with civil small UAS.⁹
- FAA has sought to prohibit civil drone use without FAA authorization since 2005.¹⁰
 - In 2007, the FAA issued a notice (FAA Notice 07-01, 72 Fed. Reg. 6689-90) stating that “[O]perators who wish to fly an unmanned aircraft for civil use must obtain an FAA airworthiness certificate the same as any other type of aircraft.”¹¹
 - In 2008, the FAA chartered the small UAS Aviation Rulemaking Committee to initiate rulemaking regarding UAS.
 - Because the FAA has not finalized any formal regulations regarding UAS to date, there is still ambiguity over what lawful uses of drones include. In 1981, the FAA issued an advisory circular (AC 91-57) applicable to hobbyists and recreational users of UAS (*i.e.*, guidance applicable to users of model aircraft). FAA canceled AC 91-57 on September 2, 2015 and issued a new advisory circular (AC 91-57A) applicable

⁷ Memorandum on Promoting Economic Competitiveness While Safeguarding Privacy, Civil Rights, and Civil Liberties in Domestic Use of Unmanned Aircraft Systems, 80 Fed. Reg. 9355 (Feb. 20, 2015), <https://www.whitehouse.gov/the-press-office/2015/02/15/presidential-memorandum-promoting-economic-competitiveness-while-safegua>.

⁸ Richard M. Thompson II, CRS Report R43965, *Domestic Drones and Privacy: A Primer 20* (Mar. 30, 2015).

⁹ Operation and Certification of Small Unmanned Aircraft Systems, 80 Fed. Reg. at 9549.

¹⁰ Since 2005, the FAA has prohibited civil use of small drones in U.S. airspace absent FAA authorization. See Fed. Aviation Admin., AFS-400 Policy Memo 05-01, Unmanned Aircraft Systems Operations in the U.S. National Airspace System – Interim Operational Approval Guidance (June 1, 2005), *superseded by* Fed. Aviation Admin. Aviation Safety Unmanned Aircraft Program Office AIR-160, Interim Operational Approval Guidance, 08-01 (Mar. 13, 2008).

¹¹ See also, Fed. Aviation Admin. Aviation Safety Unmanned Aircraft Program Office AIR-160, Interim Operational Approval Guidance, 08-01, 5-6 (Mar. 13, 2008).

to hobbyists and recreational users.¹² Users of civil drones have cited to AC 91-57 as proof that use of drones for civil use is lawful. However, FAA, in FAA Notice 07-01, a June 2014 Interpretation of the Special Rule for Model Aircraft, and its February 2015 NPRM, asserts that AC 91-57 applies only to model aircraft. To date, FAA has used its discretion to not bring enforcement action against model aircraft operations that comply with AC 91-57 (going forward AC 91-57A). However, FAA has brought enforcement actions against recreational users where such operation endangered the safety of the national airspace system.¹³

- Currently, the FAA classifies drone use by the type of use, which includes three types (other than military):

<i>Public aircraft operations</i> for “government functions” by any political subdivision of a federal, state, or local government ¹⁴	Requires FAA Certificate of Authorization (“COA”). ¹⁵
<i>Civil operations</i> (non-governmental) ¹⁶	Requires either: <ul style="list-style-type: none"> • Special airworthiness certificate <ul style="list-style-type: none"> ○ Experimental (<i>e.g.</i>, research and development) or Restricted category (<i>i.e.</i>, for a special purpose); or • An exemption under “Section 333,” Pub. L. No. 112-95 + COA.
<i>Model aircraft</i> for recreational purposes ¹⁷	No authorization needed. However, FAA can bring enforcement action against recreational users that endanger the safety of the national airspace system. <ul style="list-style-type: none"> • FAA Advisory Circular 91-57A. • Section 336, Pub. L. No. 112-95. • June 2014 Interpretation of the Special Rule for Model Aircraft.

¹² Fed. Aviation Admin., Advisory Circular, Model Aircraft Operating Standards, 91-57A (Sept. 2, 2015), https://www.faa.gov/regulations_policies/advisory_circulars/index.cfm/go/document.information/documentID/1028086

¹³ *E.g.*, *Huerta v. Pirker*, Docket No. CP-217, Decisional Order (Mar. 6, 2014) (initial decision), *reversed and remanded*, Order No. EA-5730 (NTSB Nov. 18, 2014).

¹⁴ 49 U.S.C. §§ 40102(a)(41), 40125 (defining “public aircraft”). An aircraft operated by a government entity is not a “public aircraft” if it is used for commercial purposes. 49 U.S.C. § 40125(b).

¹⁵ *Unmanned Aircraft Operations in the National Airspace System*, 72 Fed. Reg. 6689. As of March 15, 2015, an FOIA request related to COAs indicated that the FAA had 426 COA files.

¹⁶ Civil operations include all drone use that is not governmental. 49 U.S.C. § 40102(a)(16); 14 C.F.R. § 1.1; *see also*, Interpretation of the Special Rule for Model Aircraft, 79 Fed. Reg. 36,172. **Therefore, drone use for profit, business purposes, or by non-profit organizations appears to fall into this category.** *See infra* Part II.C.

¹⁷ Model aircraft are aircraft flown strictly for hobby or recreational purposes. Interpretation of the Special Rule for Model Aircraft, 79 Fed. Reg. at 36,172.

- FAA Modernization and Reform Act of 2012 Pub. L. No. 112-95.
 - In 2012, Congress directed FAA to produce comprehensive UAS regulations to “safely accelerate the integration of civil unmanned aircraft systems into the national airspace system” no later September 30, 2015. FMRA § 332(a)(1), (3).
 - Specifically, Congress directed FAA to prepare recommendations and projections on the rulemaking that will define the acceptable standards for operation and certification of civil UAS, ensure that any civil UAS has sense and avoid capability, and establish standards and requirements necessary to achieve the safe and routine operation of civil UAS in the national airspace system. FMRA § 332(a)(2).
 - The FMRA also directs the FAA to “develop and implement operations and certification requirements for the operation of public unmanned aircraft systems in the national airspace system” no later December 31, 2015. FMRA § 334(b).
 - Additionally, the FMRA mandated the FAA to establish six test sites to help facilitate the integration of UAS into national airspace.
 - The FMRA prohibits FAA from issuing rules or regulations regarding model aircraft when flown under specific circumstances. FMRA § 336.
- FAA, Integration of Civil Unmanned Aircraft Systems in the National Airspace System Roadmap 11 (Nov. 7, 2013).
 - Stating that while the FAA’s “mission does not include developing or enforcing policies pertaining to privacy or civil liberties, experience with the UAS test sites will present an opportunity to inform the dialogue . . . concerning the use of UAS technologies and the areas of privacy and civil liberties.”
- Proposed Privacy Policy for UAS operations at 6 test sites.
 - In February 2013, FAA sought public comment on a proposed privacy policy for UAS operations at the 6 test sites the FMRA required it to establish.
 - On November 14, 2013, the FAA approved a privacy policy as included in the provisions of the contracts for each of the 6 sites. Unmanned Aircraft System Test Site Program, 78 Fed. Reg. 68,360 (Nov. 14, 2013) (to be codified at 14 C.F.R. pt. 1).
 - FAA stated that its authority to craft the privacy policy fell under its contracting authority as opposed to its statutory authority. Unmanned Aircraft System Test Site Program, 78 Fed. Reg. at 68,361.
- February 23, 2015 NOPR.
 - Pursuant to a NOPR issued in the *Federal Register* on February 23, 2015, the FAA is proposing to amend its regulations to adopt specific rules to allow the operation of small civil unmanned aircraft systems (*i.e.*, systems under 55 pounds) in the National Airspace System.

- A summary of the proposed rule is available at https://www.faa.gov/regulations_policies/rulemaking/media/021515_sUAS_Summary.pdf.
- According to FAA, privacy concerns related to the use of drones are beyond the scope of this rulemaking proceeding.¹⁸
- However, the FAA will participate in the multi-stakeholder engagement process, required pursuant to a February 15, 2015 Presidential Memorandum: Promoting Economic Competitiveness While Safeguarding Privacy, Civil Rights, and Civil Liberties in Domestic Use of Unmanned Aircraft Systems, led by the National Telecommunications and Information Administration to assist in the process regarding privacy, accountability and transparency issues involving commercial and private UAS use.
- Electronic Privacy Information Center (“EPIC”) has filed suit in the U.S. Court of Appeals for the D.C. Circuit to force the FAA to come up with privacy rules concerning drones in their rules.¹⁹
- FAA Begins to Regularly Grant Section 333 Exemptions in Spring 2015.
 - Following issuance of the NPRM, FAA began regularly issuing Section 333 exemptions to petitioning civil drone users. As of September 1, 2015, FAA has approved 1,407 exemptions.²⁰ Of the first 500 exemptions granted, 13% were for film and television use.²¹
- May 6, 2015 Press Release
 - FAA is partnering with industry to explore next steps in UAS operations beyond the type the agency proposed in the draft rule published in February 2015, including a partnership with CNN to explore how UAS may be safely used for newsgathering in populated areas.²²

C) *Impact of Federal Regulations on Public, Educational and Governmental Access Channels*

1. Government Access Cable Television Use

- Although FAA has not spoken directly on the issue, FAA would not likely interpret the use of drones by a government agency or department for government access programming to be a public or governmental operation.

¹⁸ *E.g.*, Operation and Certification of Small Unmanned Aircraft Systems, 80 Fed. Reg. at 9552.

¹⁹ Jack Nicas, *Privacy Group Sues FAA Over Drone Rules*, Washington Post (March 31, 2015, 7:48 PM), <http://www.wsj.com/articles/privacy-group-sues-faa-over-drone-rules-1427845718>.

²⁰ FAA, Section 333 (Aug. 24, 2015), https://www.faa.gov/uas/legislative_programs/section_333/.

²¹ AUVSI, Snapshot of the First 500 Commercial UAS Exemptions (July 20, 2015), <http://higherlogicdownload.s3.amazonaws.com/AUVSI/f28f661a-e248-4687-b21d-34342433abdb/UploadedFiles/Section333Report.pdf>.

²² FAA, Press Release – FAA – Industry Initiative Will Expand Small UAS Horizons (May 6, 2015), https://www.faa.gov/news/press_releases/news_story.cfm?newsID=18756.

- Public aircraft operations are limited by federal statute to certain government operations. Title 49 U.S.C. § 40102(a)(41) provides the definition of "public aircraft" and section 40125(a)(2) defines "Governmental function." A public aircraft is an aircraft owned and operated by the government. A governmental function is "an activity undertaken by a government, such as national defense, intelligence missions, firefighting, search and rescue, law enforcement (including transport of prisoners, detainees, and illegal aliens), aeronautical research, or biological or geological resource management." The FAA has interpreted this authority narrowly. For example, the FAA has stated that, to qualify as a public or governmental operation, research performed by a government entity using a drone (such as a public university) must be related to a governmental function and that certain types of research by a government entity using a drone are not public or governmental operations.²³

2. Public Access Cable Television Use

- FAA also has not spoken directly on the issue of whether drone use by a public access or community access cable channel or videostream is a civil operation. However, drone use by a public access or community media center fits within the statutory definition of "civil aircraft" – *i.e.*, "an aircraft except a public aircraft."²⁴ FAA has asserted that using a drone for commercial newsgathering is a civil use that requires authorization.²⁵ The same determination is likely to apply to non-profit newsgathering entities like public access or community media centers. Further, because drone use by a staff member of a public access or community media center would not be strictly a hobby or recreational use²⁶ but a service to the community, such use also fits into the "civil" use category.
- That said, we know of at least one public access center that has been advised by its insurance carrier that drone use by it does not require FAA authorization. We surmise such advice was at least partially based on an assessment of FAA's enforcement practices.
- Images captured from drones operated by independent programmers who wish to air such footage on public access or community access channels or video streams and provide such footage to the center without a fee, however, should be considered hobby or recreational users.²⁷

²³ FAA, UAS Operations by Public University for Aeronautical Research (June 13, 2014), https://www.faa.gov/about/office_org/headquarters_offices/agc/pol_adjudication/agc200/interpretations/data/interps/2014/williams-afs-80%20-%20%282014%29%20legal%20interpretation.pdf; FAA Clarification of June 13, 2014 Interpretation of Research Using UAS (July 3, 2014),

https://www.faa.gov/about/office_org/headquarters_offices/agc/pol_adjudication/agc200/interpretations/data/interps/2014/williams-afs-80%20clarification%20-%20%282014%29%20legal%20interpretation.pdf.

²⁴ 49 U.S.C. § 40102; *see also* 14 C.F.R. § 1.1.

²⁵ FAA, Media Use of UAS (May 5, 2015),

[http://www.faa.gov/about/office_org/headquarters_offices/agc/pol_adjudication/agc200/interpretations/data/interps/2015/williams-afs-80%20-%20\(2015\)%20legal%20interpretation.pdf](http://www.faa.gov/about/office_org/headquarters_offices/agc/pol_adjudication/agc200/interpretations/data/interps/2015/williams-afs-80%20-%20(2015)%20legal%20interpretation.pdf).

²⁶ Interpretation of the Special Rule for Model Aircraft, 79 Fed. Reg. 36,172.

²⁷ FAA, Media Use of UAS (May 5, 2015),

[http://www.faa.gov/about/office_org/headquarters_offices/agc/pol_adjudication/agc200/interpretations/data/interps/2015/williams-afs-80%20-%20\(2015\)%20legal%20interpretation.pdf](http://www.faa.gov/about/office_org/headquarters_offices/agc/pol_adjudication/agc200/interpretations/data/interps/2015/williams-afs-80%20-%20(2015)%20legal%20interpretation.pdf).

D) State Regulation

- According to the National Conference of State Legislatures, as of July 2015, 26 states have enacted laws addressing drones and six states have adopted resolutions.²⁸ Most state laws are aimed at defining appropriate use of drones by law enforcement agencies and/or by the general public.
- Some state laws include privacy-provisions.
- Broad Overview of State Laws on Drone Use:
 - *Laws that Regulate Law Enforcement Use* (e.g., require a search warrant or exception to apply): Alaska, Florida, Idaho, Illinois (including how law enforcement can use data acquired from private drone users), Indiana, Iowa, Maine, Montana, Nevada, North Carolina, North Dakota, Oregon, Tennessee, Texas, Virginia, Utah (including how law enforcement can use data acquired from private drone users), and Wisconsin
 - *Laws that Regulate Retention of Records*: Alaska, Illinois, Utah (for law enforcement only), Tennessee, and Texas (for private use only)
 - *Laws that Regulate Private Use*: Arkansas, Florida, Idaho, Louisiana, Nevada, New Hampshire, North Carolina, Oregon, Tennessee, Texas, and West Virginia
 - *Laws that Provide for Civil Damages Related to Drone Use*: Florida, Idaho, Nevada, North Carolina, Oregon, and Tennessee
 - *Laws that Provide for Criminal Charges Related to Drone Use*: Indiana, Louisiana, Mississippi, Nevada, North Carolina, Oregon, Tennessee, Texas, and Wisconsin
 - *Laws that fund Research/Testing/Curriculums on Drones*: Alaska, Hawaii, Maryland, Nevada, North Dakota, and Ohio
 - *Laws that Prevent Use of Drone to Interfere with Hunters/Fisherman*: Illinois, Michigan, North Carolina, Oregon, and Tennessee²⁹

²⁸ National Conference of State Legislatures, Current Unmanned Aircraft State Law Landscape (July 13, 2015), <http://www.ncsl.org/research/transportation/current-unmanned-aircraft-state-law-landscape.aspx>.

²⁹ The National Conference of State Legislatures' summary of the 26 laws regarding drone use is provided in the Appendix.

III EMERGING LEGAL ISSUES & CONSIDERATIONS:

A) *First Amendment Issues – As Related to Government Regulations*

1. It has been argued that FAA’s previous virtual blanket ban on civil use of UAS, which includes aerial photography and news gathering for profit, constituted an unconstitutional restriction on free speech and press.³⁰

To be valid, government regulations of speech in public forums (*e.g.*, aerospace below 500 feet) must (1) be content neutral, (2) be narrowly tailored to serve an important government interest, and (3) leave open alternative channels of communication. That is, valid time, place and manner restrictions must be based on furthering a legitimate government interest, not simply disagreement with the message conveyed. *Clark v. Cmty. for Creative Non-Violence*, 468 U.S. 288, 293 (1984). To be valid, government regulations of commercial speech (advertising) in public forums (*e.g.*, national aerospace below 500 feet) that concern lawful activity and is non-fraudulent must (1) serve a substantial government interest, (2) directly advance the asserted interest, and (3) be narrowly tailored to serve the substantial interest. *Board of Trustees of State University of New York v. Fox*, 492 U.S. 469 (1989).

- Banning commercial use but allowing comparable recreational use in order to keep a public forum safe may not be designed to serve an important government interest – *i.e.*, safety. Critics argue that there is no reason to suppose recreational users would be safer drone operators than commercial users. Rather, it seems intuitive that the opposite is true, since more commercial users would have more to lose – financially and reputation-wise – than a recreational user and therefore would follow safer practices.

2. More recently, following the FAA’s grant of 6 special airworthiness certificates to commercial entities to film and take aerial photographs but refusing to grant certificates to other commercial applicants, it has been argued that the FAA’s grant of the 6 special airworthiness certificates is an invalid prior restraint on speech.³¹ U.S. Supreme Court precedent regarding licensing or permitting schemes associated with speech places certain restrictions on the power to license or permit. The standards for granting a license or permit cannot be too vague or provide the granting authority with too much discretion. Permitting schemes associated with

³⁰ *E.g.*, *Amicus Curiae* Brief of News Media *Amici* in Support of Respondent Raphael Pirker at 7, *Huerta v. Pirker*, NTSB Order No. EA-5730, Docket No. CP-217 (May 6, 2014); Cynthia D. Love, Sean T. Lawson, & Avery E. Holton, *News from Above: First Amendment Implications of the Federal Aviation Administration Ban on Commercial Drones*, Mercatus Working Paper, Mercatus Center (Sept. 2014), <http://mercatus.org/sites/default/files/Love-Commercial-Drone-Ban.pdf>.

³¹ *E.g.*, Margot E. Kaminski, *Up in the Air*, *Slate* (Nov. 25, 2014, 11:56 AM), http://www.slate.com/articles/technology/future_tense/2014/11/faa_s_attempts_to_regulate_drones_could_have_first_amendment_problems.html.

speech must establish “narrowly drawn, reasonable and definite standards.”³² Some argue that the FAA’s current licensing scheme is vague and potentially gives the FAA too much discretion.

- Since it issued the NPRM, the FAA has been granting Section 333 exemptions for civil use in growing numbers.³³ Protests that the FAA’s licensing process is vague and allows too much discretion may decrease as applications for exemptions are granted more regularly. Additionally, the FAA’s new rules related to small civil drones are also likely to provide users with a clearer process for receiving FAA authorization to fly.
3. In response to the FAA’s NPRM, some commenters also argued that the FAA’s proposed regulation violates the First Amendment because the proposed rules are not narrowly tailored to serve a substantial governmental interest. For example, one commenter suggested that elements of FAA’s proposed regulation are overbroad by prohibiting more speech that is necessary to ensure safety.³⁴ These elements include (1) the proposed ban on flying drones over persons not directly involved in the operation, and (2) the proposed ban on using drones that are outside the operator’s direct, unaided line of sight.
 4. Some state laws regulating drones may infringe First Amendment rights. For example -
 - New Jersey’s proposed Assembly Bill No. 4344 – would make it a crime to use a drone to photograph “critical infrastructure” – including generation facilities, telecommunications facilities, bridges, tunnels, and highways – without written permission from the infrastructure’s owner. Although the bill is directed at safety, it appears to go too far in banning all photography of infrastructure from a drone.³⁵
 - North Carolina’s law banning the use of a drone to take a person’s photograph without permission, with exceptions for “newsgathering,” “newsworthy events,” and places where the public is generally invited, also seems to go too far where there is a generally recognized right to take photographs for First Amendment purposes from locations where a photographer is authorized to be.

³² *Niemotko v. Maryland*, 340 U.S. 268, 271 (1951).

³³ FAA, Section 333 (Aug. 24, 2015), https://www.faa.gov/uas/legislative_programs/section_333/.

³⁴ Comments of International Center for Law & Economics and TechFreedom in the matter of Operation and Certification of Small Unmanned Aircraft Systems, FAA Docket No. 2015-0150 (Apr. 24, 2015), http://laweconcenter.org/images/articles/icle-tf_comments_faa_drone_rules.pdf.

³⁵ Ari Rosmarin, *Drone Rules Are Already Colliding With The First Amendment*, ACLU (July 16, 2015, 12:30 AM), <https://www.aclu.org/blog/free-future/drone-rules-are-already-colliding-first-amendment>.

B) First Amendment Issues – As Related to All Drone Users

1. The First Amendment does not provide drone users with a blanket right to photograph or film with drones. Drone users can be held liable for tortious conduct – *i.e.*, the invasion of privacy, public disclosure of private facts, false light, appropriation of one’s likeness, trespass, nuisance, etc. But, tort law may not provide blanket protections from all drone photography or filming.

- *See Streisand v. Adelman*, No. SC 077 257 (Cal. Super. Ct. Dec. 31, 2003) (finding that aerial photographs taken of private property from a drone between 150 and 2,000 feet did not violate property owner’s right to privacy).

Additionally, drone use may also be curbed by criminal laws prohibiting stalking, harassment and voyeurism.

C) Fourth Amendment Issues

It has not been determined whether the use of a drone by a government entity to observe private individuals or private property requires a warrant under the Fourth Amendment.

1. The Fourth Amendment prohibits the government from performing unreasonable searches and seizures of persons or property. A “search” is a government intrusion into an area where a person has a reasonable and justifiable expectation of privacy. Additionally, Fourth Amendment case law indicates that government may violate the Fourth Amendment when it acts in concert with private citizens.

- *E.g., Hanlon v. Berger*, 526 U.S. 808 (1999) (holding that federal agents violated the Fourth Amendment’s prohibition on unreasonable searches when they let CNN news media accompany and observe their conduct in execution of a search warrant).

2. Older Fourth Amendment case law indicates that viewing property or activity from the air with the naked eye has not required a warrant. This line of cases could be interpreted to support a holding that government observations made with a drone do not require a warrant.

- *California v. Ciraolo*, 476 U.S. 207 (1986) (Fourth Amendment rights not violated by the naked-eye aerial observation of law enforcement from private aircraft at 1,000 feet of petitioner’s backyard).
- *Dow Chemical Co. v. United States*, 476 U.S. 227 (1986) (EPA did not violate Fourth Amendment rights when it took aerial photographs of industrial complex from 1200, 3000, and 12,000 feet *with a zoom lens*).

- *Florida v. Riley*, 488 U.S. 445 (1989) (Fourth Amendment rights not violated when law enforcement used helicopter at 400 feet to look inside greenhouse).
3. However, more recent Fourth Amendment case law could support a finding that government observations made with a drone do require a warrant or violate the Fourth Amendment. These cases emphasize the privacy risks associated with new technologies and suggest that courts may move away from the “naked-eye” cases above and find that the privacy risk associated with drones are sufficiently great to pose Fourth Amendment concerns.
 - *Kyllo v. United States*, 533 U.S. 27 (2001) (holding that use of sense-enhancing technology “not in general public use” to obtain information about the inside of a home was considered a Fourth Amendment search).
 - *United States v. Jones*, 132 S. Ct. 945 (2012) (in two separate concurrences, five Justices would have held that a month-long location monitoring mission using a GPS device was a search). The position of the five Justices, in large part, appears to turn on 1) the intrusion on property (the tracked individual’s car); and 2) the amount of time over which the surveillance took place.
 4. Although Fourth Amendment precedent typically comes into play when government is attempting to enforce criminal or civil laws, is it possible that images captured by government-owned and operated drone for media or marketing purposes could be challenged as violating the Fourth Amendment. For example, if a local government filming or photographing a drought or wildfire catches someone’s property or action on film and law enforcement later request to see the film or video, such activity may be found to constitute an unreasonable government intrusion in violation of the Fourth Amendment.

D) *Fifth Amendment Takings and Trespass Issues*

1. Courts have not yet addressed whether a drone flight above private property amounts to a trespass, or whether persistent drone use by a government actor amounts to a Fifth Amendment taking. Courts will likely look to the precedent such as the following to determine whether a taking has occurred:
 - In 1946, the U.S. Supreme Court rejected the common law principle of *ad coelum* – the premise that a property owner’s rights include the vertical column of air above land surface – and determined that persistent flight at 83 feet above private property did amount to a taking, but left open the question of whether flights above 83 feet

amounted to a taking. But, the Court did indicate that invasions into airspace situated within “the immediate reaches” of land are the same as invasions to the land itself, where such invasions affect the use and enjoyment of the surface of the land. *U.S. v. Causby*, 328 U.S. 256, 266 (1946).

- In 1962, the U.S. Supreme Court held that consistent low flights (at lowest, approximately 70 feet) over residential property in connection with flight paths to and from a nearby airport did amount to a taking. Specifically, the Court found that the noise, vibration, and fear of a plane crash resulting from the flights made residing on the property “undesirable and unbearable.” *Griggs v. Allegheny County*, 369 U.S. 84, 90 (1962).
 - In light of new technology, *e.g.*, an improved zoom lens, is 83 feet meaningful? If persistent drone flights over property are quiet and unnoticed and do not induce fear, have they interfered with use and enjoyment of land?
2. Airspace trespass claims arising under state law are grounded in part on the U.S. Supreme Court’s *Causby* ruling. Because *Causby* found that land owners do not have an absolute possessory right to airspace above land, state law generally requires a plaintiff claiming trespass of airspace to show (1) the trespass occurred within the immediate reaches of land, and (2) the trespass interfered with the use of land.³⁶
- It is unclear how courts will assess drone trespass claims under this standard. However, nuisance claims, requiring only a showing that a particular action amounts to a substantial and unreasonable interference with the use and enjoyment of land, may prove to be a more successful claim for landowners.

E) Self Defense from Threatening Drones

1. Common law recognizes that property owners are entitled to commit otherwise tortious acts if a property owner “reasonably believe[s]” the act is “necessary to protect the actor’s land or chattels or his possession of them, and the harm inflicted is not unreasonable as compared with the harm threatened.”³⁷ Additionally, the law recognizes a right of self-defense when death or serious bodily injury is threatened.³⁸
- Whether these privileges provide property owners with a right to interfere with drones flying over their property remains unclear. For

³⁶ Restatement (Second) of Torts § 821D (1979).

³⁷ *Id.* § 260.

³⁸ *Id.* § 65.

example, when is a drone overflight reasonably perceived as threatening to property or life? And, what sort of harm is reasonable compared to harm to property?

- To date, when property owners harm drones flying above their property, the law appears to take the side of the drone operator, at least when it comes to property owners that shoot drones out of the sky.³⁹ For example, a California small claims court found that a property owner liable for damages after shooting his neighbor's drone while it was over his property.⁴⁰

³⁹ See John Seibler, *Is It Legal to Shoot Down a Drone Hovering Over Your Property?*, Newsweek (Aug. 15, 2015, 10:45 AM), <http://www.newsweek.com/it-legal-shoot-down-drone-hovering-over-your-property-362878>.

⁴⁰ *Id.*

IV APPENDIX

A) *The National Conference of State Legislatures' Summary of State Laws Regarding Drone Use*

1. Laws Enacted in 2015⁴¹

Arkansas HB 1349 prohibits the use of UAS to commit voyeurism. HB 1770 prohibits the use of UAS to collect information about or photographically or electronically record information about critical infrastructure without consent.

Florida SB 766 prohibits the use of a drone to capture an image of privately owned property or the owner, tenant, or occupant of such property without consent if a reasonable expectation of privacy exists.

Hawaii SB 661 creates a chief operating officer position for the Hawaii unmanned aerial systems test site. It also establishes an unmanned aerial systems test site advisory board to plan and oversee test site development and appropriates funds to establish the test site.

Illinois SB 44 creates a UAS Oversight Task Force which is tasked with considering commercial and private use of UAS, landowner and privacy rights and general rules and regulations for the safe operation of UAS. The task force will prepare recommendations for the use of UAS in the state.

Louisiana SB 183 regulates the use of UAS in agricultural commercial operations.

Maine LD 25 requires law enforcement agencies receive approval before acquiring UAS. The bill also specifies that the use of UAS by law enforcement comply with all FAA requirements and guidelines. Requires a warrant to use UAS for criminal investigations except in certain circumstances and sets out standards for the operation of UAS by law enforcement.

Maryland SB 370 specifies that only the state can enact laws to prohibit, restrict, or regulate the testing or operation of unmanned aircraft systems. This preempts county and municipal authority. The bill also requires a study on specified benefits.

Michigan SB 54 prohibits using UAS to interfere with or harass an individual who is hunting. SB 55 prohibits using UAS to take game.

Mississippi SB 2022 specifies that using a drone to commit "peeping tom" activities is a felony.

⁴¹ National Conference of State Legislatures, Current Unmanned Aircraft State Law Landscape (Aug. 26, 2015), <http://www.ncsl.org/research/transportation/current-unmanned-aircraft-state-law-landscape.aspx>.

Nevada AB 239 includes UAS in the definition of aircraft and regulates the operators of UAS. It also prohibits the weaponization of UAS and prohibits the use of UAS within a certain distance of critical facilities and airports without permission. The bill specifies certain restrictions on the use of UAS by law enforcement and public agencies and requires the creation of a registry of all UAS operated by public agencies in the state.

New Hampshire SB 222 prohibits the use of UAS for hunting, fishing, or trapping.

North Carolina SB 446 expands the authority of the state's Chief Information Officer to approve the purchase and operation of UAS by the state and modifies the state regulation of UAS to conform to FAA guidelines.

North Dakota HB 1328 provides limitations for the use of UAS for surveillance.

Oregon HB 2534 requires the development of rules prohibiting the use of UAS for angling, hunting, trapping, or interfering with a person who is lawfully angling, trapping, or hunting. HB 2354 changes the term "drone" to "unmanned aircraft system" in statute.

Tennessee HB 153 prohibits using a drone to capture an image over certain open-air events and fireworks displays. It also prohibits the use of UAS over the grounds of a correctional facility.

Texas HB 3628 permits the creation of rules governing the use of UAS in the Capitol Complex and provides that a violation of those rules is a Class B misdemeanor. HB 2167 permits individuals in certain professions to capture images used in those professions using UAS as long as no individual is identifiable in the image. HB 1481 makes it a Class B misdemeanor to operate UAS over a critical infrastructure facility if the UAS is not more than 400 feet off the ground.

Utah HB 296 allows a law enforcement agency to use an unmanned aircraft system to collect data at a testing site and to locate a lost or missing person in an area in which a person has no reasonable expectation of privacy. It also institutes testing requirements for a law enforcement agency's use of an unmanned aircraft system.

Virginia HB 2125 and SB 1301 require that a law enforcement agency obtain a warrant before using a drone for any purpose, except in limited circumstances. Virginia's governor also issued an executive order establishing a commission on unmanned systems.

West Virginia HB 2515 prohibits hunting with UAS.

2. Laws Enacted in 2014⁴²

Alaska enacted HB 255 creating procedures and standards for law enforcement's use of unmanned aircraft, as well as, regulations for the retention of information collected with UAS. It

⁴² National Conference of State Legislatures, 2014 State Unmanned Aircraft Systems (UAS) Legislation (July 2, 2015), <http://www.ncsl.org/research/transportation/2014-state-unmanned-aircraft-systems-uas-legislation.aspx>.

requires law enforcement agencies to adopt procedures that ensure: the appropriate Federal Aviation Administration flight authorization is obtained; UAS operators are trained and certified; a record of all flights are kept and there is an opportunity for community involvement in the development of the agencies' procedures. Under the law, police may use UAS pursuant to a search warrant, pursuant to a judicially recognized exception to the warrant requirement and in situations not involving a criminal investigation. Images captured with UAS may be retained by police under the law for training purposes or if it is required as part of an investigation or prosecution. The law also authorizes the University of Alaska to develop a training program for operating UAS. The state senate also adopted a resolution HCR 15 to extend the operating time and expand the duties of the state UAS task force.

Illinois enacted SB 2937 creating regulations for how law enforcement can obtain and use information gathered from a private party's use of UAS. The law requires police to follow warrant protocols to compel third parties to share information, and if the information is voluntarily given to police, authorities are required to follow the state's law governing UAS data retention and disclosure. The law also loosens regulations around law enforcement's use of UAS during a disaster or public health emergency.

Indiana is the first state to enact a UAS law in 2014. HB 1009 creates warrant requirements and exceptions for the police use of unmanned aircraft and real time geo-location tracking devices. It also prohibits law enforcement from compelling individuals to reveal passwords for electronic devices without a warrant. If law enforcement obtains information from an electronic service provider pursuant to a warrant, the provider is immune from criminal or civil liability. The law provides that if police seek a warrant to compel information from media entities and personnel, then those individuals must be notified and given the opportunity to be heard by the court concerning issuance of the warrant. The new law also creates the crime of "Unlawful Photography and Surveillance on Private Property," making it a Class A misdemeanor. This crime is committed by a person who knowingly and intentionally electronically surveys the private property of another without permission. The law also requests that the state's legislative council study digital privacy during the 2014 interim.

Iowa enacted HF 2289, making it illegal for a state agency to use a UAS to enforce traffic laws. The new law requires a warrant, or other lawful means, to use information obtained with UAS in a civil or criminal court proceeding. It also requires the department of public safety to develop guidelines for the use of UAS and to determine whether changes to the criminal code are necessary. The department must report on their findings to the general assembly by Dec. 31, 2014.⁴³

Louisiana enacted HB 1029, creating the crime of unlawful use of an unmanned aircraft system. The new law defines the unlawful use of an unmanned aircraft system as the intentional use of a UAS to conduct surveillance of a targeted facility without the owner's prior written consent. The crime is punishable by a fine of up to 500 dollars and imprisonment for six months. A second offense can be punished by a fine up to 1000 dollars and one year imprisonment.

⁴³ See Iowa Dep't of Pub. Safety, Unmanned Aerial Vehicle Legislative Report (Dec. 2014), <https://www.legis.iowa.gov/docs/APPS/AR/D2CCB37D-7674-4AAC-AE97-58E7474B197D/SubmittedNotes.pdf>.

North Carolina enacted SB 744 creating regulations for the public, private and commercial use of UAS. The new law prohibits any entity from conducting UAS surveillance of a person or private property and also prohibits taking a photo of a person without their consent for the purpose of distributing it. The law creates a civil cause of action for those whose privacy is violated. In addition, the law authorizes different types of infrared and thermal imaging technology for certain commercial and private purposes including the evaluation of crops, mapping, scientific research and forest management. Under the law, the state Division of Aviation is required to create a knowledge and skills test for operating unmanned aircraft. All agents of the state who operate UAS must pass the Division's knowledge and skills test. The law enables law enforcement to use UAS pursuant to a warrant, to counter an act of terrorism, to oversee public gatherings, or gather information in a public space. The bill creates several new crimes: using UAS to interfere with manned aircraft, a class H felony; possessing an unmanned aircraft with an attached weapon, a class E felony; the unlawful fishing or hunting with UAS, a class 1 misdemeanor; harassing hunters or fisherman with a UAS, a class 1 misdemeanor; unlawful distribution of images obtained with a UAS, a class 1 misdemeanor for; and operating a UAS commercially without a license, a class 1 misdemeanor. The law addresses launch and recovery sites of UAS, prohibiting their launch or recovery from any State or private property without consent. In addition the law extends the state's current regulatory framework, administered by the chief information officer, for state use of UAS from July to December 31, 2015.

Ohio enacted HB 292 creating the aerospace and aviation technology committee. One of the committee's duties is to research and develop aviation technology including unmanned aerial vehicles.

Tennessee has enacted two new laws in 2014. The first, SB 1777, makes it a class C misdemeanor for any private entity to use a drone to conduct video surveillance of a person who is hunting or fishing without their consent. SB 1892 makes it a Class C misdemeanor for a person to use UAS to intentionally conduct surveillance of an individual or their property. It also makes it a crime to possess those images (Class C Misdemeanor) or distribute and otherwise use them (Class B Misdemeanor). The law also identifies 18 lawful uses of UAS, including the commercial use of UAS under FAA regulations, professional or scholarly research and for use in oil pipeline and well safety.

Utah enacted SB 167, regulating the use of UAS by state government entities. A warrant is now required for a law enforcement agency to "obtain, receive or use data" derived from the use of UAS. The law also establishes standards for when it is acceptable for an individual or other non-governmental entity to submit data to law enforcement. The new law provides standards for law enforcement's collection, use, storage, deletion and maintenance of data. If a law enforcement agency uses UAS, the measure requires that agency submit an annual report on their use to the Department of Public Safety and also to publish the report on the individual agency's website. The new law notes that it is not intended to "prohibit or impede the public and private research, development or manufacture of unmanned aerial vehicles."

Wisconsin enacted SB 196, requiring law enforcement to obtain a warrant before using drones in a place where an individual has a reasonable expectation of privacy. The law also creates two new crimes; "possession of a weaponized drone" and "use of a drone." Use of a drone creates a

class A misdemeanor for a person who, with intent, observes another individual in a place where they have a reasonable expectation of privacy. Possession of a weaponized drone is a class H felony.

3. Laws Enacted in 2013⁴⁴

Florida SB 92 defines what a drone is and limits their use by law enforcement. Under this legislation, law enforcement may use a drone if they obtain a warrant, there is a terrorist threat, or “swift action” is needed to prevent loss of life or to search for a missing person. The law also enables someone harmed by an inappropriate use of drones to pursue civil remedies and prevents evidence gathered in violation of this code from being admitted in any Florida court.

The **Hawaii** Legislature passed SB 1221, which appropriates \$100,000 in funds for two staff positions, contracted through the University of Hawaii, to plan for the creation of three degree and training programs on advanced aviation. One of the programs is a professional unmanned aircraft systems pilot program administered through Hawaii Community College.

On April 11, 2013, **Idaho** became the second state to enact a drone law. SB 1134 defines an “Unmanned Aircraft System,” requires warrants for their use by law enforcement, establishes guidelines for their use by private citizens and provides civil penalties for damages caused by improper use.

Illinois has enacted two new laws in 2013. Both measures define "drone" as any aerial vehicle that does not carry a human operator. Illinois HB 1652 prohibits anyone from using a drone to interfere with hunters or fisherman. SB 1587 allows drones to be used by law enforcement with a warrant, to counter a terrorist attack, to prevent harm to life or to prevent the imminent escape of a suspect among other situations. If a law enforcement agency uses a drone, the agency must destroy all information gathered by the drone within 30 days, except that a supervisor at the law enforcement agency may retain particular information if there is reasonable suspicion it contains evidence of criminal activity.

The law also requires the Illinois Criminal Justice Information Authority (CJIA) to report on its website every law enforcement agency that owns a drone and the number they own. Each law enforcement agency is responsible for giving this information to the Illinois CJIA.

Maryland's legislature, through HB 100, appropriated \$500,000 for the state's unmanned aerial system test site.

Montana SB 196 limits when information gained from the use of unmanned aerial vehicles may be admitted as evidence in any prosecution or proceeding within the state. The information can be used when it was obtained pursuant to a search warrant, or through a judicially recognized exception to search warrants. The new law defines “unmanned aerial vehicle” as “an aircraft that is operated without direct human intervention from on or within the aircraft,” not including satellites.

⁴⁴ National Conference of State Legislatures, 2013 State Unmanned Aircraft Systems (UAS) Legislation (July 2, 2015), <http://www.ncsl.org/research/transportation/2013-state-unmanned-aircraft-systems-uas-legislation.aspx>.

Nevada AB 507 appropriated \$4,000,000 to the interim Finance Committee for allocation to the Governor's Office of Economic Development for the Unmanned Aerial Vehicle (UAV) program. The funds can only be appropriated if Nevada is selected as a Federal Aviation Administration test site.

North Carolina SB 402 places a moratorium on UAS use by state and local personnel unless the use is approved by the Chief Information Officer for the Department of Transportation (CIO). Any CIO granted exception has to be reported immediately to the Joint Legislative Oversight Committee on Information Technology and the Fiscal Research Division. The CIO may determine that there is a need to develop a UAS program within the State of North Carolina. This effort must include the CIO and the Department of Transportation Aviation Division Director.

North Dakota law, SB 2018 grants \$1 million from the state general fund to pursue designation as a Federal Aviation Administration unmanned aircraft systems test site. If selected, the law would grant an additional \$4 million to operate the site.

Oregon's HB 2710 defines a drone as an unmanned flying machine, not including model aircraft. The law allows a law enforcement agency to operate a drone if it has a warrant and for enumerated exceptions including for training purposes. It also requires that a drone operated by a public body be registered with the Oregon Department of Aviation (DOA), which shall keep a registry of drones operated by public bodies. The law grants the DOA rulemaking authority to implement these provisions. It also creates new crimes and civil penalties for mounting weapons on drones and interfering with or gaining unauthorized access to public drones. Under certain conditions a landowner can bring an action against someone flying a drone lower than 400 feet over their property.

The law also requires that the DOA must report to legislative committees on the status of federal regulations and whether UAV's operated by private parties should be registered in a manner similar to the requirement for other aircraft.

Tennessee law SB 796 addresses the use of drones by law enforcement. The new law enables law enforcement to use drones in compliance with a search warrant, to counter a high-risk terrorist attack and if swift action is needed to prevent imminent danger to life. Evidence obtained in violation of this law is not admissible in state criminal prosecutions. Additionally, those wronged by such evidence can seek civil remedy.

Texas recently enacted HB 912, which enumerates 19 lawful uses for unmanned aircraft, including their use in airspace designated as an FAA test site, their use in connection with a valid search warrant and their use in oil pipeline safety and rig protection. The law creates two new crimes, the illegal use of an unmanned aircraft to capture images and the offense of possessing or distributing the image; both offenses are class C misdemeanors. "Image" is defined in the law as any sound wave, thermal, ultraviolet, visible light or other electromagnetic waves, odor, or other conditions existing on property or an individual located on the property. Additionally, the measure requires the Department of Public Safety to adopt rules for use of UAS by law enforcement and mandates that law enforcement agencies in communities of over 150,000 people make annual reports on their use. Texas HCR 217 altered reporting requirements from the original HB 912.

On April 3, 2013, **Virginia** enacted the first state drone laws in the country with the passage of HB 2012 and SB 1331. The new laws prohibit drone use by any state agencies “having jurisdiction over criminal law enforcement or regulatory violations” or units of local law enforcement until July 1, 2015. Numerous exceptions to the ban are enumerated including enabling officials to deploy drones for Amber Alerts, Blue Alerts and use by the National Guard, by higher education institutions and search and rescue operations. The enacted bills also require the Virginia Department of Criminal Justice Services and other state agencies to research and develop model protocols for drone use by law enforcement in the state. They are required to report their findings to the General Assembly and governor by Nov. 1, 2013.