Drones

Wendie L. Kellington

Introduction

DRONES ARE ENTERING UNITED STATES AIRSPACE IN GREAT NUMBERS. In 15 years, a landscape without drones will be unusual. Just as we are now used to Fed Ex and UPS trucks on our local streets and highways, in 15 years we will be equally or more used to, not to mention reliant upon, delivery and other drones for our day-to-day needs. These aerial robots fly in Federal Aviation Administration (FAA) declared "navigable airspace." The greatest aerial drone growth has been and will be in small machines that fly at 400 feet above ground level (AGL) or less. As a consequence, the all but forgotten law informing the rights at the intersection of navigable airspace and private property rights, largely developed in early days when manned aircraft first became ubiquitous, is again important. These key older cases set useful, although incomplete, parameters about the rights of aircraft in navigable airspace vis-á-vis the rights of occupants and owners of private property.[1] However, exactly where private rights end, and the public's right to flight in the navigable airspace without avigation easements begins, has no bright line. As is always the case with new technology, the law will be tasked to "catch up."

This article outlines the current state of the law respecting the authorization of drones to fly in navigable airspace and the law at the intersection of navigable airspace and property/personal rights. It analyzes the likely legal envelope for small drones in navigable airspace as it unfolds in the future and also offers some food for thought on preemption and privacy in the era of drones.

The Federal Regulatory World of Drones

The FAA Modernization and Reform Act of 2012, together with its reauthorization, the FAA Extension Safety and Security Act of 2016,

Wendie L. Kellington is a partner at Kellington Law Group in Lake Oswego, Oregon. She is a member of the Radio Technical Commission for Aeronautics (RTCA), a federal advisory committee, serving on the RTCA SC 228 developing Minimum Operational Performance Standards (MOPS) for UAS (drone) airspace integration. She also is a member of the Academy of Model Aeronautics.

1. *See, e.g.*, United States v. Causby, 328 U.S. 256 (1946).

requires the FAA to integrate drones in the National Airspace System. The 2016 Act requires the FAA in conjunction with NASA to establish a pilot "Unmanned Traffic Management" (UTM) system (think air traffic control for small drones flying below 500 feet AGL) on very tight timelines: the entire pilot program must be completed by 2019. NASA has done an impressive job so far with the UTM program and in fact has been at it for awhile. NASA announced on September 2, 2014, that it was then developing an air traffic control system for drone flights up to 500 feet AGL: "The system would check for other low-flying drone traffic, help the small unmanned vehicles avoid buildings, and scan for adverse weather conditions that might knock a drone out of the sky."

The federal government is, of course, supposed to manage such things. 49 U.S.C. § 40103 declares that "[t]he United States Government has exclusive sovereignty of airspace of the United States." 49 U.S.C. § 40101 declares that the public has a right of freedom of transit through this airspace. 49 U.S.C. § 4102(32) defines navigable airspace to mean: "airspace above the minimum safe altitude of flight prescribed by the Secretary of Commerce. . . ." Further, Congress has determined that the FAA has authority to regulate the use of navigable airspace, its management and efficiency, air traffic control, safety, navigational facilities, and aircraft noise at its source.[2] It is clear that the FAA has the right to declare the location of the navigable airspace. For winged aircraft, that has generally meant airspace above 1,000 feet in urban areas and 500 feet in rural areas,[3] plus the airspace needed for taking off and landing.[4] Helicopters may operate at lower levels as long as they do so without hazard to persons or property below.[5] Small commercial drones must fly at 400 feet AGL or lower, without special exception granted by the FAA.[6] Much to the chagrin of affected property owners, FAA Special Use Airspace (SUA) rules claim to make the navigable airspace reach from the ground level to 60,000 feet. Such SUAs can be designated by the FAA merely on the finding that an agency claims that surface airspace existed in December 1, 1967.[7]

2. 49 U.S.C. § 44502; 49 U.S.C. §§ 44701–44735; *see also* FAA Office of Chief Counsel, *State and Local Regulation of Unmanned Aircraft Systems (UAS) Fact Sheet*, at 1, *available at* https://www.faa.gov/uas/resources/uas_regulations_policy/media/UAS_Fact_Sheet_Final.pdf.

3. 14 C.F.R. §§ 91.119(b), 91.119(c).

4. 49 U.S.C. § 40102(32).

5. 14 C.F.R. § 91.119(d).

6. 14 C.F.R. § 107.51(b).

7. Fed. Aviation Admin. Order JO 7400.2J 21-3-3, SUA Proposals; Proposal Content. That is not to say the resulting intrusion is lawful, just that FAA opines that it is free to make the designation, and the offending operator or pilot will certainly have liability to the property owner if such flights are undertaken without an avigation easement.

However, the power of Congress and the FAA to declare navigable airspace does not give anyone, including pilots, the right to trespass, create nuisances, unconstitutionally take private property, invade privacy, commit crimes, or commit state law torts. Thus, the location of navigable airspace for low flying aircraft, like small drones, potentially has great impact on real property rights and personal rights of privacy. Yet, the location of navigable airspace is not recorded in real property records (unless an owner in the chain has given an avigation easement) and is not readily identifiable to non-pilots. Worse still, the intersection between rights to navigate the navigable airspace and perhaps the most cherished private property right stick in the bundle—the right to exclude others—not to mention the federal right to privacy found in the Fourth Amendment to the U.S. Constitution, is murky at best.

The following offers a partial roadmap through the federal miasma, with the unapologetic caveat that there is much work to be done by the courts, Congress, the FAA, and state and local legislatures. But the reader must keep in mind: drones are here to stay. It is up to the policy-makers and lawyers to facilitate the balance between the work that robots can and need to do for people and people's needs to be free from harassment.

Flying in Declared Navigable Airspace Does Not Immunize Governmental Airport Owners/Operators from Unconstitutional Taking Liability

Congress by statute cannot arbitrarily limit the scope of the Fifth Amendment taking clause to any particular distance above the ground. In *United States v. Causby*, 328 U.S. 256, 258 (1946), the government claimed, among other things, a property owner does not own any airspace adjacent to the surface "which he has not subjected to possession by the erection of structures or other occupancy." The *Causby* Court rejected the government's claim, deciding that "the landowner owns at least as much space above the ground as he can occupy or use in connection with the land. The fact that he does not occupy it in a physical sense—by the erection of building and the like—is not material." The Court explained that the area around the surface of the ground was necessary to enable a person to use and enjoy one's property and that the invasions thereof "are in the same category as invasions of the surface." The Court held that "flights over private land are not a taking, unless they are so low and so frequent to be a direct and immediate interference with the enjoyment and use of the land."

The Court concluded that the flights at issue in *Causby* imposed a servitude similar to an easement that interfered with the use and enjoyment of the real property. Although all economically beneficial use was not lost, there was a compensable diminution in the value of the property because the property could not be used as for chicken farming as the owner intended. The Court admonished: "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." *Causby*, 328 U.S. at 264.

Later, in *Braniff Airways v. Nebraska State Board of Equalization & Assessment,* 347 U.S. 590 (1954), the Supreme Court summarized *Causby* to hold "that the owner of land might recover for a taking by national use of navigable air space, resulting in destruction in whole or in part of the usefulness of the land property."

Many lower courts have created a bright line of liability to private property owners for flights below 500 feet. *Argent v. United States*, 124 F.3d 1277, 1281–82 (Fed. Cir. 1997), citing, e.g., *Lacy v. United States*, 595 F.2d 614, 616 (Ct. Cl. 1979); *Aaron v. United States*, 311 F.2d 798, 801 (Ct. Cl. 1963). That bright line will not work well in the era of drones that, if they fly at all, must fly below 400 feet per FAA rule.

Traditionally, Airports Are Responsible for Aircraft Damages

When flights are by military aircraft, the responsibility for damage belongs to the federal government.[8] But when the offending aircraft are civilian, operating from civilian airports, then the responsibility has been that of the airport operator (not, as you might suspect, the aircraft owner). This is because the airport is the party that chose where to establish the airport and how much land to acquire to buffer its neighbors. *Griggs v. Allegheny County* 369 U.S. 84, 90 (1962).

Fourth Amendment—Reasonable Expectation of Privacy That Society Is Prepared to Accept

- *Olmstead v. United States*, 277 U.S. 438, 464–66 (1928), holding no unlawful search without trespass, police attached wires to public telephone lines outside of the defendant's residence.

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

- *Katz v. United States*, 389 U.S. 34 (1967), abandoning *Olmstead*, the Supreme Court held that trespass was no longer the controlling factor for determining whether a search violated the Fourth Amendment. The Court decided that a wiretap of conversation in a public telephone booth was an unlawful search even though there was no trespass, holding famously that "the Fourth Amendment protects people, not places." *Id*. at 351. Justice Harlan's concurrence described for the first time the new Fourth Amendment test for a "reasonable expectation of privacy": (1) "that a person [exhibits] an actual (subjective) expectation of privacy," and (2) "that the expectation be one society is prepared to recognize as 'reasonable.'" *Id.* at 361.

- *Oliver v. United States,* 466 U.S. 170 (1984); this case establishes the "open fields" doctrine in which even though police trespass on private property, the resulting search is not unlawful under the Fourth Amendment. In *Oliver*, two police officers entered the defendant's private property, bypassed a locked gate (which they walked around) and a no trespassing sign, and eventually discovered marijuana growing. The marijuana site was approximately a mile from the defendant's home. The marijuana was growing in an open field. Holding that open fields are different than a home's curtilage, the Court explained:

  > [o]pen fields do not provide the setting for those intimate activities that the Amendment is intended to shelter from government interference or surveillance. There is no societal interest in protecting the privacy of those activities, such as the cultivation of crops, that occur in open fields. Moreover, as a practical matter these lands usually are accessible to the public and the police in ways that a home, an office, or commercial structure would not be. It is not generally true that fences or "No Trespassing" signs effectively bar the public from viewing open fields in rural areas. And both petitioner Oliver and respondent Thornton concede that the *public and police lawfully may survey lands from the air*. For these reasons, the asserted expectation of privacy in open fields is not an expectation that "society recognizes as reasonable. (Emphasis supplied.)

- *California v. Ciraolo*, 476 U.S. 207 (1986), holds there was no search, based exclusively on privacy grounds. The police had a tip that the defendant was growing marijuana in his back yard. The back yard was shielded from street view by two layers of fences, a six-foot outer layer and a ten-foot inner layer. There was no question that the owner had an expectation of privacy from ground level for what the Court called "his unlawful agricultural pursuits." So the

police went airborne. They went up in a small aircraft, flew over defendant's home *in the navigable airspace*, and took photos with "a standard 35mm camera." Then they got a search warrant. The opinion concludes, and the state did not contest, that the back yard was within the curtilage of the home. But that was not the end of it. Was it reasonable for the defendant to believe that his yard was secure from observations by the naked eye? No. The Court concluded that either a passing aircraft or even "a power company repair mechanic on a pole overlooking the yard" could have seen the illicit crop. The Court's conclusion was that "simple visual observations from a public space" (i.e., the navigable airspace) do not violate the Fourth Amendment, even if they invade the curtilage.

- *Florida v. Riley*, 488 U.S. 445 (1989), holding that a warrantless search from 400 feet in the air via helicopter that enabled police to discover marijuana growing on private property was not unlawful under the Fourth Amendment because police do not need a warrant to observe private property from public airspace. Justice O'Connor concurred that the police flyover observation was not an unlawful search, but her rationale was because such flyover was at an altitude at which members of the public travel with sufficient regularity that the defendant's expectation of privacy was not one that society is prepared to accept as "reasonable." Importantly, however, she did not rely on FAA navigable airspace relevant to whether the warrantless search was reasonable. Instead, she explained: "Because the FAA has decided that helicopters can lawfully operate at virtually any altitude so long as they pose no safety hazard, it does not follow that the expectations of privacy 'society is prepared to recognize as reasonable simply mirror the FAA's safety concerns."

- *Kyllo v. United States.* 533 U.S. 27 (2001), holds as unconstitutional a search using police thermal imaging from a car on a public street. A majority of five Justices found that using sense-enhancing technology to obtain information about what is going on inside a home was an unlawful search and seizure. Note, however, that the four dissenting justices who saw nothing unconstitutional about the use of thermal imagery in a search included Chief Justice Rehnquist, and Justices Stevens, O'Connor, and Kennedy.

- *Riley v. California*, 134 S. Ct. 2473 (2014), is relevant to the drone discussion in how it wrestles with new technology using

a balancing test. At issue was an alleged unlawful search of digital data from a cell phone found on a person after arrest, forcing the court to adapt old cases to new technology: "These cases require us to decide how the search incident to arrest doctrine applies to modern cell phones, which are now such a pervasive and insistent part of daily life that the proverbial visitor from Mars might conclude they were an important feature of human anatomy. A smart phone of the sort taken from Riley was unheard of ten years ago; a significant majority of American adults now own such phones." The court explained how it would begin its analysis in dealing with novel technology: "Absent more precise guidance from the founding era, we generally determine whether to exempt a given type of search from the warrant requirement 'by assessing, on the one hand, the degree to which it intrudes upon an individual's privacy and, on the other, the degree to which it is needed for the promotion of legitimate governmental interests.'" After a long and thoughtful discussion, Chief Justice Roberts concluded: "The fact that technology now allows an individual to carry such information in his hand does not make the information any less worthy of the protection for which the Founders fought. Our answer to the question of what police must do before searching a cell phone seized incident to an arrest is accordingly simple—get a warrant."

Fourth Amendment: Trespass Analysis Is Not Dead

- *United States v. Jones*, 565 U.S. 400 (2012), holding that installation of a GPS tracking device on a private car for 28 days was a trespass on the suspect's car and thus an unconstitutional search. A majority of the justices relied on the trespass rationale. Four justices relied on invasion of privacy. All agreed the search violated the Fourth Amendment.
- *United States v. Jardines*, 569 U.S. 1 (2013); a drug sniffing dog was brought by police to the front porch of a home (easily within the curtilage) and once there exhibited behavior that indicated the presence of drugs inside. The Court held that the search was unlawful, relying upon trespass grounds. Justice Scalia termed the dog an "unlicensed physical intrusion" (even though the police had a right to come to the front door—they did not have a right to bring the enhancement of a dog) and explained that the *Katz* "reasonable expectation of privacy test" supplemented the tres-

pass basis of the Fourth Amendment. The Court determined it was unnecessary to reach the privacy issue. Justice Kagan's concurring opinion provides perhaps a useful analogy for drones:

> A stranger comes to the front door of your home carrying super-high powered binoculars. . . . He doesn't knock or say hello. Instead, he stands on the porch and uses the binoculars to peer through your windows, into your home's furthest corners. It doesn't take long (the binoculars are really very fine): In just a couple of minutes, his uncommon behavior allows him to learn details of your life you disclose to no one. Has your "visitor" trespassed on your property, exceeding the license you have granted to members of the public to, say, drop off the mail or distribute campaign flyers? . . . Yes, he has.

Because the dog sniffing was a trespass, the search was unlawful under the Fourth Amendment.

Fourth Amendment Reasonable Expectation of Privacy Is Diminished in the Industrial/Commercial Setting

In Dow Chemical v. United States, 476 U.S. 227 (1986), the Supreme Court decided that technological perception enhancements that did not reveal "intimate details," such as penetrating the walls of buildings or recording conversations, were not an unlawful search and seizure of an *industrial complex*. *Dow* distinguished the reasonable expectation of privacy in the curtilage of a person's home from that of the owner of a 2,000-acre industrial complex. In *Dow*, EPA hired an airplane to take investigative photographs of an industrial facility that was guarded against ground level public views to determine compliance with Clean Air Act standards. EPA did not have a warrant. Dow got wind of the aerial investigation and brought suit, claiming the investigation from the air was beyond the EPA's authority, violated the Fourth Amendment of the U.S. Constitution, and should be enjoined by the court. The parties stipulated that the investigation was a "search" within the meaning of the Fourth Amendment.

Trespass, Nuisance and State Drone Specific Rules

Generally, a person is liable for private trespass when he or she enters property belonging to another without permission. In this regard, the Restatement (Second) of Torts § 159 (1965) restates the following regarding public and private liability for trespass: "Flight by aircraft in the air space above the land of another is a trespass if, but only if: (a) it enters into the immediate reaches of the air space next to the land, and (b) it interferes substantially with the other's use and enjoyment of his land."

In many states, including Oregon, it appears at least to be a defense to criminal trespass if a statute or rule gives you a right to be on private property. *See, e.g.*, OR. REV. STAT. § 164.205(3):

> Enter or remain unlawfully means:
>
> (a) To enter or remain in or upon premises when the premises, at the time of such entry or remaining, are not open to the public and when the entrant is not otherwise *licensed or privileged to do so;*

Further, respecting trespass (again, in Oregon), the case of *Thornburg v. Port of Portland*, 233 Or. 178 (1962), is instructive, albeit as a taking case involving aircraft noise. The Oregon Supreme Court analyzed *Causby*, explaining that the offending flight was essentially "at tree-top level" and could have constituted a trespass. *Id.*

On the other hand, private nuisance typically does not depend on whether offenders have a right to do what they are doing under some statute or rule. The issue is unreasonable interference with an occupant/owner's use and enjoyment of his land.

So, for example, OR. REV. STAT. § 837.380 provides:

> person who owns or lawfully occupies real property may bring an action against any person or public body that operates [a UAS] that is flown over the property if:
>
> (a) the operator of the unmanned system has flown the [UAS] over the property on at least one previous occasion; and
>
> (b) the person notified the owner or operator of the unmanned system that the person did not want the unmanned aircraft system flown over the property.

Conclusions from These Precedents and Principles

- In the home and curtilage, people have a reasonable expectation of privacy, free from the prying of people with "uncommon" technological enhancements.
- Private property includes the "immediate reaches of the enveloping atmosphere," such as that needed for the reasonable use and enjoyment of land.
- What is society prepared to accept as reasonable?
- The federal government specifically refused to adopt a "field preemption" clause in FAA's new Part 107 rules.
- FAA Chief Counsel Memo (see appendix)
- Likely flights that whiz by that don't interfere with reasonable use and enjoyment of residential land are probably acceptable as long

as they do not create unreasonable noise, employ unauthorized (by the subject without a warrant) private data collection, or other problems for the residential land occupier/land owner. For example, if land is rural and needed for wind turbines, you can't presume to run your drones at 200 feet AGL and below without an avigation easement; hovering over a backyard or near home windows that drives people crazy is likely to lead to liability for the drone operator. This to be contrasted from an Amazon or Fed Ex delivery drone, which will be an invitee when delivering packages. The non-invitee hovering drone is likely to be enjoined as unlawful, punished criminally, or result in taking if authorized by local, state, or federal government, regardless of whether activity is in the navigable airspace.

A Word About Preemption

The specific division of authority between state and local governments concerning drones is a very gray area. The FAA Chief Counsel has written an FAQ memo that takes a positions about preemption that are probably generally correct as far as they go, but it leaves significant and frustrating gaps where the rubber hits the road: what is the area private property owners own such that they can exclude drones, and in which local law enforcement can enforce private rights? Nevertheless the FAA General Counsel FAQ sheet memo features prominently in the commentary to the FAA's new Part 107 rules[9] promulgated to regulate small commercial drones. The Part 107 commentary endorses that memo and declares that it:

> summarizes well-established legal principles as to the Federal responsibility for regulating the operation or flight of aircraft, which includes, as a matter of law, UAS. The Fact Sheet also summarizes the Federal responsibility for ensuring the safety of flight as well as the safety of people and property on the ground as a result of the operation of aircraft.
>
> Substantial air safety issues are implicated when State or local governments attempt to regulate the operation of aircraft in the national airspace. The Fact Sheet provides examples of State and local laws affecting UAS for which consultation with the FAA is recommended and those that are likely to fall within State and local government authority.

9. 14 C.F.R. 107.

The FAA Chief Counsel Memo is appended to this article, because it's important to those of us to represent state and local governments and private property owners (i.e., all of us).

The Chief Counsel Memo issues important warnings for state and local governments, considering the regulation of drones:

- Consult with FAA before operational bans, altitude, or "any regulation of the navigable airspace."
- Consult with FAA before mandating equipment or training because it is believed to be preempted.

Tidbits from the commentary for the Part 107 rules include the following additional marginally helpful nuggets:

- "[T]his rule does not address preemption issues because those issues necessitate a case- specific analysis that is not appropriate in a rule of general applicability."
- The FAA notes, however, that *state governments* have historically been able to *regulate the takeoffs and landings of aircraft* within their state boundaries.
- "Certain legal aspects concerning small UAS use may be best addressed at the State or local level. For example, State law and other legal protections for individual privacy may provide *recourse for a person whose privacy may be affected through another person's use of a UAS*."

The Part 107 rules, in turn, refer the reader to the Chief Counsel's memo, which says that state and local governments retain authority with respect to:

- "Laws traditionally related to state and local police power—including land use, zoning, privacy, trespass, and law enforcement operations."
- "Requirement for police to obtain a warrant prior to using a UAS for surveillance."
- "Specifying that UAS may not be used for voyeurism."
- "Prohibitions on using UAS for hunting or fishing, or to interfere with or harass an individual who is hunting or fishing."
- "Prohibitions on attaching firearms or similar weapons to UAS."

A Word About Privacy

Regardless of great pontifications on the topic, individual privacy in the era of robots and the internet is not well understood or very well protected. The danger is that there will be a overreaction to fill the void that will crush the emerging industry.

States are free to regulate in the area of privacy protections of citizens. While the lack of federal intervention on the topic of privacy leaves a tremendous gap and puts enormous pressure on state and local governments to act, they clearly have power. As long as the exercise of that power does not adversely affect the uniform federal regulation of low flying aircraft (equipage, time, date, house, or flights), those regulations are on as solid a ground as any.

The federal protections of privacy are underwhelming to date:

There is the February 2015 Presidential Memorandum for the federal agency use of drones.[10] It requires federal agencies to develop, maintain, and update privacy policies for collection, retention, and dissemination of information obtained by drone, and assorted other policies.

The Federal Communications Commission has core enforcement authority under Section 5 of FTC Act (15 U.S.C. § 45(n)) where, if in interstate commerce, a company's data security or privacy practices cause or are likely to cause substantial injury to consumers or to competition. Most citizens and law enforcement can't successfully call the FCC and get any help with a problem of a drone collecting personal data.

The federal Department of Commerce, National Telecommunications Information Administration has adopted voluntary best practices for privacy protection—data collection retention, facial recognition etc. It's unlikely this will address the problems associated with local photographers, ex-lovers, and newsies driving people crazy with their ill-mannered use of drones.

10. White House, Presidential Memorandum: Promoting Economic Competitiveness While Safeguarding Privacy, Civil Rights, and Civil Liberties in Domestic Use of Unmanned Aircraft Systems, Feb. 15, 2015.

Appendix

State and Local Regulation of Unmanned Aircraft Systems (UAS) Fact Sheet
Federal Aviation Administration
Office of the Chief Counsel
December 17, 2015

BACKGROUND

Unmanned aircraft systems (UAS) are aircraft subject to regulation by the FAA to ensure safety of flight and safety of people and property on the ground. States and local jurisdictions are increasingly exploring regulation of UAS or proceeding to enact legislation relating to UAS operations. In 2015, approximately 45 states have considered restrictions on UAS. In addition, public comments on the Federal Aviation Administration's (FAA) proposed rule, "Operation and Certification of Small Unmanned Aircraft Systems" (Docket No. FAA-2015-0150), expressed concern about the possible impact of state and local laws on UAS operations.

Incidents involving unauthorized and unsafe use of small, remote-controlled aircraft have risen dramatically. Pilot reports of interactions with suspected unmanned aircraft have increased from 238 sightings in all of 2014 to 780 through August of this year. During this past summer, the presence of multiple UAS in the vicinity of wild fires in the western U.S. prompted firefighters to ground their aircraft on several occasions.

This fact sheet is intended to provide basic information about the federal regulatory framework for use by states and localities when considering laws affecting UAS. State and local restrictions affecting UAS operations should be consistent with the extensive federal statutory and regulatory framework pertaining to control of the airspace, flight management and efficiency, air traffic control, aviation safety, navigational facilities, and the regulation of aircraft noise at its source.

Presented below are general principles of federal law as they relate to aviation safety, and examples of state and local laws that should be carefully considered prior to any legislative action to ensure that they are consistent with applicable federal safety regulations. The FAA's Office of the Chief Counsel is available for consultation on specific questions.

WHY THE FEDERAL FRAMEWORK

Congress has vested the FAA with authority to regulate the areas of airspace use, management and efficiency, air traffic control, safety, navigational facilities, and aircraft noise at its source. 49 U.S.C. §§ 40103, 44502, and 44701–44735. Congress has directed the FAA to "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 air-

space." 49 U.S.C. § 40103(b)(1). Congress has further directed the FAA to "prescribe air traffic regulations on the flight of aircraft (including regulations on safe altitudes)" for navigating, protecting, and identifying aircraft; protecting individuals and property on the ground; using the navigable airspace efficiently; and preventing collision between aircraft, between aircraft and land or water vehicles, and between aircraft and airborne objects. 49 U.S.C. § 40103(b)(2).

A consistent regulatory system for aircraft and use of airspace has the broader effect of ensuring the highest level of safety for all aviation operations. To ensure the maintenance of a safe and sound air transportation system and of navigable airspace free from inconsistent restrictions, FAA has regulatory authority over matters pertaining to aviation safety.

REGULATING UAS OPERATIONS

In § 333 of the FAA Modernization and Reform Act of 2012 (Public Law No. 112-95), Congress directed the Secretary to determine whether UAS operations posing the least amount of public risk and no threat to national security could safely be operated in the national airspace system (NAS) and if so, to establish requirements for the safe operation of these systems in the NAS.

On February 15, 2015, the FAA proposed a framework of regulations that would allow routine commercial use of certain small UAS in today's aviation system, while maintaining flexibility to accommodate future technological innovations. The FAA's Notice of Proposed Rulemaking offered safety rules for small UAS (under 55 pounds) conducting non-recreational or non-hobby operations. The proposed rule defines permissible hours of flight, line-of-sight observation, altitude, operator certification, optional use of visual observers, aircraft registration and marking, and operational limits.

Consistent with its statutory authority, the FAA is requiring Federal registration of UAS in order to operate a UAS. Registering UAS will help protect public safety in the air and on the ground, aid the FAA in the enforcement of safety-related requirements for the operation of UAS, and build a culture of accountability and responsibility among users operating in U.S. airspace. No state or local UAS registration law may relieve a UAS owner or operator from complying with the Federal UAS registration requirements. Because Federal registration is the exclusive means for registering UAS for purposes of operating an aircraft in navigable airspace, no state or local government may impose an additional registration requirement on the operation of UAS in navigable airspace without first obtaining FAA approval.

Substantial air safety issues are raised when state or local governments attempt to regulate the operation or flight of aircraft. If one or two municipalities enacted ordinances regulating UAS in the navigable airspace and a significant number of municipalities followed suit, fractionalized control of the navigable airspace could result. In turn, this "patchwork quilt" of differing restrictions could severely limit the flexibility of FAA in controlling the airspace and flight patterns and ensuring safety and an efficient air traffic flow.

A navigable airspace free from inconsistent state and local restrictions is essential to the maintenance of a safe and sound air transportation system. *See Montalvo v. Spirit Airlines*, 508 F.3d 464 (9th Cir. 2007), and *French v. Pan Am Express, Inc.*, 869 F.2d 1 (1st Cir. 1989); *see also Arizona v. United States*, 567 U.S. ___, 132 S. Ct. 2492, 2502 (2012) ("Where Congress occupies an entire field . . . even complimentary state regulation is impermissible. Field preemption reflects a congressional decision to foreclose any state regulation in the area, even if it is parallel to federal standards."), and *Morales v. Trans World Airlines, Inc.*, 504 U.S. 374, 386–87 (1992).

EXAMPLES OF STATE AND LOCAL LAWS FOR WHICH CONSULTATION WITH THE FAA IS RECOMMENDED

- Operational UAS restrictions on flight altitude, flight paths; operational bans; any regulation of the navigable airspace. For example—a city ordinance banning anyone from operating UAS within the city limits, within the airspace of the city, or within certain distances of landmarks. Federal courts strictly scrutinize state and local regulation of overflight. *City of Burbank v. Lockheed Air Terminal*, 411 U.S. 624 (1973); *Skysign International, Inc. v. City and County of Honolulu*, 276 F.3d 1109, 1117 (9th Cir. 2002); *American Airlines v. Town of Hempstead*, 398 F.2d 369 (2d Cir. 1968); *American Airlines v. City of Audubon Park*, 407 F.2d 1306 (6th Cir. 1969).

- Mandating equipment or training for UAS related to aviation safety, such as geo-fencing, would likely be preempted. Courts have found that state regulation pertaining to mandatory training and equipment requirements related to aviation safety is not consistent with the federal regulatory framework. *Med-Trans Corp. v. Benton*, 581 F. Supp. 2d 721, 740 (E.D.N.C. 2008); *Air Evac EMS, Inc. v. Robinson*, 486 F. Supp. 2d 713, 722 (M.D. Tenn. 2007).

EXAMPLES OF STATE AND LOCAL LAWS WITHIN STATE AND LOCAL GOVERNMENT POLICE POWER

Laws traditionally related to state and local police power—including land use, zoning, privacy, trespass, and law enforcement operations—generally are not subject to federal regulation. *Skysign International, Inc. v. City and County of Honolulu*, 276 F.3d 1109, 1115 (9th Cir. 2002). Examples include:

- Requirement for police to obtain a warrant prior to using a UAS for surveillance.

- Specifying that UAS may not be used for voyeurism.

- Prohibitions on using UAS for hunting or fishing, or to interfere with or harass an individual who is hunting or fishing.
- Prohibitions on attaching firearms or similar weapons to UAS.

CONTACT INFORMATION FOR QUESTIONS

The FAA's Office of the Chief Counsel is available to answer questions about the principles set forth in this fact sheet and to consult with you about the intersection of federal, state, and local regulation of aviation, generally, and UAS operations, specifically. You may contact the Office of Chief Counsel in Washington, D.C. or any of the following Regional Counsels:

FAA Office of the Chief Counsel
Regulations Division (AGC-200)
800 Independence Ave. S.W.
Washington, DC 20591
(202) 267-3073

Alaskan Region
Office of the Regional Counsel
222 West Seventh Ave.
Anchorage, AK 99513
(909) 271-5269
(AK)

Central Region
Office of the Regional Counsel
901 Locust St., Room 506
Kansas City, MO 61406-2641
(816) 329-3760
(IA, KS, MO, NE)

Eastern Region
Office of the Regional Counsel
1 Aviation Plaza, Room 561
Jamaica, NY 11434-4848
(718) 553-3285
(DC, DE, MD, NJ, NY, PA, VA, WV)

Great Lakes Region
Office of the Regional Counsel
O'Hare Lake Office Center
2300 East Devon Ave.
Des Plaines, IL 60018
(847) 294-7313
(IL, IN, MI, MN, ND, OH, SD, WI)

New England Region
Office of the Regional Counsel
12 New England Executive Park
Burlington, MA 01803
(781) 238-7040
(CT, ME, MA, NH, RI, VT)

Northwest Mountain Region
Office of the Regional Counsel
1601 Lind Ave. SW
Renton, WA 98055-4056
(425) 227-2007
(CO, ID, MT, OR, UT, WA, WY)

Southern Region
Office of the Regional Counsel
1701 Columbia Ave., Suite 530
College Park, GA 30337
(404) 305-5200
(AL, FL, GA, KY, MS, NC, SC, TN)

Southwest Region
Office of the Regional Counsel
6N-300
10101 Hillwood Parkway Dr.
Fort Worth, TX 76177
(817) 222-5099
(AR, LA, NM, OK, TX)

Western-Pacific Region
Office of the Regional Counsel
Box 92007
Los Angeles, CA 90009
(310) 725-7100
(AZ, CA, HI, NV)

APPENDIX—LIST OF AUTHORITIES

Federal Statutes

- 49 U.S.C. §§ 40103, 44502, and 44701–44735 (former Federal Aviation Act of 1958, as amended and recodified).
- FAA Modernization and Reform Act of 2012, Public Law No. 112-95 (Feb. 14, 2012), Subtitle B, "Unmanned Aircraft Systems."

Federal Regulations

- Title 14 of the Code of Federal Regulations, Chapter 1.

U.S. Supreme Court

- "Congress has recognized the national responsibility for regulating air commerce. Federal control is intensive and exclusive. Planes do not wander about in the sky like vagrant clouds. They move only by federal permission, subject to federal inspection, in the hands of federally certified personnel and under an intricate system of federal commands. The moment a ship taxies onto a runway it is caught up in an elaborate and detailed system of controls. It takes off only by instruction from the control tower, it travels on prescribed beams, it may be diverted from its intended landing, and it obeys signals and orders. Its privileges, rights, and protection, so far as transit is concerned, it owes to the Federal Government alone and not to any state government." *Northwest Airlines v. State of Minnesota*, 322 U.S. 292, 303 (1944) (Jackson, R., concurring).
- "If we were to uphold the Burbank ordinance [which placed an 11 p.m. to 7 a.m. curfew on jet flights from the Burbank Airport] and a significant number of municipalities followed suit, it is obvious that fractionalized control of the timing of takeoffs and landings would severely limit the flexibility of FAA in controlling air traffic flow. The difficulties of scheduling flights to avoid congestion and the concomitant decrease in safety would be compounded." *Burbank v. Lockheed Air Terminal Inc.*, 411 U.S. 624, 639 (1973).
- "The Federal Aviation Act requires a delicate balance between safety and efficiency, and the protection of persons on the ground. . . . The interdependence of these factors requires a uniform and exclusive system of federal regulation if the congressional objectives underlying the Federal Aviation Act are to be fulfilled." *Burbank*, 411 U.S. at 638–639.
- "The paramount substantive concerns of Congress [in enacting the FAA Act] were to regulate federally all aspects of air safety . . . and, once aircraft were in 'flight,' airspace management. . . ." *Burbank*, 411 U.S. at 644 (Rehnquist, J. dissenting).

Courts of Appeals

- "Air traffic must be regulated at the national level. Without uniform equipment specifications, takeoff and landing rules, and safety standards, it would be impossible to operate a national air transportation system." *Gustafson v. City of Lake Angeles*, 76 F.3d 778, 792–93 (6th Cir. 1996) (Jones, N., concurring).

- "The purpose, history, and language of the FAA [Act] lead us to conclude that Congress intended to have a single, uniform system for regulating aviation safety. The catalytic events leading to the enactment of the FAA [Act] helped generate this intent. The FAA [Act] was drafted in response to a series of fatal air crashes between civil and military aircraft operating under separate flight rules. . . . In discussing the impetus for the FAA [Act], the Supreme Court has also noted that regulating the aviation industry requires a delicate balance between safety and efficiency. It is precisely because of 'the interdependence of these factors' that Congress enacted 'a uniform and exclusive system of federal regulation.'" *Montalvo v. Spirit Airlines,* 508 F.3d 464, 471 (9th Cir. 2007), citing *City of Burbank v. Lockheed Air Terminal Inc*., 411 U.S. 624, 638–39 (1973).

- "[W]hen we look to the historical impetus for the FAA, its legislative history, and the language of the [FAA] Act, it is clear that Congress intended to invest the Administrator of the Federal Aviation Administration with the authority to enact exclusive air safety standards. Moreover, the Administrator has chosen to exercise this authority by issuing such pervasive regulations that we can infer a preemptive intent to displace all state law on the subject of air safety." *Montalvo*, 508 F.3d at 472.

- "We similarly hold that federal law occupies the entire field of aviation safety. Congress' intent to displace state law is implicit in the pervasiveness of the federal regulations, the dominance of the federal interest in this area, and the legislative goal of establishing a single, uniform system of control over air safety. This holding is fully consistent with our decision in *Skysign International, Inc. v. Honolulu*, 276 F.3d 1109 (9th Cir. 2002), where we considered whether federal law preempted state regulation of aerial advertising that was distracting and potentially dangerous to persons on the ground. In upholding the state regulations, we held that federal law has not 'preempt[ed] altogether any state regulation purporting to reach into the navigable airspace.' *Skysign* at 1116. While Congress may not have acted to occupy exclusively all of air commerce, it has clearly indicated its intent to be the sole regulator of aviation safety. The FAA, together with federal air safety regulations, establish complete and thorough safety standards for interstate and international air trans-

portation that are not subject to supplementation by, or variation among, states." *Montalvo*, 508 F.3d at 473–74.

- "[W]e remark the Supreme Court's reasoning regarding the need for uniformity [concerning] the regulation of aviation noise, see *City of Burbank v. Lockheed Air Terminal*, 411 U.S. 624 (1973), and suggest that the same rationale applies here. In *Burbank*, the Court struck down a municipal anti-noise ordinance placing a curfew on jet flights from a regional airport. Citing the 'pervasive nature of the scheme of federal regulation,' the majority ruled that aircraft noise was wholly subject to federal hegemony, thereby preempting state or local enactments in the field. In our view, the pervasiveness of the federal web is as apparent in the matter of pilot qualification as in the matter of aircraft noise. If we upheld the Rhode Island statute as applied to airline pilots, 'and a significant number of [states] followed suit, it is obvious that fractionalized control . . . would severely limit the flexibility of the F.A.A. . . .' [citing *Burbank*] Moreover, a patchwork of state laws in this airspace, some in conflict with each other, would create a crazyquilt effect. . . . The regulation of interstate flight-and flyers-must of necessity be monolithic. Its very nature permits no other conclusion. In the area of pilot fitness as in the area of aviation noise, the [FAA] Act as we read it 'leave[s] no room for . . . local controls.' [citing *Burbank*]. *French v. Pan Am Express, Inc*., 869 F.2d 1, 6 (1st Cir. 1989).