Managing the Risk of UNMANNED AIR VEHICLES

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THE FAA ESTIMATES THAT BY THIS YEAR, AS MANY AS 7,500 COMMERCIAL UNMANNED AERIAL VEHICLES ("UAVs"), or "drones," will be operating within the United States.[1] Public agencies now have access to valuable technology, once available only to the military and its related entities, aimed at maintaining public safety, protecting law enforcement officers from harm, and collecting valuable data and imaging in order to aid in search and rescue missions, accident reconstruction, or to respond to natural or manmade disasters.[2] In the future, UAVs could help law enforcement in hostage negotiations, missing persons, drug interdictions, crime scene analysis, criminal surveillance and pursuit, and in creating maps to solve crimes.[3]

Additionally, UAVs could assist police in active shooter or SWAT situations, crime and traffic accident scene and analysis, crowd monitoring, and bomb inspection.[4] Indeed, UAVs have already been utilized by the Federal Bureau of Investigation (FBI) to support missions related to kidnappings, search and rescue, drug interdictions, and fugitive investigations.[5] Moreover, UAVs have long been used by both the Mexican government and the Department of Homeland Security to patrol border towns.[6]

Increasing constitutional implications, however, surround the usage of UAVs by public agencies, and few issues are as polarizing to the American people as what may be deemed "Orwellian" surveillance by the United States government.

"THE AERIAL SURVEILLANCE TRILOGY"[7]

Three United States Supreme Court cases have challenged what it means to have a reasonable expectation of privacy in and around one's home, and have provided the framework for modern case law related to remotely-operated aerial surveillance, search and seizure, and an individual's expectation of privacy.

The Fourth Amendment of the United States Constitution provides in relevant part that, "[t]he right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated." Curtilage, which is defined by courts as the area immediately surrounding a private house, has commonly been touted as protected space.[8]

In *California v. Ciraolo*, the Supreme Court of the United States held that a warrantless, naked eye observation of marijuana plants growing in Ciraolo's fenced-in backyard from an aircraft lawfully operating at an altitude of 1,000 feet in navigable airspace did not violate Ciraolo's Fourth Amendment rights.[9] In considering whether the police's actions were violative, the Supreme Court relied on the "reasonable expectation of privacy" test enumerated in *Katz v. United States*: whether the individual manifested a subjective expectation of privacy in the object of the challenged search and whether society is willing to accept that expectation as reasonable.[10] The Court held that, "[i]n an age where private and commercial flight in the public airways is routine, it is unreasonable for [Ciraolo] to expect that his marijuana plants were constitutionally protected from being observed with the naked eye from an altitude of 1,000 feet."[11]

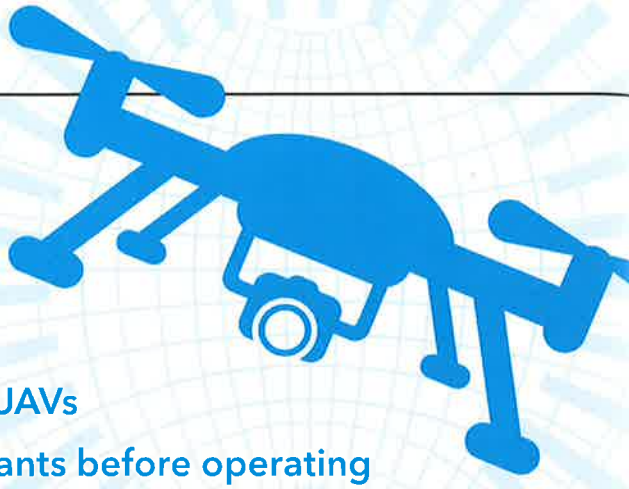
On the same day as *Ciraolo*, the Supreme Court decided *Dow Chemical Co. v. United States*, which considered whether the EPA's aerial surveillance of Dow's 2,000-acre chemical manufacturing facility using a precise aerial mapping camera at 1,200, 3,000 and 12,000 feet without a warrant violated the Fourth Amendment.[12] The Court acknowledged that "the businessman, like the occupant of a residence, has a constitutional right to go about his property free from unreasonable official entries upon his private commercial property," but that the expectations of privacy associated with a warrantless inspection of commercial property differed significantly from the sanctity accorded an individual home.[13]

Three years later, the Supreme Court was tasked with deciding the case of Florida v. Riley, which presented similar facts to that of *Ciraolo*.[14] In a plurality opinion, the Supreme Court largely followed the framework set forth in *Ciraolo*, holding that the 400-foot aerial surveillance of marijuana plants in Riley's greenhouse did not violate the Fourth Amendment.[15]

KYLLO AND JONES–THE TECHNOLOGY CASES

In *Kyllo v. United States*, police used a thermal imaging detector from a vehicle across the street to determine whether Kyllo was growing marijuana plants in his home.[16] Based on tips from informants, utility bills, and the thermal imaging, a warrant was issued to search Kyllo's home whereby agents found an indoor marijuana growing operation.[17] Kyllo moved to suppress the evidence, but both the trial court and the Ninth Circuit upheld the validity of the warrant relying on *Ciraolo and Dow*.[18] The Supreme Court disagreed, holding that, "[o]btaining by sense-enhancing technology any information regarding the interior of the home that could not otherwise have been obtained without physical intrusion into a constitutionally protected area" constitutes a search where, as here, the technology in question is not in general public use."[19]

Finally, in *United States v. Jones*, the government obtained a search warrant permitting it to install a GPS tracking device on a vehicle registered to Jones's wife.[20] The warrant authorized installation in the District of Columbia within 10 days, but agents installed it on the 11th day in



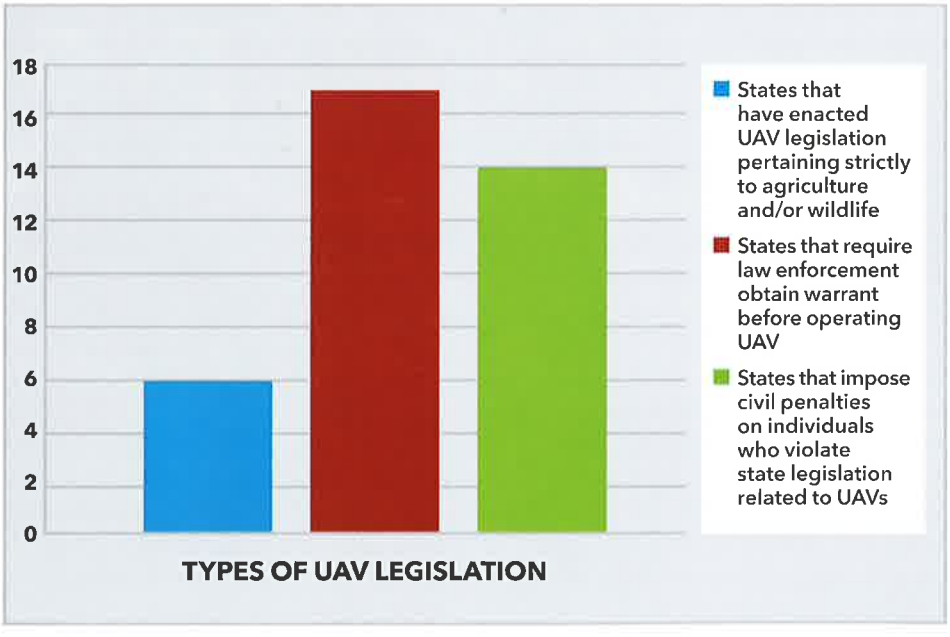
State legislation ranges from permissive to overly restrictive, and employs various protections, specificities and definitions. Ironically, the majority of states that have adopted legislation concerning UAVs specifically require law enforcement to obtain warrants before operating a UAV, except for specific exceptions set forth in each state's statute.

Maryland.[21] The government then tracked the vehicle for 28 days, and subsequently secured an indictment of Jones on drug trafficking conspiracy charges.[22] The Supreme Court held that the government, by placing the tracking device on the car, physically occupied private property, and that action alone constituted a search, as did the subsequent use of the device to monitor the vehicle.[23]

STATE LEGISLATION

Since 2013, states have considered literally hundreds of pieces of legislation concerning UAVs.[24] Thirty-eight states are considering legislation related to UAVs in the 2017 legislative session alone.[25] At this time, all 50 states have either adopted a resolution, proposed a bill or enacted a law related to UAVs.[26]

State legislation ranges from permissive to overly restrictive, and employs various protections, specificities and definitions. Ironically, the majority of states that have adopted legislation concerning UAVs specifically require law enforcement to obtain warrants before operating a UAV, except for specific exceptions set forth in each state's statute. States that generally require warrants before operating a UAV include Alaska, Idaho, Illinois, Iowa; North Carolina; North Dakota, Florida, Vermont, Oregon, Indiana, Wisconsin, Montana, Utah, Maine, Tennessee, Virginia, and Nevada.[27]



Exceptions to warrant requirements include: terrorist attacks; searches for missing persons; the imminent escape of a suspect; probable cause that a person has committed or is committing a crime and exigent circumstances exist that make it unreasonable to obtain a warrant; the need to mitigate a natural or other disaster; the need to perform geographical or environmental survey for purposes that are not criminal; the need to obtain aerial photographs or video images of a motor vehicle accident site; to locate an escaped prisoner; surveillance for the purpose of executing an arrest warrant; if a law enforcement officer has reasonable suspicion to believe that the use of a drone is necessary to prevent imminent danger to an individual or to prevent imminent destruction of evidence; use in "emergency situations"; use by institutions of higher education solely for research and development purposes; property appraisal; use in utility facilities and operations; or to deliver cargo.[28]

Additionally, and perhaps in direct response to Jones, some states require that a warrant authorizing the use of a UAV must specify the period for which operation of the unmanned aircraft system is authorized.[29] In Oregon, in no event may a warrant provide for the operation of an unmanned aircraft system for a period of more than 30 days.[30] In Nevada, it's 10 days.[31]

Law enforcement agencies are subject to reporting requirements created by state statute. In Illinois, a law enforcement agency that owns one or more drones shall report in writing the number of drones that it owns, which is then made available to the public.[32]

Louisiana has adopted legislation pertaining to UAVs in commercial agriculture.[33] Relatedly, a few states have prohibited the use of drones in hunting and/or fishing practices.[34]

Kansas has expanded the definition of "stalking" to include the use of drones to stalk another person.[35] Mississippi has adopted a ban on voyeurism by use of drone.[36] California expands the definition of "trespass" to include unauthorized invasions of a property owner's airspace.[37] In Nevada, a person who owns or lawfully occupies real property may bring an action for trespass against the owner or operator of a UAV that is flown at a height of less than 250 feet over the property.[38]

Oklahoma prohibits the operation of drones over a critical infrastructure facility (i.e. an airport, prison, water source, etc.) without permission of the facility's owner.[39] Texas prohibits use of drones for gathering surveillance, disclosure of photographs or videos obtained while illegally surveilling, or flying over critical infrastructure.[40]

Utah, Tennessee and North Dakota have enacted statutes specifically related to data retention, which seemingly provides added safeguards to the individual subject to the UAV search.[41]

FUTURE ISSUES

Much like the advent of DNA analysis, the current state of the law related to UAVs is years behind its technological advances. UAVs have created a particularly thorny path for public agencies to travel down, where agencies must balance the necessity for new law enforcement techniques with an individual's rights under the United States Constitution.

For instance, the issue of whether UAVs should be equipped with additional technology, such as thermal imaging or biometric data (facial recognition), will eventually come into play. Vermont has already prohibited the use of both, while North Carolina has prohibited thermal imaging.[42] Maine has directed for the establishment of written policies and procedures regarding restrictions on the use of night vision technology, high-powered zoom lenses, video analytics, facial recognition technology, thermal imaging and other such enhancement technology.[43] Autonomous UAVs, or UAVs operated without a remote pilot, could also create entirely separate issues.[44]

Furthermore, "weaponization" of UAVs with both lethal and nonlethal weaponry is largely prohibited in most states.[45] Although North Dakota currently prohibits weaponizing drones, the North Dakota House recently voted against a bill that would have barred law enforcement from using nonlethal weapons on drones.[46] Connecticut also proposed a bill that might have allowed regulation enforcement to make use of weaponized drones, but no action was taken by Connecticut's Public Safety and Security Committee, and the bill was effectively quashed.[47]

Additionally, while UAVs could possibly assist law enforcement in crowd monitoring during protests or marathons, for example, not only is a warrant required to operate a UAV in some states, but it is illegal in Maine and Vermont for law enforcement to use a UAV to conduct surveillance of private citizens peacefully exercising their constitutional rights of free speech and assembly.[48]

Even if states are adopting legislation at a remarkably fast pace, judicially created rules and analyses have not started to develop. In fact, there is little to no case law in the United States regarding the legalities of UAVs. In states where laws pertaining to UAVs have yet to be adopted or are silent on warrant requirements, for example, the Supreme Court holdings in *Ciraolo*, *Dow*, *Riley*, *Kyllo* and *Jones* will likely apply. These cases do not create a neat picture of how the courts will react to novel UAV issues. They do, however, present a common theme: surveillance is constitutionally acceptable if it is limited by human experience and endurance.

The Supreme Court has found that surveillance that does not go beyond the limits of the "naked eye" or that is short in duration is not considered violative of the Fourth Amendment. In Kyllo, for example, the thermal imaging device could detect heat, which is impossible to do with the naked eye, while the GPS device used in Jones tracked the subject for 28 continuous days, which is more than any one human could be expected to endure. It has been suggested that legislators should craft simple duration-based surveillance legislation that addresses the potential for "persistent surveillance."[49] Doing so could limit the possibility that aerial surveillance could follow individuals and monitor their daily activities, or that UAVs could be used to hover directly over a landowner's property.[50]

MANAGING THE RISK

In order to manage the associated risks inherent to UAV use, it is absolutely imperative that public entities take extra precautions in the use and operation of UAVs. Public entities should comply with all FAA Regulations, particularly the new FAA regulations that became effective in August 2016, including reporting and certification requirements, and should become familiar with navigable airspace guidelines, as well as any state, municipal or local laws and ordinances related to UAV usage in any specific area.[51]

Additionally, it is important that entities develop a UAV program philosophy, determining why the entity needs a UAV, what it will be used for, and what type of sensors or technology the UAV will carry.[52] The entity will also want to develop a robust standard operating procedure covering equipment, personnel selection and training, operations, maintenance, and administrative procedures.[53] In the development stage, it may be beneficial to involve the citizens and local elected officials served by the entity.[54]

Public entities should always obtain necessary warrants, and these warrants should spell out the exact parameters of a specific mission or search in compliance with any known law or regulation. At the very minimum, *Jones* and *Kyllo* should be considered when deciding how long a search should take or what technology should be used. Entities should develop data retention and confidentiality policies and procedures, and should stress the absolute importance of a subject's privacy.

One major benefit to an agency's use of UAVs is cost. UAVs cost about $25 an hour to operate, compared with $250 to $1,000 per hour for a traditional aircraft.[55] UAVs can perform approximately 30 percent of the missions that a manned helicopter can perform for less than one

percent of the cost of the helicopter and crew.[56] Compared to a police helicopter, which could cost anywhere from $500,000 to $3 million to acquire[57], a very capable UAV can be had for approximately $10,000.[58] The cost of a UAV is relatively insignificant in order to mitigate the risk of a law suit.

electronic store for $50 to $2,000.[63] Suppose an agency is notified of a missing person report and the last known reported sighting was in a remote and fairly inaccessible tree-covered swamp area. Could agencies face liability for either failing to own or operate UAVs to conduct the search, given their minimal cost and availability?

As the law races to catch up with technology, we are pioneers in this endeavor. But we must be prepared for the risks that come with it. Whatever those may be.

POTENTIAL CLAIMS

Of obvious import is the question of agency liability. To date, UAVs have a higher mishap rate than traditional manned aircraft.[59] Although advances in technology, training, and operation will likely reduce these accidents, the introduction of UAVs into highly-populated, domestic air traffic could create human injuries or property damage if a UAV were to crash or collide with another object in the air.[60]

Various states allow a plaintiff to seek compensatory damages, attorney's fees, treble damages, injunctive relief, and punitive damages for UAV statute violations.[61] It remains to be seen whether immunity will protect public agencies from civil liability resulting from a UAV mishap, although it is certainly clear that liability exists for an agency's violation of an individual's constitutional rights. Potential standard of care claims related to the operation, maintenance, or safeguards of a UAV will also certainly come into play as their use increases.

Are UAVs so commonplace and inexpensive that an agency could potentially be subject to claims for not owning or deploying a UAV in any given situation? A recent study identified at least 347 state and local police, sheriff, fire and emergency units across 43 states that have acquired UAVs, the majority in the last year, with local law enforcement leading the way.[62] An amateur UAV can be purchased on the internet or a big box

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FOOTNOTES

1 Chris Jenks, State Labs of Federalism and Law Enforcement "Drone" Use, 72 Wash. and Lee L.Rev. 1389 (2015).
2 http://www.techrepublic.com/article/police-are-now-using-drones-to-apprehend-suspects-and-administer-non-lethal-force-a-police-chief/
3 https://redshift.autodesk.com/drones-in-police-work-future-crime-fighting/
4 https://www.policeone.com/police-products/Police-Drones/articles/9502450-5-ways-drones-can-help-cops-fight-crime/
5 Id.
6 Id.; see also http://www.ahwatukee.com/community_focus/article_3201a05c-c891-11e2-bf27-001a4bcf887a.html.
7 Jenks, supra, at 1405 (internal citations omitted).
8 Oliver v. United States, 466 U.S. 170, 180 (1984).
9 476 U.S. 207 (1986).
10 Id. at 211; citing to Katz v. United States, 389 U.S. 347, 360 (1967).
11 Id. at 215.
12 476 U.S. 227 (1986).
13 Id. at 237-238.
14 488 U.S. 445 (1989).
15 Id.
16 533 U.S. 27, 29 (2001).
17 Id.
18 Id.
19 Id.
20 565 U.S. 400, 402 (2012).
21 Id. at 403.
22 Id.
23 Id. at 404-405.
24 http://www.ncsl.org/research/transportation/current-unmanned-aircraft-state-law-landscape.aspx.
25 Id.
26 https://jrupprechtlaw.com/drone-law-blog
27 See Alaska Stat. Ann. § 18.65.902 (2014); Idaho Code Ann. § 21-213 (2013); Ill. Comp. Stat. Ann. Ch. 725 § 167/10 (2014); Iowa Code Ann. § 808.15 (2014); N.C. Stat. Ann. § 15A-300.1 (2015); N.D. Cent. Code Ann. § 29-29.4-02 (2015); Fla. Stat. Ann. § 934.50 (2015); Vt. Stat. Ann. tit. 20, § 4622 (2015); Or. Rev. Stat. Ann. § 837.320 (2015); Ind. Code Ann. § 35-33-5-9 (2016); Wis. Stat. Ann. § 175.55 (2014); Mont. Code Ann. § 46-5-109 (2013); Utah Code Ann. § 63G-18-103 (2015); Me. Rev. Stat. tit. 25, § 4501(2015); Tenn. Code Ann. § 39-13-609 (2013); Va. Code Ann. § 19.2-60.1 (2015); Nev. Rev. Stat. § 493.010, et seq. (2015).
28 See Or. Rev. Stat. Ann. § 837.320 (2015); Ind. Code Ann. § 35-33-5-9 (2016); Wis. Stat. Ann. § 175.55 (2014); Utah Code Ann. § 63G-18-103 (2015); Me. Rev. Stat. tit. 25, § 4501(2015); Tenn. Code Ann. § 39-13-609 (2013); Va. Code Ann. § 19.2-60.1 (2015); Vt. Stat. Ann. tit. 20, § 4622 (2015); Fla. Stat. Ann. § 934.50 (2015); Nev. Rev. Stat. § 493.010, et seq. (2015).
29 See N.D. Cent. Code Ann. § 29-29.4-03 (2015); Or. Rev. Stat. Ann. § 837.320 (2015).
30 See Or. Rev. Stat. Ann. § 837.320 (2015).
31 See Nev. Rev. Stat. Ann. § 493.112 (2015).
32 See Ill. Code Ann. Ch. 725 § 167/35 (2014); see also Vt. Code Ann. tit. 20 § 4624 (2015); Nevada Stat. Ann. § 493.118 (2015); Me. Rev. Stat. tit. 25 § 4501 (2015).
33 See La. Stat. Ann. tit. 3 § 41 (2015).
34 See Idaho Code § 36-1101(2016); Ill. Comp. Stat. Ch. 720 § 5/48-3 (2013); Ind. Code § 14-22-6-16 (2016); 1994 Mich. Pub. Acts § 451, Mich. Comp. Laws § 324.40111c (2015); N.H. Rev. Stat. § 207:57 (2016); W. Va. Code § 20-2-5 (2015); N.C. Gen. Stat. § 113-295 (2014).
35 See Kan. Stat. § 60-31a02 (2016).
36 See Miss. Code Ann. § 97-29-61 (2015).
37 See Cal. Civ. Code § 1708.8 (2015).
38 See Nev. Rev. Stat. Ann. § 493.103 (2015).
39 See Okla. Stat. tit. 3 § 322 (2016).
40 See Texas Gov. Code § 423, et seq. (2013).
41 See Utah Code Ann. § 63G-18-104 (2015); N.D. Cent. Code Ann. § 29-29.4-03 (2015); Tenn. Code Ann. § 39-13-609 (2013).
42 See Vt. Stat. Ann. tit. 20, § 4622 (2015); N.C. Gen. Stat. 14-401.25 (2014).
43 See Me. Rev. Stat. tit. 25 § 4501 (2015).
44 See Jenks, supra, at 1402.
45 See Nevada Stat. Ann. § 493.109 (2015); Wis. Stat. Ann. § 941.292 (2014); Vt. Stat. Ann. tit. 13 § 4018 (2015); Me. Rev. Stat. tit. 25 § 4501 (2015); Va. Code Ann. § 19.2-60.1 (2015); N.C. Gen. Stat. 14-401.24 (2014); Nev. Rev. Stat. § 493.010, et seq. (2015).
46 http://www.thedickinsonpress.com/news/4222456-nd-house-nonlethal-drone-weapons-stay-legal-law-enforcement
47 http://www.uav.org/connecticut-decides-against-weaponized-drones-for-law-enfo/
48 See Me. Rev. Stat. tit. 25 § 4501 (2015); Vt. Stat. Ann. tit. 20, § 4622 (2015).
49 https://www.brookings.edu/research/drones-and-aerial-surveillance-considerations-for-legislatures/
50 Id.
51 http://www.policemag.com/channel/technology/articles/2016/08/getting-your-unmanned-aircraft-program-off-the-ground.aspx
52 Id.
53 Id.
54 Id.
55 http://www.ahwatukee.com/community_focus/article_3201a05c-c891-11e2-bf27-001a4bcf887a.html
56 http://www.bluetoad.com/publication/?i=251297&ver=html5&p=1#{"page":12,"issue_id":251297}
57 https://www.aclu.org/blog/we-already-have-police-helicopters-so-whats-big-deal-over-drones
58 http://www.reuters.com/article/us-usa-drones-lawenforcement-idUSBRE92208W20130304
59 Geoffrey Christopher Rapp, Unmanned Aerial Exposure: Civil Liability Concerns Arising from Domestic Law Enforcement Employment of Unmanned Aerial Systems, 85 N.D. L.Rev. 627 (2009).
60 Id.
61 See Fla. Stat. Ann. § 934.50 (2015); Nev. Rev. Stat. § 493.010, et seq. (2015); Or. Rev. Stat. Ann. § 837.380 (2015).
62 Press Release, Airborne Law Enforcement Association, ALEA Announces Public Safety Drone Expo 2017.
63 http://www.bestbuy.com/site/aerial-drones-accessories/drones-with-cameras/pcmcat369900050002.c?id=pcmcat369900050002.