

THE DRONE WARS: THE NEED FOR FEDERAL PROTECTION  
OF INDIVIDUAL PRIVACY

*Toban Platt*\*

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ABSTRACT

*Drones—also known as unmanned aerial vehicles—are lightweight, easy to use, and relatively inexpensive aircraft with a wide variety of applications. Drone popularity has recently exploded, with an estimated two million recreational drones sold in 2016 and analysts predicting that sales will increase to 4.3 million units sold annually by 2020.<sup>1</sup> With this increased popularity comes increased concerns about how they will be used and who will fly them. The Federal Aviation Administration (FAA) and state legislatures have created drone-specific legislation and rules governing drone use. However, these rules and regulations are more concerned with regulating drones with in relation to public lands and public safety rather than protecting privacy. To protect an individual's privacy and make them feel secure in their home, new privacy legislation must be created to protect against drones' unique technical and physical capabilities. This new legislation may be created by each state or by the FAA, with different approaches having their own benefits and drawbacks.*

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\* Toban Platt, University of Washington School of Law, Class of 2018. Thank you to my family, friends and editing staff of the Washington Journal of Law, Technology & Arts.

<sup>1</sup> See Amy Ann Forni & Rob van der Meulen, *Gartner Says Almost 3 Million Personal and Commercial Drones Will Be Shipped in 2017*, GARTNER (Feb. 9, 2017), <http://www.gartner.com/newsroom/id/3602317>; See also FED. AV. ADMIN, FAA AEROSPACE FORECAST: FISCAL YEARS 2016-2036 (2016), [https://www.faa.gov/data\\_research/aviation/aerospace\\_forecasts/media/FY2016-36\\_FAA\\_Aerospace\\_Forecast.pdf](https://www.faa.gov/data_research/aviation/aerospace_forecasts/media/FY2016-36_FAA_Aerospace_Forecast.pdf).

*However, to develop the most effective and comprehensive privacy scheme, the FAA should create a privacy regulation for individual states to implement through conditional preemption. This will provide a uniform privacy law that has the necessary enforcement mechanisms to protect individual privacy.*

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## INTRODUCTION

Drones, officially called “unmanned aircraft systems,”<sup>2</sup> have increased in popularity in recent years. An estimated two million recreational drones were sold in 2016, creating an estimated \$1.7 billion in revenue.<sup>3</sup> Three million recreational drones are expected to be sold in 2017, which would increase drone-generated revenue to an estimated \$2.3 billion.<sup>4</sup>

The increased number of drones prompted passing both federal and state drone-specific legislation. In 2012, Congress passed the FAA Modernization and Reform Act (FMRA), which required the FAA to integrate drones into the national airspace system.<sup>5</sup> In response, the FAA created and issued new rules for registering and operating drones.<sup>6</sup> Additionally, several states have created their own restrictions on drone use. In 2016 alone, at least thirty-eight states considered legislation related to drones, and eighteen states passed thirty-two pieces of legislation.<sup>7</sup> Like their federal counterparts, many of the state regulations focused on the safe operation of drones rather than privacy concerns created by their use.

As states continue to pass legislation and the number of drones in the sky increases, so does concern over the lack of regulations protecting individual privacy. Citizens should feel safe from the preying eyes of other individuals as well as from private businesses.

Currently there is a gap in privacy regulations, allowing private citizens and businesses to invade an individual’s privacy without serious repercussions. The current privacy landscape also causes confusion as to whether the FAA or individual states have the

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<sup>2</sup> See Small Unmanned Aircraft Systems, 14 C.F.R. § 107 (2016).

<sup>3</sup> See Amy Ann Forni & Rob van der Meulen, *Gartner Says Almost 3 Million Personal and Commercial Drones Will Be Shipped in 2017*, GARTNER (Feb. 9, 2017), <http://www.gartner.com/newsroom/id/3602317>.

<sup>4</sup> *Id.*

<sup>5</sup> See FAA Modernization and Reform Act of 2012, Pub. L. No. 112–95, §§ 331–336, 126 Stat. 11 (2012).

<sup>6</sup> See 14 C.F.R. § 107.

<sup>7</sup> *State Unmanned Aircraft Systems (UAS) 2016 Legislation*, NAT’L CONF. ST. LEG., <http://www.ncsl.org/research/transportation/state-unmanned-aircraft-systems-uas-2016-legislation.aspx> (last visited Oct. 1, 2017).

authority to create their own drone-specific privacy regulations. The FAA has the ultimate authority 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.”<sup>8</sup> This includes “prescribing air traffic regulations on the flight of aircraft . . . for . . . navigating, protecting, and identifying aircraft [and] protecting individuals and property on the ground.”<sup>9</sup> However, allowing the FAA to create privacy regulations could result in the creation of rules with no means of enforcement.

In order to create an effective and comprehensive drone privacy scheme, the FAA should create privacy regulations that states can then implement through conditional preemption. Federal preemption mandates that federal laws supersede conflicting state laws.<sup>10</sup> Conditional preemption stems from this principle and “allows states to regulate in compliance with federal standards or preempts state law with federal regulation.”<sup>11</sup> It allows the federal government to create the regulation and states to enforce it. In this case, conditional preemption would provide for the greatest protection of individuals with the fewest issues arising from implementation.

## I. BACKGROUND

### A. *History of Drones*

The FAA refers to a drone as an “unmanned aircraft and associated elements (including communication 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.”<sup>12</sup> Drones can be enjoyed by hobbyists to take high-definition photos and videos from a unique perspective. They can also be used commercially, for aerial surveying, photography

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<sup>8</sup> 49 U.S.C. § 40103(b)(1) (2012).

<sup>9</sup> *Id.*

<sup>10</sup> U.S. CONST. art. VI, cl. 2.

<sup>11</sup> Philip J. Weiser, *Towards a Constitutional Architecture for Cooperative Federalism*, 79 N.C. L. REV. 663, 668 (2001).

<sup>12</sup> 14 C.F.R. § 107.3.

services, or uses incidental to a business, such as monitoring construction sites, creating topographical maps, or inspecting pipelines.<sup>13</sup>

### B. Concern About Drones

There are several reasons the public is concerned about the increased number of drones. First is their ease of use: drones are lightweight, easily operated, and relatively inexpensive. Many have the ability to travel up to forty miles per hour, with flight times over twenty minutes per battery charge.<sup>14</sup> Second is the additional technology which can be attached to drones. For example, high-resolution cameras may easily be secured to drones, and some are purchasable with pre-integrated technology.<sup>15</sup> These cameras capture high-resolution pictures and videos with relative ease. Once captured, these photos and videos can be stored and transmitted electronically with the click of a button.

Drones may be outfitted with Global Positioning System (GPS) technology, be programmed to fly by themselves in a set pattern, or even follow a specified individual.<sup>16</sup> Pictures and videos of seemingly mundane activities may not seem alarming on their own, but the U.S. Supreme Court has acknowledged that by tracking an individual and mining that information, those mundane activities can reveal a significant amount about that person.<sup>17</sup>

### C. Incidents of Drone Misuse

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<sup>13</sup> *FAA Small Drone Rule Lets Unmanned Aircraft Soar*, FED. AV. ADMIN. (Sept. 6, 2017), <https://www.faa.gov/news/updates/?newsId=88748>.

<sup>14</sup> *See, e.g., Specs of Mavic Pro*, DJI, <http://www.dji.com/mavic/info#specs> (last visited Oct. 3, 2017).

<sup>15</sup> *See, e.g., Mavic*, DJI, <http://www.dji.com/mavic> (last visited Oct. 3, 2017).

<sup>16</sup> *See id.; see also, e.g., Karma*, GOPRO, <https://shop.gopro.com/karma> (last visited Oct. 11, 2017).

<sup>17</sup> *United States v. Jones*, 132 S. Ct. 945, 955 (2012) (“GPS monitoring generates a precise, comprehensive record of a person’s public movements that reflects a wealth of detail about her familial, political, professional, religious, and sexual associations. . . . The Government can store such records and efficiently mine them for information years into the future.”) (Sotomayor, J., concurring).

Several instances of drone misuse have caused physical harm or created dangerous circumstances for individuals. In Washington State, a drone struck a Pride Parade spectator and knocked her unconscious.<sup>18</sup> The Seattle Municipal Court found the operator guilty of reckless endangerment.<sup>19</sup> In Pacifica, California, “police arrested a man for flying a drone close to a helicopter during a rescue mission.”<sup>20</sup> Further, at the U.S. Open in New York City, police arrested a drone operator and charged him with reckless endangerment, reckless operation of a drone, and operating a drone in a New York City park outside of a prescribed area.<sup>21</sup>

Individuals operating drones have also used them to invade others’ privacy. In Los Angeles, California, two men were accused of flying drones in the vicinity of a hospital and police heliports.<sup>22</sup> An Ulster, New York court charged David Beesmer with unlawful surveillance for flying his drone around the Mid-Hudson Valley Medical Facility.<sup>23</sup> Ultimately, a jury acquitted Beesmer, but his case did raise concerns about how drones can be used to invade privacy.<sup>24</sup> In these instances, drone operators were punished with criminal charges.

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<sup>18</sup> Steve Miletich, *Drone Operator Charged with Knocking Out Woman at Pride Parade*, SEATTLE TIMES (Oct. 28, 2015), <https://www.seattletimes.com/seattle-news/crime/drone-operator-charged-with-knocking-out-woman-at-pride-parade>.

<sup>19</sup> Charles Raley, *Local and State UAS Enforcement Authorities*, FED. AV. ADMIN. UNMANNED AIRCRAFT SYS. SYMP. (2017), [https://www.faa.gov/uas/resources/event\\_archive/2017\\_uas\\_symposium/media/Workshop\\_7\\_Local\\_and\\_State\\_UAS\\_Enforcement\\_Authorities.pdf](https://www.faa.gov/uas/resources/event_archive/2017_uas_symposium/media/Workshop_7_Local_and_State_UAS_Enforcement_Authorities.pdf).

<sup>20</sup> *Id.*

<sup>21</sup> *Id.*

<sup>22</sup> James Queally, *L.A. City Attorney Files First Criminal Charges Under New Drone Ordinance*, L.A. TIMES (Jan. 20, 2016), <http://www.latimes.com/local/lanow/la-me-ln-city-attorney-drones-20160120-story.html>.

<sup>23</sup> Ariél Zangla, *David Beesmer Acquitted in Town of Ulster Drone Surveillance Case*, DAILY FREEMAN (Jun. 22, 2015), <http://www.dailyfreeman.com/article/DF/20150622/NEWS/150629926>.

(Beesmer was acquitted of attempted unlawful surveillance after it was shown the drone camera could not see inside the windows of the hospital).

<sup>24</sup> *Id.*

In potentially more serious instances, would-be victims of drone misuse have taken matters into their own hands. In *Boggs v. Merideth*, a property owner shot a drone out of the sky because it was hovering over his property.<sup>25</sup> In Colorado, a town proposed a bounty for recovered drone parts.<sup>26</sup> Drone misuse makes an outright ban a possible option for drone legislation, however this would prevent operators from responsibly using drones.

#### D. Positive Use of Drones

One way to ease the public's fear of drones would be to outright ban the technology. However, the devices do serve public benefits. For instance, drones have been instrumental in the aftermath of natural disasters. During the 2017 hurricanes in Florida and Texas, recovery workers used drones to survey the damage and expedite recovery efforts.<sup>27</sup> FAA administrator Michael Huerta emphasized the positive impact drones can have, saying "every drone that flew meant that a traditional aircraft was not putting an additional strain on an already fragile system," adding that "unmanned aircraft were able to conduct low-level operations more efficiently – and more safely – than could have been done with manned aircraft."<sup>28</sup> With all the potential beneficial uses of drones, simply banning them is not practical. However, individuals still need to be protected from potential intrusion into their privacy.

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<sup>25</sup> See *Boggs v. Merideth*, No. 3:16-CV-00006-TBR, 2017 U.S. Dist. LEXIS 40302 (W.D. Ky. Mar. 21, 2017); see also Steven Hoffer, *Kentucky Man Arrested For Shooting Down Neighbor's Drone*, HUFFPOST (Aug. 3, 2015), [http://www.huffingtonpost.com/entry/man-shoots-neighbors-drone\\_us\\_55bf8127e4b0d4f33a034e31](http://www.huffingtonpost.com/entry/man-shoots-neighbors-drone_us_55bf8127e4b0d4f33a034e31).

<sup>26</sup> Ana Cabrera, *Colorado Town's Vote on Drone Ordinance Postponed*, CNN (Dec. 10, 2013), <http://www.cnn.com/2013/12/10/us/colorado-town-drone-ordinance/index.html>.

<sup>27</sup> *FAA Supports Drone Assessments for Houston Response and Recovery*, FED. AV. ADMIN. (Aug. 31, 2017), <https://www.faa.gov/news/updates/?newsId=88728>.

<sup>28</sup> Michael Huerta, Administrator, Fed. Av. Admin., Remarks at the InterDrone International Drone Conference and Exposition (Sep. 6, 2017), [https://www.faa.gov/news/speeches/news\\_story.cfm?newsId=22134](https://www.faa.gov/news/speeches/news_story.cfm?newsId=22134).

*E. Current Regulatory Landscape*

## 1. Federal Regulations

In preparation for the massive amount of drones in the sky, Congress passed the FAA Modernization and Reform Act (FMRA), which requires the FAA to integrate drones in the National Airspace System.<sup>29</sup>

In order to meet FMRA requirements, the FAA created the Operation and Certification of Small Unmanned Aircraft Systems, which creates requirements for both recreational and commercial use of drones.<sup>30</sup> For example, a drone must weigh less than fifty-five pounds, regardless of whether it is flown for commercial or recreational purposes.<sup>31</sup> Additionally, the FAA requires registration if the drone weighs between 0.55 and 55 pounds.<sup>32</sup> The registration requirement simplifies drone oversight and identification for the FAA. A drone flown for commercial use also requires the pilot to have a remote pilot airman certificate with a small UAS rating.<sup>33</sup>

The FAA is authorized to make these rules pursuant to 49 U.S.C. § 40103(b)(1) and (2), which grant it the authority 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.”<sup>34</sup> This includes “prescribing air traffic regulations on the flight of aircraft . . . for . . . navigating, protecting, and identifying aircraft [and] protecting individuals and property on the ground.”<sup>35</sup>

The FAA has few drone regulation enforcement mechanisms. One mechanism is that the FAA can fine the operators.<sup>36</sup> These fines

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<sup>29</sup> FAA Modernization and Reform Act of 2012, Pub. L. No. 112-95, §§ 331-336, 126 Stat. 11 (2012).

<sup>30</sup> See Small Unmanned Aircraft Systems, 14 C.F.R. § 107 (2016).

<sup>31</sup> *Id.* § 107.3.

<sup>32</sup> Registration and Marking Requirements for Small Unmanned Aircraft, 14 C.F.R. § 48.15 (2016).

<sup>33</sup> 14 C.F.R. § 107.12 (The certificate requires passing an aeronautical knowledge test or the holding of a pilot certificate).

<sup>34</sup> 49 U.S.C. § 40103(b)(1) (2012).

<sup>35</sup> *Id.* § 40103(b)(2).

<sup>36</sup> 14 C.F.R. § 383.2 (2016).



can be up to \$1,414 per violation for individuals or small businesses.<sup>37</sup> Also, where applicable, the FAA can revoke or suspend the pilots remote pilot airman certificate.<sup>38</sup> Since 2014, there have been forty-eight enforcement cases with most involving careless or reckless operation of a drone.<sup>39</sup>

## 2. State Regulations

States have responded to increased drone usage by creating a patchwork of laws and regulations. In 2016, thirty-eight states considered legislation related to drones, with eighteen states passing thirty-two pieces of legislation, two states adopting resolutions, and two governors issuing executive orders.<sup>40</sup> These statutes vary widely: some criminalize certain drone activities while others limit drones to specific uses, such as wildlife surveys.<sup>41</sup> Of the states that have drone laws, sixteen include restrictions on private drone operators.<sup>42</sup>

Florida was one of the first states to pass drone-specific legislation by prohibiting private individuals from using drones to record images of persons or property without prior consent.<sup>43</sup> Oregon, Nevada and California have also passed restrictive drone laws which preserve privacy for individuals. In Oregon, the law grants a civil cause of action to a landowner against anyone who flies a drone over their property.<sup>44</sup> The Nevada law creates an action

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<sup>37</sup> *Id.* § 383.2(a).

<sup>38</sup> *E.g.*, 14 C.F.R. § 107.57 (authorizing the FAA to suspend or revoke an Airman Certificate on grounds of convictions for alcohol or drug related offenses).

<sup>39</sup> Charles Raley, *Local and State UAS Enforcement Authorities*, FED. AV. ADMIN. UNMANNED AIRCRAFT SYS. SYMP. (2017), [https://www.faa.gov/uas/resources/event\\_archive/2017\\_uas\\_symposium/media/Workshop\\_7\\_Local\\_and\\_State\\_UAS\\_Enforcement\\_Authorities.pdf](https://www.faa.gov/uas/resources/event_archive/2017_uas_symposium/media/Workshop_7_Local_and_State_UAS_Enforcement_Authorities.pdf).

<sup>40</sup> *State Unmanned Aircraft Systems (UAS) 2016 Legislation*, NAT'L CONF. ST. LEG., <http://www.ncsl.org/research/transportation/state-unmanned-aircraft-systems-uas-2016-legislation.aspx> (last visited Oct. 1, 2017).

<sup>41</sup> *Id.*

<sup>42</sup> *Id.*

<sup>43</sup> *See* Freedom from Unwarranted Surveillance Act, FLA. STAT. § 934.50(3)(b) (2015).

<sup>44</sup> OR. REV. STAT. § 837.380 (2016).

for trespass for anyone flying a drone less than 250 feet over another person's property without the owner's permission.<sup>45</sup> Finally, California's legislature passed an "anti-paparazzi statute" prohibiting individuals from using a drone to capture an image or recording of a person engaging in a private, personal, or familial activity without permission.<sup>46</sup>

## II. PRIVACY PROTECTION AGAINST GOVERNMENTAL INTRUSION

Individual privacy should be protected from unreasonable governmental intrusion. Individuals have a right of privacy from unreasonable government intrusion, whether it occurs on the ground or in the air. What is considered reasonable, however, will depend on how private actors are allowed to use drones.

Under the Fourth Amendment of the Constitution, "[t]he right of people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated."<sup>47</sup> The Fourth Amendment has been further refined by the Supreme Court to protect "people, not places."<sup>48</sup> This concept was first introduced in *Katz v. United States*, where the government attached a microphone to a public phone booth to listen and record Charles Katz's telephone conversations.<sup>49</sup> The Supreme Court found that the government had violated Katz's Fourth Amendment rights by conducting an unreasonable search, holding that "[w]hat a person knowingly exposes to the public . . . is not a subject of Fourth Amendment protection. But what he seeks to preserve as private, even in an area accessible to the public, may be constitutionally protected."<sup>50</sup> In his concurring opinion, Justice Harlan used the majority's opinion to establish a two-part test for when an individual has a reasonable expectation of privacy. First, an individual must "have exhibited an actual (subjective) expectation of privacy."<sup>51</sup>

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<sup>45</sup> NEV. REV. STAT. § 493.103.1 (2015).

<sup>46</sup> CAL. CIV. CODE § 1708.8 (2016).

<sup>47</sup> U.S. CONST. amend. IV.

<sup>48</sup> *Katz v. United States*, 389 U.S. 347, 351 (1967).

<sup>49</sup> *Id.* at 348.

<sup>50</sup> *Id.* at 351–52 (citations omitted).

<sup>51</sup> *Id.* at 361.

Second, that subjective expectation must “be one that society is prepared to recognize as ‘reasonable.’”<sup>52</sup> The Court has since used Justice Harlan’s test to draw the law between legal and illegal searches under the Fourth Amendment.

Several cases illustrate how a court is likely to examine whether governmental drone use violates an individual’s privacy. In *California v. Ciraolo*, police flew an airplane over Ciraolo’s property after receiving a tip that he was growing marijuana in his backyard.<sup>53</sup> From one thousand feet in the air, police photographed the marijuana plants in the backyard.<sup>54</sup> The court held that Ciraolo “manifest[ed] his own subjective intent and desire to maintain privacy” by putting up a fence.<sup>55</sup> However, the majority reasoned that with the abundance of air travel, anyone could have looked down and observed the plants with their naked-eye.<sup>56</sup> This “naked-eye” standard does not require police to “shield their eyes when passing by a home on public thoroughfares . . . where [they have] a right to be and which renders the activities clearly visible.”<sup>57</sup>

The “naked-eye” standard was further defined in *Florida v. Riley*, where police flew a helicopter 400 feet over Riley’s partially enclosed greenhouse.<sup>58</sup> The greenhouse roof had sections missing and police were able to identify marijuana plants through naked-eye observation.<sup>59</sup> The plurality opinion articulated that a reasonable expectation of privacy was unsupported because similar helicopter flights were common enough.<sup>60</sup> These cases greatly expanded how police can observe private citizens without violating the Fourth Amendment.

However, the Court has placed limits on the technology police can use to make these observations. In *Kyllo v. United States*, police used a thermal-imaging device to determine if the amount of heat emanating from Kyllo’s home was consistent with the use of high-

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<sup>52</sup> *Id.*

<sup>53</sup> *California v. Ciraolo*, 476 U.S. 207, 209 (1986).

<sup>54</sup> *Id.*

<sup>55</sup> *Id.* at 211.

<sup>56</sup> *Id.* at 215.

<sup>57</sup> *Id.* at 213.

<sup>58</sup> *Florida v. Riley*, 488 U.S. 445, 448 (1989) (plurality opinion).

<sup>59</sup> *Id.*

<sup>60</sup> *Id.* at 451–52.

intensity lamps typically used for indoor marijuana growth.<sup>61</sup> The Court held that when police use a “device that is not in general public use” to see details that would “have been unknowable without physical intrusion,” the surveillance is a search under the Fourth Amendment.<sup>62</sup> Additionally, in *United States v. Jones*, police installed a GPS tracking device on a vehicle.<sup>63</sup> The Court held that this was a physical trespass into a constitutionally protected area that constituted a search under the Fourth Amendment.<sup>64</sup>

When courts determine whether government actions have violated an individual’s right to privacy, they will examine whether the individual had an actual expectation of privacy and how the government used drone technology to enhance their search. What is considered a reasonable expectation of privacy depends on how private actors are allowed to use drones. For example, if drones are allowed to be flown over another’s property routinely, then courts are likely to consider anything visible by drone to be a reasonable search. However, if private use of drones is limited, it is likely the courts will similarly limit governmental searches using drones.

### III. PRIVACY PROTECTION AGAINST PRIVATE INTRUSION

Tort law could be used to protect an individual’s privacy from drones. However, traditional torts are not broad enough to cover all the abilities of a drone. Even with the wide variety of torts that could be used to protect an individual’s privacy, new regulations must be made to protect against certain actions by drone operators.

#### *A. Trespass*

Trespass is a widely recognized tort in common law and allows plaintiffs to protect possessory interests in their land. Trespass not only prohibits the physical intrusion of land, but prevents the disruption of its enjoyment.<sup>65</sup> In order to succeed on a claim of

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<sup>61</sup> *Kyllo v. United States*, 121 S. Ct. 2038, 2041 (2001).

<sup>62</sup> *Id.* at 2046.

<sup>63</sup> *United States v. Jones*, 132 S. Ct. 945, 948 (2012).

<sup>64</sup> *Id.* at 949.

<sup>65</sup> *See Herrin v. Sutherland*, 241 P. 328 (Mont. 1925) (finding that a bullet

trespass, a plaintiff must show that the defendant entered the land without authorization (or caused a thing or a third person to do so), remained on the land, or failed to remove a thing from the land that he had a duty to remove.<sup>66</sup> However, trespass is usually applied to a person, and it is much less clear how trespass applies to an aircraft.

Originally, it was thought that ownership of land “extended to the periphery of the universe.”<sup>67</sup> However, as aircraft became more common, Congress enacted the Air Commerce Act and later the Civil Aeronautics Act of 1938.<sup>68</sup> These Acts allowed the FAA to define navigable airspace as anything above 1,000 feet over a congested area and 500 feet over an uncongested area along with lower airspace needed to ensure safety for take-offs and landings.<sup>69</sup> “Navigable Airspace” has traditionally been interpreted to mean that an individual “owns” the airspace up to 500 feet and the airspace above that height is “owned” by the government, essentially making it public land. However, the FAA is “responsible for the safety of U.S. airspace from the ground up,”<sup>70</sup> suggesting that the 500-foot rule can be changed by the FAA to necessitate the safe operation of aircraft.

However, the FAA cannot go so far as to lower navigable airspace to the ground, because the Supreme Court held that a property owner “owns” some amount of airspace above his land. In *United States v. Causby*, the landowner operated a chicken farm located directly below the flight path of an airport being used by the Army and Navy during World War II.<sup>71</sup> The Court held that airspace is “part of the public domain,” and landowners own “at least as much

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flying over the plaintiff’s land without touching down was a trespass); *Martin v. Reynolds Metal Co.*, 342 P.2d 790 (Or. 1959) (holding that fluorides emitted from defendant’s machinery constituted a trespass).

<sup>66</sup> RESTATEMENT (SECOND) OF TORTS § 158 (AM. LAW INST. 1979).

<sup>67</sup> *United States v. Causby*, 328 U.S. 256, 260 (1946).

<sup>68</sup> See Air Commerce Act of 1926, Pub. L. No. 69-254, ch. 344, 44 Stat. 570 (1926); Civil Aeronautics Act of 1938, Pub. L. No. 75-706, ch. 601, 52 Stat. 973 (1938).

<sup>69</sup> See Federal Aviation Act of 1958, Pub. L. No. 85-726, § 101 (24), 72 Stat. 731, 739 (1958); 14 C.F.R. § 91.119(b)–(c).

<sup>70</sup> *Busting Myths About the FAA and Unmanned Aircraft*, FED. AV. ADMIN. (Mar. 7, 2014), <https://www.faa.gov/news/updates/?newsId=76240>.

<sup>71</sup> *Causby*, 328 U.S. at 258.

of the space above the ground as . . . [he] can occupy or use in connection with the land[.]”<sup>72</sup> The Court did not define what height this is. However, based on the facts in *Causby*, it appears to be between 83 and 500 feet.<sup>73</sup>

Typical drones can operate between 50 and 500 feet above the ground. This means that they can operate well above the 80-foot ceiling established by *Causby* and fly over another’s property without fear of trespassing. It is reasonable to assume that in order to accommodate the growing number of drones, the FAA could create a “navigable drone airspace” to ensure safe operation of drones. However, this “drone airspace” would allow drones to fly over another’s property in a similar way to traditional aircraft and insulate the operator from any possible claims of trespass.

### B. Nuisance

The two types of nuisance—private and public—could also be used by individuals to protect their privacy from drone intrusion. A private nuisance is demonstrated by unreasonable interference with the use and enjoyment of one’s land.<sup>74</sup> A public nuisance requires that the harm be greater than the harm to one individual and constitute a “public harm,” an activity that is harmful to public health or safety.<sup>75</sup> Additionally, a plaintiff must prove that the interference was intentional or due to defendant’s negligence.<sup>76</sup> Courts will also look to the frequency, magnitude, and duration when assessing reasonableness of defendant’s conduct. An individual instance of an invasion may not constitute unreasonable interference whereas continuous, repeated, and frequent activities may.<sup>77</sup> Whether a nuisance is public or private, the plaintiff must have suffered harm that would not be suffered by a normal person

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<sup>72</sup> *Id.* at 264, 266.

<sup>73</sup> *Id.* at 258.

<sup>74</sup> RESTATEMENT (SECOND) OF TORTS § 821D.

<sup>75</sup> *Id.* § 821B.

<sup>76</sup> *Id.* § 822.

<sup>77</sup> *See, e.g.,* *Rose v. Chaikin*, 453 A.2d 1378 (N.J. 1982) (holding continuous noise from a windmill in residential neighborhood constituted nuisance).

in the community or by property in normal condition used for a normal purpose.<sup>78</sup>

Judges will likely have difficulty deciding if the harm is significant because of the test's subjective nature. Requiring homeowners to document drone operators to provide enough evidence, will likely lead to a potentially uneven application of the law.

### C. Invasion of Privacy

Unlike privacy under the Fourth Amendment, the case law determining what privacy rights individuals have while dealing with each other is limited. Samuel D. Warren and Louis D. Brandeis first discussed the invasion of privacy in their Harvard Law Review article "The Right to Privacy."<sup>79</sup> They characterized privacy as "the right to be left alone" and identified technology as one of the major threats to privacy.<sup>80</sup> Later William Prosser categorized privacy torts into four separate causes of action, which the Restatement (Second) of Torts subsequently adopted.<sup>81</sup> The four causes of action are: (1) intrusion upon seclusion; (2) public disclosure of embarrassing private facts; (3) publicity which places the plaintiff in a false light in the public eye; and (4) appropriation of the plaintiff's name and likeness.<sup>82</sup>

Intrusion upon seclusion is most applicable to drone surveillance. It involves two key elements: (1) an intentional intrusion on the plaintiff's solitude, seclusion, or private affairs; and (2) that would be highly offensive to a reasonable person.<sup>83</sup> The intrusion must have been intentional, meaning the defendant must have desired the intrusion to occur, or must have known with a

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<sup>78</sup> See RESTATEMENT (SECOND) OF TORTS § 821F.

<sup>79</sup> Samuel D. Warren & Louis D. Brandeis, *The Right to Privacy*, 4 HARV. L. REV. 193 (1890).

<sup>80</sup> *Id.* at 195; see also THOMAS M. COOLEY, A TREATISE ON THE LAW OF TORTS: ON THE WRONGS WHICH ARISE INDEPENDENT OF CONTRACT 29 (2d ed. 1888).

<sup>81</sup> See William L. Prosser, *Privacy*, 48 CAL. L. REV. 383, 389 (1960); RESTATEMENT (SECOND) OF TORTS §§ 652B–652E.

<sup>82</sup> Prosser, *supra* note 81, at 389.

<sup>83</sup> RESTATEMENT (SECOND) OF TORTS § 652B.

substantial certainty that an intrusion would result from his conduct.<sup>84</sup> Additionally, there is no tortious conduct if the defendant did not intrude into a legally cognizable private place or sphere belonging to the plaintiff.<sup>85</sup> For example, a person in a public place who takes a photograph of a person who can be viewed from a public vantage point generally does not constitute an invasion of privacy.<sup>86</sup> A drone is able to fly over another's property with relative ease. Intrusion upon seclusion may successfully prevent the drone users from capturing images within a house, similar to *Kyllo*, but could reasonably be allowed to photograph individuals outside the house as they are arguably in "public view." The average person would still view their backyard as a "private place," and the thought of a drone being able to legally observe and record activities taking place in that area is unsettling. In fact, drones have already been destroyed in similar instances where the drone pilots were potentially operating the system in a legal manner.<sup>87</sup>

#### *D. Issues with Traditional Tort Laws*

Even if traditional tort laws do offer some protection for an individual's privacy, they represent a private cause of action that is usually civil in nature unless a state has created criminal penalties based on the aforementioned torts. A civil remedy would require an individual to go to court to assert their rights. This means individual property owners will have to undertake an expensive legal proceeding against drone users to stop them from repeating their actions. To secure the best protection for individual privacy without requiring expensive legal procedures for the individual harmed, new drone-specific rulemaking is indispensable.

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<sup>84</sup> *Id.* § 8A.

<sup>85</sup> RESTATEMENT (SECOND) OF TORTS § 652B cmt. c.

<sup>86</sup> *See, e.g.,* *Dempsey v. Nat'l Enquirer*, 702 F. Supp. 927, 931 (D. Me. 1988) (noting that a "reporter's presence on a public thoroughfare and in a restaurant open to the public cannot constitute an intrusion upon seclusion of another"); *Machleder v. Diaz*, 538 F. Supp. 1364, 1374 (S.D.N.Y. 1982) (finding no liability for intrusion upon seclusion when defendant accosted and filmed plaintiff on the property of a corporation where he was visible to the public eye).

<sup>87</sup> *See, e.g.,* *Boggs v. Merideth*, No. 3:16-CV-00006-TBR, 2017 U.S. Dist. LEXIS 40302 (W.D. Ky. Mar. 21, 2017).



#### IV. OPTIONS FOR NEW DRONE PRIVACY LAWS

Traditional privacy and tort laws provide some safeguards against individual privacy invasions caused by drones, but there are still gaps that leave individual privacy exposed. To better protect individuals from intrusions by drones, enhanced privacy laws should address the technological capabilities of these new unmanned aircraft systems.

The two most viable options for implementing a new drone privacy scheme are to: (1) allow states to continue to create and implement their own laws; or (2) have the FAA create a federal privacy scheme for drones.

##### *A. States Continue to Create and Implement their Own Drone Laws*

Allowing states to continue to make and implement their own laws would empower them to provide specific protections for their citizens based on what the state deems most important. For example, Florida prohibits private individuals from using drones to record citizens who have a reasonable expectation of privacy without their consent.<sup>88</sup> This differs from the property-centric approach that Nevada and Oregon have taken by preventing drones from flying over private property.<sup>89</sup> States could also ratchet the level of privacy protection up or down, depending on what they see as appropriate.

States are authorized to create these drone laws because they fall under traditional state police powers.<sup>90</sup> State and local police powers include land use, zoning, privacy, trespass, and law enforcement operations.<sup>91</sup> Since the FAA, at most, provides examples of state and

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<sup>88</sup> See FLA. STAT. § 934.50(3)(b) (2015).

<sup>89</sup> See NEV. REV. STAT. § 493.103.1 (2015); OR. REV. STAT. § 837.380 (2016).

<sup>90</sup> OFF. OF CHIEF COUNS., FED. AV. ADMIN., STATE AND LOCAL REGULATION OF UNMANNED AIRCRAFT SYSTEMS (UAS) FACT SHEET (Dec. 17, 2015), [https://www.faa.gov/uas/resources/uas\\_regulations\\_policy/media/UAS\\_Fact\\_Sheet\\_Final.pdf](https://www.faa.gov/uas/resources/uas_regulations_policy/media/UAS_Fact_Sheet_Final.pdf).

<sup>91</sup> *Id.*

local laws that recommend an optional consultation with the FAA, it appears that states have the power to implement these laws without fear of federal governmental interference.<sup>92</sup>

So far, Congress and the FAA have allowed states to enact their own drone laws; however, this does not protect state laws from being preempted by federal regulation. There is a presumption that state and local laws that fall under state police powers will not be preempted by federal law.<sup>93</sup> However, if the FAA so chooses, it can exercise its delegated authority to “develop regulations for the use of [the] navigable airspace.”<sup>94</sup> Additionally, under the principle of conflict preemption, federal regulations will displace a state law which “stands as an obstacle to the accomplishment and execution of the full purposes and objectives” of the federal law.<sup>95</sup> This means that regulations developed by the FAA for the use of navigable airspace will preempt state and local laws. If the FAA develops a federal drone privacy regulation, it will preempt state drone privacy regulations on the grounds that the state regulation would “stand as an obstacle” to the federal regulation.<sup>96</sup> The FAA decided that “specific regulatory text addressing preemption is not required.”<sup>97</sup> However, this does not mean that the FAA will avoid preempting state laws if they promulgate future regulations. Having state laws that could potentially be preempted is a precarious situation, especially when dealing with something as important as an individual’s privacy.

Another problem is that allowing the states to make their own laws and rules will lead to a confusing patchwork of laws across the United States. These laws would make it even harder for the FAA to govern the flight of aircrafts for purposes of “navigating, protecting, and identifying aircraft; [and] protecting individuals and property on the ground.”<sup>98</sup>

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<sup>92</sup> *Id.*

<sup>93</sup> *Id.*

<sup>94</sup> See 49 U.S.C. § 40103(b)(1)–(2) (2012).

<sup>95</sup> *Hines v. Davidowitz*, 312 U.S. 52, 67 (1941).

<sup>96</sup> *Id.*

<sup>97</sup> Operation and Certification of Small Unmanned Aircraft Systems, 81 Fed. Reg. 42064, 42194 (June 28, 2016) (to be codified at 14 C.F.R. pts. 21, 43, 61, et al.).

<sup>98</sup> 49 U.S.C. § 40103(b)(2) (2012).

Allowing states to continue to enact, implement and enforce their own drone laws would enable them to customize the types and amount of privacy they wanted to protect within their respective jurisdictions, but would also result in a patchwork of different laws. Additionally, the FAA could create new sweeping regulations that intend to preempt any state laws that were passed, creating an even more confusing privacy landscape.

### *B. FAA Creates Privacy Regulations for Drones*

The FAA has the power to promulgate, and implement drone privacy regulations on a federal level pursuant to 49 U.S.C. § 40103(b)(1) and (2). These provisions allow the FAA to develop policies for the use of navigable airspace and govern flight of aircraft for purposes of navigating, protecting, and identifying aircraft.<sup>99</sup> Further, Congress authorized the FAA to govern drone activity through the FAA Modernization and Reform Act.<sup>100</sup> Creating privacy specific laws would likely fall under this authority. Additionally, if the FAA does make drone privacy regulations, they would preempt any state laws that are currently in place.<sup>101</sup> This would mean that there would be a single uniform drone-specific privacy law across the entire country rather than a patchwork structure.

The FAA can create these regulations, but they would not be very effective without an enforcement mechanism. The FAA has the ability to fine operators who fail to follow their rules or regulations, but this requires having the workforce to catch the operators in the first place.<sup>102</sup> This would require a larger workforce in which employees take a proactive rather than reactive approach to enforcement.

## V. A FEDERAL PRIVACY SCHEME FOR DRONES

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<sup>99</sup> *Id.*

<sup>100</sup> FAA Modernization and Reform Act of 2012, Pub. L. No. 112-95, §§ 331–336, 126 Stat. 11 (2012).

<sup>101</sup> *See id.*

<sup>102</sup> *See* 14 C.F.R. § 383.2 (2016); 49 U.S.C. § 46301(a) (2012).

To provide the most effective and comprehensive privacy scheme, the FAA should create privacy regulations for drones and mandate that states enforce these rules. The FAA has already been authorized to create drone-specific regulations, and it can use conditional preemption to empower state police power to enforce the new regulations.

Individual privacy rights should be protected by FAA regulations. These privacy rights would offer more protection than traditional torts, because they would be specifically targeted to drones. These regulations should prevent drone operators from flying over another's property without permission, from following an individual's movements with a drone, or from using a drone to take photos or videos of an individual when they have a reasonable expectation of privacy. These regulations would protect individuals from potential drone intrusion, while simultaneously allowing drone pilots to operate with relative freedom.

FAA regulations would have the benefit of creating one scheme for the entire country. The same rules would apply to all drone operators who would also face the same punishments. The FAA can create specific fines or punishments for various violations. Additionally, local law enforcement would be able to be briefed on how exactly they should deal with violations by drone operators.<sup>103</sup>

The FAA can implement its new regulations through conditional preemption, which "allows states to regulate in compliance with federal standards."<sup>104</sup> Through conditional preemption, individual state police powers would be sufficient to implement the FAA's privacy regulation. With limited enforcement power themselves, the FAA would not have to worry about how to handle the large number of enforcement cases they are likely to see once the federal privacy scheme is implemented.

The FAA is in the best position to establish a federal privacy scheme that applies to all drone operators. It already has the authority to do so and can use conditional preemption to enforce the

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<sup>103</sup> Charles Raley, *Local and State UAS Enforcement Authorities*, FED. AV. ADMIN. UNMANNED AIRCRAFT SYS. SYMP. (2017), [https://www.faa.gov/uas/resources/event\\_archive/2017\\_uas\\_symposium/media/Workshop\\_7\\_Local\\_and\\_State\\_UAS\\_Enforcement\\_Authorities.pdf](https://www.faa.gov/uas/resources/event_archive/2017_uas_symposium/media/Workshop_7_Local_and_State_UAS_Enforcement_Authorities.pdf).

<sup>104</sup> Philip J. Weiser, *Towards a Constitutional Architecture for Cooperative Federalism*, 79 N.C. L. REV. 663, 668 (2001).

new privacy scheme. Once the new scheme is successfully implemented, improved legal protection of both drone operators and private individuals would be achieved.

#### CONCLUSION

As the number of consumer drones continues to increase, so do concerns about individual privacy. The FAA has regulated drone pilots, but these regulations are concerned with safety rather than privacy. Individual states have considered or passed drone legislation, but this has created a patchwork of laws that vary in their privacy protection. Additionally, traditional tort laws fall short of protecting individuals from the intrusive use of drones. In order to better protect individual privacy, the FAA should create federal privacy regulations that are implemented by states through conditional preemption. This allows for the greatest individual protection and the strongest possibility for successful implementation.

