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## It's up in the Air! Potential Criminal Liabilities for Drone-Associated Issues in the Great State of Texas

Anthony Pax

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# IT'S UP IN THE AIR! POTENTIAL CRIMINAL LIABILITIES FOR DRONE-ASSOCIATED ISSUES IN THE GREAT STATE OF TEXAS

*Anthony Pax*<sup>†</sup>

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I. INTRODUCTION

“Look! Up in the sky! It’s a bird! It’s a plane!”<sup>1</sup> No, it’s a drone! Private and commercial drone use is expanding as quickly as the technology can be developed to fulfill the various needs of different users. As new ways to use drones are conceived every day, the potential for conflict is ever increasing. This Article will argue that, in the absence of any real federal guidance on the subject, the state of Texas must apply its current criminal law framework to any drone-related conflicts that may arise. This will provide clear guidelines for resolving the multitude of issues that are sure to develop from both the private operation of drones and the possible use of self-help measures against them. It is essential for Texas to adapt and apply current criminal laws to this issue due to the vast amount of money being invested in drone technology; the fact that the law is currently unclear or non-existent on the subject; and the very real policy concerns that are sure to arise as a result of evolving drone technology.

II. EVOLUTION OF DRONE USE

A. *Government and Military Applications*

As with most technological advancements nowadays, the United States government was the first to make quick and efficient use of unmanned aerial vehicles (“UAVs”), more commonly known as drones. In the wake of the September 11, 2001, World Trade Center attack in New York City, the Central Intelligence Agency (“CIA”) weaponized Predator surveillance drones with Hellfire missiles and subsequently used them to conduct missions over Afghanistan.<sup>2</sup> The first targeted killing attributed to a weaponized CIA Predator drone occurred on February 4, 2002, in Paktia Province, Afghanistan.<sup>3</sup> Prior to this targeted killing, the CIA was only conducting unarmed Predator surveillance missions over Afghanistan.<sup>4</sup>

In the time since the first targeted strike conducted by the CIA, the United States military and various law enforcement agencies around the country have integrated drone technologies into conducting their

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1. *Adventures of Superman* (Syndicated 1952–1958).

2. Mark Bowden, *How the Predator Drone Changed the Character of War*, SMITHSONIAN.COM (Nov. 2013), <http://www.smithsonianmag.com/history/how-the-predator-drone-changed-the-character-of-war-3794671/?no-ist>.

3. John Sifton, *A Brief History of Drones*, THE NATION (Feb. 7, 2012), <http://www.thenation.com/article/brief-history-drones/>.

4. *Id.*

missions. Military and law enforcement drone applications include: surveillance; crowd and traffic monitoring; search and rescue; aiding in hostage and bomb threat situations; and tracking fleeing criminals.<sup>5</sup> Additionally, the military also uses drones for targeted airstrikes.<sup>6</sup> As drone technologies advance, the military and law enforcement applications of those technologies will continue to expand. Evidence of the military's increased reliance on drones is the 15.8% increase for expected spending on such technologies for fiscal year 2015—increasing to \$2.45 billion from the previous year's enacted budget of \$2.1 billion.<sup>7</sup> A foreseeable product of the increased military and law enforcement expenditure on drone research will be the adaptation of those technologies for civilian use.

### B. *Commercial Applications*

Nuclear power, Global Positioning Systems, and radar are all examples of military technologies that were adapted for commercial civilian use.<sup>8</sup> The same is true of drone technology. Companies such as Amazon and DHL are currently exploring ways to deliver packages to customers via drones.<sup>9</sup> Additional commercial applications for drone technologies include crop management, livestock monitoring, land surveying, search and rescue, and motion picture production.<sup>10</sup> It could be said that many of these advancements in commercial drone applications are the result of a desire to decrease economic costs and danger in the workplace.

Picture the Empire State Building at 1,454 feet tall<sup>11</sup> or the 1.7-mile-long Golden Gate Bridge.<sup>12</sup> Now consider that you are the person tasked with inspecting either of the landmarks to analyze their structural integrity. Such a task would not only be daunting because of the sheer size of the structure, but also because it is hazardous to life and

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5. Jasmine Henriques, *Unmanned Aerial Vehicles (UAV): Drones for Military and Civilian Use*, GLOBAL RES. (Mar. 21, 2014), <http://www.globalresearch.ca/unmanned-aerial-vehicles-uav-drones-for-military-and-civilian-use/5374666>.

6. *Id.*

7. John Keller, *Pentagon Plans to Spend \$2.45 Billion Next Year on UAVs for Surveillance and Attack*, MIL. & AEROSPACE ELECTRONICS (March 9, 2014), <http://www.militaryaerospace.com/articles/2014/03/uav-spending-2015.html>.

8. Les Shu, *GPS, Drones, Microwaves and Other Everyday Technologies Born on the Battlefield*, DIGITAL TRENDS (May 26, 2014), <http://www.digitaltrends.com/cool-tech/modern-civilian-tech-made-possible-wartime-research-development/>.

9. Alex Hern, *DHL Launches First Commercial Drone 'Parcelcopter' Delivery Service*, THE GUARDIAN (Sept. 25, 2014, 9:51 AM), <http://www.theguardian.com/technology/2014/sep/25/german-dhl-launches-first-commercial-drone-delivery-service>.

10. Henriques, *supra* note 5.

11. *Empire State Building Fact Sheet*, EMPIRE ST. REALTY TR., [http://www.esbnyc.com/sites/default/files/esb\\_fact\\_sheet\\_4\\_9\\_14\\_4.pdf](http://www.esbnyc.com/sites/default/files/esb_fact_sheet_4_9_14_4.pdf) (last modified April 9, 2014, 3:25 PM).

12. *Bridge Design and Construction Statistics*, GOLDEN GATE BRIDGE HIGHWAY & TRANSP. DISTRICT, <http://goldengatebridge.org/research/factsGGBDesign.php> (last visited July 1, 2016).

requires the use of costly equipment such as cranes and harnesses.<sup>13</sup> Besides shielding you from the risk of bodily harm and saving you the cost of equipment,<sup>14</sup> conducting such an inspection with a drone would save an immeasurable amount of time, thus increasing economic efficiency and decreasing waste.

The ability of drones to conduct search and rescue operations during natural disasters; support agricultural management; and contribute to safe infrastructure inspection<sup>15</sup> are all examples of reasons commercial drone use should be expected to rise in the years ahead. However, while the military accounts for the vast majority of expenditures on drone technology, predictions by the Teal Group's intelligence analysts indicate that commercial drone spending will only increase from 12% to 14% in the next ten years.<sup>16</sup> Not surprisingly, current commercial drone expenditures represent a relatively small portion of the market when compared to those of the military. The difference in spending has been attributed by some to the Federal Aviation Administration's ("FAA") hesitation to give manufacturer and operator approval for commercial drones, citing safety concerns.<sup>17</sup>

### C. *Private Drone Use*

Just as the advancements in military drone technologies and applications spurred research and development in the commercial market, current private use of drones can be traced back to commercial applications. Commercial applications of infrastructure inspection and search and rescue are similar to the private use of aerial photography since both require and benefit from the ability of drones to either record video or relay real time imagery. A recent survey conducted by SkyPixel, an online drone enthusiast community,<sup>18</sup> concluded that 75.1% of private operators will use their drones to take photographs, while 58.7% will also use them for filmmaking.<sup>19</sup>

The same survey by SkyPixel predicts that recreational—or private—drone operation will soon be the dominant civilian usage.<sup>20</sup> In addition to aerial photography, private drone use will expand to include gaming, education, personal healthcare, and home security ap-

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13. *5 Benefits of Drones (UAS) That Might Surprise You*, SRI BLOG (Aug. 7, 2013, 1:26 PM), <https://www.sri.com/blog/5-benefits-drones>.

14. *Id.*

15. *Id.*

16. Don McCullough, *Commercial Drones Set to Take Flight*, CURIOUSMATIC (Oct. 10, 2014), <https://curiousmatic.com/commercial-drones-set-take-flight/>.

17. *Id.*

18. Gregory S. McNeal, *Will Recreational Drone Flying Lead Drone Usage in 2015?*, FORBES WASHINGTON (Jan. 31, 2015, 10:37 PM), <http://www.forbes.com/sites/gregorymcneal/2015/01/31/will-recreational-drone-flying-lead-drone-usage-in-2015/#2940fcaa2b2c>.

19. *Id.*

20. *Id.*

plications.<sup>21</sup> To meet the increasing demand for drones by private citizens, “the number of mass-produced drones, ranging in cost from several hundred to several thousand dollars, will also likely increase in the coming decade.”<sup>22</sup> In fact, the Consumer Electronics Association predicted that 2015 sales of consumer drones would surpass sales for the previous year by 341,000 units—a 49% increase.<sup>23</sup>

While burdening would-be commercial operators, the FAA’s hesitation to issue approval for commercial drone use has had the opposite effect on private use.<sup>24</sup> The expected rise in private drone use is further evidenced in a recent prediction from Phil Finnegan at the aerospace and defense researcher Teal Group.<sup>25</sup> Finnegan estimates that “[s]ales of civilian unmanned aerial vehicles [ ] will reach \$8.2 billion within the decade.”<sup>26</sup> These predictions by experts and analysts familiar with the evolution of drone technology lead to one conclusion: private drone use will only continue to increase and further integrate itself into modern society.

### III. THE POTENTIAL FOR CONFLICT

#### A. *Issues Associated with Private Drone Operation*

Considering that many have predicted private drone use to become more prevalent in the future, the issues of criminal liability associated with such use can only be expected to increase. Drone-related incidents, which could subject operators to criminal liability, have already been reported in the last several months. Examples of these incidents include close encounters between drones and airliners near airports;<sup>27</sup> firefighting aircraft being grounded because of drone interference;<sup>28</sup>

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21. Thomas Frey, *192 Future Uses for Flying Drones*, FUTURIST SPEAKER (Sept. 2, 2014), <http://www.futuristspeaker.com/2014/09/192-future-uses-for-flying-drones/>.

22. Elizabeth Palermo, *Drones Could Grow to \$11 Billion Industry by 2024*, LIVESCIENCE (July 29, 2014, 9:43 AM), <http://www.livescience.com/47071-drone-industry-spending-report.html>.

23. McNeal, *supra* note 18.

24. *Id.*

25. Olga Kharif, *As Drones Evolve from Military to Civilian Uses, Capitalist Move in*, WASH. POST (Nov. 1, 2013), [https://www.washingtonpost.com/business/as-drones-evolve-from-military-to-civilian-uses-venture-capitalists-move-in/2013/10/31/592ca862-419e-11e3-8b74-d89d714ca4dd\\_story.html](https://www.washingtonpost.com/business/as-drones-evolve-from-military-to-civilian-uses-venture-capitalists-move-in/2013/10/31/592ca862-419e-11e3-8b74-d89d714ca4dd_story.html).

26. *Id.*

27. See Craig Whitlock, *FAA Records Detail Hundreds of Close Calls Between Airplanes and Drones*, WASH. POST (Aug. 20, 2015), [https://www.washingtonpost.com/world/national-security/faa-records-detail-hundreds-of-close-calls-between-airplanes-and-drones/2015/08/20/5ef812ae-4737-11e5-846d-02792f854297\\_story.html](https://www.washingtonpost.com/world/national-security/faa-records-detail-hundreds-of-close-calls-between-airplanes-and-drones/2015/08/20/5ef812ae-4737-11e5-846d-02792f854297_story.html).

28. Fred Barbash, *Drones Impede Air Battle Against California Wildfires*, WASH. POST (July 31, 2015), <https://www.washingtonpost.com/news/morning-mix/wp/2015/07/31/if-you-fly-we-cant-pleads-california-firefighter-as-drones-impede-spreading-wild-fire-battle/>.

crashes near important government buildings;<sup>29</sup> injury causing crashes at crowded events;<sup>30</sup> and trespasses over private property.<sup>31</sup>

### 1. Drone Crashes

In the highly vigilant security environment in which we live in today, it is no surprise that a drone sighting or crash near an important government building or landmark creates some panic. The January 26, 2015, crash of a recreational drone on the White House grounds in Washington, D.C.,<sup>32</sup> did just that. The crash caused a brief lockdown of the premises by the Secret Service and spurred concerns about White House security measures.<sup>33</sup> Another subsequent crash near the White House on October 9, 2015, again “raised security concerns about how to protect the White House, Congress, and other important buildings from the threat of a drone carrying weapons.”<sup>34</sup>

Reports of injuries to people caused by drone crashes have also surfaced. At the heavily attended Great Bull Run in Virginia, several people were injured when a drone dropped into the spectator seating.<sup>35</sup> Although the people affected suffered only minor injuries,<sup>36</sup> this incident illustrated the potential danger of drones crashing and injuring unsuspecting bystanders. More recently, a drone that crashed into the streets of Pasadena, California, caused an eleven-month-old girl in a stroller to suffer cuts and bruises,<sup>37</sup> yet another illustration of a drone’s potential to injure innocent bystanders. Just as crashes near important government buildings have sparked interest in new security regulations for drone use, incidents such as these create a call for public safety regulations.

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29. See, e.g., Carol D. Leonnig, Katie Zezima, & Craig Whitlock, *Drone Operator Says He Accidentally Crashed Device on White House Grounds*, WASH. POST (Jan. 26, 2015), [https://www.washingtonpost.com/politics/device-found-on-white-house-grounds-but-officials-say-it-posed-no-threat/2015/01/26/7accc156-a547-11e4-a2b2-776095f393b2\\_story.html](https://www.washingtonpost.com/politics/device-found-on-white-house-grounds-but-officials-say-it-posed-no-threat/2015/01/26/7accc156-a547-11e4-a2b2-776095f393b2_story.html).

30. See, e.g., Liz Klimas, *Drone Crash Caused More Injuries at ‘Great Bull Run’ Than Bulls*, THE BLAZE (Aug. 26, 2013, 1:12 PM), <http://www.theblaze.com/stories/2013/08/26/drone-crash-caused-more-injuries-at-great-bull-run-than-bulls/>.

31. See, e.g., Steven Hoffer, *Kentucky Man Arrested for Shooting Down Neighbor’s Drone*, HUFFINGTON POST (Aug. 3, 2015, 12:36 PM), [http://www.huffingtonpost.com/entry/man-shoots-neighbors-drone\\_us\\_55bf8127e4b0d4f33a034e31](http://www.huffingtonpost.com/entry/man-shoots-neighbors-drone_us_55bf8127e4b0d4f33a034e31).

32. Leonnig et al., *supra* note 29.

33. *Id.*

34. Bart Jansen, *Small Drone Crashes Near White House Despite Ban Against Flights in D.C.*, USA TODAY (Oct. 9, 2015, 5:12 PM), <http://www.usatoday.com/story/news/2015/10/09/drone-crash-white-house-ellipse-us-park-police-federal-aviation-administration/73641812/>.

35. Klimas, *supra* note 30.

36. *Id.*

37. Daniel Victor, *F.A.A. Opens Inquiry After Baby Hurt in Drone Crash*, N.Y. TIMES (Sept. 23, 2015), [http://www.nytimes.com/2015/09/23/business/drone-crash-injures-baby-highlighting-faa-concerns.html?\\_r=0](http://www.nytimes.com/2015/09/23/business/drone-crash-injures-baby-highlighting-faa-concerns.html?_r=0).

## 2. Property and Privacy Issues

Property and privacy rights have traditionally been some of the most revered throughout the history of the United States. So much so that the Bill of Rights was drafted to include the Fifth Amendment guarantee that no person shall “be deprived of life, liberty, or property, without due process of law”<sup>38</sup> and the Fourth Amendment protection of “[t]he right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures.”<sup>39</sup>

Consequently, issues concerning trespass by drone and unwanted aerial photography are beginning to emerge. Drones trespassing over private property have some citizens so concerned that they have taken the drastic measure of actually shooting the drones out of the sky.<sup>40</sup> Furthermore, the introduction of legislation in the California State Assembly prohibiting drone trespass over private property also reflects the increased concerns regarding drone operation and property rights.<sup>41</sup>

These conflicts involving drones trespassing over private property require a determination of how much airspace over their property a person actually owns. In 1946, the United States Supreme Court held that a “landowner owns at least as much of the space above the ground as he can occupy or use in connection with the land . . . [t]he fact that he does not occupy it in a physical sense – by the erection of buildings and the like – is not material.”<sup>42</sup>

Additionally, the Court noted that “the flight of airplanes, which skim the surface but do not touch it, is as much an appropriation of the use of the land as a more conventional entry upon it.”<sup>43</sup> The question, how much airspace does a property owner actually own, would surely need to be answered before criminal liability could be attached to a drone trespass. However, examination of the applicability of certain criminal trespass statutes is not hampered by this lack of clarity, as some type of criminal liability will be certain to attach to drone trespass at some altitudes.

Similar to the emergence of reports of property trespass committed by drones, stories evidencing the potential for the more nefarious, privacy invading uses of drones have also made the news. A Seattle, Washington woman, who recently saw a drone hovering outside the window of her high-rise apartment, reported it to police after seeing it

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38. U.S. CONST. amend. V.

39. U.S. CONST. amend. IV.

40. See, e.g., Hoffer, *supra* note 31.

41. Ariha Setalvad, *California May Ban Drones from Trespassing over Private Property*, THE VERGE (Aug. 25, 2015, 7:09 PM), <http://www.theverge.com/2015/8/25/9208271/california-ban-drones-trespassing-private-property>.

42. United States v. Causby, 328 U.S. 256, 264 (1946).

43. *Id.*



made her believe her privacy had been violated.<sup>44</sup> Although it was later determined that the drone was being innocently used for development planning,<sup>45</sup> its ability to capture images and reach the woman's twenty-sixth floor apartment prompted her to be concerned for her privacy. It is not unreasonable to believe that most people would react similarly as the woman in the above example, as our personal privacy is one of the most highly valued rights we have in our modern society.

Many of the above-mentioned issues are just those that have been reported in the news recently. It is likely that the frequency and seriousness of these types of drone-operation issues will continue to increase considering drone sales are estimated to continue to rise. Other unforeseeable issues involving potential criminal liability attached to drone operation are sure to manifest as more and more new applications for drones are conceived. However, an examination of applying criminal liabilities to current drone-operation issues will lend itself to addressing any future concerns that may arise from issues yet to be presented.

### B. *Issues Arising from Self-Help Measures Used Against Drones*

Issues of criminal liability, not from private drone operation itself, but rather from acts perpetrated against drones by members of the general public, must also be expected to develop. These issues will stem from instances of “self-help” measures used to bring down or exclude drones from certain airspace—a likely result of unappreciated drone trespasses.

#### 1. Shotguns and Similar Take-Downs

One of the most basic and effective, yet dangerous, self-help measure that has been and could be used against drones, is shooting them down with a shotgun. As one of the primary purposes of a shotgun is use against moving targets,<sup>46</sup> it seems fitting that it would serve so well to bring down a drone. Three instances, which all made for interesting headlines, are noteworthy.

First, a man from Stanislaus County, California, was ordered by a small claims court to pay \$850 to the owner of a hexacopter drone after, fearing the drones surveillance capabilities, he allegedly shot it

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44. Lindsey Bever, *Seattle Woman Spots Drone Outside her 26th-floor Apartment Window, Feels ‘Violated’*, WASH. POST (June 25, 2014), <https://www.washingtonpost.com/news/morning-mix/wp/2014/06/25/seattle-woman-spots-drone-outside-her-26th-floor-apartment-window-feels-violated/>.

45. *Id.*

46. *Shotguns Generally Have a Bead Sight*, WASH. HUNTER ED COURSE, [https://www.hunter-ed.com/washington/studyGuide/Shotguns-Generally-Have-a-Bead-Sight/20105001\\_700046677](https://www.hunter-ed.com/washington/studyGuide/Shotguns-Generally-Have-a-Bead-Sight/20105001_700046677) (last visited Feb. 28, 2016).

down with a 12-gauge shotgun.<sup>47</sup> Similarly, a Kentucky man allegedly used a shotgun to shoot down a neighbor's drone that he believed to be trespassing over his property.<sup>48</sup> Finally, and again in similar fashion, a New Jersey man was accused of using a shotgun to bring down a drone that was flying over his neighbor's property.<sup>49</sup>

Incidents such as those mentioned above are especially relevant to Texans in light of Texas being considered a gun-friendly state.<sup>50</sup> Although gun ownership research is notoriously difficult to conduct, surveys cited by the Houston Chronicle newspaper indicated that 35.7% of Texans own guns, slightly higher than the national average of 29.1%.<sup>51</sup> The facts that approximately one out of every three Texan owns a firearm and that private drone trespasses are expected to become ever more common, lead to the conclusion that conflicts are likely to arise involving the use of firearms or similar means to take down a drone.

Somewhat analogous to a shotgun takedown, in which it could remove a drone from the sky while inflicting serious damage, is swatting or batting a drone out of the air. Objects could also be thrown at a drone with the intent to bring it down. This method of drone takedown was proven to be rather effective by a large crowd of unruly hockey fans who were able to bring down what they believed to be a Los Angeles Police Department drone.<sup>52</sup> Not only could the use of a shotgun or other similar instrument to take down a drone implicate criminal liabilities for weapons use, it could also do so for the destruction of property as most drones will likely be damaged from an impact by a shotgun blast or blunt object.

## 2. Other Take-Down Methods

Other methods that could potentially be used to affect or restrict the operation of private drones are net guns and newer technologies such as signal jammers and geofencing, a system that prevents a

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47. Cyrus Farivar, *Man Shoots Down Neighbor's Hexacopter in Rural Drone Shotgun Battle*, ARS TECHNICA (June 27, 2015, 12:05 PM), <http://arstechnica.com/tech-policy/2015/06/man-shoots-downs-neighbors-hexacopter-in-rural-drone-shotgun-battle/>.

48. Hoffer, *supra* note 31.

49. Dan Stamm, *Shotgun-Toting New Jersey Neighbor Faces Charges That He Shot Down a Man's Drone*, NBC 10 (Oct. 2, 2014), <http://www.nbcphiladelphia.com/news/weird/Shotgun-New-Jersey-Drone-Erma-Charges-322850981.html>.

50. Enrique Rangel, *Texas More Welcoming of Firearms than Other States*, AMARILLO GLOBE-NEWS (April 13, 2014, 9:48 PM), <http://amarillo.com/news/latest-news/2014-04-13/texas-more-welcoming-firearms-other-states>.

51. Matt Levin, *Despite All the Rhetoric, Texas Gun Ownership Rates just above National Average*, HOUSTON CHRONICLE (June 30, 2015, 12:12 PM), <http://www.chron.com/news/houston-texas/article/Despite-all-the-rhetoric-Texas-gun-ownership-6358188.php>.

52. *Hockey Fans Take Down 'LAPD Drone' amid Stanley Cup Revelry*, RT (June 16, 2014, 1:14 PM), <https://www.rt.com/usa/166008-los-angeles-drone-downed/>.

“drone from overflowing geographic locations by blocking GPS coordinates in its firmware.”<sup>53</sup> DroneShield and Blighter Surveillance Systems are among the various companies currently offering drone prevention equipment and products such as net guns for capturing low-flying drones.<sup>54</sup>

Another drone-restriction device that could become available to the general public is the anti-drone shoulder rifle, the DroneDefender.<sup>55</sup> The DroneDefender functions by emitting radio pulses in an attempt to interrupt a drone’s internal communication system, essentially tricking it to believe it is out of range.<sup>56</sup> Although these methods are not widely available and do not implicate destruction of property issues in the same manner as using a shotgun against a drone would, they could still create criminal liabilities for members of the general public who may choose to use them to take down drones.

#### IV. POTENTIAL CRIMINAL LIABILITIES FOR PRIVATE DRONE OPERATION

Applying Texas’s current penal and government codes to issues arising from private drone operation is not only achievable in practice, it is essential because it provides drone operators and the general public alike with a source of guidance for safe and legal private drone operation. While the State Legislature has recently promulgated certain laws aimed directly at some drone-operation issues, many of the more common and more likely potential issues were not addressed. The Legislature could easily rectify this oversight through a series of modest and reasonable changes to the current Texas Penal Code. The following discussion suggests the application and amending of certain longstanding laws in order to meet criminal issues arising from drone operation head on. The recently enacted statutes, which specifically address drone issues, will also be discussed and the ways in which they could apply will be analyzed.

##### A. *Criminal Trespass and Other Property Related Liabilities*

###### 1. Criminal Trespass

The Sixty-second Texas Legislature enacted what is now codified as section 30.05 of the Texas Penal Code which provides a criminal cause

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53. Matt Klein, *What Do Drones Mean to the Future of Personal Privacy?*, HOW-TO GEEK (April 2, 2015), <http://www.howtogeek.com/207518/what-do-drones-mean-to-the-future-of-personal-privacy/>.

54. Thomas Claburn, *Drones Need Geo-Fencing, Says Sen. Schumer*, INFORMATIONWEEK (Aug. 21, 2015), <http://www.informationweek.com/government/drones-need-geo-fencing-says-sen-schumer/d/d-id/1321847>.

55. Kelly Hodgkins, *Anti-drone shoulder rifle lets police take control of UAVs with targeted radio pulses*, FOX NEWS (Oct. 15, 2015), <http://www.foxnews.com/tech/2015/10/14/anti-drone-shoulder-rifle-lets-police-take-control-uavs-with-targeted-radio.html>.

56. *Id.*

of action against one who enters another's land without consent.<sup>57</sup> According to the language of the statute, a person commits a criminal trespass if he or she "enters or remains on or in property of another, including residential land, agricultural land, a recreational vehicle park, a building, or an aircraft or other vehicle, without effective consent and the person: had notice that the entry was forbidden; or received notice to depart but failed to do so."<sup>58</sup> The statute distinguishes the severity of different types of trespasses, classifying them as misdemeanors ranging from Class C to Class A.<sup>59</sup> Although the statute was created to address the issues associated with an actual physical trespass by a human, through minor modifications or amendments it could be easily applied to issues and conflicts created by a trespassing drone.

As it was recently suggested in an article on airspace and legal rights by Gary Wickert, "[t]he right of a landowner to control the low-altitude space immediately over his private property appears to be in conflict with the right of a drone owner to operate a drone in the same airspace."<sup>60</sup> These types of conflicts, or drone trespasses, are analogous to an entry by a person on another's land because both involve the violation of sacred property rights. Whether it be by foot over a front yard, or by air over a house, a trespass is a trespass. Furthermore, a drone trespass arguably would subject the victim to a heightened sense of violation because of the precise image-capturing equipment many drones carry. Thus, it is prudent to examine the applicability of modified criminal trespass statutes to drone issues in Texas because these trespasses are likely to be at the forefront of drone-related conflicts—an easy conclusion considering more and more of the general public are purchasing and flying drones for private use.

Two potential roadblocks present themselves when considering the application of section 30.05 to trespasses caused by drones. First, in its current form, the statute defines "entry" as "an intrusion of the entire body,"<sup>61</sup> a definition that would clearly prevent application of the statute to these types of issues. Additionally, as of now, it is unclear exactly how much of the airspace above their land that landowners actually own. Prior to the Supreme Court's 1946 ruling in *United States v. Causby*, "the law followed the Latin maxim, *Cujus est solum,*

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57. TEX. PENAL CODE ANN. § 30.05 (West, Westlaw through 2015 Reg. Sess. of 84th Leg.).

58. PENAL § 30.05(a)(1)–(2) (Westlaw).

59. PENAL § 30.05(d)(1)–(3) (Westlaw).

60. Gary Wickert, *Drone Wars: Airspace and Legal Rights in the Age of Drones*, CLAIMS J. (July 2, 2015), <http://www.claimsjournal.com/news/national/2015/07/02/264216.htm>.

61. PENAL § 30.05(b)(1) (Westlaw).

*ejus est usque ad coelum*,” meaning “[t]o whomever the soil belongs, he also owns the sky.”<sup>62</sup>

To clear the first hurdle, the Legislature could simply amend the language of subsection (b)(1) of section 30.05 from “[e]ntry” means the intrusion of the entire body”<sup>63</sup> to “entry includes an intrusion of the entire body or one effected by means of a remotely controlled, unmanned vehicle system.” Section 30.05 of the Texas Penal Code could then be efficiently and properly applied to drone trespasses. In making such a change, the Legislature would provide a clear and reasonable guideline that would put the general public on notice of the potential criminal liability for drone trespass.

Secondly, a determination that must be made prior to attaching criminal liability to a drone trespass is how much of the airspace above his or her land a landowner in fact owns. In addressing this question, the Supreme Court held that “a landowner owns at least as much of the space above the ground as he can occupy or use in connection with the land.”<sup>64</sup> This is hardly a bright line rule, but it is a far cry from the Latin maxim of owning everything to the heavens as long as you own the soil. To overcome this potential roadblock, two possible approaches could be utilized. The first would be for the Legislature to amend the statute to define a landowner’s airspace as that of everything up to a certain, quantified altitude. This definition would tend to be the most favorable to a landowner as it would likely expand his or her airspace rights, by state statute, far beyond that which the Supreme Court held in *Causby*.

A second option would be to take an approach which is in line with *Causby* and borrow from section 159(2) of the Restatement (Second) of Torts, which states that a “[f]light by aircraft in the airspace above the land of another is a trespass if, but only if, it enters into the immediate reaches of the airspace next to the land.”<sup>65</sup> The Restatement’s “immediate reaches” approach is similar to *Causby* since it gives people rights to the airspace they can occupy and use in connection with the land.<sup>66</sup> Distinguishable from the first, quantifiable options, a definition that is comparable to the Restatement and analogous with *Causby* would likely be subjected to less scrutiny by the Court.

The addition of either above examples that define the reaches of a landowner’s airspace in tandem with amending the statutory definition of “entry” would make application of section 30.05 to trespass by drone practicable. This would provide a clear-cut rule for the governance of conflicts arising from drone trespass. Amending section 30.05

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62. Wickert, *supra* note 60.

63. PENAL § 30.05(b)(1) (Westlaw).

64. *United States v. Causby*, 328 U.S. 256, 264 (1946).

65. RESTATEMENT (SECOND) OF TORTS § 159(2) (1965).

66. *Compare* RESTATEMENT (SECOND) OF TORTS § 159 (1965) *with Causby*, 328 U.S. at 264.

in this manner would address the policy concerns behind issues of drone trespass in a fashion similar to how the current statute addresses the policy concerns behind physical intrusion onto another's land.

Whether the Legislature chooses to take an approach similar to that set forth above is entirely their prerogative. However, because it is expected that consumers will purchase over 300,000 drones by the end of 2015,<sup>67</sup> it is incumbent upon the Texas Legislature to amend the State's criminal statutes to allow for their application to the numerous drone issues that are sure to present themselves. As trespass is likely to be one of the most common issues to arise, section 30.05 of the Texas Penal Code would be a logical place for the legislature to begin.

## 2. Criminal Mischief

According to section 28.03 of the Texas Penal Code, addressing criminal mischief, an offense is committed if, without the property owner's effective consent, a person "intentionally or knowingly damages or destroys the tangible property of the owner" or "intentionally or knowingly tampers with the tangible personal property of the owner and causes pecuniary loss or substantial inconvenience to the owner or a third person."<sup>68</sup> When enacting the Texas Penal Code in 1973,<sup>69</sup> the Sixty-third Legislature absolutely could have deemed it necessary to include tangible property protections in the Penal Code in order to achieve its goal of ensuring the public's safety through the deterrent influence provided by the code's penalties.<sup>70</sup> The Legislature created offense classifications ranging from a minor Class C misdemeanor to a first-degree felony depending on the amount of loss suffered by the property owner.<sup>71</sup>

A situation in which the criminal mischief statute could apply to a drone-related issue might present itself as follows: A is outside washing his brand new car in his driveway when he notices that B is flying his new drone over and through the neighborhood. Concerned for the safety of his new car, A quickly approaches B and tells him, "Please do not fly your drone over my property. I do not want it to crash on my new car." Ignoring A's warning, B later flies his drone over A's property only to have it crash through the windshield of A's brand new car. B's piloting error, and not any malfunction of the drone, is the sole cause of the crash. For the entirety of its flight, the drone was well within B's line of sight.

In its current form, section 28.03 provides criminal liability for incidents similar to the hypothetical set forth above. The statute requires

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67. McNeal, *supra* note 18.

68. TEX. PENAL CODE ANN. § 28.03(a)(1)–(2) (West, Westlaw through 2015 Reg. Sess. of 84th Leg.).

69. S.B. 34, 63rd Leg., Reg. Sess. (Tex. 1973).

70. *Id.*

71. PENAL § 28.03(b)(1)–(7) (Westlaw).

that the person damaging, destroying, or tampering with another's tangible property to do so "without the effective consent of the owner."<sup>72</sup> Here, effective consent is absent as A told B not to fly the drone over A's property, specifically citing a concern for his car.

In addition to applying to intentional acts, the statute also applies to those acts where a person knowingly damages, destroys, or tampers with the tangible property of another.<sup>73</sup> A person acts knowingly "when he is aware of the nature of his conduct," or "aware that his conduct is reasonably certain to cause the result."<sup>74</sup> Keeping in mind that B had the drone within his line of sight for the entirety of its flight, B's conduct would satisfy the knowingly element of the statute because he continued to fly over A's property after A clearly requested that he not do so.

Considering the expected increase in private drone use, it logically follows that incidents similar to the above hypothetical will begin to present themselves more frequently. Situations such as these will produce heated conflicts with the potential to result in criminal consequences between drone operators and other members of the public, especially where the damage or destruction of property is concerned.

However, applying section 28.03 of the Texas Penal Code to drone-caused conflicts of this kind would serve to give drone operators and property owners alike notice of the potential criminal liabilities from drone-caused property damage. Operators would be on notice that they could be held criminally liable for any property damage that results from flying their drones. On the other hand, property owners could rest easy in the knowledge that the law affords their tangible property protections from damage caused by a drone.

### 3. Reckless Damage or Destruction

Similar to section 28.03, section 28.04 of the Texas Penal Code also affords property owners protections against unwanted damage or destruction of their property. Section 28.04 states "[a] person commits an offense if, without the effective consent of the owner, he recklessly damages or destroys property of the owner."<sup>75</sup> However, section 28.04 does not require that a person act intentionally, or knowingly to commit an offense. Instead, a person must only act recklessly to commit an offense under this section.<sup>76</sup> An offense under section 28.04 cannot be classified as greater than a Class C misdemeanor.<sup>77</sup>

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72. PENAL § 28.03(a) (Westlaw).

73. See PENAL § 28.03(a)(1)–(3) (Westlaw).

74. TEX. PENAL CODE ANN. § 6.03(b) (West, Westlaw through 2015 Reg. Sess. of 84th Leg.).

75. TEX. PENAL CODE ANN. § 28.04(a) (West, Westlaw through 2015 Reg. Sess. of 84th Leg.).

76. See *id.*

77. See PENAL § 28.04(b) (Westlaw).

If an operator were to fly a drone in an environment, even with an understanding that the environment was ill-suited for safe drone operation, and that in doing so the activity could potentially damage or destroy another's property, he or she will have done so recklessly. An example of this might be a houseguest flying his drone designed solely for outdoor use through a home and then accidentally crashing it into a priceless painting hanging on a wall, causing its destruction. The operator obviously would not have done this intentionally as he was a guest of the house. However, his actions would be reckless because he proceeded to fly the drone inside a house with conscious awareness that the design of his drone was specifically for outdoor use. This is because a person acts recklessly "when he is aware of but consciously disregards a substantial and unjustifiable risk that the circumstances exist or the result will occur."<sup>78</sup>

Application of section 28.04 to drone incidents such as these would be beneficial for multiple reasons; among those are the notice that it gives drone operators and property owners of their potential liabilities and protections. Furthermore, application of section 28.04 to hold operators liable for property damage caused by reckless drone operation is prudent, as it covers incidents that do not meet the intentional or knowing requirements of section 28.03.<sup>79</sup> Failing to use section 28.04 of the Texas Penal Code as a protection against property damage in these types of situations of lessened severity could potentially result in numerous instances of no liability for property damage caused by reckless drone operation.

### B. *Texas Privacy Act Liabilities*

In 2013, the Texas Legislature promulgated the Texas Privacy Act to address the potential privacy issues associated with drone operation.<sup>80</sup> However, the Legislature constructed the Act in a manner that also provides for protections of real property. The Legislature further extended the protections of the Texas Privacy Act to other real property in a 2015 amendment.<sup>81</sup> Also included were provisions providing for criminal liabilities for violations of the Act.

#### 1. *Illegal Use of Unmanned Aircraft to Capture Image*

Under section 423.003 of the Texas Government Code, a person commits a Class C misdemeanor offense if he or she "uses an unmanned aircraft to capture an image of an individual or privately

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78. PENAL § 6.03(c) (Westlaw).

79. Compare § 28.04(b) (Westlaw), with TEX. PENAL CODE ANN. § 28.03(a)(1) (West, Westlaw through 2015 Reg. Sess. of 84th Leg.).

80. See Texas Privacy Act, 83d Leg., R.S., ch. 1390, 2013 (codified at Tex. Gov. Code Ann. §§ 423.001–.008).

81. See TEX. GOV'T CODE ANN. § 423.0045 (West, Westlaw through 2015 Reg. Sess. of 84th Leg.).



owned real property in this state with the intent to conduct surveillance on the individual or property captured in the image.”<sup>82</sup> An offense under this section requires that a person intend to capture the image of the person or property. In Texas, a person acts with intent when he consciously desires to commit the conduct or to cause its result.<sup>83</sup>

Protecting citizens’ rights to privacy and the enjoyment of their property has long been a paramount concern of legislatures throughout the country, as well as Texas, and is evidenced by the enactment of the Texas Privacy Act. Incidents of spying or stalking via drone technology would almost certainly warrant application of section 423.003 of the Government Code as those acts by their very nature fall squarely within the section’s requirement of intent. The section also protects one’s right to enjoy his or her property since it penalizes capturing images above privately owned real property. This furthers real property protections because it reassures property owners that criminal punishments exist for those wishing to illegally expose lawful, private activities conducted on private property. Essentially, it punishes a new type of trespass—trespass by drone facilitated aerial photography.

Recognizing that law-abiding drone operators may inadvertently capture images, the Texas Legislature included a defense to prosecution under section 423.003. If a person destroys the image captured, as soon as having knowledge that he or she captured it in violation of the section and without having disclosed or distributed it, he or she will not be held liable.<sup>84</sup> It is legislation such as this that will allow for drone-related conflicts between operators and the general public to be resolved reasonably and fairly while still holding potential bad actors accountable for their actions.

## 2. Operation of Unmanned Aircraft over Critical Infrastructure Facility

Section 423.0045 of the Texas Government Code was passed in 2015 as an amendment to the Texas Privacy Act.<sup>85</sup> This section specifically makes it an offense for any person who intentionally or knowingly operates a drone over a critical infrastructure facility while under 400 feet in altitude;<sup>86</sup> allows a drone to contact a critical infrastructure facility or any person or object on the facility premises;<sup>87</sup> or allows a drone to come close enough to a critical infrastructure facility as to

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82. TEX. GOV’T CODE ANN. § 423.003(a)–(b) (West, Westlaw through 2015 Reg. Sess. of 84th Leg.).

83. See PENAL § 6.03(a) (Westlaw).

84. GOV’T § 423.003(c) (Westlaw).

85. Act of Sept. 1, 2015, 84th Leg., R.S., ch. 1033, § 1, sec. 423.0045, (Tex. 2015).

86. GOV’T § 423.0045(b)(1) (Westlaw).

87. GOV’T § 423.0045(b)(2) (Westlaw).

interfere with its operations or cause a disturbance.<sup>88</sup> An offense under this section is classified as a Class B misdemeanor unless the actor has a prior conviction under the section, then it is a Class A misdemeanor.<sup>89</sup>

Many of the types of real property that the section classifies as a “critical infrastructure facility” are those owned by private citizens and corporations. Refineries, power and chemical plants, natural gas stations, dams, and transportation facilities are among the various types of critical infrastructure facilities to which the section applies.<sup>90</sup> As much as it serves as a privacy protection, this section of the Government Code also functions to protect against more nefarious activities, such as terrorism.

In light of the ever-growing fear of terrorist attacks, the government and private citizens alike are on heightened alert for conduct and acts that may be adverse to public safety. A drone flying too closely to one of the above critical infrastructure facilities could easily raise the alarm of the general public and law enforcement agencies, regardless of how benign its operator’s intentions were. Inasmuch, the Texas Legislature appears to have taken a proactive approach to easing these concerns by addressing the issue head on.

Providing criminal liabilities for one who would fly a drone near a critical infrastructure facility, regardless of the intent to raise alarm among the public, has a twofold effect. First, it serves a deterrent function, as it puts drone operators on notice of the liabilities they face for merely flying their drones near a critical infrastructure facility. Second, it reassures the citizenry that the Texas Legislature is aware of evolving drone technologies; that it recognizes the very real potential for drone-related conflicts to arise; and that it takes seriously its responsibility of protecting the general welfare.

#### V. POSSIBLE CRIMINAL LIABILITIES FOR SELF-HELP AGAINST DRONES

In addition to the criminal liabilities that drone operators could possibly face, there stands the potential for criminal liability to attach to acts perpetrated against drones. Self-help measures as discussed above not only present serious ramifications in the way of weapons offenses and public safety, they create consequences related to the destruction of private property.

Members of the general public whose property is subjected to trespass by a drone may feel the need to resort to extreme measures in order to protect their property against such intrusions. Out of concern for their privacy, some may feel the need to take action against a

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88. Gov’t § 423.0045(b)(3) (Westlaw).

89. Gov’t § 423.0045(d) (Westlaw).

90. Gov’t § 423.0045(a)(1)(A) (Westlaw).

drone fearing its image-capturing capabilities, even when no trespass over their own property has occurred. Application of Texas's existing penal laws to these instances of self-help measures used against drones would allow the State to promote safe and cordial interactions between drone technologies and the general public.

A. *Potential Property Related Liabilities for Self-Help Measures*

1. Criminal Mischief

As noted in the above discussion of criminal liabilities for drone operation, section 28.03 of the Texas Penal Code makes it an offense for any person to intentionally or knowingly damage, destroy, or tamper with the property of another without that person's consent.<sup>91</sup> Application of Texas's criminal mischief statute to these types of situations could prove valuable as a deterrent to those who would attempt to shoot down a drone regardless of the legality of its operation. This is necessary because, along with the destruction of property implications, such an act has the potential to place the general public in unreasonable danger created by an uncontrolled drone that is falling from the sky.

Section 28.03 would apply perfectly in the context of a shotgun being used to shoot down a drone. It cannot be said that if one were to take out a shotgun, aim it at a flying drone, and then pull the trigger, that he or she did so while acting unintentionally or unknowingly. The stark and irreversible consequences of shooting a shotgun are generally known to its shooter. Thus, the mens rea, or state of mind,<sup>92</sup> required to commit an offense under this section would be satisfied.

If the shooter in fact made contact with the drone, the two remaining elements of damaging another's property and doing so without his consent is met. The very nature of a shotgun's "shot" style ammunition, which disperses pellets ranging in size from 0.08 to 0.15 inches in diameter,<sup>93</sup> almost guarantees that damage will be done should contact with the drone be made. Furthermore, one would be hard pressed to find an owner or operator who would consent to having his drone shot out of the sky by a shotgun.

Undoubtedly, private citizens value the protections afforded by law to their tangible property, which would include a drone, just as much as those protections given to their real property. Inasmuch, it is necessary for the State to put its citizens on notice that actions taken against drones, which present a danger to the general welfare and the poten-

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91. See TEX. PENAL CODE ANN. § 28.03(a)(1)–(2) (West, Westlaw through 2015 Reg. Sess. of 84th Leg.).

92. *Mens Rea*, CORNELL U. L. SCH.: LEGAL INFO. INST., [https://www.law.cornell.edu/wex/mens\\_rea](https://www.law.cornell.edu/wex/mens_rea) (last visited Feb. 28, 2016).

93. *Ammunition Demystifier - Types of Shotgun Ammo*, WELL ARMED WOMAN, <http://thewellarmedwoman.com/ammunition-demystifier-types-of-shotgun-ammo> (last visited Feb. 28, 2016).

tial for the destruction of private property, will not be tolerated. Making section 28.03 of the Texas Penal Code applicable to these situations would have just that effect and would serve to make private citizens aware of the consequences of damaging or destroying another's drone.

## 2. Reckless Destruction or Damage of Property

Take the above mentioned hypothetical of a shotgun downing a drone one step further—suppose that the damaged drone spirals out of control onto property owned by neither the drone operator nor the person who shot it from the sky. Upon impacting the roof of a home located on the nearby property, the drone burst into flames. The resulting fire burned the house to the ground and severely damaged the remainder of the property. Would anyone be criminally liable for the events that rendered the nearby property owner homeless?

A situation where property, other than the drone itself, is damaged as a result of someone shooting the drone down would be perfectly attuned for application of section 28.04, Reckless Destruction or Damage, for multiple reasons. First, in an incident similar to the shotgun hypothetical, no one would venture to believe that the person shooting at the drone intended to damage or destroy a nearby property in the process. Thus, charging the shooter with a criminal mischief offense would be improper because he or she in no way intended to harm the nearby property, nor could he or she have known that the drone would cause a fire in the manner it did.

However, section 28.04 would be appropriate in this instance because it is reasonable to assume that one would have to act in disregard of the obvious potential for a drone to crash and damage nearby property if they were to shoot it down. Shooting down a drone with a shotgun in an area populated with people or structures could reasonably qualify as disregarding a substantial and unjustifiable risk of causing harm to nearby persons or property, thus meeting the elements of recklessness as discussed previously.<sup>94</sup> Therefore, holding those who recklessly shot down a drone criminally liable for the property damage that resulted, not to the drone itself but to the surrounding environment, would provide clear guidance on the liabilities which one could face for such an act, while exemplifying the deterrent function of this penal statute.

### B. *Weapons Related Criminal Liabilities*

In addition to the destruction of property related offenses that one could face for shooting a drone down, there stands the potential for weapons and breach of the peace related charges. While discharging a firearm at a drone creates property damage implications, it also pro-

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94. See PENAL § 6.03(c) (Westlaw).

duces concerns for the safety of the general public. This is especially true in more populous urban and suburban areas. Applying Texas's current penal statutes for discharge of a firearm and disorderly conduct to issues created by the shooting down of a drone would put people on notice of the possible criminal liabilities associated with committing this act.

### 1. Discharge of a Firearm

An offense under section 42.12 of the Texas Penal Code, Discharge of Firearm in Certain Municipalities, is committed when a person “recklessly discharges a firearm inside the corporate limits of a municipality having a population of 100,000 or more.”<sup>95</sup> Concerning the reckless requirement of the section, one would most certainly be consciously disregarding a substantial and unjustifiable risk if they were to shoot down a drone in an area populated by 100,000 or more people.<sup>96</sup> This is true because the shooter could not possibly account for all the various scenarios that could result from his actions.

The potential for private citizens to shoot at drones in populated areas is something that must be addressed by attaching criminal liability for at least three reasons. First, the projectile fired could always stray from the intended target and strike a nearby person, causing an injury. Additionally, a drone descending from the sky in an uncontrolled manner could also cause harm to people and property. Finally, the mere act of firing a gun in a populated area could create unwarranted alarm and fear among members of the general public. Application of section 42.12 to the shooting down of a drone would address these concerns. It would do so regardless of whether the drone was actually shot down, because the section only requires that a firearm be recklessly discharged.

An offense under this section of the penal code is classified as a Class A misdemeanor,<sup>97</sup> the highest of misdemeanor classifications in Texas.<sup>98</sup> However, the section in no way prevents a local government or municipality from enacting its own ordinances which prohibit discharging firearms within its boundaries.<sup>99</sup> Thus, there is still the potential for local criminal liability to attach if someone were to shoot down a drone in a municipality not covered by the Texas Penal Code—one with a population less than 100,000.

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95. TEX. PENAL CODE ANN. § 42.12 (West, Westlaw through 2015 Reg. Sess. of 84th Leg.).

96. See PENAL § 6.03(c) (Westlaw).

97. See PENAL § 42.12(b) (Westlaw).

98. *What Are Class A, B, and C Misdemeanors?*, FREEADVICE, [http://criminal-law.freeadvice.com/criminal-law/white\\_collar\\_crimes/criminal-misdemeanor-classes.htm](http://criminal-law.freeadvice.com/criminal-law/white_collar_crimes/criminal-misdemeanor-classes.htm) (last visited Feb. 28, 2016).

99. PENAL § 42.12(d).

Recognizing the need to protect the general public from unnecessary fear and danger presented by discharging a firearm in heavily populated areas, the Texas Legislature chose to make this act a violation of the law. Although this was enacted in a time before drone technologies were of concern, the Penal Code can be used to provide criminal liabilities for acts attempted or perpetrated against drones using a firearm—an act which could endanger the safety of the general public.

## 2. Disorderly Conduct

Continuing with the shotgun downing a drone hypothetical, criminal liability for such an act could also result under section 42.01 of the Texas Penal Code, which makes the intentional or knowing discharge of “a firearm in a public place other than a public road or a sport shooting range”<sup>100</sup> an offense. Thus, using a firearm in an attempt to shoot down a drone could be a state chargeable offense in a municipality that lacks its own discharge of a firearm ordinance and has a population of less than 100,000 people. This would be an important tool in addressing exactly such a situation in more rural areas, especially considering those areas are sometimes thought of as more familiar with firearm use.

Additionally, section 42.01 makes the display of a firearm alone an offense if done in a public place and in a manner calculated to cause alarm.<sup>101</sup> Should a person brandish a firearm and somehow evidence his or her intent to discharge it at a drone, either through verbal threats or conduct, he or she could be liable under the section, as those actions would undoubtedly cause alarm. An offense under both subsections (a)(7) and (a)(8) is a Class B misdemeanor, the most severe offense classification under section 42.01.<sup>102</sup> The section does provide for a defense under subsection (a)(7) if “the person who discharged the firearm has a reasonable fear of bodily injury to the person or to another.”<sup>103</sup> However, it is hard to imagine that private drone operation would amount to causing fear of bodily injury so as to excuse the discharge of a firearm in a public place.

### C. *Defenses Against Prosecution for Self-Help Measures*

Just as with any other analysis of criminal liability, it is prudent to examine the possible defenses that could be used to avoid prosecution for self-help measures against drones. Recognizing that certain situations call for the use of force to defend oneself or property, the Legislature included section 9.41 when drafting the Texas Penal Code. This

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100. TEX. PENAL CODE ANN. § 42.01(a)(7) (West, Westlaw through 2015 Reg. Sess. of 84th Leg.).

101. PENAL § 42.01(a)(8).

102. PENAL § 42.01(d).

103. PENAL § 42.01(e).

section provides for a defense against prosecution for the use of force to protect one's own property if (1) the person was in lawful possession of that property and (2) reasonably believes the force is required to terminate or prevent another's trespass on land or unlawful interference with property.<sup>104</sup>

Protections under this section would likely be available to someone charged with either criminal mischief or reckless destruction or damage for downing a drone trespassing over his or her own property. However, the same cannot be said if it turns out he or she did so with the use of a firearm. Batting down a drone or jamming its control signals do not implicate the same safety concerns to the general public that discharging a firearm does. Firearm projectiles travel great distances and cannot always be accounted for. That fact alone would likely render unreasonable the act of shooting at a drone to protect property, thus barring the protections of section 9.41.

Section 9.42 of the Texas Penal Code also provides a defense against prosecution for certain situations that involve the use of deadly force to protect property. This section makes the use of deadly force to protect land or tangible property justifiable when the use of such force was justified under section 9.41; the actor reasonably believes that the use of deadly force is immediately necessary; and the actor reasonably believes that the land or property cannot be protected by other means.<sup>105</sup> It is however, difficult—if not impossible—to imagine a situation in which a person would be justified in using deadly force, including the discharge of a firearm, to protect against a drone trespass. By its plain language, it is clear that this section was created to allow for the use of force to protect land and property from intrusion and crime by a human being, not a trespass by an often harmless drone.

## VI. FEDERAL PREEMPTION

Of course, there is always the possibility that the federal government, the FAA, or both will speak to the issues of criminal liabilities surrounding the private use of drones. Doing so would likely preempt the application of any state statutes or regulations to such activity. The doctrine of preemption requires that federal law supersede, or preempt, state law when the two are in conflict.<sup>106</sup> This idea is anchored in the Supremacy Clause of the United States Constitution which states, “[t]his Constitution, and the Laws of the United States which

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104. TEX. PENAL CODE ANN. § 9.41(a) (West, Westlaw through 2015 Reg. Sess. of 84th Leg.).

105. TEX. PENAL CODE ANN. § 9.42(1)–(3)(a) (West, Westlaw through 2015 Reg. Sess. of 84th Leg.).

106. *Preemption*, CORNELL U. L. SCH.: LEGAL INFO. INST., <https://www.law.cornell.edu/wex/preemption> (last visited Feb. 28, 2016).

shall be made in Pursuance thereof . . . shall be the supreme Law of the Land.”<sup>107</sup>

The FAA received its authority to regulate and oversee American airspace use from Congress through the Federal Aviation Act of 1958.<sup>108</sup> This authority extends to commercial, military, and civilian aircraft.<sup>109</sup> As the FAA received its ability to control and regulate American airspace through an act of Congress signed by the President, any regulations it promulgated on the subject of criminal liabilities for issues associated with private drone use would likely preempt state regulations to the same effect. This would be just as true for any congressional enactments regarding private drone operation that are made in accordance with the requirements set forth in the United States Constitution.

## VII. CONCLUSION

Drone technologies will only continue to evolve as millions of dollars are spent annually on research and development. This will undoubtedly lead to the proliferation of drone use among private citizens. A foreseeable result of increased private drone use will be the numerous and varying conflicts that drone operation has the potential to create.

In the absence of federal guidance on criminal consequences for the myriad of foreseeable drone-related conflicts, the State of Texas must apply its current penal and government codes to meet these issues head on. While the FAA currently regulates the procedural side of drone operation,<sup>110</sup> it provides no criminal liabilities for incidents of property destruction or personal injury caused by the operation of a drone. Nor does it offer any liabilities for self-help measures used to disrupt a drone’s operation. Thus, it is incumbent upon the State to use the existing penal and government codes, along with any drone-technology-inspired amendments or additions, to allow for safe and reasonable private drone operation, while protecting the property and privacy rights of its citizens.

Existing criminal laws can be applied to drone-related conflicts to protect the property rights of Texans. Some, such as Penal Code section 30.05, Criminal Trespass, may require amending certain definitions so as to include drone entries. It may also require the development of case law to define the amount of airspace that a property owner owns in light of new drone technologies. Others however, such as section 28.03, Criminal Mischief, and section 28.04, Reckless Destruction or Damage, can be applied in their current forms to ex-

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107. U.S. CONST. art. VI, cl. 2.

108. Federal Aviation Act of 1958, Pub. L. No. 85-726, 72 Stat. 731.

109. *Id.*

110. *FAA Announces Small UAS Registration Rule*, FED. AVIATION ADMIN. (Dec. 14, 2015), [https://www.faa.gov/news/press\\_releases/news\\_story.cfm?newsId=19856](https://www.faa.gov/news/press_releases/news_story.cfm?newsId=19856).



tend the property protections that they already afford to Texans into the realm of drone-caused conflicts.

The Texas Legislature has recognized and begun to address the privacy concerns that drone technologies implicate, by enacting the Texas Privacy Act in 2013.<sup>111</sup> Most notable among the Act's provisions are sections 423.003 and 423.0045 of the Texas Government Code. The former makes it an offense to use a drone to conduct surveillance on an individual or privately owned real property,<sup>112</sup> and the latter makes it an offense to operate a drone near critical infrastructure facilities.<sup>113</sup> Along with the Act's other provisions, both of these sections are reasonable but necessary steps in the process of developing private drone operation in Texas.

Just as the use of drone technologies can be expected to create new and various conflicts between operators and members of the general public, it should be expected that the converse would occur as well. Particularly, conflicts will be created by members of the general public taking action to counter what they may view as a trespass to their property, or as violations of their privacy. As with conflicts arising from drone operation, Texas's current penal laws regarding property destruction and weapons offenses can be applied to instances of self-help measures being used to remove a drone from the sky.

In light of the increased demand for and use of drone technologies, it is unavoidable that the State must go further in regulating these technologies. Application of certain Texas penal and government laws would serve to put operators on notice of the fact that they must respect and observe the property rights of the general public when flying their drones. Although preemption is always a possibility, the federal government has yet to speak on how conflicts caused by drone operation or self-help measures used against them would implicate criminal liabilities for the actors involved. It is this lack of federal guidance that makes it incumbent upon the State of Texas to act and create ways to govern the conflicts that are bound to result from the integration of drone technologies into daily life. A failure to do so would be nothing short of a disservice to the people of the State of Texas, as increased drone operation and the associated conflicts are nothing but imminent and foreseeable.

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111. *See* Texas Privacy Act, 83d Leg., R.S., ch. 1390, 2013 (codified at Tex. Gov. Code Ann. §§ 423.001–.008).

112. TEX. GOV'T CODE ANN. § 423.003(a) (West, Westlaw through 2015 Reg. Sess. of 84th Leg.).

113. TEX. GOV'T CODE ANN. § 423.0045(b) (West, Westlaw through 2015 Reg. Sess. of 84th Leg.).