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Flight and Federalism: Federal Preemption of State and Local Drone Laws

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FLIGHT AND FEDERALISM: FEDERAL PREEMPTION OF STATE AND LOCAL DRONE LAWS

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Abstract: Small, unmanned aircraft referred to as "drones" are becoming increasingly common in the skies above the United States. Their increasing ubiquity has been driven by the wide variety of industries and tasks to which they can be applied, but it has also drawn the attention of government. Where Amazon.com sees the potential for packages delivered in thirty minutes or less, governments see crowded skies and clumsy pilots, to name only two potential risks associated with the widespread integration of drones into the national airspace. To that end, just as Amazon.com has ambitiously made use of the technology, state and local governments have begun to actively regulate drone use. The City of Chicago, for example, enacted an ordinance essentially banning drones within city limits.

A major legal hurdle potentially stands in the way of those state and local efforts: The federal government has also regulated the commercial use of drones. The Federal Aviation Administration (FAA), guided by congressional direction to safely accelerate the process of integrating drones into the national airspace, promulgated comprehensive regulations governing commercial drone use. This overlap with state and local laws leads to issues of preemption. The doctrine of preemption reflects the principle that, in the United States, where a (valid, constitutional) federal law conflicts with a state or local law, the federal law supersedes its counterparts.

This comment explores the issue of federal preemption of state and local drone laws. It concludes—based on a survey of preemption law, useful analogues from other areas of law, and first-of-its-kind drone preemption litigation—that restrictive drone laws like Chicago's are preempted by the FAA regulations. Yet all is not lost for the state or local government wishing to have a say in matters of drone regulation. As this comment explains, there are strong arguments that state and local governments *can* regulate certain uses of drones, particularly in light of a doctrine known as the presumption against preemption. To that end, some state and local laws are clearly safe from preemption challenges. Others are just as clearly preempted. Finally, there is a category of state and local laws that fall somewhere in between those two extremes, for which the outcome of future preemption challenges is unclear.

INTRODUCTION

Small unmanned aircraft systems—more commonly known as "drones"—have skyrocketed in popularity, and the trend is not anticipated

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to abate anytime soon.[1] Drones initially became popular as aerial platforms for high-definition cameras, and are now also marketed for commercial and governmental applications.[2] As a result of their widespread popularity and increasing ubiquity, however, there have been a number of accidents involving irresponsibly flown drones.[3] Drones have also proven ripe for intentional misuse.[4] Concerns about the threats posed by drone technology have caused many to call for greater government intervention.[5] The federal government, as well as state and local governments, have responded by regulating many aspects of drone use.

The Federal Aviation Administration Modernization and Reform Act of 2012 (FAAMRA)[6] directed the Federal Aviation Administration (FAA) to regulate commercial drone use in the United States.[7] FAAMRA prohibits the FAA from regulating drones used *exclusively* for "hobby" or "recreational" purposes.[8] Therefore, the FAA's exclusive focus is commercial, income-generating drone use.[9] In 2016, the FAA promulgated Part 107, an intricate set of regulations governing many aspects of commercial drone operations.[10] For example, Part 107 requires all commercial drone operators to be licensed and requires every drone weighing more than five pounds to be registered with the federal government.[11] It also prohibits drone operation at night, at altitudes exceeding 400 feet, or outside the drone operator's line-of-sight.[12]

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1. *FAA Releases 2016 to 2036 Aerospace Forecast*, FED. AVIATION ADMIN. (Mar. 26, 2016), https://www.faa.gov/news/updates/?newsId=85227 [https://perma.cc/92E8-YD5J].

2. *See generally infra* notes 14–20.

3. *See, e.g.*, Steve Miletich, *Pilot of Drone that Struck Woman at Pride Parade Gets 30 Days in Jail*, SEATTLE TIMES (Feb. 24, 2017, 6:21 PM), https://www.seattletimes.com/seattle-news/crime/pilot-of-drone-that-struck-woman-at-pride-parade-sentenced-to-30-days-in-jail/ (last visited Sept. 15, 2018).

4. *See, e.g.*, Paighten Harkins, *Utah Man Convicted of Using Drone to Spy on People in Their Homes Gets Suspended Jail Sentence*, SALT LAKE TRIB. (Oct. 31, 2017), https://www.sltrib.com/news/2017/10/31/utah-man-convicted-of-using-drone-to-spy-on-people-in-their-homes-gets-suspended-jail-sentence/ [https://perma.cc/MK4P-AZ27].

5. *See, e.g.*, Alan Levin, *Drone's Close Encounter with Jet Spurs Call to Tighten Laws*, BLOOMBERG (Feb. 13, 2018, 4:03 PM), https://www.bloomberg.com/news/articles/2018-02-13/drone-s-close-encounter-with-airliner-spurs-call-to-tighten-laws (last visited Sept. 15, 2018).

6. Pub. L. No. 112-95 (2012).

7. *Id.* § 332(a)(1).

8. *Id.* § 335(a)(1).

9. *See infra* note 48.

10. 14 C.F.R. § 107 (2018).

11. *See generally infra* section I.B.

12. *Id.*

Following the enactment of Part 107, state and local governments also promulgated drone regulations.[13] Some took a relatively narrow approach. In Washington State, for example, pending legislation would outlaw the use of a drone to deliver contraband to a prison.[14] Other states expanded existing criminal statutes to affirmatively outlaw the use of a drone to commit invasion-of-privacy crimes like voyeurism.[15] Still others took a much more restrictive approach, passing ordinances that prohibit drone flight above public or private land without the landowner's permission.[16] Given the inherently mobile nature of drones, a restriction prohibiting flight over any land except that of the drone's owner essentially prohibits drone flight entirely.[17] In *Singer v. City of Newton*,[18] a citizen in a jurisdiction that had done so successfully argued that the ordinance was preempted by Part 107.[19]

This Comment takes up the issue of federal preemption of state and local drone laws. Part I provides a basic summary of drone technology, summarizes the regulations in Part 107, and provides examples of common state and local drone regulations. Part II sketches the constitutional outlines of the preemption doctrine, examines two specific aspects of that doctrine implicated by Part 107, and explores an analogous area of the law—aerial advertising—in which preemption has been more thoroughly litigated. Part III addresses the issue of preemption of state and local drone laws. First, it looks to the FAA's own analysis of the preemption issue, examines the *Singer* court's reasoning, and then draws analogies to aerial advertising cases to determine how future courts will analyze the issue. Ultimately, Part III concludes that restrictive laws like those in *Singer* interfere with Congress's express intent to "integrate" drones into the national airspace, and are therefore preempted by Part 107. This Comment then argues that state laws that only revise existing criminal laws to prohibit the use a drone to commit a crime are not preempted by Part 107. Finally, this Comment concludes by considering those laws that fall somewhere in between those two extremes. For those, it argues that courts may resort to an aspect of preemption doctrine—

13. *See, e.g.*, H.B. 2363, 65th Leg., Reg. Sess. (Wash. 2018).

14. *Id.* § 2(b).

15. MISS. CODE ANN. § 97-29-61(1)(b) (2013) (including drones in a non-exhaustive list of instrumentalities with which a person can commit the felony of voyeurism).

16. *See infra* sections III.B, III.D.1.

17. *Id.*

18. 284 F. Supp. 3d. 125 (D. Mass. 2017).

19. *Id.* at 133.

known as the presumption against preemption—to uphold those laws against preemption challenges.

I. DRONES HAVE PROMPTED A REGULATORY RESPONSE FROM THE FEDERAL GOVERNMENT AS WELL AS FROM STATE AND LOCAL GOVERNMENTS

Drones are becoming increasingly common in the national airspace. This is largely a result of rapid advances in drone technology, which now provides a viable option for many recreational,[20] commercial,[21] and governmental applications.[22] This Part briefly summarizes drone technology and its common uses. Then it details the regulations in Part 107. Finally, it summarizes three categories of state and local drone regulations: those imposing major operational restrictions, those revising criminal statutes to include the use of drones, and those falling somewhere in between.

A. Drones Are Becoming Increasingly Ubiquitous, Which Raises Concerns

"Unmanned aircraft systems" (colloquially and hereinafter "drones") are becoming increasingly ubiquitous for recreational use,[23] as well as in

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20. *See /r/drones*, REDDIT (July 30, 2018), reddit.com/r/drones [https://perma.cc/M93S-C48U] (online community devoted to recreational drone activities, including drone cinematography, first-person-view drone racing, and drone building).

21. *See, e.g.*, Allison I. Fultz, *Flying Ahead of the Pack: Drones in the Agriculture Industry*, 50 MD. B.J. 22 (2017) (noting that, for agricultural applications, drones are equipped with "sensors that measure temperature, ground moisture, or the chemical composition of soils"); *Drone Pipeline Inspections*, LANDPOINT, http://www.landpoint.net/drone-services-for-oil-and-gas-pipeline-inspections/ [https://perma.cc/UY5T-YBT8] (advertising its services as "one of the few FAA authorized UAV service providers to offer inspection services across the nation"); *Drones*, NAT'L ASS'N OF REALTORS, https://www.nar.realtor/drones [https://perma.cc/SS2J-YEB2] (promoting the use of drone photography in real estate marketing and offering guidance regarding the legality of such applications). One would be remiss in failing to mention online mega-retailer Amazon.com's "Prime Air," its bold proposal to create "a delivery system . . . designed to safely get packages to customers in 30 minutes or less using . . . drones." *See Amazon Prime Air*, AMAZON, https://www.amazon.com/Amazon-Prime-Air/b?node=8037720011 [https://perma.cc/YLD6-BVT6].

22. For example, law enforcement agencies utilize drones to photograph the scene of automobile collisions. *See, e.g.*, Steve Kiggins, *State Troopers Testing Drones to Speed up Crash Scene Investigations*, Q13 FOX (Aug. 31, 2017, 6:40 PM), http://q13fox.com/2017/08/31/state-troopers-testing-drones-to-speed-up-crash-scene-investigations/ [https://perma.cc/F6ZL-3EMH]. For those expressing concern about the potential for surveillance-by-drone, see *Surveillance Drones*, ELEC. FRONTIER FOUND., https://www.eff.org/issues/surveillance-drones [https://perma.cc/4PWX-TYHW].

23. *See supra* note 20.

commercial[24] and governmental applications.[25] The FAA, the federal agency tasked with regulating and integrating drones,[26] anticipates that drone sales will increase from roughly 2.5 million units in 2016 to 7 million in 2020.[27] Drones initially became popular as aerial platforms for cameras.[28] For example, one of the world's largest drone manufacturers advertises a 1.6-pound drone capable of capturing high-definition video and still images, which retails for around $1,000.[29] The flight capabilities of that drone worry regulators concerned about accidental or intentional drone misuse. It can achieve speeds of 40 miles per hour at a maximum altitude of 16,404 feet, and can operate from up to 4.3 miles away from its remote operator continuously for up to 27 minutes before needing to recharge its battery.[30] And that is just a consumer-level drone, marketed to hobbyists.[31] Drones marketed for commercial and industrial applications are capable of much more.[32]

Advanced aerial technology, accessible to many in the consumer market, comes with many dangers.[33] For example, a Seattle man was sentenced to a month in jail after he crashed his drone and injured two people—knocking one unconscious—during Seattle's 2012 pride parade.[34] Shortly after that incident, also in Seattle, a drone crashed into the top of the Space Needle.[35]

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24. *See supra* note 21.

25. *See supra* note 22.

26. *See* 49 U.S.C. § 106(a) (2018).

27. FED. AVIATION ADMIN., *supra* note 1.

28. *See, e.g.*, Donald Melanson, *Parrot AR.Drone Hits the US this September for $299, We Go Hands on with Video!*, ENGADGET (June 15, 2010), https://www.engadget.com/2010/06/15/parrot-ar-drone-hits-the-us-this-september-for-299/ [https://perma.cc/KDR4-9EFW].

29. *Mavic Pro Specs*, DJI, https://www.dji.com/mavic/info#specs [https://perma.cc/4AYG-GA6W].

30. *Id.*

31. *Id.*

32. DJI's Agras MG-1S drone is built for agricultural applications. The MG-1S model weighs close to 50 lbs. when loaded with substances for crop-spraying and can fly up to 15 meters per second (around 33.5 m.p.h.). DJI, *supra* note 29. DJI's "professional level" cinematography drone, on the other hand, can achieve speeds of 58 m.p.h. and weighs about 8 pounds. *Inspire 2 Specs*, DJI, https://www.dji.com/inspire-2/info#specs [https://perma.cc/VH46-K9SZ].

33. *See, e.g.*, Miletich, *supra* note 3.

34. *Id.*

35. Jessica Lee, *Watch: Drone Crashes into Space Needle During New Year's Eve Fireworks Setup*, SEATTLE TIMES (Jan. 11, 2017, 9:00 PM), https://www.seattletimes.com/photo-video/video/watch-drone-crashes-into-space-needle-during-new-years-eve-fireworks-setup/ (last visited Sept. 15, 2018).

In 2017, a drone struck a plane on final approach to a Canadian airport.[36] Fortunately, the collision caused only minor damage, but it demonstrated the potential for a catastrophic accident.[37] A recent academic study, conducted in association with the FAA, found that the possibility of drone-on-aircraft collisions poses serious risks.[38] The study concluded that current aircraft construction standards are insufficient to withstand the potential damage from a drone strike.[39]

Intentional drone misuse presents its own risks. Recently, a Utah man was convicted of using his drone to "video people in the[ir] bedrooms and bathrooms."[40] Officials worry that terrorists will one day use a drone to perpetrate a violent attack.[41] Concerns like these have spurred federal, state, and local governments to regulate drones within their jurisdictions.[42]

B. Part 107 Establishes Comprehensive Federal Regulations Regarding Drones and Their Operation

The FAA is the federal agency responsible for regulating United States airspace.[43] Prior to 2011, the FAA experimented with integrating large, fixed-wing drones into the national airspace.[44] Toward the end of the

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36. Christina Caron, *After Drone Hits Plane in Canada, New Fears About Air Safety*, N.Y. TIMES (Oct. 17, 2017), https://www.nytimes.com/2017/10/17/world/canada/canada-drone-plane.html (last visited Sept. 15, 2018).

37. *Id.*

38. *Researchers Release Report on Drone Airborne Collisions*, FED. AVIATION ADMIN. (Nov. 28, 2017), https://www.faa.gov/news/updates/?newsId=89246&omniRss=news_updatesAoc&cid=101_N_U [https://perma.cc/U8AE-Y6FT] (noting that current aircraft manufacturing standards contemplate mid-air collisions with birds).

39. *Id.*

40. Harkins, *supra* note 4.

41. Ben Popper, *How Big a Threat Are Drones on Inauguration Day?*, VERGE (Jan. 20, 2017, 10:27 AM), https://www.theverge.com/2017/1/20/14335836/inauguration-day-drones-threat-bomb-security-detection-prevention [https://perma.cc/L7LP-2NW4] (considering the possibility of drones perpetrating a terrorist attack during the inauguration of Donald Trump); *see also* Robert Windrem, *U.S. Fears New Threat from ISIS Drones*, NBC NEWS (May 24, 2017, 12:16 PM), https://www.nbcnews.com/storyline/isis-terror/u-s-fears-new-threat-isis-drones-n764246 [https://perma.cc/5YR7-FR79] (reporting the U.S. military's concern over an ISIS-released video showing the terrorist group using drones armed with bombs).

42. *See, e.g.*, *Alan Levin, Drone's Close Encounter with Jet Spurs Call to Tighten Laws*, BLOOMBERG (Feb. 13, 2018, 4:03 PM), https://www.bloomberg.com/news/articles/2018-02-13/drone-s-close-encounter-with-airliner-spurs-call-to-tighten-laws (last visited Sept. 15, 2018).

43. *See* 49 U.S.C. § 106(a) (2018).

44. *See, e.g.*, Jason Paur, *FAA Experiments with Integrating Drones in Civil Airspace*, WIRED (Jun. 14, 2010, 8:00 AM), https://www.wired.com/2010/06/faa-uav-civil-airspace/ [https://perma.cc/J9H4-8SPE]. At that time, the discussion around "drones" centered on unmanned warplanes in the Middle East. *See, e.g.*, David E. Anderson, *Drones and the Ethics of War*, PBS (May 14, 2010),

decade, smaller, consumer-oriented drones—more closely resembling those that are common today—became commercially available.[45] As a result, Congress acted to integrate this new class of drone into the national airspace.[46] FAAMRA directed the FAA to "develop[ ] a comprehensive plan to safely accelerate the integration of civil unmanned aircraft systems into the national airspace system."[47] FAAMRA directed the FAA to regulate only the *commercial* use of drones.[48] It specifically prohibited the FAA from regulating "model aircraft" used entirely for "hobby or recreational" purposes.[49]

In early 2015, the FAA published a Notice of Proposed Rulemaking for the "Operation and Certification of Small Unmanned Aircraft Systems."[50] In mid-2016, the agency promulgated the final rule, codified at 14 C.F.R. 107, now known as "Part 107."[51]

Part 107's most significant restrictions on the operation of drones include the following: (1) no person may operate a drone in a "careless or reckless manner so as to endanger the life or property of another;"[52] (2) no person may operate a drone at night,[53] or during periods of civil twilight,

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http://www.pbs.org/wnet/religionandethics/2010/05/14/drones-and-the-ethics-of-war/6290/ [https://perma.cc/4ERP-EQVZ].

45. *See* Carrie Kahn, *It's a Bird! It's a Plane! It's a Drone!*, NPR (Mar. 14, 2011, 3:55 PM), https://www.npr.org/2011/03/14/134533552/its-a-bird-its-a-plane-its-a-drone (last visited Sept. 15, 2018).

46. FAA Modernization and Reform Act of 2012, Pub. L. No. 112-95 § 332(a)(1) (2012).

47. *Id.*

48. *Id.* § 336(a). Accordingly, the scope of this Comment is limited to those drone operations that generate income for their operator.

49. *Id.* The FAA interprets a hobby as a "pursuit outside one's regular occupation engaged in especially for relaxation" and recreation as "refreshment of strength and spirits after work; a means of refreshment or diversion." 79 Fed. Reg. 36,171, 36,174 (June 25, 2014). The "hobbyist exception" applies only if "the [drone] is flown strictly for hobby or recreational use," weighs less than fifty-five pounds, does not interfere with manned flight, stays within the line-of-sight of the operator, and, when operated within five miles of an airport, the operator notifies the control tower there. *See* Pub. L. No. 112-95 § 336 (2012). The FAA maintains that any commercial element to drone operation disqualifies one from flying under the hobbyist exception, even if the operation is merely "in furtherance of a business, or incidental to a person's business." 79 Fed. Reg. at 36,174 (emphasis added). Therefore, while "[t]aking photographs with a model aircraft for personal use" or "[u]sing a model aircraft to move a box from point to point without any kind of compensation" would qualify as hobby or recreational uses, "[d]etermining whether crops need to be watered that are grown as part of commercial farming operation" or delivering a box for a fee would qualify as commercial applications triggering the restrictions of Part 107. *Id.*

50. 80 Fed. Reg. 9,943, 9,543–90 (proposed Feb. 23, 2015) (codified at 14 C.F.R. § 107 (2018)).

51. 14 C.F.R. § 107.

52. *Id.* § 107.23.

53. *Id.* § 107.29(a).

unless the drone is equipped with anti-collision lighting;[54] (3) no person may use a drone to carry hazardous materials;[55] (4) no person may operate a drone "so close to another aircraft as to create a collision hazard"[56] or fail to yield the right of way to other aircraft[57]; (5) no person may operate a drone over another human being unless that person is involved in the drone operation or under cover[58]; (6) no person may operate a drone at speeds greater than 100 miles per hour[59] or higher than 400 feet above the ground level, unless the drone is operated from a building and flies no higher than 400 feet above the structure's highest point[60]; and (7) no person may operate a drone outside of the drone operator or a visual observer's unaided line-of-sight.[61] Other restrictions include prohibiting operation of a drone from a moving vehicle,[62] prohibiting one person from operating or observing more than one drone at a time,[63] and prohibiting people from operating a drone under the influence of alcohol or drugs.[64]

Part 107 also establishes requirements for drone operators themselves. A drone operator must (1) be at least sixteen years old; (2) be able to speak, write, and understand English; (3) not have a medical condition that would impede their ability to safely operate the drone; and (4) pass an FAA-administered knowledge test.[65] The knowledge test covers a wide variety of topics. It includes not only those regulations and flight

54. *Id.* § 107.29(b).

55. *Id.* § 107.36. Hazardous materials are defined and regulated elsewhere in the FAA regulations. *See id.* § 171.8 (2018) (providing hazardous materials definitions); *id.* § 172.101 (providing hazardous material carriage regulations).

56. *Id.* § 107.37(b).

57. *Id.* §107.37(a).

58. *Id.* § 107.39.

59. *Id.* § 107.51.

60. *Id.*

61. *Id.* § 107.31(a). The operator or visual observer's vision must be "unaided by any device other than corrective lenses," liberating those who wish to fly a drone but are shackled to the use of eyeglasses or contact lenses. *Id.*

62. *Id.* § 107.25.

63. *Id.* § 107.35.

64. *Id.* § 107.27 (citing *id.* §§ 91.17, 91.19). By simply incorporating those regulations applicable to crewmembers of commercial aircraft, this restriction is perhaps more restrictive than it appears. While the provisions bar the operation of a drone "[w]hile under the influence of alcohol," *id.* § 91.17(a)(2), or "[w]hile using any drug that affects the person's faculties in any way contrary to safety," *id.* § 91.17(a)(3), it also prohibits a person from operating a drone "[w]ithin 8 hours after the consumption of any alcoholic beverage." *Id.* § 91.17(a)(1).

65. *Id.* § 107.61(d)(1). Notably, if a person is already a licensed airplane pilot, the person can bypass the knowledge test requirement by "complet[ing] an initial training course covering the areas of knowledge" focused on drone-specific regulations and operating constraints. *Id.* § 107.61(d)(2).

restrictions specific to drones,[66] but also topics like "aviation weather sources,"[67] "radio communication procedures,"[68] and the "physiological effects of drugs and alcohol."[69]

Though Part 107's regulations are comprehensive, they present a lower barrier to entry than other fields of aviation, contributing to drones' increasing place in the national airspace.[70] First, the cost of a drone—even a sophisticated, industrial model[71]—is far less than a manned aircraft.[72] Second, the FAA estimates that the total cost associated with drone operator certification is $150, which "is less than the cost of any other airman certification that allows non-recreational operations."[73] Notably, the FAA may waive a number of Part 107's restrictions and requirements if it finds that the proposed operation can be conducted safely.[74]

Part 107 is a significant body of restrictions and requirements for the commercial operation of drones.[75] The regulations are silent, however, on the role of state and local governments in restricting the use of drones within their borders.[76]

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66. *Id.* § 107.73(a)(1)–(2).

67. *Id.* § 107.73(a)(3).

68. *Id.* § 107.73(a)(7).

69. *Id.* § 107.73(a)(9).

70. *See* Final Rule, 81 Fed. Reg. 42,067 (June 28, 2016).

71. *See, e.g.*, *Inspire 2*, DJI, https://store.dji.com/product/inspire-2?site=brandsite&from=buy_now_bar [https://perma.cc/7NB4-SM29] ($2,999 base price for professional-level cinematography drone).

72. *See, e.g.*, *R22 Beta II Price List*, ROBINSON HELICOPTER CO. (Jan. 15, 2018), https://robinsonheli.com/wp-content/uploads/2016/03/r22_pricelist.pdf [https://perma.cc/8Q2U-N92A] ($297,000 suggested price for small, two-person helicopter with standard equipment); *2017 Cessna 182 Skylane*, PLANE & PILOT (Jan. 31, 2017), https://www.planeandpilotmag.com/article/2017-cessna-182-skylane/#.WykgjGbMwWo [https://perma.cc/N72Q-UJ32] ($470,000 base price for four-person single-engine airplane).

73. Operation and Certification of Small Unmanned Aircraft Systems, 81 Fed. Reg. 42,063, 42,067 (June 28, 2016) (codified in various sections of 14 C.F.R.).

74. 14 C.F.R. § 107.200. Those sections subject to waiver include the requirement for daylight operations, *id.* § 107.29; the requirements for the use of a visual observer, *id.* § 107.33; the operation of more than one drone, *id.* § 107.35; the requirement that a drone yield the right of way, *id.* § 107.37(a); the restriction on operations over people, *id.* § 107.39; operations in certain protected airspace, *id.* § 107.41; speed and altitude limits, *id.* § 107.51; and both the restrictions for operation from a moving vehicle, *id.* § 107.25; and maintaining visual line-of-line sight, *id.* § 107.31, but in neither case will a waiver "be issued to allow the carriage of property of another by aircraft for compensation or hire." *Id.* § 107.205(a).

75. *See generally id.* § 107.

76. *Id.*

C. *State and Local Governments Have Responded to Concerns About Drones with a Variety of Laws*

State and local governments regulate drones in a wide variety of ways.[77] This Comment organizes drone regulations into three categories: (1) those that impose significant operational restrictions, (2) those that merely expand existing criminal laws to include drones, and (3) those that fall somewhere in between. This Comment later concludes that Category 1 laws will be preempted, Category 2 laws will not, and that the outcome for Category 3 laws is uncertain.

1. *Some State and Local Laws Regulate Drone Operations Similarly to Part 107*

In 2015, the City of Chicago substantially restricted legal drone operations within city limits.[78] The city council, citing safety concerns posed by drones,[79] restricted the use of drones to "hobby or recreational purposes."[80] The ordinance defines those terms in the same way as the FAA.[81] The ordinance prohibits flight over "any person who is not involved in"[82] the drone's operation and "over property that the operator does not own."[83] Though it was enacted prior to Part 107, the ordinance incorporates many of the same restrictions, including a prohibition on flight over 400 feet,[84] at night,[85] and outside the operator's line-of-sight.[86] One who violates the ordinance is subject to fines between $500 and

77. According to National Conference of State Legislatures, "[a]t least 38 states considered legislation related to UAS in the 2017 legislative session" alone. *Current Unmanned Aircraft State Law Landscape,* NAT'L CONFERENCE OF STATE LEGISLATURES (Feb. 1, 2018), http://www.ncsl.org/research/transportation/current-unmanned-aircraft-state-law-landscape.aspx [https://perma.cc/F2AM-MANY].

78. CHI., ILL., MUN. CODE §§ 9-121; 10-36-380, 400 (amended July 29, 2015) (provided in CITY OF CHI., OFF. OF THE CITY CLERK: LEGIS. DETAILS 15 (Nov. 18, 2015), https://chicago.legistar.com/LegislationDetail.aspx?ID=2393877&GUID=8BC7890A-DBA7-4640-B475-7B46DEDBBE68&Options=ID%7CText%7C&Search=drone&FullText=1 [https://perma.cc/4M7P-RJQM]).

79. The City of Chicago specifically cited "'flyaways,' which occur when drones go rogue and fly off from their users," a video showing "a handgun-firing drone," a drone crashing into a St. Louis high-rise building, and "dozens of cases" of airplane pilots reporting close-calls with drones. *Id.*

80. *Id.* § 10-36-400(b)(1).

81. *Id.* § 10-36-400(a).

82. *Id.* § 10-36-400(b)(2).

83. *Id.* § 10-36-400(b)(3).

84. *Id.* § 10-36-400 (b)(4).

85. *Id.* § 10-36-400 (b)(8).

86. *Id.* § 10-36-400 (b)(5).

$5,000 and may be imprisoned for up to 180 days.[87] Each day a violation occurs constitutes a distinct violation of the ordinance.[88]

Chicago appears to have anticipated a preemption challenge when the city council drafted the ordinance. The ordinance provides guidance for its construction.[89] The most important provision states that the ordinance should not be interpreted to interfere with one's right to operate a drone "pursuant to Section 333 of [FAAMRA] or a certificate of waiver . . . *or other [FAA] grant of authority for a specific flight operation* . . . ."[90] Section 333—which preceded Part 107—directed the FAA to determine, on a case-by-case basis, if certain drone operations could be safely conducted in the national airspace before a final rule was implemented.[91] The FAA used section 333 authority to grant a few thousand waivers.[92] Part 107, however, now provides a comprehensive framework of drone regulations, and section 333 waivers are no longer granted.[93] In effect, then, the Chicago ordinance's provision constitutes an exception for any drone operation pursuant to an "[FAA] grant of authority for a specific flight operation."[94] An argument could be made that Part 107 *is* just such a grant of authority.

There are two problems with construing Part 107 as an " [FAA] grant of authority for a specific flight operation."[95] First, nothing in Part 107

87. *Id.* § 10-36-400(d).

88. *Id.*

89. *Id.* § 10-36-400(c).

90. *Id.* § 10-36-400(c)(1) (emphasis added).

91. Pub. L. No. 112-95 § 333(a) (Feb. 14, 2012). Section 333 exemptions granted by the FAA are available on the FAA's webpage. For example, Amazon.com petitioned for, and received, permission to test its "Prime Air" program under a Section 333 exemption. The waiver stated that "all operations shall be conducted in accordance with" a "Certificate of Waiver or Authorization (COA)" that was attached to Amazon.com's application. Amazon.com, FAA Docket No. FAA-2014-0474, Exemption No. 11290 (Apr. 8, 2015), https://consumermediallc.files.wordpress.com/2015/04/amazon_com_11290.pdf [https://perma.cc/DZ7N-UQZ5] (Section 333 exemption to Amazon.com). While the terms of that COA could not be located, several other drone-related COAs granted by the FAA are available. For example, the Seattle Police Department was granted a COA in 2011. Seattle Police Department, FAA Certificate of Waiver or Authorization, Cert. No. 2010-WSA-41 (Mar. 31, 2011) [hereinafter *Seattle Police Department Certificate of Authorization*], https://www.eff.org/files/filenode/pra_seattle_police_drones_27_jul_12.pdf [https://perma.cc/LQ2U-6FZG]. The COA allowed the Seattle Police Department to operate a Draganflyer X6 drone up to 400 feet in three ultra-specific locations within a radius (between one-quarter and one-half nautical mile) from exact geographic coordinates. *Id.* The COA expired in April 2012. *Id.*

92. *Section 333*, FED. AVIATION ADMIN. (Feb. 10, 2017, 3:32 PM), https://www.faa.gov/uas/beyond_the_basics/section_333/ [https://perma.cc/8MFD-97UW].

93. *Id.* ("Petitions Granted" counter last updated Sept. 28, 2016).

94. CHI., ILL. MUN. CODE § 10-36-400(c)(1) (2018).

95. *Id.*

provides a specific grant of authority, i.e., affirmative authorization, to operate a drone.[96] Rather, it details *how* one who wants to operate a drone for commercial purposes must do so.[97] When the exception to the Chicago ordinance was written, it appears that the drafters contemplated case-specific waivers from the FAA, such as under Section 333, for which the ordinance's language is more appropriate.[98] For example, if a Section 333 waiver designated specifically authorized flight routes, it could be construed as an affirmative grant of authority.[99] On the other hand, Part 107 does not appear to give a "grant of authority" for any specific flight operation.[100] For example, Part 107 does not expressly give a drone operator permission to fly over land without the owner's permission; rather, it dictates what someone flying—over any land—must do and refrain from doing.

Consider a realtor cited under the Chicago ordinance for taking videos of a home in the city. Assume further that the realtor was licensed under, and flying in compliance with, Part 107. The realtor would be guilty under Chicago's ordinance of operating her drone over land without the owner's permission if, for example, her flight crossed a neighboring yard or a public street.[101] A court would most likely find that Part 107 does not expressly give the realtor permission to do so—it merely requires that she keep the drone within line-of-sight, under 400 feet, etc.[102] Therefore, the Chicago ordinance's exception would not apply,[103] and the flight would be illegal.[104]

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96. *See generally* 14 C.F.R. § 107 (2018) (providing regulations for those choosing to operate drones, but nowhere affirmatively granting any person the right to do so).

97. *Id.* (providing regulations for, *inter alia*, speed and altitude restrictions, drone regulation, and operator certification).

98. CHI., ILL. MUN. CODE § 10-36-400(c)(1).

99. *See, e.g.*, Seattle Police Department Certificate of Authorization, *supra* note 91. The COA authorized ultra-precise areas in which the Seattle Police Department could operate its drone. At least one of those locations (one-quarter mile radius from Warren G. Magnuson Park, 47° 40' 45.52" N, 122° 15' 02.57" W) authorized flight over private property. *Id.*

100. *See* 14 C.F.R. § 107 (establishing regulatory parameters for those *choosing* to operate drones, but not affirmatively *granting* a person the right to do so).

101. *See* CHI., ILL. MUN. CODE § 10-36-400(b)(3) (2018) (prohibiting flight over public or private property without the property-owner's permission).

102. *See* 14 C.F.R. § 107 (only providing regulations for persons operating drones).

103. *See* CHI., ILL. MUN. CODE § 10-36-400(c)(1) (creating an exception for operations conducted "pursuant to Section 333 of [FAAMRA] or a certificate of waiver . . . or [some] other [FAA] grant of authority for a specific flight operation(s)").

104. *See id.* § 10-36-400(b)(3).

The second problem is that the exception's language refers to an FAA grant of authority "*for a specific flight operation*."[105] Like "FAA *grant* of authority," that language was appropriate when the FAA granted case-by-case waivers that authorized *specific* operations.[106] Part 107, however, does not identify specifically permitted operations.[107] It provides general rules for all operations: Altitude and line-of-sight requirements are in force no matter where the operations occur.[108] The exception might be construed to apply in situations where the FAA waives portions of Part 107—in that case, it could be said that the FAA is authorizing a specific operation outside Part 107's normal rules.[109] For example, if the hypothetical Chicago realtor received an FAA waiver to operate a drone to record homes at night, which the Chicago ordinance prohibits,[110] she might be able to argue that the FAA waiver constitutes a grant of authority for a "specific flight operation."[111]

For those two reasons, the exception to Chicago's ordinance will not apply to cases in which a drone operator simply complies with Part 107. The most natural reading of that exception contemplates specific, case-by-case authorizations, such as were authorized under Section 333. As a result, Chicago's ordinance essentially functions to ban all drone operations within city limits, whether or not done in compliance with Part 107's strictures.

2. *Other State and Local Laws Clarify Existing Criminal Statutes to Include Drone Use*

In contrast to Chicago's effective ban on drone operations, some state and local laws expand existing criminal statutes to expressly prohibit conduct with a drone that would otherwise be illegal. For example, a 2017 Michigan law creates a variety of drone-specific crimes.[112] For instance, no person in Michigan required to register as a sex offender may "operate a[ ] [drone] to knowingly and intentionally follow, contact, or capture

105. *Id.* (emphasis added).

106. *See, e.g.*, *Seattle Police Department Certificate of Authorization*, *supra* note 91 (establishing specific geographic areas in which drone flight was permitted).

107. *See* 14 C.F.R. § 107 (providing regulations for general, as opposed to specific, drone operations).

108. *Id.*

109. *See* CHI., ILL. MUN. CODE § 10-36-400(c)(1) (creating an exception for operations conducted "pursuant to . . . other [FAA] grant of authority for a specific flight operation").

110. *Id.* § 10-36-400(b)(8).

111. *Id.* § 10-36-400(c)(1).

112. MICH. COMP. LAWS ANN. § 259.322 (West 2017).

images of another individual, if the individual's sentence in a criminal case would prohibit the individual from [doing so]."[113] Michigan residents are also prohibited from operating a drone within a proximity of another person that, if the resident personally came that close, would violate a restraining order.[114] A bill pending in the Washington State legislature amends existing criminal statutes to prohibit the use of a drone to deliver a deadly weapon or other contraband to a correctional facility.[115] The penalty for doing so is the same as if the person personally delivered the contraband.[116]

3. *Other State and Local Laws Fall Somewhere in Between the Most and Least Restrictive Ordinances*

Many state and local laws fall somewhere in between restrictive laws like Chicago's ordinance and laws that amend existing criminal statutes to bring drones within their ambit. These "middle-ground" laws create new binding legal rules for drone operators' conduct, but are not so restrictive as to effectively ban drones entirely. Many of the state and local laws in this category relate to areas of law where state and local governments have historically been the dominant regulator, such as "land use, zoning, privacy, trespass, and law enforcement operations."[117] A number of states, for example, have prohibited the use of a drone to hunt or fish.[118] These laws clearly prevent *some* drone use in the national airspace that would occur otherwise, but leave plenty of room for other drone operation.

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113. *Id.* § 259.322(4).

114. *Id.* § 259.322(2).

115. H.B. 2363, 65th Leg., Reg. Sess. (Wash. 2018). The bill has passed the Washington House of Representatives and is, as of this writing, pending in committee in the state Senate.

116. *Id.*

117. OFFICE OF THE CHIEF COUNSEL, FED. AVIATION ADMIN., STATE AND LOCAL REGULATION OF UNMANNED AIRCRAFT SYSTEMS (UAS) FACT SHEET 3 (Dec. 17, 2015), https://www.faa.gov/uas/resources/uas_regulations_policy/media/uas_fact_sheet_final.pdf [https://perma.cc/BB8E-4CCG].

118. *See, e.g.*, MICH. COMP. LAWS ANN. § 324.40111(c)(2) (West 2017) ("An individual shall not take game or fish using an unmanned vehicle or unmanned device . . . ."); *see also* IND. CODE ANN. § 14-22-6-16(c) (2018) ("[A] person may not knowingly use an unmanned aerial vehicle . . . to search for, scout, locate, or detect a wild animal to which the hunting season applies as an aid to take the wild animal."); N.C. GEN. STAT ANN. § 14-401.24 (West 2018) ("It shall be a Class 1 misdemeanor for any person to fish or to hunt using an unmanned aircraft system.").

D. The FAA Articulated a Non-Binding Position That Part 107 Preempts State and Local Operational Drone Restrictions

In promulgating Part 107, the FAA noted that it had received numerous inquiries and comments on the topic of preemption.[119] However, it was "not persuaded that including a preemption provision in the final rule [was] warranted at [that] time" because the "preemption issues involving small [drones] necessitate a case-specific analysis that is not appropriate in a rule of general applicability."[120] Prior to issuing the final rule, the FAA issued a brief fact sheet "to serve as a guide for State and local governments as they respond to the increased use of [drones] in the national airspace."[121] The FAA *did not* state its position that certain types of state or local regulations were preempted by its regulations, but rather urged "consultation with the FAA" prior to state or local governments enacting regulations affecting drones.[122] Specifically, it urged consultation when a state or local government attempted to enact "restrictions on flight altitude; flight paths; operational bans; [or] any regulation of the navigable airspace."[123] On the other hand, the FAA noted, those "[l]aws traditionally related to State and local police power[s]—including land use, zoning, privacy, trespass, and law enforcement operations—generally are not subject to Federal regulation" and therefore did not urge the same consultation.[124] In explaining its analysis, the FAA stated that:

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

119. Operation and Certification of Small Unmanned Aircraft Systems, 81 Fed. Reg. 42,063, 42,194 (June 28, 2016) (codified in various sections of 14 C.F.R.).

120. *Id.*

121. *Id. See generally* OFFICE OF THE CHIEF COUNSEL, FED. AVIATION ADMIN., *supra* note 117.

122. OFFICE OF THE CHIEF COUNSEL, FED. AVIATION ADMIN., *supra* note 117, at 3.

123. *Id.*

124. *Id.* (citation omitted).

> inconsistent state and local restrictions is essential to the maintenance of a safe and sound air transportation system.[125]

While the issue of deference to the fact sheet's analysis is beyond the scope of this Comment, a cursory analysis is necessary to understanding its effect on future preemption litigation. The fact sheet was not promulgated through a process of notice and comment rulemaking or formal agency adjudication.[126] Consequently, it would not receive *Chevron* deference as an interpretation of FAAMRA.[127] Nor would it benefit from *Auer* deference[128] as an interpretation of Part 107, because it was promulgated prior to Part 107.[129] Instead, the fact sheet would be entitled only to *Skidmore* deference.[130] As a result, a court would defer to the agency's position in the fact sheet only to the extent that its reasoning is persuasive.[131]

Courts defer to an agency's analysis of the way in which state law conflicts with the agency's regulations.[132] But courts do not simply defer to the agency's conclusion on an issue of preemption.[133] Therefore, if a litigant cited the fact sheet as evidence of the administration's position on the preemption issue, a court would defer to the agency's understanding of the relationship between Part 107 and state or local drone laws, but would perform its own preemption analysis in light of the "patchwork" problem.[134]

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125. *Id.* at 2 (citations omitted).

126. Operation and Certification of Small Unmanned Aircraft Systems, 81 Fed. Reg. 42,064, 42,194 (June 28, 2016) (codified in various sections of 14 C.F.R.).

127. *See generally* Chevron, U.S.A., Inc. v. Nat. Res. Def. Council, Inc., 467 U.S. 837 (1984). An agency's interpretation of a statute receives *Chevron* deference if (1) Congress has not spoken clearly to resolve the question of interpretation and (2) the agency's interpretation is reasonable. *Id.* at 842–44.

128. *See* Auer v. Robins, 519 U.S. 452 (1997). Generally, an agency's interpretation of its own regulation receives significant deference. *Id.* at 462–63. Scholars have criticized the evolution of the *Auer* doctrine, and some believe the Supreme Court is poised to significantly curtail it. *See, e.g.*, Sanne Knudsen & Amy J. Wildermuth, *Unearthing the Lost History of Seminole Rock*, 65 EMORY L.J. 67 (2015).

129. *See* Auer, 519 U.S. at 461. Auer deference applies to an interpretation of an agency's existing regulation—clearly the FAA could not have been interpreting Part 107 before it existed, so the Fact Sheet will not receive Auer deference. *Id.*

130. Skidmore v. Swift & Co., 323 U.S. 134 (1944). If an agency's interpretation—of a statute or a regulation—does not receive *Chevron* or *Auer* deference, it receives *Skidmore* deference. The extent to which a court will defer to the agency's interpretation at the *Skidmore* level varies considerably, depending on factors including the thoroughness evident in the agency's analysis and "those factors which give [ ] [an agency's statement] power to persuade, [even] if lacking power to [legally] control." *Id.* at 140.

131. *Id.*

132. *See* Wyeth v. Levine, 555 U.S. 555, 576 (2009).

133. *Id.*

134. *Id.*

The fact sheet makes it clear that the FAA considers Part 107 to preempt many state and local laws, namely those relating to operational restrictions.[135] On the other hand, with reference to state and local laws in areas such as privacy, trespass, and law enforcement operations, the FAA seems willing to permit state and local governments a say in the matter.[136]

E. In Singer v. City of Newton*, a Federal District Court Struck Down a Restrictive Drone Law as Preempted*

In late 2017, a federal district court in Massachusetts held that a municipality's attempt to regulate the use of drones within its jurisdiction was preempted by Part 107.[137] Newton, Massachusetts enacted an ordinance that, among other things, (1) required drone operators to register their drones; (2) prohibited drone operators from flying at altitudes under 400 feet above private property without the permission of the land-owner; (3) prohibited drone operators from flying their drones over Newton city property without prior permission from the city and; (4) prevented drone operators from flying their drones "beyond the visual line of sight of the operator."[138] The plaintiff filed suit for declaratory and injunctive relief, arguing that Part 107 preempted the ordinances.[139]

In *Singer v. City of Newton*,[140] the district court granted summary judgment for the plaintiff, ruling that the City of Newton's ordinance was preempted by Part 107. The court began its analysis with a nod toward the presumption against preemption, discussed more fully later in this Comment. The *Newton* court held that "[u]nder our federalist system . . . a court must be wary of invalidating laws in areas traditionally left to the states unless the court is entirely convinced that Congress intended to override state regulation."[141] However, the court wrote, "if a state government attempts to regulate an area traditionally occupied by the federal government, a court need not seek to avoid preemption."[142]

Next, the court rejected the plaintiff's argument that Part 107 preempted the entire field of drone law, citing the FAA's fact sheet

135. OFFICE OF THE CHIEF COUNSEL, FED. AVIATION ADMIN., *supra* note 117, at 3.

136. *Id.*

137. Singer v. City of Newton, 284 F. Supp. 3d. 125 (D. Mass. 2017).

138. *Id.* at 131–32 (quoting NEWTON, MASS., REV. ORDINANCES § 20-64(c)(1)(b) (2012)).

139. *Id.* at 127.

140. *Id.*

141. *Id.* at 128–29 (citing Gregory v. Ashcroft, 501 U.S. 452, 460 (1991)).

142. *Id.* at 129 (citing United States v. Locke, 529 U.S. 89, 108 (2000)).

discussed earlier.[143] The FAA's recognition that some areas are traditionally not subject to federal regulation was sufficient for the court to conclude that neither Congress nor the FAA intended to displace *all* state or local regulations relating to drone operations.[144] The court reasoned that, if the FAA expressly recognizes the existence of federal law, it must not have intended to displace it.[145] If it had, the FAA would have said so.[146]

Nonetheless, the court concluded that the challenged regulations conflicted with the FAA's regulations, and were therefore preempted. As to the registration requirement, the court deferred to the FAA's reasoning that it should be "the exclusive means for registering" drones and that, "'no state or local government may impose an additional registration requirement.'"[147] Next, the court found that the prohibition against operating a drone over public *or* private land without the land owner's permission worked to create an "essential ban on drone use" in the city.[148] Citing both the FAA's regulations and the statement of congressional intent to "'safely accelerate the integration of [drones] into the national airspace system,'"[149] the court held that such a ban "thwarts not only the FAA's objectives, but also those of Congress. "[150]

The holding of *Singer* is important for many reasons. One reason is the level of generality at which the court embraced Congress's intent to integrate drones into the national airspace. A blanket ban on all flight within city limits, the court said, was clearly in conflict with that intent.[151] However, the court did not constrain its holding to such severe restrictions.[152] As a result, it is not at all clear what level of restriction

143. *Id.* at 130.

144. *Id.*

145. *Id.* In this respect, the *Singer* court's reasoning was markedly similar to the reasoning in *Skysign Intern, Inc., v. City & Cty. of Honolulu*, 276 F.3d 1109, 1117 (9th Cir. 2002) (holding that where the federal government recognizes the existence of federal law, it would not have intended to preempt it without clearly indicating so).

146. *Singer*, 284 F. Supp. 3d at 130.

147. *Id.* at 131 (quoting OFFICE OF THE CHIEF COUNSEL, FED. AVIATION ADMIN., *supra* note 117, at 2).

148. *Id.*

149. *Id.* at 129 (quoting FAA Modernization and Reform Act of 2012, Pub. L. No. 112-95 § 332, 126 Stat. 11, 73 (2012)).

150. *Id.* at 133.

151. *Id.*

152. *Id.* (not limiting its holding to those state or local regulations which would ban drones entirely).

would rise to a level of conflict with Congress's intent sufficient to render them preempted—all that is clear is that this ordinance did.

Singer represents only a single district court's opinion on the matter, but it is worth noting that its reasoning—namely, that Congress wishes to integrate drones into the national airspace, and a state or local government's attempt to exclude them from its airspace conflicts with that purpose—could be applied even where less severe restrictions impede a person's ability to operate a drone commercially.

II. THE DOCTRINE OF PREEMPTION PRESENTS A BARRIER TO STATE AND LOCAL ATTEMPTS TO REGULATE DRONES

Article VI, Section II of the United States Constitution provides that the laws of the federal government "shall be the supreme Law of the Land . . . [any] Laws of any State to the Contrary notwithstanding."[153] That provision, known as the "Supremacy Clause,"[154] dictates that when a federal law is at odds with a state law, the federal law supersedes its state counterpart.[155] When a state law conflicts with a federal law, the federal law is said to "preempt" the state law.[156] Borne of the federalist system, the doctrine of preemption is based on "the principle that both the National and State Governments have elements of sovereignty the other is bound to respect."[157] The frequency with which conflicts arise has led one commentator to denominate preemption as "the most frequently used doctrine of constitutional law in practice."[158] Indeed, the way the Constitution distributes legislative power between the states and the national government means that almost every federal law touches upon an area in which the states also have the authority to legislate.[159]

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153. U.S. CONST. art. VI, § 2.

154. Arizona v. United States, 567 U.S. 387, 399 (2012).

155. Gibbons v. Ogden, 22 U.S. (9 Wheat.) 1, 211 (1824) ("In every such case [of conflict between federal and state law], the act of Congress . . . is supreme; and the law of the State, though enacted in the exercise of powers not controverted, must yield to it.").

156. *Arizona*, 567 U.S. at 399 ("Congress has the power to preempt state law.").

157. *Id.* at 398 (citations omitted).

158. Stephen A. Gardbaum, *The Nature of Preemption*, 79 CORNELL L. REV. 767, 768 (1994).

159. The U.S. Constitution creates a legislature with enumerated, and therefore finite and circumscribed, powers. *See* Caleb Nelson, *Preemption*, 86 VA. L. REV. 225, 225 (2000). Professor Nelson writes that, except for areas of law that the Constitution reserves for the national government, such as the power to coin money and enter into treaties, "the states retain concurrent authority over most of the areas in which the federal government can act." *Id.*

Preemption can occur in several ways. Congress can expressly state that a federal law preempts any state or local law on the same topic, known as express preemption.[160] In the absence of express preemption, federal law may still "impliedly" preempt state or local laws.[161] Implied preemption takes two forms: (1) implied field preemption, where federal law is so prolific that there is no room for state or local regulation,[162] and (2) implied conflict preemption, where the purpose or effect of federal law clashes with state or local law.[163] After surveying two facets of preemption doctrine applicable to all three forms, this Part examines each in turn.

A. Agency Regulations Can Preempt State and Local Law

Part 107 is a body of agency regulations, not a statute enacted by Congress. Nonetheless, where the provision at issue in a preemption challenge is a regulation promulgated by a federal agency *pursuant to* authority granted by Congress, its preemptive effect is no less than if it were enacted directly by Congress.[164] An agency does not need specific statutory authority to preempt state law if that preemptive effect is consistent with the agency's statutory mandate.[165] In a preemption challenge to a federal regulation, courts will inquire whether the regulation exceeds, or is outside the scope of, the agency's statutory authority.[166] Accordingly, when a court is asked to resolve the preemptive effect of a regulation, it will first ask whether the regulation preempts state law according to traditional preemption doctrine. If it does, the court will then ask whether that preemptive effect is contrary to the agency's statutory mandate. If it is not, the regulation has preemptive effect.[167]

In *Geier v. American Honda Co.*,[168] a regulation promulgated by the U.S. Department of Transportation (DOT) required car manufacturers to install passive restraint devices in some, but not all, new cars.[169] Manufacturers could choose between a variety of passive restraint

160. *Id.* at 226.
161. *Id.* at 272–78.
162. *Id.*
163. *Id.*
164. *See* Fid. Fed. Sav. & Loan Ass'n v. de la Cuesta, 458 U.S. 141, 153–54 (1982).
165. *Id.*
166. *Id.* at 154.
167. *Id.*
168. 529 U.S. 861 (2000).
169. *Id.* at 864–65.

devices, including automatic seatbelts and airbags.[170] Over time, the DOT planned to gradually phase-in the restraint device requirements, eventually requiring them in all new vehicles. The plaintiff in *Geier* was injured while driving a car unequipped with airbags, and sued under a state tort theory that the car's manufacturer was negligent not to install an airbag.[171]

The Supreme Court held that the DOT's regulation conflicted with state "no airbag" torts, and therefore that any state requirement that manufacturers install an airbag was preempted.[172] The Court found that Congress, acting through the DOT, did not intend to require airbags in *all* new vehicles, and had a variety of reasons for instead desiring a gradual phase-in of the devices.[173] Therefore, while both the federal and state law stood in pursuit of the same objective—making automobiles safer—the state law conflicted with the DOT's decision regarding how best to achieve that goal, and was therefore preempted.

The Court also credited the DOT's assertion that state law would pose an obstacle to the achievement of the regulation's objectives.[174] It held that "[t]he agency is likely to have a thorough understanding of its own regulation and its objectives and is 'uniquely qualified' to comprehend the likely impact of state requirements."[175] The Court also rejected an argument that the agency should have included an express preemption clause, holding that an agency "ordinarily would not intend to permit a significant conflict" between its regulations and state law.[176]

Courts defer to an agency's understanding of the likely conflicts between its regulations and state or local law, but are not bound to accept an agency's position on the *legal* question of preemption.[177] In *Wyeth v. Levine*,[178] the Court determined the preemptive effect of FDA drug label approval on state tort actions alleging a failure to properly warn of a medication's dangers.[179] The defendant drug manufacturer argued that the

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170. *Id.*

171. *Id.* at 865.

172. *Id.* at 874.

173. *Id.* at 877–78. The Court considered Congressional objectives related to the cost of airbags, certain safety risks associated with airbag deployment, and public buy-in. *Id.*

174. *Id.* at 883 (citing Medtronic, Inc. v. Lohr, 518 U.S. 470, 496 (1996) (Breyer, J., concurring in part and concurring in judgment)).

175. *Id.*

176. *Id.* at 884–85.

177. Wyeth v. Levine, 555 U.S. 555, 573–80 (2009).

178. *Id.*

179. *Id.* at 563–68.

FDA's approval of the drug's label preempted state tort actions. For support, it cited the preamble to the FDA regulation defining the required content and format of drug labels, where the FDA stated that its regulations preempted state law.[180] The Court reiterated that agency regulations can preempt state law, but that in such cases a court should "perform[ ] its own conflict determination, relying on the substance of state and federal law and not on agency proclamations of pre-emption."[181] While courts are willing to give some credence to an agency's position on the preemption issue, deference extends only to the agency's understanding of how state law conflicts with its regulations, not the agency's "conclusion" on the question of preemption.[182]

B. The Presumption Against Preemption Weighs Against Preemption in "Close Calls" Implicating Areas of Traditional State Regulation

Another nuance of preemption doctrine is known as the "presumption against preemption."[183] The presumption provides that, when the preemption issue involves an area of the law traditionally within the ambit of the states' "police powers," courts should look for the "clear and manifest" intent of Congress to preempt the state law.[184] In other words, when a state or local law subject to a preemption challenge falls within the traditional "police powers," courts place a thumb on the scale against a finding of preemption. Congress's decision not to include a provision expressly addressing the preemption issue may be persuasive to courts,[185]

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180. *Id.* at 575. Specifically, the preamble stated that the FDA interpreted the Federal Food, Drug, and Cosmetic Act to "establish[ ] 'both a "floor" and a "ceiling,"' so that 'FDA approval of labeling . . . preempts conflicting or contrary State law.'" *Id.* (quoting Requirements on Content and Format of Labeling for Human Prescription Drug and Biological Products, 71 Fed. Reg. 3,922, 3,934–35 (Jan. 24, 2006) (codified at 21 C.F.R. pts. 201, 314, 601)).

181. *Id.* at 576.

182. *Id.* at 576–77.

183. The presumption against preemption has generated a considerable body of scholarship. Some legal scholars have called into question how significant a role it actually plays in the Court's preemption decisions. For a more thorough discussion of this topic, see Mary J. Davis, *The "New" Presumption Against Preemption*, 61 HASTINGS L.J. 1217 (2009).

184. Wyeth v. Levine, 555 U.S. at 565 (2009) ("In all preemption cases, and particularly those in which Congress has 'legislated . . . in a field which the States have traditionally occupied' . . . [courts] 'start with the assumption that the historic police powers of the States were not to be superseded by the Federal Act unless that was the clear and manifest purpose of Congress.'" (quoting Medtronic, Inc. v. Lohr, 518 U.S. 470, 485 (1996)).

185. *Id.* at 575 (holding that "[Congress's] silence on the [preemption] issue, coupled with its certain awareness of the prevalence of state tort litigation, is powerful evidence that Congress did not intend" its grant of authority to an agency—the FDA—to have preemptive effect).

particularly when the state law alleged to pose an obstacle to its federal counterpart (e.g., state tort litigation) is well known to Congress.[186]

C. Congress Can Expressly Give a Statute Preemptive Effect

The first way a state or local law can be preempted by federal law is when Congress explicitly states its preemptive intent. Congress can include an "express preemption" provision, which conclusively establishes that the statute is intended to preempt contrary or complimentary state law on the same topic.[187] Congress has used express preemption provisions many times, including in the aviation context.[188] For example, the Airline Deregulation Act states that, "a State, [or] political subdivision of a State . . . may not enact or enforce a law, regulation, or other provision having the force and effect of law related to a price, route, or service of an air carrier."[189] By including that clause, Congress made clear that states are prevented from legislating on issues of airline prices, routes, or services. The legislative prohibition applies to *all* state and local laws—including those that conflict with the federal law, and even those laws that are exactly the same as it.[190] One federal statute, at first blush, suggests that the entire field of aviation is expressly preempted: "[T]he United States Government has exclusive sovereignty of airspace of the United States."[191] Courts have uniformly held, however, that this provision is not an express preemption clause, but rather "an assertion of exclusive national sovereignty."[192] Cases involving express preemption clauses are straightforward, because Congress has left no room for uncertainty regarding its preemptive intent. Ambiguity often arises, however, with respect to the breadth of those areas that Congress delineates "off limits" to state and local governments.[193]

186. *Id.*

187. *See* Nelson, *supra* note 159, at 226–27.

188. *See, e.g.*, 49 U.S.C. § 41713(b)(1) (2016) (expressly preempting aspects of state airline regulation).

189. *Id.*

190. *Id.*

191. 49 U.S.C. § 40103(a)(1) (2016).

192. Braniff Airways, Inc. v. Neb. State Bd. of Equalization & Assessment, 347 U.S. 590, 595 (1954) ("The Act, however, did not expressly exclude the sovereign powers of the states.").

193. *See, e.g.*, Medtronic, Inc. v. Lohr, 518 U.S. 470, 484–85 (1996) (identifying the "domain" of state laws falling within an express preemption clause).

D. Even Absent an Express Preemption Clause, Federal Law May "Impliedly" Preempt State Law

The second form of preemption, more complicated and more frequently litigated, is known as "implied preemption."[194] Implied preemption, which takes two forms, occurs when a federal law displaces state or local law despite a lack of explicit congressional intent.

1. If the Federal Interest in an Area of Law is Sufficiently Dominant, or a Body of Federal Regulations Sufficiently Exhaustive, an Entire Area of Law May Be "Field Preempted"

The first, relatively rare, form of implied preemption is known as "field preemption."[195] A federal law "field preempts" state law (1) when Congress legislates in "a field in which the federal interest is so dominant that the federal system will be assumed to preclude enforcement of state laws on the same subject," or (2) when Congress has so widely or exhaustively legislated in a given field "as to make reasonable the inference that Congress left no room for the States to supplement it."[196] Notably, both express preemption and field preemption prohibit *all* state laws on the same topic, whether in conflict with the federal law, in excess of it, or even "parallel to [it]."[197] Courts rarely find field preemption in many areas of the law, but have done so in some areas, such as subsets of immigration law.[198] Some aspects of aviation law are field preempted, including noise restrictions[199] and pilot qualifications.[200]

194. Freightliner Corp. v. Myrick, 514 U.S. 280, 287 (1995).

195. Arizona v. United States, 567 U.S. 387, 401 (2012).

196. Rice v. Santa Fe Elevator Corp., 331 U.S. 218, 230 (1947).

197. *Arizona*, 567 U.S. at 401.

198. *Id.* at 399.

199. City of Burbank v. Lockheed Air Terminal, Inc., 411 U.S. 624, 633 (1973) ("It is the pervasive nature of the scheme of federal regulation of aircraft noise that leads us to conclude that there is pre-emption.").

200. French v. Pan Am Exp., Inc., 869 F.2d 1, 4 (1st Cir. 1989) ("The intricate web of statutory provisions affords no room for the imposition of state-law criteria vis-a-vis pilot suitability. We therefore conclude, without serious question, that preemption is implied by the comprehensive legal scheme which imposes on the Secretary of Transportation the duty of qualifying pilots for air service.").

2. *Federal Law May Impliedly Preempt Conflicting State or Local Law Due to Conflicting Purposes or Effects*

The second form of implied preemption occurs when state and federal law conflict. This species of preemption is commonly referred to as "conflict preemption."[201] Conflict preemption takes two forms. The first occurs when compliance with both a state and a federal law is a "physical impossibility."[202] This permutation of conflict preemption is exceedingly rare, and the test for finding it is demanding.[203] It will not be found, for example, where one statute states that conduct is *permissible* and another statute prohibits it—under such circumstances a person could choose not to engage in the behavior, thereby complying with both statutes.[204] To create an implied impossibility preemption situation, one statute must *require* conduct the other statute prohibits, thus presenting a physical impossibility of simultaneous compliance with both.[205]

The second form of conflict preemption, known as "obstacle preemption," occurs when state law "stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress."[206] Where federal law conflict preempts state or local law, it is physically possible for a regulated entity to comply with both, but the state or local law nonetheless interferes with its federal counterpart's purpose.[207] Implied obstacle preemption is responsible for a significant portion of the Supreme Court's preemption jurisprudence because—unlike express or implied impossibility preemption—it requires a court to "examin[e] the federal statute as a whole and identify[ ] its purpose and intended effects" to determine if the state law in question poses a sufficient obstacle to the purpose of the federal statute such that the state law will be held preempted.[208]

The Supreme Court has recognized an array of purposes for which Congress may enact a statute, including those beyond requiring or

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201. *See, e.g.*, Geier v. Am. Honda Motor Co., 529 U.S. 861, 869 (2000) (analyzing conflict between state tort action and federal regulation).

202. Barnett Bank of Marion County v. Nelson, 517 U.S. 25, 31 (1996).

203. *See* Nelson, *supra* note 159, at 228 (describing physical impossibility preemption as "vanishingly narrow").

204. *Id.*

205. *Id.*

206. Hines v. Davidowitz, 312 U.S. 52, 67 (1941).

207. *Id.*

208. Crosby v. Nat'l Foreign Trade Council, 530 U.S. 363, 373 (2000).

prohibiting conduct.[209] For example, the Court has recognized congressional intent to take a balanced approach in confronting illegal immigration.[210] In *Arizona v. United States*,[211] the United States sought to invalidate an Arizona immigration statute that made it a misdemeanor for an undocumented immigrant to work or seek work in the state.[212] Under federal law, neither working nor seeking work as an undocumented immigrant are illegal.[213] It *is* illegal, however, for an employer to hire an undocumented immigrant.[214] Looking to evidence in the legislative record, the Court concluded that "Congress made a deliberate choice not to impose criminal penalties on" undocumented immigrants.[215] Therefore, the Arizona law, in doing what Congress opted not to, posed an obstacle to the objectives of federal law.[216] The Court noted that the Arizona law "attempts to achieve . . . the same goals as federal law—the deterrence of unlawful employment" but conflicted with Congress's chosen "method of enforcement."[217] On the basis of that conflict, the state law posed an obstacle to its federal counterpart's objectives and was, therefore, preempted.[218]

E. Preemption Cases Involving Aerial Advertising Provide Examples of Preemption Doctrine in Practice

Laws involving aerial advertising—the towing of advertising banners behind aircraft—implicate elements of traditional state concern.[219] For example, there is a strong local interest in issues such as the distracting

209. *See, e.g.*, Arizona v. United States, 567 U.S. 387, 405 (2012) (finding that Congress made a "deliberate choice" to impose penalties on employers of illegal aliens, but not illegal aliens themselves, as means by which to address the problem of illegal immigration).

210. *Id.*

211. 567 U.S. 387 (2012).

212. *Id.* at 403 (quoting ARIZ. REV. STAT. ANN. § 13-2928(c) (2018)).

213. *Id.* at 404 (holding that "the law makes it illegal for employers to knowingly hire . . . unauthorized workers . . . . [But] does not impose federal criminal sanctions on the employee side").

214. *Id.*

215. While not a crime to seek work as an undocumented immigrant, it is a crime to an employ undocumented workers. *Id.* at 404. The Court looked to the legislative history of the federal statute establishing those criminal penalties and concluded that Congress intended to target employers, but not the immigrants themselves. *Id.* at 405.

216. *Id.*

217. *Id.* at 406.

218. *Id.*

219. Skysign Int'l, Inc. v. City & Cty. of Honolulu, 276 F.3d 1109, 1115 (9th Cir. 2002) ("[A]dvertising is an area traditionally subject to regulation under the states' police power . . . .").

effect of advertisements.[220] However, they also implicate areas of federal concern, such as aviation safety.[221] Preemption challenges in this area of aviation law have already been litigated,[222] while the preemption issues involved in state and local drone laws remain largely unresolved. Therefore, the way courts have addressed preemption in aerial advertising might provide insight into how the analysis will look in the drone context.

In *Banner Advertising, Inc. v. City of Boulder*,[223] the Colorado Supreme Court held that a local ordinance prohibiting aerial advertising was preempted by federal law.[224] Aerial advertising is prohibited under FAA regulations, but the FAA had issued the plaintiff a waiver allowing it to tow aerial advertising banners.[225] The FAA advised the plaintiff that "[the waivers] d[id] not constitute a waiver of any state law or local ordinance not otherwise preempted by the United States Constitution or Federal Statute or Regulation."[226] The plaintiff was cited under the city ordinance prohibiting aerial advertising and challenged the citation, arguing that the extensive federal aviation regulations, including those on aerial advertising, field preempted the state law.[227] The City of Boulder argued that, because the certificate of waiver specifically mentioned applicable local laws, the federal government did not intend to displace them.[228] The court sided with the plaintiff, citing the broad statutory authority of the Secretary of Transportation to formulate regulations for the protection of "persons and property on the ground."[229] That, coupled with the fact that the FAA had *specifically* regulated aerial advertising, led the court to hold that the local law "impermissibly enter[ed] an arena reserved for the federal government" and was preempted.[230]

The court also rejected the defendant's arguments that the federal government expressly considered, and chose not to preempt, applicable state law.[231] It held that the federal government cannot exempt people from state or local laws, so "by restricting its direct effect to federal laws,

220. *Id.* at 1117.

221. *Id.* at 1116.

222. *See, e.g.*, *id.* (resolving preemption challenge to aerial advertising ordinance).

223. 868 P.2d 1077 (Colo. 1994).

224. *Id.* at 1083.

225. *Id.* at 1079.

226. *Id.*

227. Banner Advert., Inc. v. City of Boulder, 868 P.2d 1077, 1080 (Colo. 1994).

228. *Id.* at 1082–83.

229. *Id.* at 1081–82.

230. *Id.* at 1083.

231. *Id.* at 1082.

the certificate only states a fundamental principle of the doctrine of federalism."[232] Second, and more importantly, the court held that "preemption is paramount," and once a state or local law is preempted by a federal law, the state law is entirely without force.[233] In other words, a state law cannot be revived by the federal government when it opts to waive enforcement of federal law.[234] Thus, the certificate of waiver's language could not save the ordinance, even if the FAA intended it to, because the court concluded that the federal regulations—despite being waived—preempted the local law.[235]

In *Skysign International., Inc. v. City and County of Honolulu*,[236] the Ninth Circuit reached a contrary result.[237] There, the court addressed a challenge to two Honolulu ordinances, one of which barred certain kinds of signage, however displayed, and another that specifically barred the use of an aircraft to display signage.[238] The plaintiff was an aerial advertising firm operating in Hawaii under FAA certificates of waiver, like those in *Banner*, that allowed it to conduct advertising operations otherwise prohibited by FAA regulations.[239] The plaintiff was cited for violating the local ordinances, and argued that the city ordinances were preempted by the FAA regulations.[240]

The Ninth Circuit began its preemption analysis with reference to the presumption against preemption, stating that "advertising is an area [of law] traditionally subject to regulation under the states' police power."[241] The court held the ordinance applicable to all signage would benefit from the presumption against preemption, but the ordinance specifically barring *aerial* advertising did not, because aviation is an area of law ordinarily regulated by the federal government.[242]

The court reiterated the well-settled assumption that the federal government had not expressly or impliedly preempted the entire field of

232. *Id.*

233. *Id.* at 1082–83.

234. *Id.*

235. *Id.* at 1083 ("We conclude that the Boulder ordinance impermissibly intrudes into the exclusive domain of the federal government to regulate the towing of banners by aircraft.").

236. 276 F.3d 1109 (9th Cir. 2002).

237. *Id.*

238. *Id.* at 1113.

239. *Id.*

240. *Id.* at 1114.

241. Skysign Int'l, Inc. v. City & Cty. Of Honolulu, 276 F.3d 1109, 1115 (9th Cir. 2002).

242. *Id.* at 1116.

aviation regulations.[243] But unlike the *Banner* court, the *Skysign* court found that the "mere volume and complexity" of the federal aerial advertising regulations did not constitute field preemption without some "affirmative accompanying indication" of congressional intention.[244] As to implied conflict preemption, the *Skysign* court held that the language of the waivers specifically advised the recipients that the waivers excepted compliance with applicable federal laws, but did not supersede applicable state or local laws.[245] That language, the court held, indicated that "the federal government *contemplates coexistence* between federal and local regulatory schemes" which meant that "state law cannot by its mere existence stand as such an obstacle" to the federal law.[246] In *Skysign*, the court cited and explained its disagreement with the *Banner* decision.[247] The *Skysign* court considered the two waivers different,[248] and explained that its only fundamental disagreement was with the *Banner* court's field preemption analysis.[249]

III. MOVING FORWARD: THE FUTURE OF DRONE PREEMPTION LITIGATION

This Part predicts how the future of drone litigation will proceed. With laws like Chicago's, cases like *Singer* are bound to occur throughout the country until courts reach a consensus. By drawing on general preemption jurisprudence and the aerial advertising line of cases, this Part concludes that state and local drone laws imposing substantial operational restrictions will be preempted, while those that merely clarify existing criminal statutes will not. Finally, for those laws that fall somewhere in the middle of those two categories, this Part predicts that courts will utilize the presumption against preemption to uphold such laws.

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243. *Id.* (citing 49 U.S.C. § 40103(a)(1) (2012); Braniff Airways, Inc. v. Nebraska State Bd. of Equalization & Assessment, 347 U.S. 590, 595 (1954)).

244. *Id.*

245. *Id.* at 1118.

246. *Id.* at 1117 (emphasis added).

247. *Id.* at 1117 n.6.

248. Specifically, the *Skysign* waiver said, "[t]he operator, by exercising the privilege of this waiver, understands all local laws and ordinances relating to aerial signs, and accepts responsibility for all actions and consequences associated with such operations." *Id.* at 1113. The *Banner* waiver said "[t]his Certificate constitutes a waiver of those Federal Rules or Regulations specifically referred to above. It does not constitute a waiver of any state law or local ordinance not otherwise preempted by the United States Constitution or Federal Statute or Regulation." Banner Advert., Inc. v. City of Boulder, 868 P.2d 1077, 1079 (Colo. 1994). The *Skysign* court thought that there was enough difference between the two clauses to hold that they were not at odds with one another. *Skysign*, 276 F.3d at 1117 n.6.

249. *Id.* at 1117 n.6.

A. Singer*'s Analysis Reflects the Current State of Preemption Jurisprudence and Will Likely Be Replicated in Future Challenges to State and Local Drone Laws*

Federal preemption of state and local drone laws was a question of first impression in *Singer*, but the issue is almost certain to arise in the future. Other courts are not bound to respect the *Singer* court's decision or to follow its analysis, but many will likely look to it because it is the first decision in a new area of the law. Thus, it is worth understanding the *Singer* court's decision and asking whether it is in line with preemption jurisprudence.

1. Part 107 is Unlikely to Preempt the Field of Drone Law

Singer was not a field preemption case.[250] The court's holding was based entirely on conflict preemption.[251] Nonetheless, the issue of field preemption is important because courts in the future may look to it given that aviation has historically been an area of primarily federal regulation.[252]

It is unlikely that Part 107 preempts the entire field of drone regulations. Field preemption occurs where federal regulations in the area of law at issue are so extensive as to "make reasonable the inference that Congress left *no room* for the States to supplement it" or if the regulations occupy "a field in which the federal interest is so dominant that the federal system will be assumed to preclude enforcement of state laws on the same subject."[253] Field preemption is not commonly found.[254] Where courts do find field preemption, it is usually limited to a subset of an area of the law.[255]

As to the first permutation of field preemption—where Congress has left no room for state law—Part 107 covers many aspects of drone operations, but not so many as to conclude that the FAA intended it to be exclusive body of regulation concerning drones.[256] For example, Part 107 says nothing about the weather conditions in which a person may operate

250. Singer v. City of Newton, 284 F. Supp. 3d. 125, 130 (D. Mass. 2017).

251. *Id.*

252. *Id*. at 1116.

253. Rice v. Santa Fe Elevator Corp., 331 U.S. 218, 230 (1947) (emphasis added).

254. *See* Nelson, *supra* note 159, at 227 ("The Court has grown increasingly hesitant to read implicit field-preemption clauses into federal statutes.").

255. *See supra* section II.D.1.

256. *See* 14 C.F.R. § 107 (2018) (omitting regulations on many aspects of drone operations such as permissible weather conditions, visibility conditions, etc.).

a drone, so a state prohibition on operation in poor weather conditions would likely not be field preempted.[257] The same is true for prohibitions on flying over state parks.[258] Part 107 imposes many requirements and limitations, but not so many as to infer that there is *no room* for supplementary state law.

Field preemption owing to a dominant federal interest in drone regulation is also unlikely. The federal interest in consistent drone laws is undoubtedly strong—uniformity would allow for the rapid integration of drones into the national airspace, given the relative ease of complying with one federal regulation compared to numerous different state regulations. But state and local governments have competing interests in regulating drones themselves. For example, some states may be eager to prohibit uses of drones that infringe on citizens' privacy or put them in danger, while others may prioritize the economic benefit drones bring to their jurisdictions.[259] Thus, because both the state *and* federal interest in regulating drones is strong, neither dominates sufficiently to trigger field preemption.

Courts may find that Part 107 preempts extremely narrow aspects of state or local laws. For example, the altitude at which a drone may be flown is a straightforward issue, which Part 107 limits to 400 feet. Therefore, courts may conclude that Part 107 field preempts the issue of drone altitude restrictions, but not other issues, such as weather restrictions.

2. *Many State Laws Will Conflict with Part 107 and Therefore Be Preempted*

Singer was decided on conflict preemption grounds. Its analysis tracked established preemption doctrine,[260] and the court's reasoning is likely to be repeated in future litigation. The congressional intent expressed in FAAMRA is clear: congress intends to safely and rapidly integrate drones into the national airspace.[261] The local regulations at issue in *Singer* thus made for an easy decision on conflict preemption. In concert, the prohibition on flying above public and private property without permission entirely banned drones from city limits. Such an outcome clearly conflicts with the objective of integrating drones into the

257. *See* § 107.

258. *Id.*

259. *Id.*

260. *See* Singer v. City of Newton, 284 F. Supp. 3d. 125, 130 (D. Mass. 2017).

261. *See* FAA Modernization and Reform Act of 2012, Pub. L. No. 112-95 § 332(a)(1) (2012) (directing the FAA to develop regulations to integrate drones into the national airspace).

national airspace. Other state and local laws, with less restrictive prohibitions, will present more complicated questions, but will be subject to the same analysis. In other words, courts will still ask whether the laws at issue conflict with Congress's intent to integrate drones.

Even if the state or local laws at issue do not conflict with Congress's intent to integrate drones into the national airspace, they may conflict with the FAA's vision for how to do so. In other words, a state or local law may actually *share* Congress's objective, but still clash with some provision of Part 107. In that respect, reasoning like the Court's in *Arizona*—where a state statute had the same objective as the federal regulation but was still preempted[262]—will guide the analysis. The FAA has chosen to carry out its statutory mandate of integrating drones in a specific way, e.g., by limiting flight to the operator's line-of-sight during the daytime.[263] A court might conclude that those choices imply that the FAA chose *not* to adopt other restrictions, e.g., prohibting operation near large buildings, or only in fair weather. A more or less restrictive local law—even if it did not permit something Part 107 prohibited or prohibit something it permits—could still conflict with Part 107, and therefore be preempted.

B. Skysign *and* Banner *May also Provide Useful Guidance for Courts in Future Litigation*

The aerial advertising cases may provide helpful guidance in predicting future courts' approaches to preemption challenges. A state or local government's drone law will likely be motivated, at least in part, by concern for the safety of people and property on the ground. These concerns are similar to those motivating restrictions on aerial advertising. Therefore, a preemption challenge to those drone laws would look similar in many respects to the fight over aerial advertising in *Skysign* and *Banner*.

This Comment predicts that state or local regulations on drone operation will be preempted, and that courts will analyze the issues similarly to *Banner*.[264] Even with the benefit of the presumption against preemption, insofar as a state regulates the operation of drones, it would conflict with the regulations in Part 107. For example, if a state law

262. Arizona v. United States, 567 U.S. 387, 406 (2012).

263. 14 C.F.R. §§ 107.29(a), 107.31(a) (2018).

264. Banner Advert., Inc. v. City of Boulder, 868 P.2d 1077, 1079 (Colo. 1994). *Banner* and *Skysign* both dealt with waivers of federal law. This Comment primarily looks to conflicts between federal and state/local drone laws. Therefore, insofar as the waivers in *Banner* and *Skysign* waived federal law, they set up a similar issue—conflict between a restrictive state law on the one hand, and a less restrictive federal law on the other.

prohibited drone flight above 300 feet, where the FAA has limited flight to 400 feet, it is likely that a court would follow the *Banner* court's reasoning and conclude that the federal regulations preempt state law. States may argue that Part 107 merely sets the minimum standard and that a more restrictive regulation complements, rather than conflicts with, Part 107. However, FAAMRA included explicit congressional intent that drones be integrated, so a more restrictive state prohibition would arguably conflict with that objective by restricting the use of drones.[265]

Litigants may cite the FAA's fact sheet, which details its position on the issue of preemption.[266] However, courts will only be required to defer to the fact sheet insofar as any given court finds its reasoning persuasive.[267] Courts may defer to its reasoning on the potential for conflict between Part 107 and state or local laws. However, courts will not simply accept the fact sheet's legal conclusion regarding conflict-preemption given the reasoning in *Wyeth*.[268] That is, courts defer to an agency's analysis of the risk for conflict between its regulations and state law, but not their legal analysis of the preemption issue.[269] In its fact sheet, the FAA states simply that a system of varying regulations in each jurisdiction is harmful to a uniform airspace. Courts will credit this position, but then perform their own conflict analysis.[270]

C. Examples of State Drone Laws that Are and Are Not Likely to Be Preempted

The preceding analysis makes clear that state and local drone laws that impose significant operational restrictions will be preempted by Part 107. Other state or local laws, such as those which expand criminal statutes to include drones, will not be preempted. Finally, those laws that impose some operational restrictions within the traditional state police power may or may not be preempted. For the latter category, the presumption against preemption may provide a critical thumb on the scale weighing against preemption. This section looks to each category in turn.

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

266. OFFICE OF THE CHIEF COUNSEL, FED. AVIATION ADMIN., *supra* note 117, at 3.

267. *See supra* section III.A.

268. Wyeth v. Levine, 555 U.S. 555, 576 (2009).

269. *Id.* at 576–77.

270. *See* OFFICE OF THE CHIEF COUNSEL, FED. AVIATION ADMIN., *supra* note 117, at 2.

1. Restrictive Drone Laws are Most Likely Preempted

In 2015, the City of Chicago substantially restricted legal drone operations within city limits.[271] The Chicago ordinance restricted the use of drones to "hobby or recreational purposes,"[272] and by banning flight over public or private property without the landowner's permission, essentially banned all drone flight within the city.[273] A person who violates the ordinance is subject to fines of between $500 and $5,000 and may be imprisoned for up to 180 days.[274] Each day a violation occurs constitutes a distinct violation of the ordinance.[275]

An exception to the Chicago ordinance could be read to exempt operations in compliance with Part 107 from the ordinance's restrictions.[276] However, as established earlier in this Comment, the most natural reading of the exception contemplates specific, case-by-case authorizations—not a general set of regulations like Part 107. If a court read the exception to require case-specific authorizations, a preemption challenge would likely prove fatal to the ordinance. The ordinance imposes draconian operational restrictions.[277] Congress has expressed its intent to integrate drones into the national airspace and delegated that responsibility to the FAA.[278] Part 107, the manifestation of that intent, provides the legal framework for drone operation that is far less restrictive than Chicago's ordinance.[279] Thus, the Chicago ordinance blatantly interferes with Congress's clearly expressed objectives, and will likely be found to be preempted by Part 107.

2. Drone Laws that Clarify Other Existing Laws Will Likely Not Be Preempted

In contrast to Chicago's virtual ban on drone operations, some state and local laws expressly prohibit conduct with a drone that would otherwise be illegal.[280] For example, one proposed bill criminalizes using a drone to

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271. CHI., ILL. MUN. CODE § 10-36-400(b)(1) (2018).

272. *Id.*

273. *Id.* § 10-36-400(b)(3).

274. *Id.* § 10-36-400(d).

275. *Id.*

276. *Id.* § 10-36-400(c)(1).

277. *Id.* § 10-36-400(b)(1).

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

279. *See generally* 14 C.F.R. § 107 (2018).

280. *See generally supra* section I.C.2.

deliver contraband to a correctional facility,[281] while another state statute prohibits using a drone to violate a restraining order.[282] These laws, because they change little substantive law, are likely not preempted by Part 107.

These state laws are likely safe from preemption by Part 107. First, a defendant would be hard-pressed to convince a court that, in the absence of the statute, delivering a deadly weapon to a prison with a drone was legal—if the defendant was not convicted under the drone-specific statute, they would be convicted under some more general criminal law. The statutes function to clarify existing legal rules, not create new ones.[283] Secondly, and most importantly, a defendant arguing that the laws are preempted would need to argue that the laws conflict with Congress's goal of integrating drones into the national airspace. Such a defendant would, in effect, be forced to argue that Congress intended that people be allowed to deliver contraband to prisons, or commit voyeurism, using a drone. It seems unlikely that a court would embrace such an argument. While these laws change little in the way of substantive legal norms, insofar as they might be challenged as preempted, they are likely not preempted by Part 107.

3. Laws that Impose New Legal Norms, but that Fall Within the Traditional State Police Power, May or May Not Be Preempted

Many state and local laws fall somewhere in between those that significantly curtail drone operation and those that clarify existing criminal laws. A number of states, for example, have prohibited the use of a drone to hunt or fish.[284] While far less restrictive than a law like Chicago's, such a prohibition undoubtedly limits some amount of commercial drone use that would occur otherwise. However, this Comment concludes that such laws are not so restrictive as to interfere

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281. H.B. 2363, 65th Leg., 2018 Reg. Sess. (Wash. 2018). Washington's proposed bill passed the State House of Representatives and is, as of this writing, pending in committee in the State Senate.

282. MICH. COMP. LAWS § 259.322 (4) (2017).

283. Some of the state and local laws of this kind may impose a different or more severe penalty for committing a crime with a drone. This would impose a new legal norm. However, the statutes cited here do not impose such a penalty. And so long as the penalty was not significantly greater than existing sanctions, this Comment concludes that they would still not be preempted by Part 107.

284. *See, e.g.*, MICH. COMP. LAWS § 324.40111c(2) (2017) ("An individual shall not take game or fish using an unmanned vehicle or unmanned device . . . ."); N.C. GEN. STAT. § 14-401.24(b) (2014) ("It shall be a Class 1 misdemeanor for any person to fish or to hunt using an unmanned aircraft system."); IND. CODE § 14-22-6-16(c) (2017) ("[A] person may not knowingly use an unmanned aerial vehicle . . . to search for, scout, locate, or detect a wild animal to which the hunting season applies as an aid to take the wild animal.").

with the congressional intent to see drones integrated into that national airspace. Moreover, in a preemption challenge, a court may apply the presumption against preemption to resolve a close-call in favor of upholding the law.

Many of the laws in this category fall within areas traditionally regulated by the states, rather than the federal government. Hunting and fishing, for example, are traditionally areas of state regulation.[285] That implicates the presumption against preemption.[286] In fact, the FAA fact-sheet on preemption specifically identified "prohibitions on using [drones] for hunting or fishing" as generally not preempted by Part 107.[287] Thus, a court faced with a preemption challenge to an "anti-drone hunting" law may employ the presumption in favor of upholding the law.

Many of the state and local laws that fall somewhere in this middle ground will likely relate to areas of law where state and local governments have historically been the dominant regulator, such as "land use, zoning, privacy, trespass, and law enforcement operations."[288] Preemption challenges to such laws will be less likely to succeed than, for example, laws like Chicago's, because of the presumption against preemption. In those cases, the primary issue will be the extent to which Part 107 and Congress's intent to see drones integrated into the national airspace conflicts with state law in that specific area. Absent a clear indication that Congress intended the federal government to have exclusive authority over the area of law, courts will likely employ the presumption against preemption to uphold the laws.

CONCLUSION

The legal issues surrounding the integration of drones into the national airspace are only beginning to surface. As more state and local governments attempt to regulate drone operations, the question of preemption will become increasingly important. This Comment sheds light on the current legal framework that courts will apply when faced with preemption challenges. Part 107 will preempt state and local laws that curtail the ability to operate a drone within a given jurisdiction. However, not all state and local laws will be preempted. Those laws that

285. United States v. Washington, 520 F.2d 676, 684 (9th Cir. 1975) ("By virtue of its police power, the state has initial authority to regulate the taking of fish and game.") (citing Geer v. Connecticut, 161 U.S. 519 (1896)). That hunting and fishing are areas of *traditional* state regulation does not mean that they are *exclusively* within the purview of the state. *Id.* ("The federal government, however, may totally displace state regulation in this area.").

286. Skysign Int'l, Inc. v. City & Cty. of Honolulu, 276 F.3d 1109, 1116 (9th Cir. 2002).

287. OFFICE OF THE CHIEF COUNSEL, FED. AVIATION ADMIN., *supra* note 117, at 3.

288. *Id.*

simply clarify existing law to include drones are safe from preemption challenges. Moreover, those that create a new legal norm but fall within the traditional state police power may also be safe, due in part to the presumption against preemption.