CONTROLLED AIRSPACE:
A CONSTITUTIONAL ANALYSIS OF STATE ATTEMPTS TO REGULATE UNMANNED AIRCRAFT SYSTEMS

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The views expressed in the succeeding thesis are those of the author and do not reflect the official policy or position of the United States Air Force, Department of Defense, or the United States Government.

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ABSTRACT

The concept of routine unmanned aviation is increasingly becoming a reality. From commercial entities seeking to profit from faster and cheaper services to law enforcement agencies looking for safer alternatives to suspect interactions to hobbyists wanting to explore aspects of their surroundings once only accessible by manned aircraft, the desire for widespread unmanned aircraft systems (UASs) use is coming from multiple directions. Although society appears ready to embrace UAS integration, federal aviation regulators have been caught behind the eight-ball with no substantive regulations in place to manage unmanned aerial flight. In an effort to fill the legislative gap, several states have enacted their own UAS legislation, seemingly encroaching on territory historically reserved for the Federal Aviation Administration. This thesis will explore whether these well-meaning local laws will ultimately be preempted by ensuing federal UAS legislation.

RÉSUMÉ

Le concept de l'aviation sans pilote routine est de plus en plus une réalité. De entités commerciales qui cherchent à profiter de services plus rapides et moins coûteux pour les organismes d'application de la loi à la recherche d'alternatives plus sûres de soupçonner interactions pour les amateurs qui souhaitent explorer les aspects de leur environnement une seule fois accessibles par des avions pilotés, le désir pour des systèmes de drones généralisées (UAS) l'utilisation est venant de plusieurs directions. Bien que la société semble prête à embrasser l'intégration UAS, les organismes de réglementation de l'aviation fédéraux ont été pris derrière la huit-ball avec aucune réglementation de fond en place pour gérer vol aérien sans pilote. Dans un effort pour combler le vide législatif, plusieurs États ont adopté leur propre législation UAS, empiétant sur le territoire apparemment historiquement réservé à la Federal Aviation Administration. Cette thèse sera d'explorer si ces lois locales bien intentionnés seront finalement préempté par la législation qui a suivi UAS fédéral.

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INTRODUCTION

Martin Scorsese makes great movies![1] He directed one of 2013's biggest films, *The Wolf of Wall Street*, and won a 2006 Academy Award for his work on *The Departed*.[2] Accolades aside, would it surprise you to know that he engages in illegal activities? Illegal, that is, according to the Federal Aviation Administration (FAA). During production of *The Wolf of Wall Street*, an unmanned Octocopter aircraft equipped with a digital camera and Gemini Autopilot system was used to film several aerial scenes.[3] According to current FAA rules, unmanned aerial aircraft cannot be operated for commercial pursuits without special authorization.[4] But these rules are not codified and several states, such as Idaho and Texas, statutorily protect unmanned commercial flight.

The FAA has issued several notices regarding pilotless aircraft use, but some critics argue that these amount to no more than unenforceable policy statements. In February 2012, President Barack Obama signed into law the FAA Modernization and Reform Act of 2012 (FMRA),[5] which, among other things, tasked the FAA with establishing policies for the integration of unmanned aerial aircraft into the national airspace by September 2015. In the meantime, a bevy of states have begun introducing and adopting their own legislation. And therein lies the problem. Which set of rules are operators obliged to follow?

Since the passage of the Federal Aviation Act of 1958, sole responsibility and authority over manned aircraft and domestic airspace has rested with the FAA.[6] As such, state attempts

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[1] Among the films he directed and/or produced are *Raging Bull*, *Taxi Driver*, *The Color of Money*, *Goodfellas*, *The Age of* Innocence, *Cape Fear*, and *Casino*. "Martin Scorsese" *IMDb*, online: Internet Movie Database <http://www.imdb.com/name/nm0000217/?ref_=nv_sr_1>.
[2] *Ibid*.
[3] Ian Failes, "Boom Times: *The Wolf of Wall Street*" *FXGuide* (17 December 2013), online: FXGuide.com, LLC <https://www.fxguide.com/featured/boom-times-the-wolf-of-wall-street/>.
[4] The FAA recently relaxed its complete prohibition against the commercial use of UASs by granting a regulatory exemption to six photo and video production companies. Martin Scorsese, however, was not acting under said exemption during the filming of *The Wolf of Wall Street*. Federal Aviation Administration, *Press Release—U.S. Transportation Secretary Foxx Announces FAA Exemptions for Commercial UAS Movie and TV Production* (25 September 2014), online: Federal Aviation Administration <http://www.faa.gov/news/press_releases/news_story.cfm?newsid=17194>.
[5] *FAA Modernization and Reform Act of 2012*, Pub L No 112-95, 126 Stat 11 [FMRA].
[6] *Federal Aviation Act of 1958*, Pub L No 85-726, 72 Stat 731 (codified as amended at 49 USC §§ 40101-50105 (2012)) [*1958 Federal Aviation Act*].

to usurp the FAA's power in those realms have been met with federal preemption challenges. With the advent of unmanned aircraft, the extent of the FAA's regulatory reach is being questioned. Until now, courts have not had to consider whether state and local laws regulating unmanned aircraft are preempted by federal legislation. But as more and more states enter into the fray, the answer to this question becomes vitally important in determining which regulations unmanned aircraft operators must observe.

This thesis addresses whether current federal law preempts state attempts to regulate unmanned aircraft. Although several dozen local bills have been introduced, this study focuses only on those that have been duly enacted. Chapter I begins with a brief review of the genesis of federal preemption law in the United States before moving into a summary of its application to assorted state-borne aviation regulations. The discussed case holdings provide guidance on the limits, if any, to the FAA's jurisdiction over unmanned aircraft. Chapter II then details current state and federal unmanned aircraft law, providing the reader insight into the issues causing the most legislative concern. In Chapter III, the question of a state's authority to regulate unmanned aircraft in light of current federal aviation law is addressed. Finally, Chapter IV concludes with a discussion of the entity best suited to set UAS standards.

CHAPTER I

The Path to Preemption and its Application to Aviation Regulation

> *It should never be forgotten that this slogan, "Our Federalism," born in the early struggling days of our Union of States, occupies a highly important place in our Nation's history and its future.*[7]

A. Birth of a Federalist Nation

To fully understand federal preemption, one must first understand the genesis of our federalist system. Borne out of a necessity to unify a fractured band of colonies and create "a more perfect union," federalism is the backbone of American government and is the moral compass guiding us away from abuse of authority.[8] The term "federalism" refers to the sharing of political power between governments occupying the same geographic space.[9] As Supreme Court Justice Hugo L. Black noted in *Younger v. Harris*, federalism is:

> …a system in which there is sensitivity to the legitimate interests of both State and National Governments, and in which the National Government, anxious though it may be to vindicate and protect federal rights and federal interests, always endeavors to do so in ways that will not unduly interfere with the legitimate activities of the States.[10]

On 4 July 1776, while engaged in the Revolutionary War with Great Britain, thirteen colonies declared their independence from the British Empire and established thirteen independent, yet united, states of America.[11] The newly united states quickly realized that some form of central government would be necessary if they were to defeat the Crown; they needed foreign recognition and assistance, as well as, a unified war plan.[12] Not wanting to once again be subject to monarchial rule, the states carefully crafted limits on their new government's power in a document that would become the nation's first constitution.

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[7] *Younger v Harris*, 401 US 37 at 44-45 (1971).
[8] Larry N Gerston, *American Federalism: A Concise Introduction* (London, UK: ME Sharpe, Inc, 2007) at ix.
[9] *Ibid* at 5.
[10] *Younger*, *supra* note 7 at 44.
[11] US Declaration of Independence.
[12] Barbara Silberdick Feinberg, *The Articles of Confederation: The First Constitution of the United States* (Brookfield, CT: Twenty-First Century Books, 2002) at 12-25. Prior to the Convention, the Second Continental Congress had already begun to manage and direct the Revolutionary War, but it was an advisory body, not a legal government.

Ratified on 1 March 1781, the Articles of Confederation maintained each states' individual "sovereignty, freedom, and independence" while granting Congress the power to coin money, resolve disputes between states (via arbitration), maintain armies (but not draft troops), and enter into treaties and alliances with foreign countries.[13] Although given some power, an underlying fear of oligarchy prevented Congress from collecting taxes and regulating interstate commerce; Congressional revenue was solely dependent on state contributions, which oftentimes were not paid.[14] By the end of the Revolutionary War in 1783, perpetual underfunding had led to the military's collapse, giving foreign nations unfettered access to unguarded territory.[15] In addition, tension between states began to emerege as they became more self-interested.[16]

Further exasperating the situtaion were apprehension about meeting war debt, frustration amid debt ridden soldiers, and concerns about westward expansion.[17] Coupled with a post-war economic depression, strong calls for a comprehensive reconsideration of the Articles of Confederation were soon being heard.[18] Those calling for a strong central government would later become known as "the Federalists" and after years of inaction would manage to convince most states to gather in the summer of 1787 for a Constitutional Convention.[19] Following months of intense debate and numerous revisions, a new constitution emerged that would forever transform the relationship between states and the federal government. This new framework set out to "establish justice, insure domestic tranquility, provide for the common defense, and promote the general welfare," all the while balancing state interests against those of the nation.[20] To accomplish this, delegates had to renounce the then-current notion of

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[13] Kerry P Callahan, *The Articles of Confederation: A Primary Source Investigation Into the Document the Preceded the U.S. Constitution* (New York, NY: The Rosen Publishing Group, 2003) at 59.
[14] *Ibid*.
[15] James Madison, Edward J Larson & Michael P Winship, *The Constitutional Convention: A Narrative History from the Notes of James Madison* (New York, NY: The Random House Publishing Group, 2005).
[16] For example, Maryland and Virginia quarreled over the boundaries of the Potomac River while Rhode Island attempted to impose taxes on a post road used to access other states. Eric Hines, *A Conservative's Treatise on American Government: A Brief Discussion of What a Government, Subordinate to the Sovereign People, Must Do* (Bloomington, IN: Authorhouse, 2012) at 63.
[17] Melissa V Holdstedt, ed, *Federalism: History and Current Issues* (New York, NY: Nova Publishers, 2006) at 4.
[18] *Ibid*.
[19] *Ibid*. Rhode Island, fearing it would be disadvantaged, boycotted the Convention and initially refused to ratify the Constitution.
[20] US Const, preamble.

federalism, which stressed the independence and soveriegnty of states giving them ultimate control over their respective territories.[21] Now states would be forced to share their power and federalism would come to mean the distribution of authority between national and state governments.

What emerged from the Convention was a new political architecture and although ratified more than 200 years ago, the exact allocation of governmental power remains unsettled.[22] On one hand we pledge allegiance to a republic that stands as "one Nation under God, indivisible."[23] Yet on the other hand we recognize a state's sovereign status and give due deference in matters involving purely local interests.[24] The enduring paradox of this "new federalism" is the catalyst behind federal preemption questions and will be the basis of the challenges facing newly enacted state UAS laws.

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[21] David O'Brien, *Constitutional Law and Politics: Struggles for Power and Governmental Accountability*, vol 1, 3d ed (New York, NY: WW Norton & Company, 1991) at 592.

[22] The Constitution's first ten amendments, collectively known as the Bill of Rights, were was ratified in 1791. The last Constitutional amendment, Amendment XXVII, was ratified in 1992, over 200 years after it was initially submitted to Congress for consideration.

[23] Kenneth W Starr, "Preface" in Richard A Epstein & Michael S Greve, eds, *Federal Preemption: States' Powers, National Interests* (Washington, DC: The AEI Press, 2007) xi at xii. The *Pledge of Allegiance* is a pronouncement of national loyalty authored by former Baptist minister Francis Bellamy in 1892. Originally written to commemorate the 400th anniversary of Christopher Columbus' "discovery" of America, it is now often recited by schoolchildren as a "patriotic exercise." See Ronald Bishop, *Taking on the Pledge of Allegiance: The News Media and Michael Newdow's Constitutional Challenge* (Albany, NY: State University of New York Press, 2007) at 26. The phrase "under God" was subject to a 2004 Establishment Clause challenge by California attorney and physician, Michael Newdow. Although the Supreme Court granted *certiorari*, the issue it faced was whether Newdow, a non-custodial parent, had standing to pursue a claim on his daughter's behalf. The Court ultimately ruled that he did not. *Elk Grove Unified School Dist v Newdow*, 542 US 1 (2004).

[24] As noted in *Alden v Maine*, 527 US 706 at 758 (1999):

> Congress has vast power but not all power. When Congress legislates in matters affecting the States, it may not treat these sovereign entities as mere prefectures or corporations. Congress must accord States the esteem due to them as joint participants in a federal system, one beginning with the premise of sovereignty in both the central Government and the separate States. Congress has ample means to ensure compliance with valid federal laws, but it must respect the sovereignty of the States.

B. The Supremacy Clause

Creating the proper balance of an effective central government with the individuality of thirteen states was the primary focus of the Constitutional Convention.[25] In an effort to avoid meeting the same fate as prior confederacies, that is, destruction at the hands of members who failed to subject to the general authority, Virginia delegate James Madison devised a "negative" power scheme whereby the federal government would have absolute power to veto state legislation "in all cases whatsoever."[26] Critics of the plan, however, condemned its overbreadth, claiming state laws rarely impacted federal concerns and thus Madison was "propos[ing] to mend a small hold by covering the whole garment."[27] Instead in of adopting Madison's scheme, the delegates agreed that their new constitution would be the preeminent law and the judiciary would be responsible for ensuring state compatibility with that law.

Thus the Supremacy Clause was born and as its name suggests, the "Constitution, and Laws of the United States" are the supreme laws of the land.[28] It is from this provision that the concept of federal preemption, which generally holds state and local laws subordinate to those passed by Congress, is said to derive.[29] Although the terms are often used interchangeably, the concepts of supremacy and preemption hold subtle differences that must be understood to

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[25] Alison L LaCroix, *The Ideological Origins of American Federalism* (Cambridge, MA: Harvard University Press, 2010) at 133-34.

[26] Alison L LaCroix, "What if Madison Had Won?: Imagining a Constitutional World of Legislative Supremacy" (2011) 45 Ind L Rev 41 at 41 [LaCroix, *What if Madison Had Won?*]. See also Alison L LaCroix, "The Authority for Federalism: Madison's Negative and the Origins of the Federal Ideology" (2010) 28 L and Hist Rev 451 at 460 [LaCroix, *The Authority for Federalism*].

[27] LaCroix, *What if Madison Had Won?*, *supra* note 26 at 44 (quoting Robert A Rutland et al eds, *Letter from Thomas Jefferson to James Madison (June 30, 1787)* in 10 The Papers of James Madison 3 at 63-64 (1977). See also Barry Friedman, *The Will of the People: How Public Opinion has Influenced the Supreme Court and Shaped the Meaning of the Constitution* (New York, NY: Farrar, Straus and Giroux, 2009) at 35.

[28] US Const art VI, § 2: "This Constitution, and the Laws of the United States which shall be made in Pursuance thereof; and all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land: and the Judges in every State shall be bound thereby, any Thing in the Constitution or Law of any State to the contrary notwithstanding."

[29] See also *Fidelity Federal Savings and Loan Ass'n v de la Cuesta*, 458 US 141 at 152 (1982) in which the Court held that the "pre-emption doctrine…has its roots in the Supremacy Clause" and *Gade v National Solid Wastes Management Ass'n*, 505 US 88 at 108 (1992) (noting that "under the Supremacy Clause, from which our preemption doctrine is derived, 'any state law…which interferes with or is contrary to federal law, must yield.'" (quoting *Free v Bland*, 369 US 663 at 666 (1962)).

accurately answer any preemption question.[30] The differences hinge on whether a state law is invalid from the beginning or whether such law is invalid due to conflict.

The function of the Supremacy Clause is to act as an arbiter to settle conflicts between federal and state statutes in situations where concurrent legislative power has been granted.[31] Put another way, supremacy directs federal law to override validly enacted state law when the two conflict.[32] Supremacy thus recognizes the shared authority of states and Congress to legislate. Dual legislation, however, is not absolute. As will be discussed in proceeding sections, the Constitution has marked the boundaries of federal versus state versus dual authority, albeit ambiguously, which leaves much room for interpretation. Nevertheless, where dual legislation exists, if a conflict between the two arises, supremacy holds that federal law always prevails.[33]

Consider the following example of the supremacy doctrine in play. In 1966, the Supreme Court ruled that the Fifth Amendment privilege against self-incrimination requires rights advisements prior to a suspect in law enforcement custody being interrogated.[34] Failure to inform a suspect of his right to remain silent and to consult an attorney makes any statement procured during subsequent interrogations inadmissible at trial.[35] Thus, although states have the authority to create their own courts and establish their own rules of criminal procedure, under the Supremacy Clause those rules must conform with the Constitution.

The Constitutional Convention rejected Madison's "negative" plan in part because some framers feared it would engulf state sovereignty.[36] Many were concerned that granting Congress absolute veto power would result in the Government overregulating state

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[30] See generally Stephen A Gardbaum, "The Nature of Preemption" (1994) 79 Cornell L Rev 767 for a comprehensive and thought provoking dissection of the supremacy versus preemption debate. In the article, Gardbaum argues that preemption cannot be derived from the concept of supremacy because preemption grants the government power that exceeds supremacy and "greater power cannot derive form a lesser one." *Ibid* at 774.
[31] *Ibid* at 770.
[32] See e.g. *McCulloch v Maryland*, 17 US 316 at 425 (1819), in which the Court held that states are prohibited from taking any actions that "in [their] nature [are] incompatible with, and repugnant to, the constitutional laws of the Union."
[33] See generally Caleb Nelson, "Preemption" (2000) 86 Va L Rev 225 at 245-60.
[34] *Miranda v Arizona*, 381 US 436 (1966).
[35] *Ibid*.
[36] LaCroix, *The Authority for Federalism*, *supra* note 26 at 480-84.

activities.[37] The Supremacy Clause, therefore, is a compromise that establishes federal superiority *only* when dual authority exists. Where states have been given exclusive legislative responsibility, federal law does not supersede. This allows states to maintain sole control over most activities occurring within their borders. Similarly, for issues deemed exclusively federal, states laws regarding the same are invalid. This is the concept of preemption. Rather, than presuming that states and the federal government have equal authority to regulate, preemption presumes the opposite—that each controls specific segments of society that the other shall not encroach upon. Determining the respective boundaries between concurrent and sole authority can be challenging, particularly when it is not explicitly stated but is implied based on the traditional roles of each government. As will be discussed below, state and the federal governments share responsibility for aviation regulation but there are certain subsets that have been deemed exclusively federal and determining the scope of these subsets continues to challenge jurists.

C. Federal Preemption of State Law

The Constitution never mentions the word "federal preemption." The concept is a judicial construct that gives life to Congress' enumerated powers found under Article I, Section 8 of the Constitution.[38] In attempting to preserve state sovereignty, Constitutional framers limited Congressional power to only those found within the Constitution. Any other power was reserved for the states.[39] Although Article I only lists eighteen plenary powers,[40] these powers

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[37] *Ibid* at 485.

[38] The first case to apply federal preemption was *Southern Railway Co v Reid* in which the Supreme Court ruled that a North Carolina statute that fined a railway carrier who refused to accept "tendered freight" was preempted by the Interstate Commerce Act (ICA), which established railroad rates. The Court held that the state statute was invalid not because it conflicted with the ICA but because "Congress ha[d] taken control of the subject of [railway] rate making and charging" and thus North Carolina had no authority in that field. *Southern Railway Co v Reid*, 222 US 424 at 438 (1912). See also *Charleston & W Carolina Railway Co v Varnville Furniture Co*, 237 US 597 at 604 (1915) (holding ["[w]hen Congress has taken the particular subject-matter in hand coincidence is as ineffective as opposition, and a state law is not to be declared a help because it attempts to go farther than Congress has seen fit to go.")

[39] US Const amend X: "The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people."

[40] Among the powers exclusively reserved to the federal government are the powers to declare war, coin money and regulate its value, and establish post offices. There are in fact only seventeen enumerated powers listed under Article I. The eighteenth is implied power found under the Necessary and Proper Clause, which gives Congress the power necessary to execute its enumerated powers. See Kenneth Janda et al, eds, *The Challenge of*

are quite broad and give Congress extensive legislative strength. The overwhelming source of Congress' preemptive authority comes from its regulation of interstate commerce under the Commerce Clause.[41] The clause allows the federal government to block any state regulations that affects interstate commerce and is used as the basis for the FAA's regulatory authority.[42]

Preemption is exercised in one of two ways: expressly or impliedly.[43] Under express preemption, federal statutes explicitly assert intent to preempt state law.[44] These clauses are included when Congress wants to establish uniformity or national standards on a particular issue.[45] Implied preemption is not inherent but rather is another judicial construct that has traditionally been delineated further into two separate categories. The first, conflict preemption, results when it is either impossible to comply with both federal and state law (impossibility preemption)[46] or when state law interferes with the full execution of Congressional objectives (obstacle preemption).[47] As previously argued, conflict preemption is really a question of supremacy, however, it must be conceded that the prevailing judicial view considers conflict preemption to be a subset of federal preemption, both of which are derived from the Supremacy Clause.[48] The second branch, field preemption, occurs when the

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Democracy: American Government in Global Politics, Essential Edition, 9th ed (Boston, MA: Wadsworth, 2014) at 59-60.

[41] US Const art I, § 8: "The Congress shall have Power To…regulate Commerce with foreign nations, and among the several States…."

[42] See *Vorhees v Naper Aero Club Inc*, 272 F 3d 398 at 406 (7th Cir 2001).

[43] For an in depth discussion of the various preemption branches, see James T O'Reilly, *Federal Preemption of State and Local Law: Legislation, Regulation and Litigation* (Chicago, IL: American Bar Association, 2006) at 11-20 and 65-78. See also Christopher R Drahozal, *The Supremacy Clause: A Reference Guide to the United States Constitution* (Westport, CN: Praeger, 2004) at 89-125.

[44] See *Cipollone v Liggett Group Inc*, 505 US 504 at 516-17 (1992) (holding that the Public Health Cigarette Smoking Act of 1969's express preemption clause preempted a plaintiff's attempt to hold tobacco companies liable for state common law damage claims).

[45] William W Buzbee, ed, *Preemption Choice: The Theory, Law, and Reality of Federalism's Core Question* (New York, NY: Cambridge University Press, 2009) at 121.

[46] See *Florida Lime & Avocado Growers Inc v Paul*, 373 US 132 (1963) (holding that no impossibility existed between a California law prohibiting the importation and sale of avocados containing less than 8% of oil by weight and the Secretary of Agriculture's federal marketing orders that did not consider oil content when assessing avocado maturity).

[47] See *Silkwood v Kerr-McGee Corp*, 464 US 238 at 239 (1984) (holding that punitive damages for injuries suffered at a federally-licensed nuclear facility in addition to federally-imposed fines did not frustrate the Congressional purpose of "encourag[ing] widespread participation in the development and utilization of atomic energy for peaceful purposes" because Congress did not provide adequate redress for those injured by exposure to nuclear products).

[48] See e.g. *Cipollone*, *supra* note 44 at 516 ("[S]tate law is pre-empted if that law actually conflicts with federal law.…").

court infers a federal intent to occupy a particular regulatory field based on the pervasiveness of federal regulation.[49] In determining whether state law is field preempted, the fundamental question to be answered is whether Congress intended to encompass a given field or whether states were granted some legislative discretion. In some instances Congress carves out exceptions to their preemptive power with the inclusion of a saving clause. Saving clauses do not instruct a court to rule in a state's favor where preemption lawfully exists, rather they "clarify" the extent to which federal regulations are deemed to occupy a certain field.

Within the domestic aviation realm, two statutes serve as the overwhelming source of federal preemption litigation: the Federal Aviation Act of 1958 (1958 Act) and the Airline Deregulation Act of 1978 (ADA).[50] Although the Supreme Court has rendered several opinions regarding the proper application of these statutes, lower courts still struggle to determine if and when state-based laws will be preempted by them.

1. Federal Aviation Act of 1958: Implied Preemption

The Federal Aviation Act of 1958 created the Federal Aviation Agency as a new, independent regulatory body charged with oversight of the U.S. aviation industry.[51] Prior to the act, aviation was subject to the jurisdiction of the Civil Aeronautics Authority (CAA), a branch of the Department of Commerce.[52] The CAA consisted of three entities that mimicked the federal branches of government: a five-member board drafted economic and safety

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[49] Field preemption has been defined by the Supreme Court as follows:

> ...Congress implicitly may indicate an intent to occupy a given field to the exclusion of state law. Such a purpose properly may be inferred where the pervasiveness of the federal regulation precludes supplementation by the States, where the federal interest in the field is sufficiently dominant, or where "the object sought to be obtained by the federal law and the character of obligations imposed by it…reveal the same purpose."

Schneidewind v ANR Pipeline Co, 485 US 293 at 300 (1988) (quoting *Rice v Santa Fe Elevator Corp*, 331 US 218 at 230 (1947)).

[50] *Airline Deregulation Act of 1978*, Pub L No 95-504, 92 Stat 1705 (codified as amended in scattered sections of 49 USC) [*1978 Airline Deregulation Act*]. Preemption in the domestic aviation realm also exists under the *General Aviation Revitalization Act of 1994*, Pub L No 103-298, 108 Stat 1551 (codified as amended 49 USC § 40101 (1997)) [GARA], which prohibits civil actions against aircraft manufacturers when 18 or more years have passed between the date of manufacture and an accident resulting in death or bodily injury. GARA's preemption provision reads, "…this section supersedes any State law to the extent that such law permits a civil action…to be brought after the applicable limitation period [of 18 years]…" (*ibid* at Pub L No 103-298 § 2(d)).

[51] *1958 Federal Aviation Act*, *supra* note 6 at Pub L No 85-726 § 301.

[52] V Foster Rollo, *Aviation Law: An Introduction*, 5th ed (Lanham, MD: Maryland Historical Press, 2000) at 54.

regulations (legislative), an Administrator of Aviation executed the board's policies (executive), and a three-member Air Safety Board investigated aircraft accidents (judicial).[53]

Eventual reorganization resulted in the abolishment of the Air Safety Board and the creation of the Civil Aeronautics Administration and a five-member Civil Aeronautics Board (CAB) in 1940.[54] According to a Senate Report, the CAA's break up caused irreparable damage to civil aeronautics regulation.[55] Divided responsibility created an environment where the Civil Aeronautics Administration, which was responsible for the day-to-day management of the airways, often supplanted the rulemaking functions of the Administrator of Aviation.[56] Moreover, there existed no clear statutory authority for the centralized management of airspace, and the Department of Commerce and Bureau of the Budget repeatedly denied the Authority's funding requests for better air traffic control equipment.[57]

The 1958 Act eradicated the haphazard division of responsibility, giving full safety rulemaking authority to the Federal Aviation Agency, while leaving economic regulations, accident investigation, and safety certifications to the CAB.[58] The need for a substantive overall of federal aviation regulations was undoubted result of the growing aviation industry. Between 1950 and 1954, more than 127 million passengers travelled on U.S. airlines, more than double the number that had done so by the end of the 1940s.[59] That number nearly doubled again to 225 million passengers between 1955 and 1959.[60] With the advent of the "Jet Age,"[61] increased commercial air traffic, and a haphazard aviation regulatory scheme, the

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[53] See *Civil Aeronautics Act of 1938*, Pub L No 75-706, 52 Stat 973 at §§ 205, 301-308, and 701-702. The act established the Civil Aeronautics Authority and placed sole responsibility for all air transportation regulations with this one administrative agency.
[54] John G Wensveen & Alexander T Wells, *Air Transportation: A Management Perspective* 6th ed (Aldershot, UK: Ashgate Publishing Ltd, 2007) at 52.
[55] S Rep No 1811, 85th Cong, 2d Sess 10 (1958).
[56] *Ibid* at 6.
[57] *Ibid* at 10.
[58] During debate on the bill, it was suggested that the CAB be allowed to retain its safety rulemaking authority. However, as noted in the Senate Report, the five-member Board was "completely dependent" on its staff of experts with respect to drafting regulations and Civil Aeronautics Administration medical staff recommendations were often ignored prior to the Board taking action. *Ibid* at 10-11.
[59] Ray Holanda, *A History of Aviation Safety: Featuring the U.S. Airline System* (Bloomington, IN: AuthorHouse, 2009) at 137.
[60] *Ibid*.
[61] The term "Jet Age" refers to the period from 1958-present whereby the widespread use of turbine engine-powered aircrafts led to "bigger, faster, and more productive airliners." National Air and Space Museum, *The Jet*

likelihood of aircraft accidents became inevitable. Within two years, the industry experienced four mid-air collisions, which sent legislatures scrambling to establish comprehensive safety regulations and an airspace management system.[62] According to the 1958 Act's legislative history:

> The principal purpose of this legislation is to establish a new Federal agency with powers adequate to enable it to provide for the safe and efficient use of the navigable airspace by both civil and military operations…The Administrator of the new Federal Aviation Agency (1) would be given full responsibility and authority for the advancement and promotion of civil aeronautics generally, including the promulgation and enforcement of safety regulations, and (2) would be charged with the management of the national airspace….[63]

Following a spate of hijackings in the 1960s, the Federal Aviation Agency acquired additional responsibilities to include the management of airport and aircraft security.[64] In 1966, Congress established the Department of Transportation (DOT) to oversee the nation's transportation industry. As a result, both air and surface transportation fell under its purview and by 1967, the Federal Aviation Agency was transferred to the DOT and renamed as the

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Age, 1958-Today (2007), online: Smithsonian <https://airandspace.si.edu/exhibitions/america-by-air/online/jetage/index.cfm>. For example, the inaugural flight of the Boeing 707 (credited as the first US-made turbojet airplane) took passengers from New York to Paris in just over 7.5 hours. The same flight previously took 11 hours to complete. See Jenifer Van Vleck, *Empire of the Air: Aviation and the American Ascendancy* (Cambridge, MA: Harvard University Press, 2013) at 239.

[62] Harry P Wolfe & David A NewMyer, *Aviation Industry Regulation* (Carbondale, IL: Southern Illinois University Press, 1985) at 28. The first of these crashes occurred on 30 June 1956 when a TWA Super Constellation and a United Airlines DC-7 collided 21,000 feet over the Grand Canyon killing all 128 people aboard both flights. This was the first commercial airline crash to result in more than 100 deaths. The accident investigation report suggested the crash was caused by, among other things, the inability of the air traffic control (ATC) system to separate aircraft utilizing visual flight rules (VFR) (slower moving traffic) from those using instrument flight rules (IFR) (faster moving traffic). See *FAA Historical Chronology, 1926-1996*, online: Federal Aviation Administration <http://www.faa.gov/about/media/b-chron.pdf> [FAA, *Historical Chronology*] at 64. The latter three crashes involved collisions between military and commercial aircraft and occurred on 31 January 1957, 21 April 1958, and 20 May 1958, respectively (*ibid*).

[63] HR Rep No 2360, 85th Cong, 2d Sess 1 (1958), *reprinted in* 1958 USCCAN at 3741 [HR Rep No 2360]. The first Administrator of the Federal Aviation Agency was Lt Gen (Ret.) Elwood "Pete" Quesada, a former pilot with the U.S. Army Air Corp and later, the U.S. Air Force. Federal Aviation Administration, *Elwood "Pete" Quesada: The Right Man for the Right Job*, online: Federal Aviation Administration, <https://www.faa.gov/about/history/heritage/media/Elwood_Quesada.pdf>.

[64] Federal Aviation Administration, *Pilot's Handbook of Aeronautical Knowledge*, FAA-H-8083-25A (New York, NY: Skyhorse Publishing Inc, 2009) at 1-6 [FAA, *Pilot's Handbook*]. Aviation security was ultimately transferred to the Department of Transportation's (DOT) Security Administration (TSA) in 2003 and is now a function of the Department of Homeland Security. Paul Stephen Dempsey, *Public International Air Law* (Montreal, Canada: McGill University Institute and Centre for Research in Air and Space Law, 2008) at 292, 295-96.

Federal Aviation Administration (FAA).[65] The CAB's responsibilities were eventually transferred to the FAA[66] where today, safety directives, certification requirements, economic standards, among other responsibilities, are codified in a series of rules known as the Federal Aviation Regulations (FAR).[67]

The FAR is a five-volume set of federal rules that cover virtually every aspect of aviation from airworthiness and noise standards to domestic baggage liability to human space flight requirements and more. Adherence is mandatory and violations can result in civil and administrative penalties.[68] In its role as the primary regulator of aviation, the FAA's most important function is the management of the national airspace for commercial, private, and military use.[69] This is accomplished through a complicated network of air traffic control (ATC) facilities, airports, radars, and personnel collectively known as the National Airspace System (NAS).[70] First constructed by the FAA in 1982, the NAS today consists of more than 100,000 daily "aviation operations" involving over 18,000 commercial aircrafts and 230,000 general aviation airplanes.[71]

Although the Supremacy Clause makes no mention of federal administrative regulations among its list of "supreme Law of the Land," courts have concluded these regulations nevertheless preempt state law to the same extent as federal legislation.[72] The 1958 Act does not explicitly discuss preemption but it does include two provisions that courts have applied in attempts to resolve the federal versus state jurisdiction question. The act contains a

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[65] Robert M Kane & Allan D Vose, *Air Transportation*, 5th ed (Dubuque, IA: Kendall Hunt Publishing, 1975) at 43.
[66] When Congress established the Department of Transportation in 1966, it created the National Transportation Safety Board (NTSB) to investigate all transportation accidents, including aviation accidents that had previously been investigated by the CAB. FAA, *Pilot's Handbook*, *supra* note 64 at 1-6.
[67] 14 CFR §§ 1.1-1399 (2014). Aviation security regulations are promulgated by the TSA and can be found at 49 CFR §§ 1500-1562.29 (2014). In addition, the U.S. Department of Justice has regulatory authority over airline mergers and anticompetitive behavior pursuant to 49 USC § 46107.
[68] 14 CFR § 406.
[69] Federal Aviation Administration, *Fact Sheet: Unmanned Aircraft Systems (UAS)* (July 2011), online: Federal Aviation Administration < http://www.faa.gov/about/initiatives/uas/media/uas_fact_sheet.pdf> [FAA, *2011 UAS Fact Sheet*].
[70] FAA, *Pilot's Handbook*, *supra* note 64 at 1-6 and 14-2.
[71] FAA, *2011 UAS Fact Sheet*, *supra* note 69.
[72] *de la Cuesta*, *supra* note 29 at 153-54 (noting that "[f]ederal regulations have no less preemptive effect than federal statutes.").

sovereignty clause that states "the United States Government has exclusive sovereignty of airspace of the United States."[73] The act also includes a saving clause which declares that "[n]othing contained in this Act shall in any way abridge or alter the remedies now existing at common law or by statute, but the provisions of the Act are in addition to remedies."[74]

Initially courts determined that through the sovereignty clause, Congress had been granted sole authority to regulate the domestic airways. States, on the other hand, maintained the right to regulate those aspects of aviation involving aircraft on the ground. For example, in *Evansville-Vandenburgh Airport Authority Dist. v. Delta Airlines*, the Supreme Court held that a $1.00 use and service charge imposed on every enplaning passenger at a small, regional airport did not conflict with federal policies to encourage uniform air transportation regulations because there was neither an express prohibition against states exacting charges to help offset airport construction and maintenance costs nor a federal rule regulating the same.[75]

Today, most courts eschew the strict in flight/on-the-ground divide and instead determine preemption based on an interpretation of the 1958 Act's saving clause. As discussed above, implied field preemption can be found where federal law is so pervasive that Congressional intent to preempt is presumed. As will be evident from the cases discussed below, even where courts agree that the 1958 Act impliedly preempts state aviation safety laws, the left and right limits of the "aviation safety field" are constantly being redrawn.

a. *City of Burbank v. Lockheed Air Terminal, Inc.*

One of the first Supreme Court cases to address the preemptive nature of the Federal Aviation Act of 1958 was *City of Burbank v. Lockheed Air Terminal, Inc.*[76] decided in 1973. In response to complaints about the cacophony of loud jet engines, the Burbank City Council

[73] *1958 Federal Aviation Act*, *supra* note 6 at 49 USC § 40103(a)(1).
[74] *1978 Airline Deregulation Act*, *supra* note 50 at 49 USC § 1506.
[75] *Evansville-Vandenburgh Airport Authority Dist v Delta Airlines*, 405 US 707 at 720-722 (1972). In response to this decision, Congress enacted the *Airport Development Acceleration Act of 1973*, Pub L No 93-44, 87 Stat 88 (codified at 49 USCA § 1513 (1973)), which prohibited non-federal agencies from imposing passenger head or use taxes for air transportation.
[76] *City of Burbank v Lockheed Air Terminal, Inc*, 411 US 624 (1973).

adopted Burbank Municipal Code 20-32.1, which banned aircrafts from departing Hollywood-Burbank Airport between the hours of 11:00 p.m. and 7:00 a.m.[77] Owned and operated by Lockheed Air Terminal, the airport acted as a satellite location for Los Angeles International Airport and was equipped with two runways (north-south and east-west) that ran alongside heavily populated, residential neighborhoods.[78] Prior to the ordinance, the FAA itself had attempted to deal with the noise hazards by issuing runway preference order BUR 7100.5B, which suggested that the east-west runway be used as much as much as possible for evening and early morning departures.[79]

Upon a grant of *certiorari*, the Supreme Court was asked determine whether the Noise Control Act of 1972, an amendment to the 1958 Federal Aviation Act, preempted a state's regulation of aircraft noise. In reaching its decision, the Court dedicated a significant portion of its ruling to outlining the FAA's enumerated powers under the Noise Control Act, which included the mandate that the FAA shall provide "for the control and abatement of aircraft noise and sonic boom, including the application of such standards and regulations in the issuance, amendment, modification, suspension, or revocation of any certificate authorized by this title."[80] Although the act did not contain an express preemption clause, the Court found in a 5-4 decision that implied preemption existed for the regulation of aircraft noise based on the "pervasive nature…of federal regulation of aircraft noise."[81]

The Court acknowledged that regulating noise is "deep-seated in the police power of the [s]tates," however, because the curfew ultimately affected airspace management, it infringed upon the FAA's exclusive control of the aerial highway.[82] It reasoned that "[i]f we were to uphold the Burbank ordinance and a significant number of municipalities followed suit, it is obvious that fractionalized control of the timing of takeoffs and landings would severely limit

[77] Only one flight was affected by this ordinance: Pacific Southwest Airlines had a weekly Sunday night flight that departed Hollywood-Burbank at 11:30 p.m. bound for San Diego. *Ibid* at 625.
[78] *Lockheed Air Terminal Inc v City of Burbank*, 457 F 2d 667 at 668 (9th Cir 1972).
[79] *Ibid* at 669.
[80] *Burbank*, *supra* note 76 at 629.
[81] *Ibid* at 633. See also *San Diego Unified Port Dist v Gianturco*, 651 F 2d 1306 (9th Cir 1981); *American Airlines Inc v Town of Hemsted*, 398 F 2d 369 (2d Cir 1968); and *Bieneman v City of Chicago*, 864 F 2d 463 (7th Cir 1988).
[82] *Burbank*, *supra* note 76 at 638-39.

the flexibility of [the] FAA in controlling air traffic flow."[83] In addition, the Court advised that a single, uniform system of regulation was critical to answering Congress' demand for increased air safety.[84] In light of Court's *Burbank* decision, Congress enacted the Aircraft Noise and Capacity Act of 1990, which allows states to request FAA permission to impose noise and access restrictions.[85]

Though the *Burbank* decision only addressed aircraft noise, its finding that the FAA had wide regulatory latitude in the aviation field has been used by other courts to justify their preemption rulings.

b. *French v. Pan Am Express, Inc.*

Pan American World Airways (Pan Am) pilot Timothy French regularly flew for the airline out of Green State Airport in Warwick, Rhode Island.[86] Upon learning from local police that French may have used marijuana off duty, Pan Am directed the pilot to undergo drug testing, which he refused, claiming the request violated Rhode Island law.[87] The statute in question (1) required employers to have "reasonable grounds to believe" that an employee had used drugs or that their work performance was impaired by drug use and (2) did not permit the administration of drug tests "in conjunction with a bona fide rehabilitation program."[88]

Pan Am fired French and he sued for among other reasons, reinstatement and an injunction prohibiting the airline from mandating drug tests.[89] On appeal, the U.S. Court of Appeals for

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[83] *Ibid* at 639. See also *British Airways Board v Port Authority of New York & New Jerse*y, 558 F 2d 75 at 83 (2d Cir 1977) (noting that "[The FAA] requires that exclusive control of airspace management be concentrated at the national level.").
[84] *Burbank*, *supra* note 76 at 639.
[85] *Airport Noise and Capacity Act of 1990*, Pub L No 101-508, 104 Stat 1388-378 (recodified at 49 USC §§ 47521-47534) at 49 USC § 47524.
[86] *French v Pan Am Express Inc*, 869 F 2d 1 (1st Cir 1989).
[87] *Ibid*.
[88] *Ibid* at 1-2 (quoting RI Gen Laws § 28-6.5.1).
[89] *Ibid* at 2.

the First Circuit (First Circuit) held that the 1958 Act gave the Secretary of Transportation[90] exclusive responsibility over air safety, which included pilot certification requirements.[91] Specifically, the act granted the DOT Secretary authority to issue airman certificates (ACs) and require all commercial aircraft pilots to have ACs prior to flight.[92] The court found that pilot certification necessarily included an assessment of pilot fitness and that the Secretary of Transportation had established standards that prohibited pilots from having an medical history or clinical diagnosis of drug dependency, or any other "medical condition that the Federal Air Surgeon [found]…[made] the applicant unable to safely perform [their] duties…." [93] To this end, the Federal Air Surgeon was empowered to "[e]xamine…holders of medical certificates for compliance with" the drug addiction ban.[94] Furthermore, no pilot was allowed to operate an aircraft without a current medical certificate.[95]

The First Circuit concluded that regulation of pilots had been impliedly preempted based on the numerous rules proffered by the DOT and the FAA regarding the same.[96] Rhode Island's law, although not expressly directed at aviation, impermissibly encroached on air safety and was therefore unenforceable. In an oft-cited excerpt, the court concluded:

> We infer from the Federal Aviation Act an unmistakably clear intent to occupy the field of pilot regulation related to air safety, to the exclusion of state law. In our judgment, such an intent is implicit in the pervasiveness of relevant federal regulation, the dominance of the federal interest, and the legislative goal of establishing a single, uniform system of control over air safety. *In this case, all flight plans lead to Washington*.[97]

Ten years after *French*, the U.S. Court of Appeals for the Third Circuit (Third Circuit) forever changed the preemption discourse with its seminal *Abdullah v. American Airlines,*

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[90] Originally the act named the FAA Administrator in lieu of the Secretary of Transportation. However, when the FAA was reorganized under the DOT in 1967, the Transportation Secretary assumed the roles of the FAA Administrator. In practice, most of the roles have been delegated back to the FAA Administrator.
[91] *French*, *supra* note 86 at 3.
[92] 49 USCA §§ 1422(a) and 1430 (a)(2).
[93] 14 CFR §§ 67.13(d)(i)(d) and 67.13(ii)(a) (1988).
[94] *Ibid* at § 67.25(a)(1) (1988).
[95] *Ibid* at § 61.3(c) (1988).
[96] *French*, *supra* note 86 at 4-6.
[97] *Ibid* at 6-7 [emphasis added].

Inc.[98] decision. Prior to *Abdullah*, courts had limited federal preemption to narrow aviation subsets such as noise abatement and aircrew qualifications. The Third Circuit, however, went ten steps further and unequivocally pronounced the *entire field* of aviation safety to be preempted by federal law.

c. *Abdullah v. American Airlines, Inc.*

In *Abdullah* several passengers filed suit against American Airlines for injuries sustained when their plane encountered severe turbulence on its way to Puerto Rico from New York. Upon noticing a developing weather system, the first officer notified flight attendants and turned on the "fasten seatbelt" sign, however, no verbal announcements regarding potential turbulence were made and the captain did not attempt to change course.[99] In their complaint, the plaintiffs alleged that the captain and flight crew negligently failed to provide adequate warning and avoid the turbulent conditions.[100]

The district court ruled in favor of the plaintiffs, applying territorial common law rules on standard of care rather than federal law.[101] On appeal, however, the Third Circuit concluded that Congress, in enacting the 1958 Act and accordant regulations, "intended generally to preempt state and territorial regulation of aviation safety" and that it would be illogical to conclude that federal law preempted narrow aspects of safety such as noise control and pilot licensing, but not the overall, general field.[102] The court further noted, "federal law establishes the applicable standards of care in the field of air safety, generally, thus preempting the *entire field* from state and territorial regulation."[103] In dismissing opposing rulings, the court explained that certain courts either failed to thoroughly analyze the 1958 Act or misapplied the express preemption clause of the 1978 ADA, which it viewed primarily as an economic deregulation statute.[104] The court also rejected the claim that because no conflict of law

[98] *Abdullah v American Airlines Inc*, 181 F 3d 363 (3d Cir 1999).
[99] *Ibid* at 365.
[100] *Ibid*.
[101] The initial jury trial was held in Saint Croix, Virgin Islands, an unincorporated territory of the United States. *Ibid*.
[102] *Ibid* at 367-68, 371.
[103] *Ibid* at 367 [emphasis added].
[104] *Ibid* at 368.

existed, preemption was unnecessary.

At Congress' direction, the FAA Administrator was charged with defining "minimum" safety standards[105] and some courts therefore concluded that states could impose requirements that exceeded those minimums.[106] The Third Circuit argued, however, that the FAA provided both general and specific prerequisites and therefore there was no void to be filled in by state common law standards.[107] Furthermore, the lack of any conflict was irrelevant since field preemption was envisaged and any state law encroaching in the area was necessarily preempted.[108]

d. *Gilstrap v. United Air Lines*

Similar to the *Abdullah* question that asked the source of the duty of care owed to passengers in flight, *Gilstrap v. United Air Lines*[109] attempted to answer the question with respect to duty owed for on-the-ground services. Suffering from osteoarthritis and other health issues, Michelle Gilstrap requested wheelchair assistance for moving through the airport on two separate United Air Lines (United) flights in 2008 and 2009, respectively.[110] United allegedly failed to furnish the requested assistance, which forced Gilstrap to navigate the airport on foot.[111] Gilstrap sued under California tort law claiming negligence, intentional infliction of emotional distress, and breach of duty among other claims.[112]

United, in turn, filed a motion to dismiss claiming the Air Carrier Access Act (ACAA), an amendment to the Federal Aviation Act of 1958, impliedly preempted common law tort claims. In ruling in United's favor, the U.S. Court of Appeals for the Ninth Circuit (Ninth Circuit) found that although the ACAA did not contain an express preemption clause, it

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[105] 49 USC § 44701(a)(1).
[106] See e.g. *In re Air Disaster at Lockerbie, Scotland*, 37 F 3d 804 at 815 (2d Cir 1994) and *Cleveland v Piper Aircraft Corp*, 985 F 2d 1438 at 1444-45 (10th Cir 1993).
[107] *Abdullah*, *supra* note 98 at 374.
[108] *Ibid*.
[109] *Gilstrap v United Air Lines*, 709 F 3d 995 (9th Cir 2013).
[110] *Ibid* at 998.
[111] *Ibid*.
[112] *Ibid*.

provided explicit instructions as to when air carriers must provide requested assistance.[113] The court therefore reasoned that the ACAA established United's standard of care regarding airport access transport and thus preempted any "different or higher standard of care that may exist under California tort law."[114] The act did not, however, preempt any local remedies that were available should an airline violate ACAA standards.[115]

Although many courts seem willing to expand the federal government's implied preemptive powers beyond that of aviation safety,[116] this trend is by no means universal. Several courts have refused to defer to federal law in the absence of express preemption language or have severely limited the field in which federal aviation law is said to occupy.

e. *Cleveland v. Piper Aircraft*

In 1983, pilot Edward Cleveland crashed his Piper Super Cub aircraft into a parked van while attempting to take off from the Mid-Valley Airport in Los Lunas, New Mexico.[117] Prior to the accident, Cleveland and an FAA-certified mechanic had removed the plane's front seat and equipped the aircraft with a camera in order to film a glider that had been attached to the aircraft's tail.[118] Cleveland had been piloting the plane from its rear seat at the time of the

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[113] *Ibid* at 1007 (noting that requested assistance must be provided "between gates to make a connection to another flight," during "enplaning and deplaning," for "accessing key functional areas of the terminal, such as ticket counters and baggage claim," etc. (quoting the *Air Carrier Access Act*, 49 USC § 41705)).
[114] *Ibid*. But see *Elassaad v Independence Air Inc*, 613 F 3d 119 at 130 (3rd Cir 2010), which held that because the aircraft was not "being operated for the purpose of air navigation" when a disabled passenger fell during disembarkation, the ACAA was not controlling).
[115] *Ibid* at 1008.
[116] See e.g. *Montalvo v Spirit Airlines*, 508 F 3d 464 (9th Cir 1999) (holding that FAA regulations impliedly preempted any state-imposed duty to warn airline passengers about the risk of deep vein thrombosis); *US Airways Inc v O'Donnell*, 627 F 3d 1318 (10th Cir 2010) (holding a New Mexico liquor control act that prescribed training and certification requirements for onboard alcoholic service was impliedly preempted since the FAA had its own regulations regarding the same); *Air Evac EMS Inc v Robinson*, 486 F Supp 2d 713 (MD Tenn 2007) (holding the pervasiveness of FAA regulations regarding safety promulgated pursuant to the 1958 Act evidenced implied field preemption in the regulation of avionics equipment for air ambulance helicopters); and *Command Helicopters Inc v City of Chicago*, 691 F Supp 1148 (ND Ill 1988) (holding that Congress has impliedly preempted regulation of helicopter external-loading operations).
[117] *Cleveland*, *supra* note 106 at 1441. The van had been intentionally parked on the runway by the airport's owner who was attempting to prevent Cleveland from flying what he believed was an illegally altered aircraft (*ibid*).
[118] *Ibid*.

accident, which Piper acknowledged its plane had been designed to do.[119] On impact, Cleveland's head hit the camera, resulting in severe head and brain trauma.[120]

Cleveland's estate sued Piper alleging it had negligently failed to include a rear shoulder harness and provide sufficient forward vision from the back seat.[121] Piper argued that the tort claim was preempted by the 1958 Act because of the abundance of federal law governing aviation safety. The U.S. Court of Appeals for the Tenth Circuit (Tenth Circuit), however, disagreed and did not find the preponderance of federal regulation to be dispositive of intent to displace *all* state law affecting aviation safety.[122] Relying heavily on the act's saving clause, the court reasoned that its inclusion signified Congress meant to allow for state-based common law remedies such as tort liability.[123]

In addition, the court noted that as an amendment to the 1958 Act, the Airline Deregulation Act of 1978 (ADA) contained an express preemption clause and that through the statutory interpretation tool known as *expressio unius est exclusio alterius*,[124] implied preemption is generally not employed when an express preemption clause exists.[125] Accordingly, anything not encompassed by the ADA's preemptive exclusions could be regulated by states.[126] The Tenth Circuit also concluded that in setting minimum standards for design safety, the 1958 Act left opens the right of states to institute stricter and more exacting requirements.[127] Although a controversial ruling, many jurisdictions followed suit and refused to find preemption for aviation related torts.[128] The Supreme Court's response came seven years later

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[119] *Ibid* at 1441, n 4.
[120] *Ibid* at 1441.
[121] *Ibid*.
[122] *Ibid*.
[123] *Ibid* at 1442-43.
[124] Loosely translated, the phrase reads, "The express mention of one thing excludes all others." Bryan A Gardner, ed, *Black's Law Dictionary*, 7th ed (St Paul, MN: West Publishing, 1999) at 602.
[125] *Cleveland*, *supra* note 106 at 1443. See also *Cipollone*, *supra* note 44 at 517.
[126] Sean A Kelly, "Federalism in Flight: Preemption Doctrine and Air Crash Litigation" (2000-2001) 28 Transp LJ 107 at 124.
[127] *Cleveland*, *supra* note 106 at 1445.
[128] See e.g. *Martin ex rel Heckman v Midwest Exp Holdings Inc*, 555 F 3d 806 (9th Cir 2009); *Monroe v Cessna Aircraft Co*, 417 F Supp 2d 824 (ED Tex 2006); *Snyder-Stulginkis v United Airlines Inc*, 2001 WL 1105128 (ND Ill 2001); and *Sheesley v The Cessna Aircraft Co*, 2006 WL 1084103 (SD S Dak 2006).

when it ruled that inclusion of an express preemption or saving clause did not forestall a finding of implied preemption as well.[129]

f. *Skysign International, Inc v. City & County of Honolulu*

In the case of *Skysign International, Inc v. City & County of Honolulu*,[130] Skysign International, Inc. (Skysign) provided aerial advertisements over the Hawaiian island of Oahu by attaching lighted signs to their company's helicopters.[131] In order to run its operation, Skysign received certificates of waiver from the FAA to operate over densely populated areas and during nighttime hours.[132] The certificates were grants of special permission for otherwise prohibited FAA activity and also included language reminding operators that they were still subject to local ordinances regarding aerial sign usage.[133] The city and county of Honolulu, Hawaii prohibited the use of aircraft as advertising devices and repeatedly fined Skysign for its violations.[134]

Skysign sued for a declaratory judgment that federal law preempted Honolulu's attempts to regulate navigable airspace.[135] On appeal to the Ninth Circuit, the court held that Congress did not preempt the entire field of aviation focusing on the fact that the FAA had not promulgated specific legislation on aerial advertising.[136] The court also emphasized that states routinely regulated advertising as an exercise of their police powers and found that aviation regulation is meant to encompass "coexistence between federal and local regulatory schemes" because the FAA's own guidelines highlight that aerial advertising pilots must still comply with local ordinances.[137]

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[129] *Geier v Am Honda Motor Co Inc*, 529 US 861 at 873 (2000) (holding that an "express pre-emption provision imposes no unusual, 'special burden' against [implied] pre-emption. For similar reasons, we do not see the basis for interpreting the saving clause to impose any such burden.").
[130] *Skysign International Inc v City & County of Honolulu*, 276 F 3d 1109 (9th Cir 2002).
[131] *Ibid* at 1113.
[132] *Ibid*.
[133] *Ibid*.
[134] *Ibid* (citing Haw Rev Ordinances § 40–6.1).
[135] *Ibid* at 1114.
[136] *Ibid*.
[137] *Ibid* at 1115, 1118. Compare with *Banner Advertising Inc v City of Boulder*, 868 P 2d 1077 (Colo Sup Ct 1994) (finding that a local aerial advertising ordinance was preempted by the 1958 Act, even where the certificates of waiver contained similar language requiring compliance with local regulation).

In reaching its conclusion, the court rejected Skysign's claim that the prohibition's impetus was a belief that aerial advertising posed a distraction to motorists and therefore, the local ordinance encroached upon the FAA's exclusive authority to "prescribe air traffic regulations in the flight of aircraft...[for] protecting individuals and property on the ground."[138] The court stated that because the ordinance did not govern flight paths, flight curfews, or flight altitude, it did not impinge upon any exclusive federal area.[139]

g. *Ward v. Maryland*

Like many states, Maryland enacted a law criminalizing the reckless operation of aircraft.[140] In May 1975, FAA-certified student pilot Robert Ward, had dinner and drinks following a later afternoon instructional flight.[141] After sleeping in his car, Ward awoke the next morning and decided to practice some additional maneuvers.[142] During his practice run, apparently overcome by excitement, Ward "buzzed" by some nearby apartment buildings.[143] Unfortunately for Ward, a Maryland State police officer witnessed his actions from a patrol helicopter and arrested him upon landing.[144]

In addition to being tried and convicted in district court, Ward also received penalties from the FAA for violating several FARs[145] including the revocation of his airman certificate.[146] Ward appealed his criminal conviction to the Court of Appeals of Maryland, which emphatically announced, "Congress has not occupied the entire field of aeronautics by the Federal Aviation Act of 1958."[147] The court focused on the act's lack of an express preemption clause and refused to concede implied preemption except in areas already deemed

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[138] *Ibid* at 1117 (citing 49 USC § 4103(b)(2)(A)).
[139] *Ibid*.
[140] MD Code 1957, art 1A, § 10-1002 (1974).
[141] *Ward v Maryland*, 374 A 2d 1118 at 1120 (Md Sup Ct 1977). When Ward's blood alcohol level was measured the next morning, it registered at .17 percent.
[142] *Ibid*.
[143] *Ibid*.
[144] *Ibid*.
[145] 14 CFR § 91.9 (1976) prohibited the reckless or careless operation of an aircraft. 14 CFR § 91.11 (1976) dealt with drug and alcohol use while operating an aircraft.
[146] *Ibid*. The certificate was later reissued six months later (*ibid*).
[147] *Ibid* at 1123-24.

so, such as aircraft noise.[148]

In pointing to the 1958 Act's 1961 amendment, which designated criminal penalties for certain violations, the court noted that during the drafting phase, it was mentioned that the FAA's punishments would be in addition to any corresponding state criminal legislation.[149] The court also went further and dismissed Ward's conflict preemption argument by opining that although both Maryland and federal law forbade the reckless operation of aircraft, the punishments were not identical because one was criminal and the other civil and administrative.[150] The justices were not convinced that a conflict existed even though under Maryland law, Ward could be barred from operating an aircraft within its borders even though he held a valid FAA airman certificate.[151] Without further explanation, the court simply resolved that they did not comprehend how:

> …prohibiting, for a limited time, the operation of an aircraft…by a person who has been found guilty in a court of law of operating an aircraft in a careless or reckless manner so as to endanger the life or property of another could be said to stand as an obstacle to the Congressional purposes and objectives.[152]

h. *Gustafson v. City of Lake Angelus*

Finally, in *Gustafson v. City of Lake Angelus*,[153] Michigan resident, Robert Gustafson owned a waterfront home on the banks of Lake Angelus.[154] As a certified FAA seaplane pilot, he often used, docked, and moored seaplanes in the waters behind his home.[155] His seemingly

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[148] *Ibid* at 1124.
[149] *Ibid* (citing 1961 US Code Cong & Adm News at 2564).
[150] *Ibid* at 1125. See also *People v Valenti*, 153 Cal App 3d Supp 35 (Cal Superior Ct 1984) (holding state prohibitions on low altitude flying, reckless flying, and unlicensed flight are not preempted by federal law because there is no comprehensive federal scheme to regulate or control that field of law).
[151] *Ibid*.
[152] *Ibid*.
[153] *Gustafson v City of Lake Angelus*, 76 F 3d 778 (6th Cir 1996).
[154] *Ibid* at 780-81.
[155] *Ibid* at 781. Ordinance 66(E) prohibited the "mooring, docking, launching…or use of any…aircraft powered by internal combustion engines." It also contained an altitude restriction law that had not been enforced against Gustafson and was subsequently removed from the ordinance after the city acknowledged it was federally preempted (*ibid* at 781, n 2). Ordinance 25(J) outlawed the landing of seaplanes within the Village of Lake Angelus area (*ibid* at 781).

mundane actions were later found to be in violation of two city ordinances that prohibited such acts as nuisances.[156] After being warned not to use his seaplane on the lake, Gustafson brought an action claiming federal law preempted the ordinances.

The district court agreed with Gustafson's claims relying heavily of the Supreme Court's *Burbank* decision.[157] On appeal, the U.S. Court of Appeals for the Sixth Circuit (Sixth Circuit) reversed, finding that the implied field designated by the 1958 Act and its attendant legislation did not include aircraft landing sites because pervasive regulations governing such sites did not exist.[158] Moreover, the act contained language suggesting that land use issues were inherently local.[159]

In dismissing Gustafson's argument that inland waters were part of the navigable airspace under the federal government's exclusive control, the court focused on the act's definition of "landing area," which included bodies of water.[160] As part of the Earth's surface, the court argued, Lake Angelus was properly under local control. In sum, the court held that "although FAA regulations preempt local law with respect to aircraft safety, the navigable airspace, and noise control, the FAA does not believe Congress expressly or impliedly meant to preempt regulation of local land or water use in regard to the location of airports or plane land sites."[161] The Sixth Circuit also rebuffed the contention that two federal regulations concerning the safe operation of seaplanes signified implied field preemption. The court noted that those regulations addressed the use of seaplanes, which was distinct from regulations dealing with the use the water's surface.[162]

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[156] *Ibid* at 781.
[157] *Ibid* at 784.
[158] *Ibid*.
[159] *Ibid* at 784-87 (citing 14 CFR § 157.7(a), which required any person seeking to build a civil airport to comply with local and state statutes irrespective of a finding from the FAA's aeronautical study).
[160] *Ibid* at 785 (citing 49 USC § 40102(28)).
[161] *Ibid* at 786. See also *In re Commercial Airfield*, 752 A 2d 13 (Ver 2000) (holding that the federal government does not pervasively occupy the field of land use law related to aviation so regulations such as zoning and environmental review are not preempted).
[162] *Gustafson*, *supra* note 153 at 785-86. 14 CFR § 91.115(a) establishes right-of-way rules for water operations and 14 CFR § 91.119 provides the minimum safe altitudes for operating an aircraft.

The *Gustafson* decision unequivocally stands for the proposition that in order to determine what activities fall under the FAA's exclusive purview, the critical question to ask is: Did the activity take place in "navigable airspace?" With respect to legislation of unmanned aircraft systems, this question is of utmost importance as will be discussed further in Chapter III.

i. *An Implied Preemption Test?*

That implied preemption—and field preemption, in particular—is a judicial construct, it should come as no surprise that courts completely disagree on the boundaries of the field Congress intended to preempt with the 1958 Act. The Supreme Court's decision in *Burbank* finding aircraft noise regulation through flight restrictions to be under the exclusive purview of the FAA due to the "pervasiveness" of noise regulations, is an ostensibly limited field. However, courts such as *French* and *Abdullah* have used the *Burbank* rationale to expand the sphere. *Abdullah*, in fact, widened the field to include everything related to aviation safety, a notion other courts quickly adopted.

On the other hand, jurisdictions such as *Ward* and *Cleveland* so narrowly define the preempted field that it essentially becomes an express preemption analysis. That is, these courts demand overwhelming evidence of Congressional intent before they will cede implied federal preemption in a given area. But even with express claims, debate over their scope still rages. The Supreme Court has considered the ADA's express preemption clause no less than three times in two decades, each time adding another step to the analysis.

2. Airline Deregulation Act of 1978: Express Preemption

Unlike its predecessor, which focused on safety initiatives and the establishment of a unified regulatory agency, the Airline Deregulation Act of 1978's sole concern was economic. By 1951, questions began to arise about the usefulness of heavy-handed government regulations.[163] Economists suggested that protectionist government policies created artificially

[163] Wensveen & White, *supra* note 54 at 55.

inflated profits than would otherwise be normalized under competitive market conditions.[164] Despite concerns, no significant push for reform was made until the early-1970s when the Arab oil embargo of 1973 spiked fuel costs, while at the same time an economic recession curbed demand air travel.[165] To cover costs, the CAB allowed airlines to raise prices, an unpopular move with the public that ultimately did nothing improve the airlines' bottom line.[166] Frustrated, Congress looked for a solution and after a series of hearings, concluded less regulation would lead to more competition, which would in turn result in lower prices for the average air traveller.[167]

It was against this backdrop that the ADA emerged. The act embraced tried-and-true capitalism by relying on competition to drive airfare, services, route designations, productivity, and innovation.[168] The ADA gradually reduced the government's control over airlines' day-to-day operations and promoted an environment where competition was governed by free market principles.[169] For example, immediately following its passage, airline fares could be reduced up to 70% without CAB approval.[170] In addition, new airlines were gradually given access to all markets, even those already served by other carriers.[171] The most sweeping change, however, undertaken by the ADA was the act's explicit preemption of state-based legislation regarding air carriers.

To safeguard against deregulation subversion, Congress included an express preemption clause prohibiting states from "enact[ing] or enforc[ing] a law, regulation, or other provision having the force and effect of law related to a price, route, or service of an air carrier…."[172]

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[164] William A Jordan, *Airline Regulation in America: Effects and Imperfections* (Baltimore, Maryland: Johns Hopkins Press, 1970) at 8.
[165] Wensveen & White, *supra* note 54 at 55-56.
[166] *Ibid* at 56.
[167] *Ibid*. A CAB study also concluded that certain provisions of the 1958 Act were "not justified by the underlying cost and demand characteristics of commercial air transportation. The industry is naturally competitive, not monopolistic." *Ibid*.
[168] Wensveen & Wells, *supra* note 54 at 58. For a detailed commentary on airline deregulation and its ultimate failure, see generally Paul Stephen Dempsey & Andrew R Goetz, *Airline Deregulation and Laissez-Faire Mythology* (Westport, Conn: Quorum Books, 1992).
[169] Wolfe & NewMyer, *supra* note 62 at 28-29.
[170] FAA, *Historical Chronology*, *supra* note 62 at 203.
[171] *Ibid*.
[172] 49 USC § 41713(b)(1).

The ADA also retained the 1958 Act's saving clause, which prevented the ADA "abrid[ging]" or "alter[ing]" state common law or statutory remedies.[173]

Although ADA litigation has traversed all rungs of the judicial ladder, the analysis here will focus on the Supreme Court's three ADA preemption decisions, each of which examined a different section of the clause. This concentrated analysis is intentional because the ADA will have a limited, if any, impact on challenges to unmanned aerial vehicle legislation. Specifically, the ADA will only apply when an unmanned aircraft is acting as an air carrier.

a. *Morales v. Trans World Airlines*

The Court's first consideration of ADA preemption came in 1992 when an airline conglomeration challenged Texas' Deceptive Trade Practices Act.[174] Texas' act required airlines to disclose all applicable surcharges, taxes, and fees when advertising ticket fares.[175] The act was based on guidelines adopted by the National Association of Attorneys General (NAAG),[176] which required an airline's total advertised airfare to include "any fuel, tax or other surcharge."[177] Although itself not law, use of the guidelines was suggestive and many states incorporated them into their consumer protection statutes.[178]

In November 1988, Texas and four others states informed Trans World Airlines, Continental Airlines, and British Airways that their practice of "hiding" surcharges and fees by displaying them less prominently than advertised ticket prices, violated both NAAG guidelines and the respective states' false advertising and deceptive practices laws.[179] Texas'

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[173] 49 USCA § 1506.
[174] See generally *Morales v Trans World Airlines Inc*, 504 US 374 at 380 (1992).
[175] *Trans World Airlines Inc v Mattox*, 897 F 2d 773 at 775 (5th Cir 1990). Mattox was the Texas Attorney General originally named in the suit.
[176] The NAAG is an organization of attorneys general from all 50 states, U.S. territories, and the District of Columbia. Its mission is "[t]o facilitate interaction among Attorneys General as peers and to facilitate the enhanced performance of Attorneys General and their staffs." National Association of Attorneys General, "About NAAG: Information on the Association" online: National Association of Attorneys General <http://www.naag.org/about_naag.php>.
[177] *Mattox*, *supra* note 175 at 775.
[178] Thirty-three states that had adopted the NAAG's guidelines were named in a March 1989 primary injunction motion. *Ibid* at 776.
[179] *Ibid* at 775.

attorney general went a step further and threatened to sue the airlines if their practices were not amended.[180] Unimpressed by intimidation, the airlines responded by filing suit in the United States District Court for the Western District of Texas alleging that Texas' Deceptive Trade Practices Act, as well as the NAAG guidelines, were preempted by the ADA.[181]

The district court granted the airlines' motion for a preliminary injunction by barring Texas from "taking any action…that would regulate respondents' rates, routes, or services, or their advertising and marketing of the same."[182] Texas unsuccessfully appealed to the United States Court of Appeals for the Fifth Circuit which held that because Texas' law "related to" an airline's rates, routes, and services, i.e., it regulated how airlines could advertise fares, it was preempted by the ADA.[183] The court came to this conclusion despite the fact that the Texas law did not specifically target the airline industry, but rather, applied to all trade practices conducted in Texas. This distinction was important to the Ninth Circuit, which found the ADA inapplicable where the challenged law only "tangentially affected," rather than specifically regulated, airline activity.[184]

On review, the Supreme Court held that the ADA's "relating to" provision was triggered when a law had some "connection with or reference to" an airline's rates, routes, or services.[185] Citing the Employee Retirement Income Security Act of 1974,[186] which contains similar preemption language, the Court proclaimed that such language was intended to be read broadly.[187] In finding that the NAAG's guidelines and attendant state law related to airline rates within the meaning of the ADA, the Court pointedly noted that the guidelines

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[180] *Ibid*.
[181] *Ibid*.
[182] *Morales*, *supra* note 174 at 380.
[183] *Mattox*, *supra* note 175 at 783.
[184] See *Air Transport Association v Public Utilities Commission*, 833 F 2d 200 at 202 (9th Cir 1987) (holding that a California Public Utilities regulation that barred the secret monitoring of telephone conversations was not preempted by the ADA because the regulation was not specifically aimed at the airline industry. The airlines were seeking to monitor conversations between customer service agents and customers without the customers' knowledge).
[185] *Morales*, *supra* note 174 at 384 (citing *Shaw v Delta Air Lines Inc*, 463 US 85 at 97 (1983)). The case was decided by a 5-3 majority as former New Hampshire Attorney General, Justice David H Souter, took no part in the case's consideration or decision.
[186] *Employee Retirement Income Security Act of 1974*, Pub L No 93-406, 88 Stat 829 (codified as amended at 29 USC § 1144(a)), preempts all state laws that "relate to" employee benefit plans.
[187] *Morales*, *supra* note 174 at 383-84.

explicitly referred to airfare in their provisions.[188] In addition, the Court concluded that any condition placed on fare advertising had an impermissible "significant effect upon fares."[189] In dismissing Texas' argument that the ADA's saving clause preserved common law remedies such as its consumer protection statutes, the Court relied on the canon of statutory interpretation, which favors specific language (the express preemption clause) over general (the saving clause).[190]

b. *American Airlines v. Wolens*

Three years after *Morales*, the Court revisited ADA preemption when it again considered the constitutionality of a state's consumer protection law as applied to airlines. At issue in *American Airlines v. Wolens*[191] was whether American Airlines (American) had violated Illinois' Consumer Fraud and Deceptive Business Practices Act (Illinois Consumer Fraud Act) and was in breach of contract for unilaterally changing the terms and conditions of its frequent flyer program, AAdvantage.[192] Specifically, the plaintiffs alleged that after earning AAdvantage mileage credits, the airline retroactively devalued those credits when it modified its program in 1988.[193] For example, after the change blackout dates were imposed and limits were placed on the number of seats available for purchase with AAdvantage credits.[194]

The plaintiffs sued for pecuniary compensation, which American attempted to block by claiming ADA preemption over both Illinois' Consumer Fraud Act and the common law contract claim.[195] Their argument was dismissed at trial[196] and on appeal by the Illinois

[188] *Ibid* at 388.
[189] *Ibid*.
[190] *Ibid* at 385.
[191] *American Airlines v Wolens*, 513 US 219 (1995) [*Wolens V*].
[192] Illinois' Consumer Fraud Act prohibited the use of deceptive, fraudulent, or misrepresentative facts in the conduct of trade or commerce. *Wolens v American Airlines*, 626 NE 2d 205 at 227 (Illinois Supreme Court 1993) [*Wolens IV*].
[193] *Wolens V*, *supra* note 191 at 224-25.
[194] *Ibid* at 225.
[195] *Ibid*.
[196] *Wolens v American Airlines*, 589 NE 2d 533 at 535 (Illinois Supreme Court 1992) [*Wolens II*].

Appellate Court and Illinois Supreme Court, both of which relied heavily on the Ninth Circuit's tangential effect analysis, as well as, the ADA's saving clause.[197]

The Supreme Court granted review and in a 5-3 decision not only examined the ADA's "related to" language, but also considered the act's "enact or enforce a law" phrase.[198] As in *Morales*, the Court easily found that Illinois' Consumer Fraud Act related to airline rates and services within the meaning of the ADA because the act affected American's ability to manage its mileage credits (rates) and passenger access to upgraded flights (services).[199] Because the act related to airline rates and services, it was properly preempted by the ADA. The breach of contract claim, however, was not.

The Court held that a state does not "enact" or "enforce" law or regulations under the ADA when it imposes common law contract remedies because these remedies are "self-imposed undertakings" of parties to a contract.[200] The Court drew a "distinction between what the [s]tate dictates and what the airline itself undertakes" and noted that together with the ADA's saving clause, states can enforce contract claims that are part of the parties' negotiation.[201] The subtle distinction between the enforcement of contractual terms versus state-borne legislation was addressed by the Court again nearly two decades later.

c. *Northwest v. Ginsberg*

The final and most recent review of ADA preemption occurred in April 2014 when the Supreme Court unanimously ruled that implied covenants of good faith and fair dealing were

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[197] *Wolens v American Airlines*, 565 NE 2d 258 at 261-62 (Illinois Appellate Court 1990) [*Wolens I*] and *Wolens II*, *supra* note 196 at 535. *Wolens II* reached Illinois' Supreme Court before the U.S. Supreme Court's *Morales* decision. The Supreme Court had initially granted *certiorari* but remanded the case without a judgment in light of its *Morales* ruling. See *American Airlines v Wolens*, 506 US 803 (1992) [*Wolens III*]. On remand, the Illinois Supreme Court reaffirmed its earlier decision on the same grounds. *Wolens IV*, *supra* note 192 at 207-09.
[198] Justice Antonin Scalia did not participate in the Court's consideration or decision.
[199] *Wolens IV*, *supra* note 192 at 226.
[200] *Ibid* at 228-29. The Court cited its decision in *Cipollone* where it held, "[A] common-law remedy for a contractual commitment voluntarily undertaken should not be regarded a 'requirement…*imposed under State law*'…." *Cipollone*, *supra* note 44 at 526 (1992) [emphasis in the original].
[201] *Ibid* at 232-33.

preempted by the ADA.[202] *Northwest v. Ginsberg* began in November 2008 when Rabbi Sholom Binyomin was kicked out of Northwest Airlines' (Northwest) WorldPerks frequent flyer program for "complaining to the Customer Care line too many times…booking reservations on full flights [for] the purpose of being bumped, and being bumped on flights too often."[203] Under the WorldPerks' contract terms, Northwest was entitled to revoke passenger membership if it deemed, in its sole discretion, that the person had abused the program.[204]

Ginsberg filed a $5 million class action lawsuit asserting four common law contract claims under Minnesota law,[205] all of which were dismissed at trial upon Northwest's preemption motion.[206] On appeal to the Ninth Circuit, Ginsberg only challenged the district court's dismissal of his breach of the implied covenant of good faith and fair dealing claim.[207] The Ninth Circuit unanimously reversed, relying on its oft-used tangential effect argument in addition to reasoning that the ADA's saving clause protected all state-based common law contract claims.[208] The Supreme Court granted review and quickly determined that the ADA could preempt common law doctrine because such rules "clearly have the force and effect of law."[209] As in *Wolens*, the Court found that the "force and effect of law" language of the preemption provision included "binding standards of conduct that operate irrespective of

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[202] *Northwest v Ginsberg*, 572 US ___, slip op at 13(2014) [*Ginsberg II*].
[203] Respondent's Brief in Opposition, *Northwest v Ginsberg*, 133 S Ct 2387 (2013) (No 12-462), 2012 WL 6625236 at *3. A July 2008 letter from Northwest to Rabbi Ginsberg indicated he had contacted its Customer Care Department twenty-four times in eight months regarding travel-related problems such as late baggage delivery. Joint Appendix, *Northwest v Ginsberg*, 133 S Ct 2387 (2013) (No 12-462), 2013 WL 3874426 at *58. The letter further contended that "[s]ince December 3, 2007, [Ginsberg] continually asked for compensation over and above [Northwest's] guidelines" and "[Northwest] awarded [Ginsberg] $1,925.00 in travel credit vouchers, 78,500 WorldPerks bonus miles, a voucher extension for [his] son, and $491.00 in cash reimbursements" (*ibid* at *59).
[204] *Ginsberg v Northwest*, 695 F 3d 873 at 874-75 (9th Cir 2012) [*Ginsberg I*].
[205] The suit was originally brought in California, however, pursuant to the choice of law doctrine, Minnesota law was applied since Ginsberg "was a resident of Minneapolis [Minnesota], appear[ed] to fly in and out of Minnesota, and Northwest's principal place of business [was] Minnesota." *Ginsberg II*, *supra* note 202 at 3, n 1.
[206] *Ginsberg I*, *supra* note 204 at 875. The four causes of action were: (1) breach of contract, (2) breach of the implied covenant of good faith and fair dealing, (3) negligent misrepresentation, and (4) intentional misrepresentation. Ginsberg also sought injunctive relief requiring Northwest to restore class members' WorldPerks status and prevent future revocations without cause. Brief for Petitioners, *Northwest v Ginsberg*, 133 S Ct 2387 (2013) (No. 12-462), 2013 WL 3894137 at *9.
[207] *Ginsberg I*, *supra* note 204 at 875.
[208] *Ibid* at 881-82.
[209] *Ginsberg II*, *supra* note 202 at 7.

private agreements."[210] Read another way, if a rule binds contracting parties to terms not found in their agreement, the rule is preempted.

The Court then considered whether the implied covenant of good faith and fair dealing doctrine was a state-imposed obligation or a voluntary undertaking of the parties. The Justices concluded that because Minnesota prohibited contracting parties from waiving the doctrine,[211] as applied in this case, the statutory rule was preempted by the ADA.[212] The Court also addressed the act's saving clause by calling it a "relic" of the 1958 Act that applied generally to the whole act and which could not be superseded by the specific mandate of the ADA's preemption clause.[213]

d. *Two-Part Test for ADA Express Preemption*

Following the triad of Supreme Court decisions, a two-part test emerged for ascertaining when the ADA preempts state or local legislation. A court must first determine if the challenged law relates to airline rates, routes, or services. It must then examine whether the law is being enacted or enforced upon an airline. When the answer to both questions is "yes," the ADA reigns supreme.[214]

While the 1958 Act's application to unmanned aircraft is apparent, the ADA's is somewhat harder to decipher. As will be discussed further in Chapter IV, the key is determining for what purpose is the unmanned vehicle is being used and how is it travelling from point-to-point. If an unmanned vehicle satisfies the FAA's definitions of "aircraft" and "air carrier," it follows that the ADA would apply to state-based attempts to legislate it. As the next chapter details,

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[210] The Court also noted that the ADA initially applied to "rule[s] and standard[s]" which unquestionably encompassed common law rules. It further reasoned that although the phrase was deleted in the act's 1994 recodification, Congress did not intend to affect the provision's ultimate meaning. *Ibid*.
[211] Under Minnesota law, the implied covenant doctrine applies to every contract except employment contracts. See *In re Hennepin Cty 1986 Recycling Bond Litigation*, 540 NW 2d 494 at 502 (Minnesota Supreme Court 1995).
[212] *Ginsberg II*, *supra* note 202 at 12-13.
[213] *Ibid* at 8.
[214] *Wolens V*, *supra* note 191 at 226. See also *Chrissafis v Continental Airlines, Inc*, 940 F Supp 1292 at 1297 (ND Ill E Div 1996) and *Tucker v Hamilton Sundstrand Corp Inc*, 268 F Supp 2d 1360 at 1363 (SD Fla 2003).

states have already begun enacting their own law, seemingly oblivious to the fact that a preemption debate is waiting in the wings.

CHAPTER II

The Current State of Federal and State Unmanned Aircraft Law

They define a republic to be a government of laws, and not of men.[215]

A. Unmanned Aircraft Systems: What's in a Name?

Correct nomenclature is critical to any discussion of pilotless aircraft as legislation only applies to those systems that by definition fall under its purview. In the early 1990s, the phrase "unmanned aerial vehicle" (UAV) replaced "remotely piloted vehicle" (RPV) as the generic description for unmanned aircraft.[216] The term "RPV" had been used since the Vietnam War although the concept of unmanned flight had been in existence since the 1800s.[217] The two phrases gradually became interchangeable despite subtle differences in their respective meanings.[218] Like manned aircraft, RPVs required human intervention for operation. What made them unique was that humans were no longer present in the cockpit, rather they sat remotely at locations often miles away from the vehicle.[219] UAVs also lacked cockpit control, but unlike RPVs, could be manipulated through preset programming, eliminating the need for a real time human presence.[220]

In 1999, the FAA introduced a new term into the fray in an effort to address the need for UAV regulation.[221] Under the 1958 Federal Aviation Act, the FAA was charged with

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[215] Written by President John Adams in his 1774 *Novanglus Papers*. Stuart K Hayashi, *The Freedom of Peaceful Action: On the Origin of Individual Rights* (Lanham, MD: Lexington Books, 2014) at 153.
[216] Laurence R Newcome, *Unmanned Aviation: A Brief History of Unmanned Aerial Vehicles* (Reston, VA: American Institute of Aeronautics and Astronautics Inc, 2004) at 1.
[217] *Ibid*. See also Paul G Fahlstrom & Thomas J Gleason, *Introduction to UAV Systems* (Hoboken, NJ: Wiley, 2012) at 4.
[218] The U.S. Air Force recently acknowledged another distinction when in 2010, it changed its use of "UAV" in favor of "remotely piloted aircraft" (RPA) in partial recognition of RPA pilots being reclassified as rated (flying-related) officers. Dawn MK Zoldi, "Protecting Security and Privacy: An Analytical Framework for Airborne Domestic Imagery" 70 AF L Rev 1 at 3, n 1 (2013). This distinction may not be universal, however, as the Department of Defense's *Dictionary of Military and Associated Terms*, Joint Publication 1-02, 15 March 2014, provides no definition for remotely piloted aircraft but does so for unmanned aerial vehicle.
[219] Fahlstrom & Gleason, *supra* note 217 at 7.
[220] *Ibid*.
[221] Newcome, *supra* note 216 at 5.

guaranteeing the safety of "aircraft"; it made no mention of the phrase "aerial vehicles."[222] By renaming unmanned aerial vehicles "remotely operated aircrafts" (ROAs), the FAA could begin setting airworthiness requirements similar to those demanded for manned aircraft.[223] Today, the term de jour is "unmanned aircraft system" (UAS), a phrase used to describe the entire pilotless aircraft scheme. The FAA currently defines a UAS as "the unmanned aircraft (UA) and all of the associated support equipment, control station, data links, telemetry, communications and navigation equipment, etc., necessary to operate [an] unmanned aircraft" and requires airworthiness certificates for the entire system, not just the UA.[224]

Lastly, one may hear the word "drone" used to characterize unmanned vehicles. But among some, "drone" has a limited connotation. The military use drones strictly as training targets because they are typically only capable of flying in a "dull, monotonous, and indifferent manner," and without the sophistication and precision usually associated with military aircraft.[225] Nevertheless, "drone" has buzzed its way to the forefront of the public's lexicon as a synonym for an unmanned aircraft system.[226] Throughout this thesis, the phrases "unmanned aircraft system" and "UAS" will be used in reference to all unmanned aerial vehicles except where legislatively designated by another name.

As the dawn of civil UAS use nears, Sir George Cayley's prophetic words—"…[a]erial [n]avigation will form a most prominent feature in the progress of civilization"—have never rung truer.[227] Today, UAS operations can be arranged into five distinct categories: military,

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[222] *Ibid*. The term "aircraft" was, and continues to be, defined as a "device that is used or intended to be used for flight in the air. *1958 Federal Aviation Act*, *supra* note 6 at §101(5) and 14 CFR § 1.1.
[223] As will be argued later, the FAA likely already had UAV jurisdiction based on the 1958 Act's declaration that the FAA controlled domestic navigable airspace.
[224] Federal Aviation Administration, *Unmanned Aircraft (UAS): General FAQs* (May 2014) *Defense News*, online: Federal Aviation Administration <www.faa.gov/about/initaives/uas.uas_faq/>.
[225] Aram Roston, "The 'D' Word: What to Call a UAV" (26 March 2013), online: Defense News <http://www.defensenews.com/article/20130326/C4ISR02/303260023/The-8216-D-8217-Word-What-Call-UAV>. See also, Fahlstrom & Gleason, *supra* note 217 at 7.
[226] See e.g. Jay Stanley, "'Drones' vs 'UAVs'—What's Behind a Name?" (20 May 2013), online: American Civil Liberties Union <https://www.aclu.org/blog/technology-and-liberty-national-security/should-we-call-them-drones-or-uavs> (admitting that while not accurate, the ACLU would continue to use the term "drone" as a substitute for "UAS" because they want to communicate with readers in a way "most clearly and directly underst[ood].").
[227] George Cayley, *Aeronautical and Miscellaneous Notebook* (Cambridge, MA: W Heffer & Sons Ltd, 1933) at 80. Many consider English aeronautical engineer, Sir George Cayley, to be the first person to fully comprehend

non-military government or civil, commercial, academic, and non-profit or non-governmental organizations.[228] From targeted assassinations[229] to marine life observation[230] to television and film videography[231] to law enforcement[232] to 3D mapping,[233] UASs provide invaluable assistance to human endeavors. Regulating the limits of that assistance is a daunting task, which Congress has seemingly placed squarely on the shoulders of the FAA.

B. FAA Modernization and Reform Act of 2012

On Valentine's Day 2012, President Barak Obama signed the $63.4 billion FAA Modernization and Reform Act into law. In addition to funding the FAA through 2015, the FMRA set a 15 September 2015 deadline for the Secretary of Transportation to fully integrate civil unmanned aircraft systems into the NAS.[234] Although not the first attempt to govern UASs, regulations promulgated from the FMRA would be the most comprehensive and most likely to withstand judicial scrutiny.

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the principles of flight and regard him as the "true inventor" of the airplane. Frank Burnham, *Cleared to Land! The FAA Story* (Fallbrook, CA: Aero Publishers Inc, 1977) at 11.

[228] Newcome, *supra* note 216 at 130.

[229] A Central Intelligence Agency UAS killed alleged al-Qaeda agent, Hassan Ghul, on 1 October 2012 in Mir Ali, Pakistan. Greg Miller, Julie Tate, & Barton Gellman, "Documents Reveal NSA's Extensive Involvement in Targeted Killing Program" *The Washington Post* (13 October 2013), online: The Washington Post <http://www.washingtonpost.com/world/national-security/documents-reveal-nsas-extensive-involvement-in-targeted-killing-program/2013/10/16/29775278-3674-11e3-8a0e-4e2cf80831fc_story.html>.

[230] Australia-based company, Insitu Pacific, used a ScanEagle UAS to record humpback whale activity off the coast of Queensland and Western Australia. The ScanEagle can operate for over 24 hours on less than five quarts of fuel. Nick Peppas, "Insitu Pacific Monitors Marine Mammals with ScanEagle Unmanned Aircraft System" *sUAS News* (4 October 2011), online: sUAS News <http://www.suasnews.com/2011/10/8620/insitu-pacific-monitors-marine-mammals-with-scaneagle-unmanned-aircraft-system/>.

[231] German film director, Christopher Kippenberger, produced a one-minute car commercial utilizing a customized UAS outfitted with high-resolution cameras. Devices like these are designed to replace expensive helicopter rentals typically used for aerial videography. Damon Lavrinc, "Forget the Helicopter: New Drone Cuts Cost of Aerial Video" *Wired* (17 May 2012), online: Wired <http://www.wired.com/2012/05/drone-auto-vids/>.

[232] In June 2011, Rodney Brossart was arrested on his North Dakota cattle ranch after local policed borrowed a surveillance Predator from the Department of Homeland Security's Customs and Border Patrol to locate him and his three armed sons. Brossart was found guilty of terrorizing the police after a federal judge denied his warrantless search motion to dismiss. Michael Peck, "Predator Drone Send s North Dakota Man to Jail" *Forbes* (27 January 2014), online: Forbes <http://www.forbes.com/sites/michaelpeck/2014/01/27/predator-drone-sends-north-dakota-man-to-jail/>.

[233] Swiss company, Pix4D, helps clients produce 2D and 3D computer models based on images captured from lightweight UASs. Pix4D, online: Pix4D <http://pix4d.com>.

[234] *FMRA*, *supra* note 5 at § 332(a)(3).

The FAA's first UAS regulation was actually designed for model aircraft, but its importance in UAS history has been noted because no other standards existed at the time.[235] In 1981, the FAA issued Advisory Circular 91-57, which permitted non-licensed, recreational use of remote-controlled aircraft operated below 400 feet and within the operator's line of sight.[236] Critics noted, however, that the circular was not a true regulation but rather a voluntary set of operating standards.[237] Twenty-four years later in 2005, the FAA issued a policy notice requiring UAS operators to obtain permission before utilizing their aircraft in the national airspace.[238] By 2007, the agency issued a second clarifying notice highlighting that remote-controlled model aircraft could not be used for commercial purposes.[239] Critics again remarked that the policy documents were not binding law but were instead non-enforceable requests.[240]

Despite questions surrounding its authority, the FAA has used the 2005 and 2007 policy documents to require operators of both public and civil UASs falling outside the definition of model aircraft[241] to obtain approval prior to use in the NAS.[242] Public UAS operators must apply for a certificate of waiver or authorization (COA), which is issued for a specific period

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[235] Douglas M Marshall, "Dull, Dirty, and Dangerous: The FAA's Regulatory Authority Over Unmanned Aircraft Operations" (May 2007) 2004-2008 Issues Aviation L & Pol'y 10085 at 10094.
[236] Federal Aviation Administration, Advisory Circular 91-157, *Model Aircraft Operating Standards* (9 June 1981), online: Federal Aviation Agency <http://www.faa.gov/documentLibrary/media/Advisory_Circular/91-57.pdf>. At the time, the CFR did not provide a separate definition of "model aircraft."
[237] John Frank Weaver, "Free the Beer Drone: Maybe the FAA Doesn't Have the Authority to Regulate Unmanned Aerial Vehicles" *Slate* (5 March 2014) online: Slate <http://www.slate.com/articles/technology/future_tense/2014/03/faa_drone_regulations_the_agency_might_not_have_the_authority_to_regulate.html>. See also *Sierra Pacific Holdings Inc v County of Ventura*, 204 Cal App 4th 509 (Cal Ct of App, 2d Dist, Div 6 2012) (holding that non-mandatory requirements in FAA advisory circulars are not law and cannot be the basis of a federal preemption claim).
[238] Federal Aviation Administration, Memorandum, *Unmanned Aircraft Systems Operations in the U.S. National Airspace System—Interim Operational Approval Guidance*, AFS-400 UAS Policy 05-01 (16 September 2005) [FAA, *2005 UAS Policy*].
[239] Federal Aviation Administration, *Unmanned Aircraft Operations in the National Airspace System*, 72 Fed Reg 6689 at 6690 (13 February 2007) [FAA, *2007 UAS Policy*].
[240] Peter Sachs, "Current Drone Law" *Drone Law Journal* (14 December 2013), online: Drone Law Journal <http://dronelawjournal.com>.
[241] For a definition of "model aircraft" see *infra* note 259 and accompanying text.
[242] The FAA categorizes aircraft as either "public" or "civil," regardless of its status as "manned" or "unmanned." Public aircraft are aircraft owned and operated by state, territorial, or federal agencies, including the District of Columbia. 49 USC § 40102(a)(41). Civil aircraft are all other aircraft not covered under the definition of public aircraft. 49 USC § 40102(a)(16).

of time.[243] Under the FMRA, the only significant change to the COA application process will be its streamlining and simplification that, for example, will now require the FAA to make an application determination within 60 business days of receipt.[244] In addition, by 31 December 2015, the DOT Secretary must develop and implement operational and certification requirements for public UAS operators.[245] Finally, public UASs weighing less than 4.4 pounds and operated during daylight, within the line of sight of the operator, less than 400 feet above the ground, in Class G airspace, and outside of a five statute mile radius of an airport, can now be operated without a COA.[246]

For civil UAS operators, the only way to fly in the NAS is to obtain a special airworthiness certificate, which classifies the aircraft as "experimental."[247] For practical purposes, these certificates are only available to UAS manufacturers as they limit UAS use to research and development, market surveys, and crew training.[248] Recognizing societal desire for expanded civil UAS operations, under the FMRA, Congress tasked the Secretary of Transportation with creating a "comprehensive plan to safely accelerate the integration of civil unmanned aircraft systems into the national airspace system."[249]

Though not an exhaustive list, the plan must contain recommendations on: (1) how rulemaking will establish operation and certification standards for civil UASs, ensure civil UASs have "sense and avoid capability, and create registration and licensing requirements for civil UAS operators;[250] (2) the most effective means for improving the technology and

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[243] FAA, *2005 UAS Policy*, *supra* note 238 at 3-4. As of December 2013, there were 545 active COAs. Federal Aviation Administration, *Fact Sheet—Unmanned Aircraft Systems (UAS)* (6 January 2014), online: Federal Aviation Administration <http://www.faa.gov/news/fact_sheets/news_story.cfm?newsId=14153> [FAA, *2014 UAS Fact Sheet*]. As of April 2012, some of the recipients included the U.S. Air Force; the U.S. Army; the U.S. Navy; the United States Marine Corps; the Federal Bureau of Investigation; the Mississippi Department of Marine Resources, the California Department of Forestry and Fire Protection; the Miami-Dade Police Department; and the City of Houston, Texas Police Department. Electronic Frontier Foundation, "FAA List of Certificates of Authorizations (COAs)" (16 April 2012), online: Electronic Frontier Foundation <https://www.eff.org/document/faa-list-certificates-authorizations-coas>.
[244] *FMRA*, *supra* note 5 at § 334(a) and (c)(2)(ii).
[245] *Ibid* at § 334(b)
[246] *Ibid* at § 334(c)(2)(C). See note 314 for a detailed explanation of FAA airspace designations.
[247] FAA, *2005 UAS Policy*, *supra* note 238 at 4 and FAA, *2007 UAS Policy*, *supra* note 239 at 6689-90.
[248] FAA, *2011 UAS Fact Sheet*, *supra* note 69.
[249] *FMRA*, *supra* note 5 at § 332(a)(1).
[250] *Ibid* at § 332(a)(2)(A).

subsystems required for safe and routine civil UAS operations;[251] (3) a phase-in program for civil UAS use in the NAS;[252] (4) the creation of an airspace designation for cooperative manned and UAS flights in the NAS;[253] (5) the most effective means to ensure simultaneous use of the NAS by pubic and civil UASs; and[254] (6) incorporating the plan into the FAA's annual NextGen Implementation Plan.[255] The FMRA also requires the FAA to establish pilot programs at six test range sites for the study of UAS integration.[256] The DOT Secretary must allocate areas in the Arctic for 24/7 commercial and research operations of small, unmanned aircraft where the designated area must be able to support development of UAS operations beyond line-of-sight and allow for over-water flights up to 2,000 feet in altitude.[257]

Recreational UAS users were given explicit protection under the FMRA. The FAA is prohibited from promulgating regulations governing model aircraft when the aircraft is flown solely for hobby or recreational use; operation conforms to community-based safety standards; the aircraft weighs less than 55 pounds; is flown within the visual line of sight of the operator; does not interfere with or gives way to manned aircraft; and when operated within five miles of an airport, notice is given to the airport and air traffic control tower.[258] For the purposes of this provision, "model aircraft" is defined as "an unmanned aircraft that is (1) capable of sustained flight…[,](2) [is] flown within visual line of sight of the [operator]…[,]

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[251] *Ibid* at § 332(a)(2)(B).
[252] *Ibid* at § 332(a)(2)(C).
[253] *Ibid* at § 332(a)(2)(F).
[254] *Ibid* at § 332(a)(2)(H).
[255] *Ibid* at § 332(a)(2)(I). The Next Generation Air Traffic Control System (NextGen) is the FAA's proposed new satellite and digital-based ATC system. The program includes, among others, Automatic Dependent Surveillance Broadcast, which uses GPS signals to provide more accurate information to pilots and ATC operators; Common Support Services-Weather, which will combine weather information from multiple ground and satellite-based sources into a single, real-time report; and the NAS Voice System, which will replace analog voice communication that limit air-to-ground voice communication between pilots and ATC towers with digital technology. Federal Aviation Administration, *NextGen Infrastructure* (18 March 2014), online: Federal Aviation Administration <http://www.faa.gov/nextgen/implementation/programs/>.
[256] *FMRA*, *supra* note 5 at § 332(c)(1). In December 2013, the following applicants were named as the six test range site operators: The University of Alaska, State of Nevada, Griffiss International Airport, North Dakota Department of Commerce, Texas A&M University—Corpus Christi, and Virginia Polytechnic Institute and State University (Virginia Tech). Federal Aviation Administration, *Fact Sheet—FAA UAS Test Site Program* (30 December 2013), online: Federal Aviation Administration <http://www.faa.gov/news/fact_sheets/news_story.cfm?newsid=15575> [FAA, *UAS Test Site Program Fact Sheet*].
[257] *FMRA*, *supra* note 5 at § 332(d)(1).
[258] *Ibid* at §§ 336(a).

and (3) [is] flown for hobby or recreational purposes."[259] As will be discussed in Chapter III, the FAA's interpretation of this FMRA provision is significant in analyzing whether states have the authority to regulate small UASs that fall under the definition of model aircraft.

On 7 November 2013, the U.S. Department of Transportation and the FAA released their *Unmanned Aircraft Systems (UAS) Comprehensive Plan* (UAS Plan) and accompanying *Integration of Civil Unmanned Aircraft Systems (UAS) in the National Airspace System (NAS) Roadmap* (UAS Roadmap).[260] The UAS Plan outlines six strategic goals developed to ensure the safe integration of UASs into the NAS. Goals 1 and 2 foresee visual line-of-sight use in the NAS for small UASs (sUAS) (under 55 pounds) by 2015.[261] Although initially prohibited from Class B and Class C airspace, eventually both public and civil UAS operators would have access to all domestic airspace classes without first having to acquire special authorization.[262] Similar to the first two goals, Goals 3 and 4 envisage routine NAS operations for all other public and civil UASs by 2015 and 2020, respectively.[263] Goal 5 calls for research and an eventual recommendation of the acceptable level of risk when employing a UAS's automatic features.[264] Finally, Goal 6 aspires to keep the United States at the forefront of UAS research and development.[265] To effectuate these goals, the UAS Roadmap outlines a five-year plan, which details the policies, regulations, and procedures needed for full UAS integration.[266]

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[259] *Ibid* at § 336(c).
[260] The FAA also released its *Final FAA Privacy Policy for UAS Test Sites*, which will be discussed further in Chapter III. The comprehensive plan was ultimately sent to Congress for review, albeit a year after the FMRA's original November 2012 deadline. *Ibid* at § 332(a)(4). Copies of all three documents are available at Federal Aviation Administration, *Unmanned Aircraft Systems (UAS)* online: Federal Aviation Administration <http://www.faa.gov/about/initiatives/uas/> [FAA, *UAS Comprehensive Plan*; FAA, *UAS Roadmap*; and FAA, *UAS Privacy Policy*].
[261] FAA, *UAS Comprehensive Plan*, *supra* note 260 at 9.
[262] *Ibid*.
[263] *Ibid*.
[264] *Ibid* at 10.
[265] *Ibid*.
[266] The U.S. Department of Defense issued its own 25-year UAS roadmap in December 2013. As the largest operator of UASs, the roadmap outlines forecasts for continued use, development, and production of UASs for military operations. Jim Garamore, "DOD Look 25 Years Ahead in Unmanned Vehicle Roadmap" *American Forces Press Service* (23 December 2013), online: US Department of Defense <http://www.defense.gov/news/newsarticle.aspx?id=121392>.

More detailed than the UAS Plan, the 72-page UAS Roadmap considers how best to bridge the gap between regulations designed for manned aircraft and unmanned technology that cannot comply with existing standards. Divided into nine goals, the Roadmap sets out FAA-developed objectives the agency considers essential for UAS success. Goals 1 and 2 would require certification for UAS aircraft (airworthiness) as well as pilot and crew.[267] Such credentialing would be similar to current guidelines that mandate aircraft be designed to meet safety standards contained in the Code of Federal Regulations and in addition, UAS personnel would be required to meet medical and training requirements.[268] Goal 3 contemplates the routine use of ground based sense-and-avoid technology for public UASs by 2018, while Goal 4, which addresses airborne sense-and-avoid technology, would be available by 2020.[269] Sense and avoid technology would allow civil UASs to fly outside the operators' line-of sight.

Reliable communication between a UAS and its control station is the target of Goal 5. To accomplish this, the FAA foresees the execution of international agreements to define and protect radio spectrum for UAS control and communication links.[270] Goal 6 addresses the development of "rules of engagement" for small UASs in the NAS to include, perhaps, the requirement of a permit.[271] Most importantly, this goal considers the operational limits, if any, of commercial small UAVs use, which is generally prohibited under FAA policy.[272] A Notice of Proposed Rulemaking on this topic was slated for an early-2014 release, however, "unanticipated issues requiring further analysis" have pushed back that date to 22 December

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[267] FAA, *UAS Roadmap*, *supra* note 260 at 51-53.
[268] *Ibid* at 25, 28.
[269] *Ibid* at 53-56.
[270] *Ibid* at 57. In February 2012, an agreement that identified available radio spectrum was signed at the International Telecommunications Union's World Radiocommunication Conference (*ibid* at 56).
[271] *Ibid* at 58-59.
[272] To date, the FAA has authorized three contracts for commercial UAS use: AeroVironment Inc and Insitu Inc both have grants to operate in the Artic. In June 2014, AeroVironment was given permission to operate commercial flights to survey British Petroleum pipelines in Alaska. Bart Jansen, "FAA Approves First Commercial Drone Over Land" *USA Today* (10 June 2014), online: USA Today <http://www.usatoday.com/story/money/business/2014/06/10/faa-drones-bp-oil-pipeline-aerovironment-north-shore/10264197/>. Incidentally, a pizza chain in Syktyvkar, Russia recently launched a UAS delivery service. The aircraft can travel up to 40 km/h (25 mi/h) and carry a pizza weighing up to 5 kg (3.1 lbs). *The Moscow Times*, "Russian Restaurant Uses Drones for Pizza Deliveries" (22 June 2014), online: The Moscow Times <http://www.themoscowtimes.com/news/article/russian-restaurant-uses-drones-for-pizza-deliveries/502286.html>.

2014.[273]

The establishment of a test range program is Goal 7, which the FAA accomplished in late 2013.[274] The program, which will last until February 2017, will help the FAA uncover issues associated with regular UAS use and develop solutions as full integration progresses.[275] Goal 8 tackles air traffic inoperability and how manned and unmanned traffic will interact in the NAS.[276] Specifically, a method will need to be developed for air traffic controllers to provide services to UAS operators, which will undoubtedly include research on sense and avoid capabilities.[277] The earliest this goal will be met is 2020.[278] The Roadmap's final goal encompasses all remaining miscellany concerns such as developing a more detailed plan for the safe integration of UASs into the NAS (by publishing an annual update to the UAS Roadmap), devising an integration plan for the Artic Region, and clarifying what is considered a model aircraft.[279]

Shortly after the FMRA's passage, Congress made further attempts to mold UAS policy by introducing several bills with narrower scopes. The No Armed Drone Act of 2012,[280] for

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[273] Michael Berry and Nabiha Syed, "The FAA's Slow Move to Regulate Domestic Drones" *The Washington Post* (24 September 2014), online: The Washington Post < http://www.washingtonpost.com/news/volokh-conspiracy/wp/2014/09/24/the-faas-slow-move-to-regulate-domestic-drones/>. Under section 332(b) of the FMRA, a final rule is supposed to be in place within 18 months of the *UAS Plan* being submitted to Congress. That date is 14 August 2014. US Department of Transportation, *Significant Rulemaking Report Archive* (January 2014), online: US Department of Transportation <http://www.dot.gov/regulations/significant-rulemaking-report-archive>. One of the reasons for the delay stems from questions about the FAA's current ability to regulate UASs. In March 2014, a National Transportation Safety Board (NTSB) judge dismissed a $10,000 FAA fine against Raphael Pirker who had operated a 56-inch foam glider equipped with video equipment to record a commercial for the University of Virginia Medical Center. The FAA alleged Pirker illegally used a UAV for commercial purposes in addition to operating it in a reckless manner. In his ruling, Judge Patrick Geraghty found that the FAA had no lawful regulations in place to govern model aircraft and therefore, Pirker's actions could not be considered unlawful. On 18 November 2014, however, the NTSB reversed, finding Mr. Pirker's UAS met the FAA's definition of "aircraft" and under 14 CFR 91.13, he could be found guilty of reckless or careless operation of said aircraft. National Transportation Safety Board Order No EA-5370 (18 November 2014), online: NTSB < https://www.ntsb.gov/legal/pirker/5730.pdf >.

[274] FAA, *UAS Roadmap*, *supra* note 260 at 60 and FAA, *UAS Test Site Program Fact Sheet*, *supra* note 256.

[275] FAA, *UAS Roadmap*, *supra* note 260 at 60.

[276] *Ibid* at 60-61.

[277] *Ibid* at 60-61.

[278] *Ibid* at 61.

[279] *Ibid* at 61-64.

[280] US, Bill HR 5950, *No Armed Drone Act of 2012*, 112th Cong, 2012. The bill also banned the manufacture, sale, or distribution of UAS (or its components) designed for weaponized use. Although it died after being referred to subcommittee, the bill was reintroduced in 2013 and referred to the House Subcommittee on Aviation. US, Bill HR 1083, *No Armed Drone Act of 2013*, 113th Cong, 2013.

example, sought to prohibit the weaponized use of UASs in the NAS and the Drone Aircraft Privacy and Transparency Act of 2012[281] attempted to block the awarding of COAs and airworthiness certificates unless an applicant affirmed that its UAS operation would be in accordance with privacy principles. The bill would have also restricted UAS use for law enforcement or intelligence gathering activities unless operated pursuant to warrant or judicially recognized warrant exception.[282] Other proposed bills included the Preserving Freedom from Unwarranted Surveillance Act of 2013,[283] the Drones Accountability Act,[284] the Preserving American Privacy Act of 2013,[285] and the Safeguarding Privacy and Fostering Aerospace Innovation Act of 2013.[286] To date, none of these proposals have made it out of committee hearings.

Not to be outdone by Congress, several states followed suit and introduced UAV-related legislation at the local level. Ranging from bans on UASs that harass hunters[287] to outlawing the photography of emergency service facilities, telecommunications structures, and banks,[288] 46 states have proposed laws that would limit how UASs are operated within state lines. Of these 46 states, 13 now have laws on the books, though whether these laws will survive

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[281] US, Bill HR 6676, *Drone Aircraft Privacy and Transparency Act of 2012*, 112th Cong, 2012.
[282] This bill also died in session and was reintroduced a year later. US, Bill HR 1262, *Drone Aircraft Privacy and Transparency Act of 2013*, 113th Cong, 2013. See also, US, Bill HR 2868, *Drone Aircraft Privacy and Transparency Act of 2013*, 113th Cong, 2013 and US, Bill S 1639, *Drone Aircraft Privacy and Transparency Act of 2013*, 113th Cong, 2013.
[283] US Bill, S 1016, *Preserving Freedom from Unwarranted Surveillance Act of 2013*, 113th Cong, 2013 (bars federal government entities, and those acting under the direction of the federal government, from using UASs to gather evidence of a crime without a warrant or recognized warrant exception). See also, US Bill, HR 972, *Preserving Freedom from Unwarranted Surveillance Act of 2013*, 113th Cong, 2013.
[284] US, Bill HR 2183, *Drones Accountability Act*, 113th Cong, 2013 (prohibits the Central Intelligence Agency from operating UASs).
[285] US, Bill HR 637, *Preserving American Privacy Act of 2013*, 113th Cong, 2013 (requires government entities that operate public UAVs to minimize the collection and disclosure of certain personal information, as well as, describe how collected information will be used and how long it will be retained. It also prohibits the use of civil UASs to record images or audio that a reasonable person would find highly offensive).
[286] US, Bill S 1057, *Safeguarding Privacy and Fostering Aerospace Innovation Act of 2013*, 113th Cong, 2013 (makes it illegal to use UASs for surveying people unless consent is granted, a threat to human life exists, or the surveillance is conducted in a public place).
[287] US, SB 240, *An Act to Amend Section 9-11-270, Code of Alabama 1975, Relating to Interference with Persons Legally Hunting or Fishing; to Specifically Include the Use of Drones to Harass in the Prohibition*, 2014, Reg Sess, Ala, 2014.
[288] US, Bill SB 356, *An Act to Enact RS 2:18, Relative to the Regulation of Aeronautics; to Restrict the use of Unmanned Aircraft Systems under Certain Circumstances; to Provide Definitions; to Provide for Criminal Penalties and Civil Liability; and to Provide for Related Matters*, 2014, Reg Sess, La, 2014.

judicial scrutiny is another question.[289]

C. State-Based UAS Legislation

State-enacted UAS law falls into one of two camps: provisions that regulate public use and those drafted to govern civil use. All of the currently enacted local statutes limit when law enforcement can utilize UASs, but some also restrict when non-state organs can operate unmanned aircraft. Florida, Illinois, Indiana, Iowa, Montana, Tennessee, and Utah each require a probable cause search warrant before law enforcement can use UASs for evidence gathering activities.[290] Each state also provides exceptions, most modeled after judicially recognized warrant requirement exceptions.[291] In addition, Illinois includes data retention and disclosure requirements, while Utah adds a reporting clause.[292]

North Carolina and Virginia similarly prohibit law enforcement's use of UASs but have done so under two-year moratoria (until 15 July 2015) that do not offer exclusions even when warrants are secured. Under North Carolina law, no state or local authority can operate a UAS or divulge information about an individual obtained through use of a UAS without permission from the state's Chief Information Officer.[293] In Virginia, law enforcement are only permitted to use UASs for AMBER and similar alerts,[294] search and rescue operations, and training.[295]

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[289] Colorado, Delaware, and Mississippi are the only states to not have introduced UAS legislation.

[290] See US, Bill SB 92, *Freedom from Unwarranted Surveillance Act*, 2013 Legis Sess, Reg Sess, Fla, 2013 (enacted); US, Bill SB 1587, *Freedom from Drone Surveillance Act*, 98th Gen Assem, Reg Sess, Ill, 2013 (enacted) [Illinois, *Freedom from Drone Surveillance Act*]; US, Bill HB 1009, *An Act to Amend the Indiana Code Concerning Criminal Law and Procedure*, 118th Gen Assem, 2d Reg Sess, 2014 (enacted); US, Bill HB 2289, *An Act Relating to the Regulation and Use of Unmanned Aerial Vehicles*, 85th Gen Assem, Reg Sess, Iowa, 2014 (enacted); US, Bill SB 196, *An Act Limiting the Use of Unmanned Aerial Vehicles by Law Enforcement; Prohibiting the Use of Unlawfully Obtained Information as Evidence in Court*, 63rd Legis, Reg Sess, Mont, 2013 (enacted); US, Bill SB 796, *Freedom from Unwarranted Surveillance Act*, 2013-2014, 108th Reg Sess, Tenn, 2013 (enacted) [Tennessee, *Freedom from Unwarranted Surveillance Act*]; and US, Bill SB 167, *Government Use of Unmanned Aerial Vehicles Act*, 2014 Gen Sess, Reg Sess, Utah, 2014 (enacted) [Utah, *Government Use of Unmanned Aerial Vehicles Act*].

[291] Exceptions include high risk of a terrorist attack, immediate threat to life or serious damage to property, imminent escape of a suspect or destruction of evidence, consent, crime scene or traffic crash photography, search and rescue operations, assistance with a natural or other disaster, or UAS training,

[292] Illinois, *Freedom from Drone Surveillance Act*, *supra* note 290 at s 20, 25 and Utah, *Government Use of Unmanned Aerial Vehicles Act*, *supra* note 290 at s 4-5.

[293] US, Bill SB 402, *Current Operations and Capital Improvements Appropriations Act of 2013*, Sess 2013, Reg Sess, NC, 2013, s 7.16(e) (enacted).

[294] AMBER (America's Missing: Broadcast Emergency Response) Alerts are child abduction warnings disseminated via television, radio, and other public media. Office of Justice Programs, "Frequently Asked

The law does not apply to the Virginia National Guard or to non-law enforcement activities such as traffic or wildfire assessment.[296]

States such as Idaho, Oregon, Tennessee, Texas, and Wisconsin also place search warrant restrictions on their law enforcement and include certain exceptions.[297] These states, however, go one step further and also limit when and how private individuals can operate unmanned aircraft systems. Idaho permits commercial UAS photography but forbids using a UAS to photograph—with the intent to publish or publicly share—an individual, without their written consent or a reasonable suspicion that criminal conduct has occurred.[298] In Oregon, a person commits a Class A felony if they use a UAS to attack another aircraft in the air.[299] If they use an unmanned vehicle to interfere with an FAA-licensed or military-operated UAS, they are guilty of a Class F felony.[300] In addition, UASs cannot be flown less than 400 feet over lawfully occupied real property if after once flown at that height, the operator was told by the property owner to cease operation.[301]

Tennessee also criminalizes private UAS use by making it a Class C misdemeanor to film individuals lawfully hunting or fishing.[302] In Texas one can use UASs for photography in connection with the marketing, sale, or finance of real estate; images of real property within 25 miles of the United States border; and to take photos of oil, gas, water, or other pipelines

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Questions: Amber Alert" (January 2010), online: US Department of Justice <http://ojp.gov/newsroom/pdfs/amberfaq.pdf>.

[295] US, Bill H 2012, *An Act to Place a Moratorium on the Use of Unmanned Aircraft Systems*, 2013 Reconv Sess, Virg, 2013, s 1 (enacted).

[296] *Ibid*.

[297] Tennessee regulates law enforcement UAS use in a separate bill. See Tennessee, *Freedom from Unwarranted Surveillance Act*, *supra* note 290 and accompanying text.

[298] US, Bill SB 1134, *An Act Related to Aeronautics; to Define a Term, to Establish Provisions Relating to Restrictions on the Use of Unmanned Aircraft Systems, to Provide Exceptions, to Provide for a Civil Cause of Action, to Provide for Certain Damages and to Provide that an Owner of Certain Facilities Shall Not be Prohibited from Using an Unmanned Aircraft System to Inspect Such Facilities*, 62nd Legis, 1st Reg Sess, Ida, 2013, s 1 (enacted).

[299] US, Bill HB 2710, *An Act Relating to Drones; and Declaring an Emergency*, 77th Legis Assem, Ore, 2013, s 13(1) (enacted).

[300] *Ibid* at s 13(2).

[301] *Ibid* at s 15(1). This prohibition does not apply if the UAS is taking off or landing, or when the UAS is in an airport's flight path on approach for landing (*ibid* at s 15(2)).

[302] US, Bill SB 1777, *An Act to Amend Tennessee Code Annotated, Title 70, Chapter 4, Part 3, Relative to Hunter Protection*, 2013-2014, 108th Reg Sess, Tenn, 2014, s 2(a)(6) (enacted).

by owners of said pipelines.[303] One cannot, however, use a UAS to record a person or real property with intent to conduct surveillance.[304] Finally, Wisconsin makes it a Class H felony to use, possess, sell, transport, or manufacture a weaponized UAS.[305] Furthermore, it is a Class A misdemeanor to photograph or observe an individual in a place where they maintain a reasonable expectation of privacy.[306]

Because most of state-enacted UAS legislation stem from privacy concerns, proponents defend the laws by arguing that the "FAA is not a privacy protection agency and has no experience drafting laws designed to protect personal privacy rights"[307] While privacy may not be the agency's primary concern, the safe navigation of the aerial highway certainly is and any local effort to manage or control airspace, arguably, unlawfully oversteps express and implied boundaries. As the next chapter reveals, there is ample evidence to suggest that the knee-jerk legislation of some states will unfortunately come back to kick them.

[303] US, Bill HB 912, *Texas Privacy Act*, 83d Legis Sess, Tex, 2013, s 423.002(13),(14), and (17) (enacted).
[304] Violation of this provision is a Class C misdemeanor. *Ibid* at s 423.003(a) and (b).
[305] US, Bill SB 196, *An Act to Amend 114.04; and to Create 175.55, 941.292, 942.10 and 972.113 of the Statutes; Relating to: Restricting the Use of Drones and Providing a Penalty*, 2013-2014, Wis, 2013, s 3 (enacted).
[306] *Ibid* at s 4.
[307] Jol A Silversmith, "You Can't Regulate This: State Regulation of the Private Use of Unmanned Aircraft" (2013) 26:3 The Air & Space Lawyer 1 (citing the legislative analysis of the *Texas Privacy Act*).

CHAPTER III

The Moment of Truth: Will State Laws Be Preempted by FAA Regulations?

> *Every act of Congress occupies some field, but we must know the boundaries of that field before we can say that it has precluded a state from the exercise of any power reserved to it by the Constitution.*[308]

A. Does the FAA Have Authority Over UAS Regulation?

Whether current and future federal UAS regulations trump state law depends on how broadly the implied preemption field of aviation is defined. The Federal Aviation Administration recently reaffirmed its control over unmanned vehicles by issuing a memorandum clarifying its rules on model aircraft.[309] Although it did not address the preemption question, it did note that the its UAS authority stems from existing safety regulations, which govern the protection of airmen as well as people and property on the ground.[310] Despite the FAA's proclamation, critics still question their jurisdiction absent federal regulations explicitly specifying FAA control of unmanned (vice manned) aircraft.[311] Critics, however, are overlooking one important consideration.

The Federal Aviation Act of 1958 unequivocally gave the FAA authority to promulgate regulations governing domestic airspace. The act, as currently amended, directs the agency to "develop plans and policy for the use of navigable airspace and assign by regulation or order the use of the airspace necessary to ensure the safety of aircraft and the efficient use of airspace."[312] Furthermore, the FAA Modernization and Reform Act of 2012 unquestionably gave the Department of Transportation responsibility for the safe assimilation of UASs into the national airspace.

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[308] *Hines v Davidowitz*, 312 US 52 at 78 (1941) (Stone, dissenting).
[309] See generally Federal Aviation Administration, *Interpretation of the Special Rule for Model Aircraft*, Dkt No FAA-2014-0396 (18 June 2014) at 9-11, online: Federal Aviation Administration <http://www.faa.gov/about/initiatives/uas/media/model_aircraft_spec_rule.pdf>.
[310] *Ibid* at 15.
[311] See generally John Frank Weaver, "Free the Beer Drone", *supra* note 237 and Peter Sachs, "Current Drone Law", *supra* note 240.
[312] *1958 Federal Aviation Act*, *supra* note 6 at 49 USC § 40103(b)(1). "Navigable airspace" is defined in the United States Code as "airspace above the minimum altitudes of flight…including airspace needed to ensure safety in the takeoff and landing of aircraft." 49 USC § 40102(a)(32).

Currently, the FAA manages airspace by dividing it into classes before setting flight operation parameters.[313] There are currently six classes encompassing the airspace between 700 and 60,000 feet above mean sea level.[314] In addition, the FAA sets minimum aircraft altitude limits that can reach as low as 500 feet above the ground.[315] Furthermore, in prohibited areas, the FAA has completely blocked flight, from the ground to the heavens, even in areas that encompasses private property. For example, in the Washington, D.C.

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[313] The NAS is divided into four categories: controlled airspace, uncontrolled airspace, special use airspace, and other airspace. Controlled airspace is that where ATC services are automatically provided to IFR and VFR flights. FAA, *Pilot's Handbook*, *supra* note 64 at 14-2. It is subdivided into five classes, each with their own reporting requirements.

[314] Class A airspace is defined as the domestic airspace between 18,000 and 60,000 feet above mean sea level (MSL) to include the territorial waters of the 48 contiguous states and Alaska. 14 CFR § 71.33. Territorial waters is defined as waters within 12 nautical miles of a territorial coast. Hawaii does not have Class A airspace. All flights within Class A airspace must operate under IFR and are subject to ATC clearances and instructions. Federal Aviation Administration, *Procedures for Handling Airspace Matters*, Part 4, Chapter 14, Section 1, JO-7400.2K (3 April 2014), online: Federal Aviation Administration <https://www.faa.gov/air_traffic/publications/atpubs/AIR/air1401.html>.

The airspace neighboring most busy airports is classified as Class B and encompasses the airspace between the ground and 10,000 feet MSL. Horizontal airspace boundary is specific to an airport and is determined based on its operations. Due to traffic congestion, ATC clearance is again required for operation in this airspace and aircraft within this area receive radar separation services. 14 CFR § 71.41 and FAA, *Pilot's Handbook*, *supra* note 64 at 14-2.

Class C airspace is defined as the airspace from the surface up to 4,000 feet MSL which surrounds airports that use radar approach control, have the requisite number of IFR operations or passenger enplanements, and which have operational control towers. Within Class C airspace, two-way radio communication with an ATC must be established before entering the airspace and that communication must be sustained throughout presence within Class C. 14 CFR § 71.51 and FAA, *Pilot's Handbook*, *supra* note 64 at 14-2.

Class D airspace surrounds airports with operational control towers and generally extends up to 2,500 MSL. As with Class C airspace, flights within Class D must establish and maintain two-way communication with an ATC. *Ibid*. Airports with associated Class D airspace typically do not operate 24 hours-a-day and when not in operation, the airspace is reclassified as Class E or Class G. Federal Aviation Administration, *Balloon Flying Handbook*, FAA-H-8083-11A (New York, NY: Skyhorse Publishing Inc, 2012) at 5-5 [FAA, *Balloon Flying Handbook*].

The final controlled airspace classification is Class E, which encompasses all airspace not previously defined as Class A, Class B, Class C, or Class D and where IFR and VFR aircraft are permitted. FAA, *Pilot's Handbook*, *supra* note 64 at 14-2. It typically includes the area between 14,500 and 18,000 MSL. *Ibid* at 14-3. Neither ATC clearance nor radio communication is required in Class E. FAA, *Balloon Flying Handbook*, *supra* note 314 at 5-3.

Uncontrolled (or Class G) airspace is not monitored by ATC and no clearance or entry notifications are required for either IFR or VFR flights. FAA, *Pilot's Handbook*, *supra* note 64 at 14-3. It begins at the Earth's surface and ends where Class E begins which in the East, typically starts at 700 or 1,200 feet above ground level and in the West, at approximately 14,500 feet. FAA, *Balloon Flying Handbook*, *supra* note 314 at 5-2.

Special use airspace (or special area of operation) is that portion of airspace allocated for a particular purpose. Categories of special use airspace include prohibited and restricted areas, warning areas, military operation areas, alert areas, and controlled firing areas. Finally, other airspace areas concerns the majority of all remaining airspace including, but not limited to, national security areas, temporary training routes, and parachute jump operations. FAA, *Pilot's Handbook*, *supra* note 64 at 14-3 to 14-7.

[315] 14 CFR § 91.119.

Metropolitan Area Flight Restricted Zone, "no pilot may conduct any operations" without prior FAA and Transportation Security Administration authorization.[316]

UASs, like manned aircraft, have the capability to traverse all airspace classes. The Dragon Eye, for example, which was used by the United States Marine Corps in Iraq for aerial surveillance, has a flight ceiling of 500 feet[317] while the Global Hawk, used by the U.S. in both the Iraq and Afghanistan conflicts, can operate up to 65,000 feet.[318] It clearly follows that if the FAA has authority, and in fact has been directed to manage the nation's airspace, UASs that operate within that airspace fall under its purview.[319]

Additionally, the 1958 Act instructs the FAA to establish and manage an air traffic control and navigation system for military and civil aircraft,[320] as well as, prescribe regulations governing the safe flight of aircraft.[321] Under the U.S. Code, "aircraft" is defined as "any contrivance invented, used, or designed to navigate, or fly in, the air."[322] Again, it is undeniable that UASs are "aircraft" under the FAA's domain as they engage in airborne operations from disaster response to aerial mapping and charting to cargo transport.[323] Those who still doubt the FAA's jurisdiction need only look to its current dominion, which includes ultralight aircraft,[324] moored balloons and kites,[325] amateur rockets,[326] and parachutes.[327] All of

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[316] *Ibid* at § 93.341. This zone is so designated as a national security measure and includes the airspace over Camp David, the National Mall, Congress, and the White House. A comprehensive list of all prohibited airspace can be found in the Federal Register.
[317] Sharad S Chauhan, *War on Iraq* (New Delhi, India: SB Nangia, 2003) at 386.
[318] Robert M Clark, *Intelligence Collection* (Thousand Oaks, CA: CQ Press, 2014) at 200.
[319] See John Villasenor, "Observations From Above: Unmanned Aircraft Systems and Privacy" (2013) 36 Harv JL & Pub Pol'y 457 at 492 ("Thus, a UAS operated at several hundred feet above the ground at a reasonable horizontal standoff from any nearby buildings would almost always be in public navigable airspace.").
[320] *1958 Federal Aviation Act*, *supra* note 6 at 49 USC § 40101(d)(6)).
[321] *Ibid* at 49 USC § 40103(b)(2)).
[322] *Ibid* at 49 USC § 40102 (a)(6)). In addition, Article 8 of the 1944 Chicago Convention, to which the U.S. is a signatory, in addressing unmanned aircraft makes contracting States responsible for ensuring that "aircraft without a pilot" are controlled in manner to "obviate danger to [other] civil aircraft." *Convention on International Civil Aviation*, 7 December 1944, 61 Stat 1180, 15 UNTS 295 (entered into force 7 April 1947).
[323] FAA, *UAS Roadmap*, *supra* note 260 at 7.
[324] 14 CFR §§ 103.11 and 101.15 (limits operation to daylight and non-congested areas).
[325] *Ibid* at §§ 101.13 and 101.17 (limits operation to 500 feet above the Earth's surface and requires appropriate lighting for night flights).
[326] *Ibid* at §§ 101.25 and 101.27 (requires FAA authorization in controlled airspace and ATC notification for certain rocket launches).
[327] *Ibid* at §§ 105.13 and 105.25 (requires ATC authorization in Class A-D airspace and use of two-way radio communication with ATC facility).

these devices fall within the FAA's authority not only because they can be categorized as aircraft but also because they actively maneuver within the national airspace. The application to UASs is no different. Ultimately, the issue is not whether the FAA can regulate unmanned aircraft, but rather, to what extent.

B. Applying the Federal Preemption Doctrine to State UAS Legislation

1. Public Use Restrictions

Aircraft are organized into one of two categories based on function and operator. Public aircraft are used by or on behalf of governments, public agencies, and armed forces to execute governmental functions such as law enforcement, national defense, and aeronautical research.[328] Civil aircraft are all other aircraft not meeting this definition.[329] Under the FAA Modernization and Reform Act of 2012, the Secretary of Transportation must develop an expedited process for issuing certificates of authorization to public operators in addition to cultivating the best methods for the simultaneous use of civil and public UASs in the national airspace system by 2015.[330] In the meantime, some states have passed legislation prescribing how and when public UASs will function within their boundaries.

Every state with ratified UAS legislation has placed some limitation on their law enforcement's ability to use unmanned aircraft and/or manage information derived therefrom. Most require a search warrant or circumstances that trigger a judicially accepted exception to the warrant requirement; others ban all law enforcement use except in limited emergency situations.[331] In scenarios where use is permitted, recovered data may not be disclosed outside the confines of an investigation or judicial proceeding and destruction of the data is sometimes required within a specified timeframe.[332] The stated intent behind these laws is to

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[328] 49 USC §§ 40102(a)(41) and 40125(a)(2).
[329] *Ibid* at § 40102(a)(16).
[330] *FMRA*, *supra* note 5 at §§ 332(a)(2)(H) and 334(a).
[331] See Chapter II.C for an examination of currently enacted state UAS legislation.
[332] See e.g. Utah, *Government Use of Unmanned Aerial Vehicles Act*, *supra* note 290 at 63G-18-104(1) (requires immediate destruction of data collected concerning non-governmental actors or property that are not targets of an investigation) and Illinois, *Freedom from Drone Surveillance Act*, *supra* note 290 at §§ 20 and 25 (requires collected data to be destroyed within 30 days unless relevant to an ongoing investigation or pending trial).

protect the general public's privacy interests[333] as guaranteed by the Fourth Amendment.[334] What enables states to consider and enact legislation defending individual rights is the police power principle of the Tenth Amendment.

The Tenth Amendment provides states with regulatory power over issues neither delegated to the federal government nor otherwise prohibited by law.[335] This power includes "police power," which confers on local governments the ability to manage their own affairs.[336] The federal government is not awarded similar power and can only act in accordance with specific provisions found in the Constitution. Although not directly referenced, included among a state's police power is the authority to create police forces for the safety of people and property within its border.[337] Implicit in this authority is the right to determine how said forces will execute their duties.

States shape all facets of their law enforcement. From uniforms to weapons to modes of transport, local governments dictate what equipment police will employ in carrying out their duties. The prohibition on using UASs to facilitate criminal investigations is simply another aspect of police power that states are lawfully free to exercise. As the Supreme Court noted in

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[333] See e.g. House Research Organization, "Regulating the Capture of Images by Unmanned Vehicles and Aircraft" at 5-6 (7 May 2013), online: House Research Organization <http://www.hro.house.state.tx.us/pdf/ba83R/HB0912.PDF>; Illinois General Assembly, "State of Illinois, 98th General Assembly, House of Representatives, Transcription Debate, 67th Legislative Day" at 22 (30 May 2013) (transcript), online: Illinois General Assembly <http://www.ilga.gov/house/transcripts/htrans98/09800067.pdf>; and Professional Staff of the Appropriations Committee, "Florida Senate: Bill Analysis and Fiscal Impact Statement for CS/CS/SB 92" (28 March 2013), online: Florida Senate <http://www.flsenate.gov/Session/Bill/2013/0092/Analyses/2013s0092.ap.PDF> [Florida Senate, *SB 92 Analysis*].

[334] The Fourth Amendment of the U.S. Constitution reads:

> The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.

US Const amend IV. *Mapp v Ohio*, 367 US 643, (1961) extended these protections to state actions, while *Katz v United States*, 389 US 347, (1967) expanded protection to areas where an individual has a "reasonable expectation of privacy."

[335] US Const amend X.

[336] The term "police power" is not found in the Constitution, however, the Supreme Court has recognized this power as inherent to the Tenth Amendment. See *Chesapeake & O Ry Co v Stapleton*, 279 US 587 at 595 (1929) (quoting *St Louis-San Francisco R Co v Conly*, 241 SW 365 at 367 (Ark Sup Ct 1922), "…the police power of the states over their own local and internal affairs…are reserved to them under the Tenth Amendment to the Constitution.").

[337] See *Cabell v Chavez-Salido*, 454 US 432 at 443 (1982) and *Kelley v Johnson*, 425 US 238 at 247 (1976).

Kelley v. Johnson, "[c]hoice of organization, dress, and *equipment* for law enforcement personnel is a decision entitled to the same sort of presumption of legislative validity as are state choices designed to promote other aims within the cognizance of the State's police power."[338] Thus, irrespective of any requirements the FAA ultimately sets regarding the public use of UASs, states may legally limit how its law enforcement utilize unmanned aircraft as an exercise of their Tenth Amendment rights. The only way such legislation would be barred is if it is found to run afoul of some other constitutional provision or is preempted by federal regulations—both scenarios of which are highly unlikely.

Like any employee, state actors must conform to workplace rules and procedures. Typically, these are only challenged in court when they are perceived to infringe on a constitutionally protected right or cause a recognizable harm. Constitutional challenges by state actors have ranged from free expression claims under the First Amendment[339] to due process and equal protection actions under the Fourteenth Amendment.[340] Harm can include physical and psychological injuries occurring in the workplace or while on duty. In the UAS scenario, it is doubtful that state restrictions on law enforcement use would trigger any constitutional claim as no court has found an inherent right of individuals to operate unmanned aircraft. An argument could be made that injuries sustained during traditional, but nonetheless dangerous, police activities, such as high-speed car chases or armed hostage negotiations, could be avoided with the use of UASs and jurisdictions that bar their use are guilty of negligence. This would be a difficult argument to sustain, however, because most negligence law requires an element of proximate cause[341] and it would be almost impossible to prove that but-for the lack of UASs, an injury would not have occurred.

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[338] *Kelley*, *supra* note 337 at 247 [emphasis added].
[339] See e.g. *City of San Diego v Roe*, 543 US 77 (2004) (conduct of off-duty police officer who recorded himself taking off a generic police uniform before masturbating, not protected by the First Amendment); *Rankin v McPherson*, 483 US 378 (1987) (First Amendment right of county constable employee to make political remark during a private conversation with a co-worker outweighed any state interest in the employee's firing); and *Snepp v United States*, 444 US 507 (1980) (no First Amendment right for CIA agent required to submit manuscript for review prior to publication).
[340] See e.g. *Kelley*, *supra* note 337 (county police hair style regulations sufficiently rational to overcome respondent's claim of deprivation of liberty under Fourteenth Amendment) and *Garrity v New Jersey*, 385 US 493 (1967) (Fourteenth Amendment prohibited use of statements against police officers coerced into making incriminating statements or suffering job termination).
[341] Fleming James Jr & Roger F Perry, "Legal Cause" (1951) 60 Yale LJ 761 at 761.

The issue of preemption is not applicable to state public UAS use laws because the execution of police powers is guaranteed under the Tenth Amendment and cannot be superseded by federal law.[342] The FAA has recognized this right and has suggested that states may even limit how local departments and state universities employ UASs.[343] Thus, the FAA can set rules for public UAS use, which states must then follow, but states are not obliged to utilize UASs simply because they can. Law enforcement personnel and other state actors do not have a constitutional right to utilize UASs in the course of their duties. As will be examined below, the same cannot necessarily be said for civil UAS operators.

Although states are free to limit public UASs, not everyone is in support of these limitations. Of the approximate 19,000 nationwide law enforcement agencies, less than 100 officers man 80% of the departments.[344] For these agencies, UASs are a cost-effective mechanism for carrying out their responsibilities.[345] During consideration of Florida's UAS legislation, the Florida Police Chiefs Association commented that UASs would positively affect local police operations by assisting in patrols and searches of wooded areas and bodies of water; reducing public safety risks associated with high speed car chases; and diminishing risk of harm during hostage, active shooter, or armed and barricaded suspects.[346]

2. Civil Use Restrictions

State-enacted civil UAS legislation pose more complicated questions than laws governing public UAS use because they impose restrictions that arguably infringe on an individual's protected rights. Of the thirteen states that have passed legislation, five have imposed limits on use by civilian operators. Idaho, Oregon, Tennessee, Texas, and Wisconsin each prohibit UASs from being used for private surveillance in some form. In addition, Oregon and Wisconsin bar the weaponized use of UASs. Interestingly, both Idaho and Texas explicitly

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[342] *New York v United States*, 505 US 144 at 156 (1992) (noting "if a power is an attribute of state sovereignty reserved by the Tenth Amendment, it is necessarily a power the Constitution has not conferred on Congress.").
[343] FAA, *2014 UAS Fact Sheet*, *supra* note 243.
[344] Jim Mathews, "Are States Overstepping on Civil UAS?" *Aviation Week* (2 August 2013), online: Aviation Week <http://www.aviationweek.com/Blogs.aspx?plckBlogId=Blog:27ec4a53-dcc8-42d0-bd3a-01329aef79a7>.
[345] *Ibid*.
[346] Florida Senate, *SB 92 Analysis*, *supra* note 333 at 5.

permit the devices to be used for commercial photography although the FAA only allows it in very limited circumstances. In the federal realm, the FAA requires civil UAS pilots to acquire a special airworthiness certificate in order to operate civil UASs. These certificates are only issued for "experimental" purposes and the agency prohibits operations in Class B airspace, which involves the NAS's highest density of manned aircraft.[347]

Starting with the basic premise that individuals have a basic right to use the national airspace, any attempt to limit that right must be examined with a skeptical eye.[348] A thorough analysis of all potential constitutional challenges to state civil UAS legislation is outside the scope of this thesis, but it should be mentioned that First Amendment free speech and expression, as well as, Fourteenth Amendment deprivation of liberty without due process of law and Fourth Amendment unreasonable search and seizure claims will undoubtedly arise in future lawsuits.[349] What this thesis will now examine is whether current and future FAA regulations will set aside state efforts to control the currently unregulated civil UAS market.

a. *Future FAA Regulations: What Areas Will Fall Under the FAA's Domain?*

The FAA projects that once legally able to operate, within five years, approximately 7,500 commercial small UASs will be utilizing the NAS.[350] With the 2012 FMRA, Congress made the Department of Transportation (and by extension, the FAA) solely responsible for the integration of UASs into the national airspace. What it did not do, however, was give the department much direction on how to accomplish this. For example, there is no discussion in the FMRA (or any other federal aviation statute) about the FAA's power to regulate privacy concerns. But, the FAA is in an enviable position because when it does ultimately promulgate

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[347] FAA, *2014 UAS Fact Sheet*, *supra* note 243.
[348] 49 USC § 40103(a)(2) reads, "A citizen of the United States has a public right of transit through the navigable airspace."
[349] For example, prohibiting UAS photography raises the question of whether such bans infringe on an individual's First Amendment right to take photos, particularly in public areas. On the other hand, the Fourteenth Amendment protects individual rights to privacy. See e.g. *Griswold v Connecticut*, 381 US 479 (1965) (invalidating a statute that prohibited contraceptive use as a violation of marital privacy) and *Lawrence v Texas*, 539 US 558 (2003) (recognizing a right to private sexual activity in striking down a local sodomy law).
[350] Federal Aviation Administration, *FAA Aerospace Forecast: Fiscal Years 2014-2034* (2013) at 65, online: Federal Aviation Administration <https://www.faa.gov/about/office_org/headquarters_offices/apl/aviation_forecasts/aerospace_forecasts/2014-2034/media/2014_FAA_Aerospace_Forecast.pdf>.

UAS rules, it can set the boundaries of the field that falls under its implied preemption domain. The agency, however, does not appear ready to include privacy within its bailiwick.

On 7 November 2013, the FAA's Acting Chief Counsel issued final privacy requirements for UAS test sites.[351] In it, the agency asserted that its mission is "to provide the safest, most efficient aerospace system in the world and [the mission] does not include regulating privacy."[352] Furthermore, the FAA's website concludes that "[t]he FAA does not have legal authority to issue privacy guidelines for aircraft, nor [is it] seeking this authority. [The FAA is] engaged in a multi-agency approach to address privacy issues outside of the UAS Test Sites."[353] As it stands, the UAS test site privacy policy requires test site operators to comply with local privacy and tort law in addition to maintaining a written plan of UAS use and data retention.[354]

To determine whether an agency is acting within its statutory bounds, the Supreme Court has fashioned a two-part test. The *Chevron* two-step[355] first asks whether Congress has expressly opined on the question at issue via relevant authorizing statutes.[356] If they have not, or if the answer is ambiguous, the second inquiry shifts to whether the agency's own statutory interpretation is "based on a permissible construction of the statute."[357] In *Chevron v. Natural Resources Defense Council*, the Court held that administrative agencies must sometimes fill the intentional or unintentional statutory gaps left by Congress, and if agencies make reasonable interpretations, such constructions will be upheld.[358] More recently, the Court clarified its *Chevron* ruling by stating that the test applied to an agency's determination of its

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[351] See FAA, *UAS Privacy Policy*, *supra* note 260.
[352] *Ibid* at 4.
[353] Federal Aviation Administration, *UAS Test Site: Frequently Asked Questions* (January 2014), online: Federal Aviation Administration >http://www.faa.gov/about/initiatives/uas/faq/>.
[354] FAA, *UAS Privacy Policy*, *supra* note 260 at 13-15.
[355] See Alissa M Dolan & Richard M Thomson, II, "Integration of Drones into Domestic Airspace: Selected Legal Issues" (4 April 2013) Congressional Research Service, R42940 at 22 (noting that the two-part test is known as the "Chevron two step") [Dolan & Thompson, "Integration of Drones"]. See also Lewie Briggs, "The Chevron Two Step" (4 May 2014), online: YouTube <https://www.youtube.com/watch?v=uHKujqyktJc>.
[356] *Chevron v Natural Resources Defense Council*, 467 US 837 at 842-43 (1984).
[357] *Ibid* at 843. *Chevron* involved conflicting interpretations between the Environmental Protection Agency (EPA) and the National Resources Defense Council, Inc (NRDC) of terms under the Clean Air Act of 1977. The Supreme Court gave deference to the EPA's interpretation noting a long history of acquiescence to administrative interpretations (*ibid* at 844).
[358] *Ibid* at 843-44.

own jurisdiction.

In *City of Arlington v. FCC*, several state and local governments challenged the Federal Communications Commission's (FCC) ability to interpret ambiguous terms under the Telecommunications Act of 1996 related to wireless telecommunications towers and antennae sites.[359] The act directed the FCC to formulate rules and regulations necessary to effectuate the act's provisions, one of which instructed local governments to respond to site applications within a reasonable period of time.[360] After responding to a request for clarification as to what constituted a "reasonable period of time," the FCC's ruling was challenged on the ground that the agency lacked authority to interpret the act's language.[361] The FCC argued it sustained broad authority to implement provisions of the Telecommunications Act of 1996, which necessarily meant it was charged with interpreting the act's terms.[362] The Supreme Court agreed and ruled that there is no distinction for *Chevron* purposes between questions of a jurisdictional or non-jurisdictional nature.[363] The Court further suggested that legislators are well aware that statutory ambiguities will be resolved, at least initially, in favor administrative agencies and "Congress knows to speak in plain terms when it wishes to circumscribe, and in capricious terms when it wishes to enlarge, agency discretion."[364]

Applying the *Chevron* test to future FAA rules, since Congress has not discussed the agency's dominion over aviation privacy issues, the analysis turns to whether an exercise of such authority would be based on a permissible construction of federal statutes. As noted by the Congressional Research Service (CRS),[365] it seems contradictory for Congress to grant the FAA rulemaking authority over UAS integration but prevent it from addressing one of the processes biggest issues.[366] It would be reasonable to infer that Congress intended the FAA to

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[359] See also *City of Arlington v FCC*, 133 SCt 1863 at 1866 (2013).
[360] *Ibid*.
[361] *Ibid* at 1867.
[362] *Ibid*.
[363] *Ibid* at 1868-73. Section II(C) of the Court's decision cites several of its prior decisions that also stand for this proposition (*ibid* at 1871-72).
[364] *Ibid* at 1868.
[365] The Congressional Research Service is a branch of the Library of Congress responsible for providing policy and legal analysis to United States House of Representatives and Senate committees and members. Library of Congress, "Congressional Research Service Careers," online: Library of Congress <http://www.loc.gov/crsinfo/>.
[366] Dolan & Thompson, *supra* note 355 at 23.

"fill the gap" left by the lack federal legislation with its own privacy regulations.[367] On the other hand, the FAA has not traditionally regulated within the privacy realm and likely lacks the legislative competence to correctly do so.[368] In addition, the CRS argues that the FMRA lists several factors the FAA should "at a minimum" consider during its rulemaking process but since the list is not exhaustive, *Chevron* deference would tip the scales in favor of the FAA being allowed to set UAS privacy requirements.[369]

Despite the FAA's reservations, it appears that it has jurisdiction to regulate UAS privacy policy given its expansive grant of power under the FMRA and the application of the *Chevron* test. This logic would even apply to the 1958 Act, which gives the agency wide discretion over the management of domestic airspace. Likewise, the two other prominent civil UAS issues already legislated by states, weaponized and commercial operations, would also fall within the FAA's territory. Again, there is currently no federal legislation governing these issues, therefore, if and when the FAA promulgates regulations, the question to be asked is whether its decision to do so is based on a reasonable construction of the FMRA. As with privacy policies, Congress likely did not intend to limit the FAA's regulatory scope when it conferred UAS responsibility to it. And as noted in the *Arlington* ruling, legislators are cognizant of the fact that clear and transparent language is required when seeking to limit an agency's power.

b. *Current FAA Regulations: Are They Sufficient to Preempt State Law?*

If the FAA chooses not to issue rules substantially similar to those already enacted by some states, will current federal regulations have preemptory superiority? They most likely will, but the full answer involves a look back at the FAA's regulatory history. In order for state civil UAS regulations to avoid federal preemption, courts will have to determine that the federal government has not occupied the field being regulated. As discussed in Chapter I, in the absence of express preemption, implied preemption can be inferred where there is a

[367] *Ibid*. Although several federal UAS privacy bills have been introduced, none have come close to becoming law. See footnotes 283 to 286 and accompanying text.
[368] Dolan & Thompson, *supra* note 355 at 23-24.
[369] *Ibid*.

pervasiveness of federal legislation or a dominant federal interest.

From the beginning of routine domestic aviation, the federal government has set rules for if, how, and when aircraft will occupy the national airspace. From the Air Commerce Act of 1926,[370] which established the first aviation regulatory agency and created licensing, certification, and safety standards to the Federal Airport Act,[371] which authorized federal aid for the funding of local airports to the Aircraft Noise Control Act of 1968,[372] which instituted maximum aircraft noise levels, the federal government has incontrovertibly demonstrated an intent to occupy certain aspects of the aviation field.

Most, if not all, courts defer to the FAA for national airspace management and aircraft safety based on the 1958 Act's grant of power and subsequent FAR promulgations. This reading has been used to uphold federal jurisdiction over airport curfews, passenger safety warnings, and flight crew drug testing standards. When courts have refused to find federal superiority, they argue that the field at issue has not been exclusively conferred to the FAA. For example, aerial advertising and airport land use, have both been deemed local aviation issues since there is no obvious connection to safety or management of the aerial highway. Critics who argue against the FAA controlling UAS privacy rules make a similar assertion.[373] They, however, like many courts are drawing the FAA's field too narrowly.

Those who claim that the FAA's current authority does not extend past aviation safety or airspace management should consider the agency's noise regulations or the Supreme Court's *Philko* decision. The FAA's noise abatement measures were put in place as a response to public nuisance complaints over jet engine noise.[374] Neither safety nor airspace management

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[370] *Air Commerce Act of 1926*, Pub L No 69-254, 44 Stat 568.

[371] *Federal Airport Act*, Pub L No 79-377, 60 Stat 170.

[372] *Aircraft Noise Control Act of 1968*, Pub L No 90-411, 82 Stat 395.

[373] FAA, *UAS Privacy Policy*, *supra* note 260 at 3. Public comments to the FAA's UAS Test Sites' privacy policy included, "[t]he FAA should focus on safety" to "[r]egulating privacy is outside the FAA's mission" to "[t]he FAA does not have statutory authority to regulate privacy." *Ibid*.

[374] Philip Weinberg & Kevin Reilly, *Understanding Environmental Law*, 2d ed (Newark, NJ: LexisNexis Matthew Bender, 2008) at 371-72.

were part of the discussion.[375] Furthermore, in its *Burbank* holding, the Court recognized states' "deep seated police power" to regulate noise yet still found field preemption because the local noise regulations ultimately affected management of the aerial highway. The same argument could be made with respect to federal UAS privacy law.

States have a vested interest in protecting their citizens' privacy rights but if such protections bleed into federal territory, they should be preempted. Management of the airspace is arguably, albeit remotely, affected by local UAS privacy laws because if sanctioned by the FAA, the agency would be responsible for issuing licenses for systems used for private surveillance. For example, if the FAA issued 2,000 licenses, half may belong to non-operational UASs due to state bans on private observation. Effective FAA management of UASs will depend on the number of aircraft utilizing the airspace and accurate numbers are of operational users is vital to not only setting flight parameters but also deciding how many resources to allocate for further research and development.

On a more fundamental level, if the FAA sanctioned UASs for private observation and surveillance, states have no authority to take away that right.[376] It would be analogous to the state of Virginia barring United Airlines from operating within its borders even though the carrier has the requisite FAA certifications. The issues of safety and airspace management were also not factors mentioned in the Supreme Court's 1983 *Philko* ruling, which found that FAA regulations preempted state aircraft title recordation rules because the Congressional intent was to create a central clearing house where lien holders could have ready access to

[375] There is some debate regarding the health risks posed by increased aircraft noise. See Charles W Schmidt, "Noise that Annoys: Regulating Unwanted Sound" *Environmental Health Perspective* (January 2005), online: National Center for Biotechnology Information <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1253730/>.
[376] In the realm of manned aircraft, the Supreme Court has addressed privacy concerns on multiple occasions. See e.g. *Dow Chemical Co v United States*, 476 US 227 at 239 (1986) ("[T]he taking of aerial photographs of an industrial plant complex from navigable airspace is not a search prohibited by the Fourth Amendment."); *California v Ciraolo*, 476 US 207 at 215 (1986) ("In an age where private and commercial flight in the public airways is routine, it is unreasonable for respondent to expect that his marijuana plants were constitutionally protected from being observed with the naked eye from an altitude of 1,000 feet."); and *Florida v Riley*, 488 US 445 (1989) (finding helicopter aerial observations of an individual's mobile home at 400 feet were not in violation of the Fourth Amendment).

claims against their property.[377] Thus, a narrow view of the FAA's dominion as being based solely on safety and airspace management relies on faulty assumptions.[378]

In trying to establish the FAA's territorial boundaries, the 1958 Act provides some limits. The act contains a saving clause that prohibits the federal government from imposing on common law or statutory remedies. This clause has been used to uphold state tort measures in wrongful death and injury, false imprisonment, and slander claims.[379] And although the Supreme Court has not directly addressed this question, it hinted in *Wolens* that federal law does not preempt a tort claim of negligence arising from a plane crash.[380] Therefore, state laws outlawing trespassing, stalking, unwanted surveillance, or unauthorized audio and video recording, via a UAS, if *tort-based*,[381] will likely fall within the net of the saving clause and be protected from federal preemption.[382] Other areas, however, that states have recently endeavored to control may not be afforded such protection.

Turning to weaponized UAS use, a stronger argument in favor of preemption, can be made here. Even if we limit the implied field to aircraft safety and airspace management, the use of a UAS as weapon fits squarely within both. The FAA currently regulates everything from aircraft airworthiness to airmen medical standards, in the interest of providing safe air navigation.[383] In addition, the FAA's air traffic and general operating rules are another link in the safety chain that includes guidance on collision avoidance systems and fuel requirements.[384] Specific FAA rules encompassing weaponization include the prohibition

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[377] *Philko Aviation Inc v Shacket*, 462 US 406 at 411-12 (1983).
[378] The FAA also regulates passenger facility charges (14 CFR §§ 158.1-158.95), while the DOT, along with the FAA, controls ticket oversales (14 CFR §§ 250.1-250.11) and baggage liability (14 CFR §§ 254.1-254.6).
[379] See e.g. *Cleveland*, *supra* note 106 at 1441 ("Congress may reserve for the federal government the exclusive right to regulate safety in a given field, yet permit the states to maintain tort remedies covering much the same territory."); *O'Hern v Delta Airlines, Inc*, 838 F Supp 1264 (ND Ill 1993); and *Fenn v American Airlines Inc*, 839 F Supp 1218 (SD Miss 1993).
[380] *Wolens V*, *supra* note 191 at 825, fn 7.
[381] Currently, only Idaho, Oregon, and Texas permit personal civil recovery for actions associated with unauthorized UAS use.
[382] See Margot E Kaminski, "Drone Federalism: Civilian Drones and the Things They Carry" (May 2013) 4 Cal L Rev Circuit 57 at 73 ("State privacy regulation of drones does not appear to be currently preempted by federal law, insofar as it does not interfere with how or where flight occurs.").
[383] 14 CFR §§ 23.1-35.47 and 67.1-67.415.
[384] *Ibid* at §§ 91.1-105-49.

against reckless aircraft operation,[385] creation of a collision hazard,[386] dropping objects from aircraft,[387] as well as, aircraft speed.[388] Furthermore, under the FMRA, it is a crime to knowingly aim a laser at an aircraft and violators face up to five years in prison.[389]

The myriad number of FAA regulations governing how aircraft must safely navigate through the NAS evidences the federal pervasiveness necessary to trigger implied preemption of this field. Referring back to the case law provided in Chapter I, it indicates that while there is no magic number of regulations that elicit a finding of preemption, the depth and breadth of the FAA's current safety regime clearly passes the test. Thus, state laws such as the *Texas Privacy Act* and Wisconsin's UAS legislation would likely be preempted with respect to their weaponization provisions on the ground that there is a federal intent to occupy the field of aviation safety, of which weaponization falls under.

Finally, of the three major civil UAS areas states have already legislated, commercial use is the easiest to analyze. Commercial use implicates the express preemption clause of the Airline Deregulation Act of 1978, which precludes states from enacting legislation that relates to an interstate air carrier's rates, routes, or services. "Air carrier" is defined as "a citizen of the United States undertaking by any means, directly or indirectly, to provide air transportation" where "air transportation" means "foreign air transportation, interstate air transportation, or the transportation of mail by aircraft."[390] The Supreme Court has defined the term "relates to" broadly so that any local rule that in any way is connected with or refers to a carrier's rate, route, or service, will be preempted.[391] A UAS can arguably fit within the definition of air carrier if it is engaged in interstate transport, most likely of small cargo. Current state commercial UAS regulations only address (presumably intrastate) aerial photography use with no mention of interstate transport, therefore, the ADA's preemption

[385] *Ibid* at § 91.13(a) ("No person may operate an aircraft in a careless or reckless manner so as to endanger the life or property of another.").
[386] *Ibid* at § 91.111(a) ("No person may operate an aircraft so close to another aircraft as to create a collision hazard.").
[387] *Ibid* at § 91.15 ("No pilot in command of a civil aircraft may allow any object to be dropped from that aircraft in flight that creates a hazard to persons or property.").
[388] *Ibid* at § 91.117 (providing maximum speeds for the respective airspace classes).
[389] *FMRA*, *supra* note 5 at § 311.
[390] 49 USC §§ 40102(a)(2) and (a)(5).
[391] See Chapter I.C.2 and accompanying notes.

clause is inapplicable in these cases. If, however, forthcoming state legislation does stray into the commercial interstate realm, for example, legislation limiting the paths or size of commercial UASs, they will undoubtedly face federal preemption under the 1958 Act, as well as, the Constitution's Interstate Commerce Clause.

As for current commercial UAS law, the FAA has categorically said it is not allowed except in limited circumstances. At least two states (Idaho and Texas), on the other hand, have given the green light for for-profit operations. Another, North Carolina, has a pending bill in its legislature that permits commercial operations upon appropriate licensing and once the FAA has authorized its use.[392] In terms of implied preemption, not only would the FAA win on field preemption grounds, but it would also prevail on conflict preemption grounds, as it is impossible to comply with both state and federal regulations. Despite the obvious federal superiority in this matter, FAA violations have continued to surface. In June 2014, U.S. House of Representative Sean P. Maloney's (D-NY) wedding was allegedly photographed by a camera-mounted UAS in Cold Spring, NY.[393] The FAA is currently investigating.

3. When the Dust Settles

As the law currently stands, federal law does not preempt all state and local UAV regulations. Laws governing public officials' actions and those providing traditional tort remedies are less likely to be preempted. Any attempt to regulate civil UAV safety or commercial use will face both express and implied preemption hurdles. While preemption is just one constitutional battle on the UAS horizon, its analysis is important because without a clear understanding of which law applies, operators are trapped within a dizzying vortex of sometimes conflicting rules.

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[392] US, Bill HB 1099, *An Act to Regulate the Use of Unmanned Aircraft Systems, as Recommended by the Legislative Research Commission's Committee on Unmanned Aircraft Systems*, Gen Ass, NC, 2013, ss 7(a) and 7(c).

[393] Erin Dooley, "FAA Probes Congressman's Wedding Video Shot by Drone" *abcNews* (17 July 2014), online: abcNews <http://abcnews.go.com/Politics/congressman-hired-drone-wedding-faces-investigation/story?id=24603553>. New York has not yet enacted any UAS legislation.

CHAPTER IV

Conclusion

> *Federal control is intensive and exclusive. Planes do not wander about the sky like vagrant clouds. They move only by federal permission, subject to federal inspection, in the hands of federally certified personnel, and under an intricate system of federal commands...[A plane's] privileges, rights, and protection, so far as transit is concerned, it owes to the Federal Government alone and not to any state government.*[394]

Aviation is an undeniably federally regulated industry. Even as the winds shifted towards deregulation in the 1970s, a state's ability to legislate aerospace activities has always been carefully controlled. Unlike manned aircraft, however, UASs do not yet have a comprehensive set of federal regulations to ensure safe and efficient operation. States, therefore, have begun filling the gap with their own rules. These attempts to protect citizenry, while noble, have resulted in the overstepping of legislative boundaries.

The Federal Aviation Act of 1958 was the solution to the "conflict of interests" problem created by a trifurcated regulatory system.[395] Prior to its passage regulation of the skies was not only inefficient, it was dangerous. Planes operating under differing flight rules and using navigation aids that did not "talk" to each other, led to a myriad of deadly collisions during the early-1950s.[396] The 1958 Act was designed to eliminate confusion and create "efficient and safe use of the navigable airspace."[397] To do this, the act bestowed upon the FAA Administrator broad power to enact air safety regulations.[398] Although there was no explicit mention of preemption with respect to these powers, the judicial consensus has favored federal superiority.[399]

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[394] *Northwest Airlines Inc v Minnesota*, 322 US 292 at 303 (1944) (Jackson, concurring).
[395] HR Rep No 85-2360, *supra* note 63 at 3-4. See generally Chapter I.C.1.
[396] See *supra* note 62 and accompanying text.
[397] HR Rep No 85-2360, *supra* note 63 at 1-2.
[398] 49 USC §§ 106 (f) (2)(A) and (g)(1)(A).
[399] But see Paul E Stinson, "Implied Field Preemption of Aviation Claims Under the Federal Aviation Act: How the Landscape is Changing" (2011-2012) 11 Issues Aviation L & Pol'y 67 at 79-80, which argues that implied field preemption in the field of aviation is at best an inference and the subsequent inclusion of express preemption provisions in the 1958 Act suggests that federal aviation regulations are not intended to preempt all state law.

The fundamental question of preemption is one of a societal and political nature. Are certain social issues better managed by the federal government, state and local legislators, or some combination of the two? Within the domestic aviation realm, the answer has always been the federal government. And for good reason. If states were allowed to set their own aviation rules, airmen, air carriers, passengers, and anyone else utilizing the airspace, would be subject to varying standards designed by legislators with little to no aviation expertise. The same fears ring true for the current UAS rulemaking debate.

The FAA Modernization and Reform Act of 2012 gave both the Department of Transportation and Federal Aviation Administration wide discretion to create the framework necessary for full integration of unmanned aircraft into the national airspace. By 2022, it is projected that over $94 billion will be spent on UAS research and development.[400] Though it appears clear forthcoming FAA legislation will preempt state attempts to regulate civil UAS use, some are calling for an explicit mandate arguing that uniformity is the key to aviation safety and "[i]nconsistent or even conflicting state and/or local regulations over where and how sUAS[s] can be flown would make it virtually impossible for the pilot of an aircraft to predict where hazards might be lurking."[401]

The concept of federalism, which first emerged as a compromise to appease those championing complete state autonomy, continues to survive because states are largely guaranteed the ability to manage their own affairs. Deferring to the federal government for UAS legislation will not change that. States will maintain the authority to determine how public actors utilize UASs. They will not, however, be allowed to make legislative decisions that impact the complex network of the national airspace. As the justices in *Abdullah* noted, there are times when state law "must yield to the force of federal law…notwithstanding that it

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[400] Federal Aviation Administration, *FAA Aerospace Forecast: Fiscal Years 2012-2032* (2012) at 57, online: Federal Aviation Administration < https://www.faa.gov/about/office_org/headquarters_offices/apl/aviation_forecasts/aerospace_forecasts/2012-2032/media/2012%20FAA%20Aerospace%20Forecast.pdf>.

[401] On 10 October 2014, attorneys from McKenna Long & Aldridge, LLP's UAS Advisory Group petitioned FAA Administrator Michael Huerta to include in forthcoming regulations, express preemption of state/local laws regarding small UAS (sUAS) "design, sale, distribution, operation." sUASs weigh less that 55 pounds and typically reach elevations no higher than 400 feet AGL. Mark A Dombroff & Lawrence S Ebner, "Letter to the Honorable Michael Huerta" (10 October 2014) at 1, 3, online: McKenna Long & Aldridge < https://www.mckennalong.com/assets/attachments/PreemptionLetterFAA.pdf>

is constructed upon values familiar to many and cherished by most, and notwithstanding that it might fit neatly alongside the federal scheme."[402]

[402] *Abdullah*, *supra* note 98 at 374.

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