

## Allocation of Airspace as a Scarce National Resource

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### TABLE OF CONTENTS

I. Introduction.....	253
II. Landmarks in Litigation.....	254
A. Eminent Domain.....	254
1. Federal Airports.....	254
2. Public Airports Operated by State and Local Governments.....	257
B. The Police Power.....	258

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1. Generally .....	258
2. Height Zoning .....	258
3. Land Use Zoning .....	259
4. State and Local Ordinances .....	260
5. Injunctions Against Airports .....	262
6. Public Opinion .....	263
C. Proprietary Restrictions on Airport Use .....	264
III. Airport Planning .....	265
IV. Airspace Allocation and Air Traffic Control .....	271
A. Airspace Allocation .....	272
1. Class A Airspace .....	272
2. Class B Airspace .....	273
3. Class C Airspace .....	274
4. Class D Airspace .....	274
5. Class E Airspace .....	274
6. Special Use Airspace .....	275
a. Restricted Areas .....	276
b. Prohibited Areas .....	276
c. Warning Areas .....	276
d. Military Operations Areas .....	277
e. Alert Areas .....	277
f. Controlled Firing Areas .....	277
7. Military Training Routes .....	278
8. Temporary Flight Restrictions .....	278
9. Class G Airspace .....	279
10. Air Defense Identification Zones .....	279
B. Air Traffic Control .....	279
1. Towers .....	280
2. Air Route Traffic Centers .....	280
3. Flight Service Stations .....	281
4. Central Flow Control .....	281
V. Current Issues in Controversy .....	281
A. Reinventing ATC .....	281
B. Challenges to Federal Preemption .....	282
1. <i>Alaska Airlines v. City of Long Beach</i> .....	283
2. <i>Country Aviation v. Tinicum Township</i> .....	284
3. <i>Gustarson v. City of Lake Angelus</i> .....	285
4. <i>A Aerial Advertising Banners v. City of Boulder</i> ...	285
C. Airspace Over National Parks .....	287
VI. Conclusion .....	289

## I. INTRODUCTION

Following deregulation of airline economics by the Airline Deregulation Act of 1978, almost all airlines sought to achieve operating economies through a shift to exclusively hub and spoke route systems with jet service to small communities being largely replaced by more numerous but smaller turboprop commuter aircraft.<sup>1</sup> Air carrier airports, selected by one or more airlines to serve as regional hubs, experienced an exponential increase in flight operations. This phenomenon has imposed an increased noise burden on residential communities in the vicinity of these airports and (especially during periods of inclement weather) increased flight delays. This not only inconveniences and frustrates travellers on the specific flights delayed, but also creates ripple effects throughout the air transportation system, disrupting nationwide air travel for days.<sup>2</sup>

This strain on air transportation system capacity has resulted in incentives to expand and improve existing airports and to build new airports, both air carrier and general aviation reliever airports to entice non-airline traffic away from these busy airline hubs.<sup>3</sup> Due to this strain on system capacity, the FAA and airport operators are under increased pressure to utilize existing airports more efficiently and to manage the navigable airspace so as to maximize its capacity.<sup>4</sup>

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1. Robert M. Hardaway, AIRPORT REGULATION, LAW & PUBLIC POLICY 26 (1991); Paul S. Dempsey, *The Disintegration of the United States Airline Industry*, 20 TRANSP. L.J. 14-17 (1991).

2. E. Tazewell Ellett, *The National Air Transportation System: Design By City Hall*, 53 J. AIR L. & COM. 1-4 (1987); Andrew R. Goetz & Paul S. Dempsey, *Airline Deregulation Ten Years After: Something Foul in the Air*, 54 J. AIR L. & COM. 927, 951-954 (1989).

3. For example, the new Denver International Airport will be the first major air carrier airport to open in the nation in over two decades, since the Dallas-Ft. Worth International Airport ("DFW") opened in 1974. Leslie Cowling & Suzanne Weiss, *Denver Gets \$60 Million Check*, ROCKY MTN. NEWS, Sept. 28, 1989, at 6.

4. U.S. Congress, Office of Technology Assessment, *Safe Skies for Tomorrow: Aviation Safety in a Competitive Environment*, OTA-SET-381 (Washington, D.C.: U.S. Government Printing Office, 36-38 (July 1988) (hereinafter referred to as "OTA Study"), Lehrer, *Air Transportation Challenges of the 1990's*, 3 J. AVIATION/AEROSPACE ED. & RESEARCH (1993). FAA Administrator David R. Hinson states that U.S. commercial air travel is estimated to exceed 680 million passenger enplanements by the year 2000 and states that unless more efficient use can be made of the airspace, constraints may be necessary. AOPA PILOT, July 1994 at 22. Concerned by the growing congestion of world airspace, the International Air Transport Association, an organization of international airlines, set up an "infrastructure action group" to lobby governments — particularly in Europe, North America and Asia (which it called the worst case) — to give higher priority and, if necessary more money, to solve the problem. IATA warned that the airports of these three affected regions face virtual saturation by the end of the century unless something is done to relieve congestion of the air traffic control system. The action group supplements IATA's existing Task Force on Airport and Airspace Congestion, which was previously organized to identify technical air traffic problems (such as lack of radar coverage in certain countries, congestion around certain airports, and safety problems) and to suggest ways to combat them. AIR SAFETY WEEK, June 4, 1990 at 3. There is already considerable international

Efforts to expand airport and airspace system capacity are sometimes hampered by: divided federal and local authority to regulate airport and other land uses, especially where the exercise of local jurisdiction operates in a manner incompatible with the exclusive federal jurisdiction to regulate airspace use;<sup>5</sup> fear of liability for aircraft noise,<sup>6</sup> and anti-airports sentiments in local communities (which are usually largely noise-related, but may have a component of safety concerns, as well).<sup>7</sup>

Most litigation over airport and airspace use in the United States has been noise-related, although issues relating to capacity and access are arising now with greater frequency.<sup>8</sup>

At this writing, all public airports in the United States, receiving scheduled airline passenger service, are owned and operated by state or local governments or quasi-governmental regional airport authorities. These state and local governments may call upon their inherent power of eminent domain, police power, and proprietary powers as operators of airports to deal with these problems.

## II. LANDMARKS IN LITIGATION

### A. EMINENT DOMAIN

#### 1. Federal Airports

The first aviation case decided by the Supreme Court of the United States focused on airport and airspace issues.<sup>9</sup> The plaintiffs raised chickens adjacent to a little-used rural airport in North Carolina. When World War II began, the federal government took over the airport and put it to use as a heavy bomber base, operating around the clock with a very high level of flight activity. A continuous stream of transports and heavy bombers, as well as formations of fighters, roared over the plaintiffs' property day and night. Their landing approach brought them as low as

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cooperation in air traffic control (*see, e.g.*, 14 C.F.R. Part 91, Appendix C — Operations in the North Atlantic (NAT) Minimum Navigation Performance Specifications (MNPS) Airspace (1993), but there is vast room for improvement.

5. Ellett, *supra* note 2, Lee L. Blackman & Roger P. Freeman, *The Environmental Consequences of Municipal Airports: A Subject of Federal Mandate?*, 53 J. AIR L. & COM. 375, 381-89 (1987).

6. *See Generally* Richard L. Bennett, *Airport Noise Litigation: Case Law Review*, 47 J. AIR L. & COM. 449 (1982).

7. OTA Study, *supra* note 4, at 63-64. Safety concerns of residents living in close proximity to an airport are not frivolous, as statistics show that most aircraft accidents occur in near proximity to the airport where the accident aircraft either took off or was intending to land.

8. *See Generally* Paul. S. Dempsey, Robert M. Hardaway & William E. Thoms, AVIATION LAW & REGULATION 7-40 to 7-54 (1993); Bennett, *supra* note 6; and Robert M. Hardaway, *Economics of Airport Regulation*, 20 TRANSP. L.J. 47, 53-75 (1991).

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

sixty-seven feet over the rooftop of the house. The roar of the bombers' four 1200 horsepower piston engines was deafening and at night their landing lights repeatedly illuminated the plaintiffs' bedroom.<sup>10</sup>

The brain of a chicken is apparently programmed to associate anything flying overhead with threat of attack by a chickenhawk, the perceived threat drove the chickens into a frenzy of activity. Thus, some 150 of the plaintiffs' chickens died from injuries sustained while crashing about their coops in panic caused by the low-flying bombers. The plaintiffs themselves found it impossible to get a night's sleep under the circumstances and hired an attorney who sued the federal government in the United States Court of Claims.<sup>11</sup>

From this humble setting came the foundation of the law of airports and airspace in this country, as the case found its way to the Supreme Court of the United States as a case of first impression.<sup>12</sup> Indeed, counsel and the Court, in a thorough and exhaustive quest for precedent on the issue of property rights in airspace, searched all the way back to the writings of the Roman Glossators who, around the time of Jesus Christ, wrote extensive legal treatises. There, they found the *ad coelum* doctrine which, when translated from the original Latin (*cujus est solum, ejus est usque ad coelum*), held that a person who owned a parcel of land owned not only the surface of that land but also the airspace vertically above it, literally "to the stars" (*ad coelum*).<sup>13</sup>

This ancient legal doctrine had been relied upon from time to time to resolve the kinds of rights-in-airspace disputes that arose prior to the advent of flying machines, such as determining the ownership of fruit growing on branches of one landowner's tree overhanging another's property,<sup>14</sup> or determining whether a landowner might legally construct a building that, although its foundation occupied only its owner's land, has balconies or roof eaves extending over a neighbor's land.<sup>15</sup>

The Supreme Court quickly realized that application of this ancient legal doctrine to the aviation context would make flight virtually impossible, as each property owner whose land was overflown could demand that aircraft keep out of that landowner's airspace or pay a toll for crossing that vertically limitless property. Relying on the Commerce Clause to the Constitution of the United States<sup>16</sup> and Congress' pronouncements in the

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10. *Id.* at 258-59.

11. *Causby v. United States*, 60 F. Supp. 751 (1945).

12. *United States v. Causby*, *supra* note 9, at 258-60; Robert Wright, *THE LAW OF AIRSPACE* 148-55 (1968).

13. *United States v. Causby*, *supra* note 9, at 260-61 n.5.

14. *See generally* Wright, *supra* note 12, at 31-66.

15. *Id.*

16. U.S. CONST., art. I, § 8(3).

Civil Aeronautics Act of 1938<sup>17</sup> (precursor to the present Federal Aviation Act of 1958<sup>18</sup>), the Court held that navigable airspace is a federal public highway within the federal public domain and that, at least as it would otherwise affect the passage of aircraft, the *ad coelum* doctrine has no place in the modern world.<sup>19</sup>

However, the Court did afford the plaintiffs relief for the damages they suffered. By analogizing to the law of eminent domain, the Court found that these flights by aircraft owned and operated by the federal government, at an airfield operated by the federal government, were "so low and so frequent as to be a direct and immediate interference with the enjoyment and use of the land" as to diminish the value of the land. This, the Court held, amounted to a taking of private property for a public use under the Just Compensation Clause of the United States Constitution, Amendment V,<sup>20</sup> requiring the federal government to pay the landowner for the taking. The Court characterized the property interest taken as an "aviation easement",<sup>21</sup> and held that the actual dollar amount constituting "just compensation" was the difference between the appraised value of the plaintiffs' land before the commencement of the oppressive over flights and its appraised value after the flights had begun.<sup>22</sup>

Ordinarily, when a government sets out to take private property for a public use under the power of eminent domain, it proceeds by way of a condemnation action, filing suit seeking a judicial determination of the fair market value of the property and a requesting a court order transferring title of that property to the government upon payment of the price thus determined.<sup>23</sup> Since, however, in this case it was the landowners who had filed the suit seeking a judicial determination that the federal government had already taken a property interest from them for public use (without prior resort to judicial proceedings), and seeking just compensation for that taking, the Court characterized this lawsuit as one in "inverse condemnation."<sup>24</sup>

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17. *United States v. Causby*, *supra* note 9, at 263-64; Civil Aeronautics Act of 1938, 49 U.S.C. §§ 1301-1542 (1976).

18. 49 U.S.C. §1301 (1976 & Supp. 1994).

19. *United States v. Causby*, *supra* note 9, at 261.

20. "[n]or shall private property be taken for public use without just compensation." U.S. CONST. amend. V.

21. *United States v. Causby*, *supra* note 9, at 261-62.

22. *Id.* at 266-67.

23. *Id.*

24. *Id.*

## 2. *Public Airports Operated by State and Local Governments*

In the next landmark case in this area, the Supreme Court of the United States addressed the issue of who should be liable to landowners near public civil airports for the impact of noise generated by civil aircraft using those airports.<sup>25</sup> In this case, the plaintiff's home was adjacent to the Greater Pittsburgh Airport, an airport owned and operated by Allegheny County and served by several commercial airlines. The county built a runway so close to the plaintiff's property that airliners following the federally-prescribed approach to landing sometimes passed as low as eleven feet over the top of the chimney of the plaintiff's home. The noise and vibration cracked the plaster walls and ceilings, and toppled the plaintiff's precious belongings from shelves and china cabinets.<sup>26</sup> The plaintiff's attorney filed suit against both the county and the airlines whose aircraft actually generated the noise. The Court dismissed the action against the airlines, reasoning that since as private enterprises, they lacked the power of eminent domain. Thus, they could not be found to have taken a property interest from the plaintiff for a public use.<sup>27</sup>

The Court held that *Causby*<sup>28</sup> was controlling authority in this case, and held that the county, as operator of this public airport, had taken an aviation easement over the plaintiff's property through inverse condemnation.<sup>29</sup> The Court thus required the county, as the airport's owner/operator, to pay the plaintiffs just compensation for the taking (again, to be measured by the difference between the appraised fair market value of the property immediately before and after the runway extension which led to the radical increase in noise burdening the plaintiffs' property).

This decision apparently alarmed many state and local governments that owned and operated (or were in the process of planning or constructing) public civil airports. Such governments recognized the potential for a flood of similar claims by local landowners. The nature of the cases that followed suggests that many attorneys for state and local governments were tasked by their employers to find a way to avoid or minimize such potential liability. The following cases suggest that these attorneys enthusiastically approached this challenge, attempting and vigorously defending a variety of approaches to evading such potential liability.

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25. *Griggs v. Allegheny County*, 369 U.S. 84 (1962).

26. *Id.* at 86-87.

27. *Id.* at 89.

28. *Supra* note 9.

29. *Griggs*, 369 U.S. at 88-90.

## B. THE POLICE POWER

## 1. Generally

Generally, when the *Griggs* decision was announced, operations had already commenced at a new regional air carrier airport in the Seattle-Tacoma, Washington area (SEATAC).<sup>30</sup> In an apparent effort to circumvent potential *Griggs* style liability for inverse condemnation suits brought by landowners provoked by aircraft noise at the new airport, the airport's proponents included in enabling legislation an elaborate recital that the airport was created under the police power, in the interest of the public welfare.<sup>31</sup>

When the airport opened for operation, an adjacent landowner filed suit. The Washington Supreme Court held that although building and operating a public airport was certainly a proper exercise of the police power, if that exercise of police power resulted in a taking of private property rights for public use, then such an exercise of police power is also, in effect, an exercise of the power of eminent domain, obligating the government that owned and operated the airport to pay just compensation to affected property owners.<sup>32</sup>

## 2. Height Zoning

Shortly thereafter, in Riverside, California, a county government, while constructing a new general aviation airport (Ryan Field), was concerned that the safety and capacity of this public airport might be jeopardized if nearby landowners were allowed to erect structures blocking approach paths to the runway.<sup>33</sup> Therefore, in the exercise of its police power, the county adopted zoning restrictions, prescribing maximum structure heights permitted beneath the line of approach to the runway, proceeding outward and upward from the airport in stairstep fashion, permitting only very low structures close to the airport and progressively higher structures farther away.

Mr. Sneed owned a parcel of some 234.5 acres immediately adjacent to the runway threshold. Under the new county height zoning ordinance, the tallest structure permitted to be built on that portion of his property farthest from the end of the runway was twenty-four feet, and on that portion closest to the runway, a mere three inches!<sup>34</sup> The landowner filed suit and the California Court of Appeals held that, while building and operating the airport and adopting this height zoning regulation to pro-

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30. *Ackerman v. Port of Seattle*, 348 P.2d 664 (Wash. 1960).

31. *Id.* at 668-70.

32. *Id.* at 671-72.

33. *Sneed v. County of Riverside*, 32 Cal. Rptr. 318, 319 (1963).

34. *Id.*



tect the airport's approaches from obstruction were valid exercises of the county's police power, the restriction resulted in a taking of the plaintiff's property. The court reasoned that because the height zoning regulation was plainly intended to keep open a right-of-way (aviation easement) for the passage of aircraft using this public airport and the restriction of the use of the airspace over this particular parcel of land was so drastic, the effect on the plaintiff landowner was a taking. Thus, the Court required the county to pay the landowner just compensation for the aviation easement taken (as measured by the difference in the value of the land immediately before and after imposition of the height zoning ordinance).<sup>35</sup>

### 3. *Land Use Zoning*

About this same time in Santa Barbara, California the county decided to build a public air carrier airport. Nearby and in line with planned runways, a private developer owned a large parcel of land which had already been zoned, platted, and approved by the county for development as a residential subdivision, although construction had not yet begun.<sup>36</sup> The county government was appropriately concerned that if this residential subdivision was constructed, its residents would soon be annoyed by noise generated by aircraft using the new airport and might successfully sue the county in inverse condemnation for the taking of an aviation easement. Therefore, the county revised its land use zoning in the vicinity of the new airport to permit only land uses insensitive to noise in those areas expected to receive the brunt of the noise generated by aircraft using the new airport.<sup>37</sup> Under this new land use zoning ordinance, the developer's property was rezoned from residential to industrial use.<sup>38</sup>

The developer filed suit, claiming that this rezoning constituted a taking of his property for a public use, requiring the payment of just compensation by the county.<sup>39</sup> The California Court of Appeals held that the ordinance was a valid exercise of the county's police power, adopted for the purpose of protecting the public health and welfare by preventing residential exposure to the adverse effects of aircraft noise.<sup>40</sup> The court noted that, unlike the zoning ordinance in *Sneed*,<sup>41</sup> the Santa Barbara County use zoning regulations did not impose any height limits or otherwise demonstrate any intent to keep open a public right-of-way through

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35. *Id.* at 320-22.

36. *Smith v. County of Santa Barbara*, 52 Cal. Rptr. 292 (1966).

37. *Id.* at 293.

38. *Id.*

39. *Id.*

40. *Id.* at 294-95.

41. *Supra* note 34.

the airspace for aircraft coming and going (an aviation easement), so that this land use zoning ordinance did not have the effect of also taking private property rights for a public use. Thus, the court found that the county had no liability to the landowner.<sup>42</sup>

As a result of this decision, land use zoning is now a very popular tool, used nationwide in new airport planning and in protecting existing airports, not already surrounded by residential developments.<sup>43</sup> Industrial, commercial and agricultural land uses are favored in the near proximity of airports, especially in areas falling within the airport's projected 65 Ldn noise contour, as it is generally accepted that noise levels of 65 Ldn or greater are incompatible with the reasonably quiet enjoyment of residential property.<sup>44</sup> Land use zoning is, however, a two-edged sword which local governments may use not only to protect airports from the encroachment of noise-sensitive residential developments, but also to protect residential communities from the encroachment of noise-generating airports.<sup>45</sup>

#### 4. State and Local Ordinances

The arrival of the first generation of jets<sup>46</sup> in airline service triggered a nationwide epidemic of aircraft noise-related litigation. These aircraft emitted far more noise and smoke than their propeller-driven predecessors (and later generations of jet airliners which followed) and their safe operation required longer, flatter approaches and departures which carried the noise burden further from the airports, to communities not previ-

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42. Smith, *supra* note 37, at 295.

43. U.S. Dept. of Transportation, Federal Aviation Administration, Planning for the Airport and its Environs: The Sea-Tac Success Story (1978), U.S. Dept. of Transportation, Federal Aviation Administration, Airport-Land Use Compatibility Planning, Advisory Circular 150,5050.6 (Dec. 30, 1977); U.S. Dept. of Commerce, National Technical Information Service, Compatible Land Use Planning On and Around Airports (1966); U.S. Dept. of Commerce, National Technical Information Service, Aids Available for Compatible Land Use Planning Around Airports (1966).

44. Ldn is an day-night average sound level measurement. Although there is no single accepted methodology for measuring aircraft noise, Ldn is the method most commonly used today. It was developed by the U.S. Environmental Protection Agency to permit comparison of noise levels from all types of urban sources. It measures ambient noise including aircraft noise and other noises within the same community setting and imposes a penalty for nighttime (10 P.M. - 7 A.M.) operations, the duration of noise events, and aircraft noise that is above the ambient background level. Lawrence Gesell, THE ADMINISTRATION OF PUBLIC AIRPORTS (1992 at 180-81; 14 C.F.R. Part 150, Appendix A, Table 1 (1989); U.S. Dept. of Transportation, Federal Aviation Administration, Impact of Noise on People (1977).

45. Garden State Farms, Inc. v. Bay, 390 A.2d 1177 (N.J. 1978).

46. The Boeing 707, Douglas DC-8, and Convair 880.

ously bothered by aircraft noise.<sup>47</sup> This new noise burden spurred many communities, which had long been neighbors of airports, to legal action to protect their citizens.

One such community was the Village of Cedarhurst on New York's Long Island, about a mile southeast of John F. Kennedy International Airport ("JFK", formerly known as Idlewild). Several of JFK's runways point toward Cedarhurst. Citizen outrage over the new jet noise level motivated the local government to adopt a municipal ordinance which specifically prohibited aircraft from flying over the village at less than 1000 feet above ground level (AGL).<sup>48</sup> Enforcement of the ordinance was immediately challenged in court.<sup>49</sup> In the litigation process, it was demonstrated that the FAA air traffic control procedures then in use required aircraft landing on certain runways at JFK to overfly the village at altitudes below 1000 feet AGL.<sup>50</sup>

The United States Court of Appeals for the Second Circuit found a pervasive federal regulatory scheme in the FAA's establishment of JFK arrival and departure routes as part of a nationwide regulatory scheme governing interstate and foreign commerce.<sup>51</sup> Since the ordinance prohibiting aircraft from flying over the village at altitudes below 1000 feet AGL conflicted with the federal regulatory scheme requiring that aircraft fly over the village at lower altitudes, the ordinance was held unenforceable<sup>52</sup> under the Supremacy Clause of the United States Constitution.<sup>53</sup>

Nearby, citizens of the Town of Hempstead were also irate over this new burden of jet noise from JFK. The town adopted a municipal noise ordinance setting decibel limits on the maximum amount of noise anyone (not just aircraft) was permitted to generate in the town. The town promptly attempted to enforce its ordinance against aircraft flying overhead to and from JFK. Enforcement of this ordinance, too, was soon challenged in court, where it was demonstrated that the jets could not comply with the town's noise ordinance without flying over the town at altitudes higher than those prescribed by the same existing FAA air traffic control procedures which had been the basis for the court's decision in

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47. U.S. Congress, Office of Technology Assessment, *Airport System Development*, OTA-STI-231, 21 (Aug. 1984).

48. *Allegheny Airlines, Inc. v. Village of Cedarhurst*, 238 F.2d 812, 814 (2d Cir. 1956).

49. *Id.* An action in which the airlines using the airport joined with the airport operator and the Air Line Pilots Association International as plaintiffs and the court also permitted the Civil Aeronautics Board (precursor to the FAA) and the Administrator of Civil Aeronautics to intervene as parties plaintiff against the municipality.

50. *Id.* at 814-15.

51. *Id.* at 815-17.

52. *Allegheny Airlines, supra* note 48 at 816-19.

53. U.S. CONST., Art. VI, cl. 2.

*Cedarhurst*.<sup>54</sup> Thus, the United States Court of Appeals for the Second Circuit found that the town's noise ordinance, as applied against aircraft, was in direct conflict with the federal regulatory scheme so that the Supremacy Clause precluded the town from enforcing the ordinance against aircraft (although the town remained free to enforce the ordinance against terrestrial noise sources such as motorcycles, lawn mowers, chain saws and the like).<sup>55</sup> It is now firmly established that the federal government has preempted control of airspace allocation and use so that state and local governments are precluded from attempting to regulate aircraft in flight.<sup>56</sup>

### 5. Injunctions Against Airports

Where irate citizens have sought to enjoin the operation of a publicly-owned airport as a nuisance, the courts have uniformly refused to grant injunctive relief, holding that such landowners have an adequate remedy at law, through suits in inverse condemnation, to obtain payment of just compensation for any diminished property value they may have suffered from the noise of aircraft using the airport. No court has ever enjoined the operation of a publicly owned and operated airport in the United States, although damages have been awarded where the public airport has been found to constitute a nuisance.<sup>57</sup>

Privately owned and operated airports, however, have generally not fared so well in defending against suits for injunctive relief. Some private airports have been found to be nuisances and either enjoined from continuing operation or subjected to such daily damages for continuing operation that they have elected to cease operation rather than pay the damages to the surrounding residents.<sup>58</sup>

Because an injunction is equitable relief, considerations of fairness come into play in these cases, so the court may take into account such factors as who came first, the airport or the complaining residents. If it

54. *Id.*

55. *American Airlines, Inc. v. Town of Hempstead*, 398 F.2d 369 (2nd Cir. 1968).

56. *City of Burbank v. Lockheed Air Terminal*, 411 U.S. 624 (1973); *Blue Sky Entertainment, Inc. v. Town of Gardiner*, 711 F.Supp. 678 (N.D.N.Y. 1989) (local ordinance regulating parachute jumping preempted); *Pirola v. City of Clearwater*, 711 F.2d 1006 (11th Cir. 1983) (non-proprietor imposed airport curfew preempted); *United States v. City of Blue Ash*, 487 F.Supp. 135 (S.D. Ohio 1978), *aff'd* 621 F.2d 227 (6th Cir. 1980) (local ordinance prescribing aircraft flight patterns preempted); *Country Aviation, Inc. v. Tinicum Township*, 1992 WL 396782 (E.D.Pa. 1992), *aff'd*, 9 F.3d 1539 (3rd Cir. 1993). See also notes 173-203, *infra*, and accompanying text.

57. J. Scott Hamilton, *PRACTICAL AVIATION LAW* 158-59 (1991); Robert Hardaway, *supra* note 1, at 47; Thomas W. Anderson & Pamela J. Rasmussen, *Recent Developments in Airport Law*, 22 *URBAN LAWYER* 899, 915-16 (1990).

58. See, e.g., *Atkinson v. Bernard, Inc.*, 355 P.2d 229 (Ore. 1960) and *Kuntz v. Werner Flying Serv., Inc.*, 43 N.W. 2d 476 (Wisc. 1950).

appears that the airport was established first and the complaining residents "came to the nuisance" the court may consider it unfair to enjoin operation of the airport.<sup>59</sup> In these cases, courts typically balance the interests involved, and may consider not only the rights and interests of the airport operator and complaining residents, but also any public benefits which may accrue by keeping the airport operational.<sup>60</sup> For example, if a privately-owned airport is open to the public and the airport's attorneys can demonstrate to the satisfaction of the court that if the airport is closed, the local government will need to expend considerable taxpayer funds to build a publicly-owned and operated airport to replace the facility, the court might well find a public interest in allowing private enterprise to continue to satisfy that need, and thus deny injunctive relief. Some private airports have successfully fought litigation seeking to enjoin their operation, while others have failed. Some of the private airports that lost have ceased operations rather than pay damages for a continuing nuisance.<sup>61</sup>

#### 6. *Public Opinion*

Not all solutions to the twin problems of aircraft noise and unobstructed airport approaches have been found in litigation or preventive lawyering. Public opinion is also sometimes effective when directly applied.

In Dallas, Texas, the Love Field airport is very convenient to downtown businesses. In the early 1970s, the Dallas banks were engaged in one-upmanship, building office towers each taller than that of the competition's. The FAA's obstruction analysis<sup>62</sup> determined that a particular proposed "skyscraper" bank would constitute an obstruction to air navigation requiring decommissioning of instrument approaches to the airport from the southeast. The FAA did not prohibit the construction, but merely announced its findings and plan, which were well publicized in the local media. Loss of these instrument approaches would have greatly reduced the utility of this popular airport in periods of foul weather. Apparently, the local business community was so upset by that prospect that they let the bank's directors know that they would not look kindly upon

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59. For a wide-ranging, if somewhat dated, review of application of the common law of nuisance to the complaints of airport neighbors, see Wright, *supra* note 12, at Ch. V.

60. Hamilton, *supra* note 58, at 158-59.

61. Of 17,581 aircraft landing facilities operating in the United States in 1991, the most recent year for which statistics are available, there were 12,904 airports, 4,199 heliports, 70 STOL ports and 408 seaplane bases. 5,090 of these facilities were publicly owned while the other 12,491 (the vast majority) were privately owned. Only 666 of these facilities are served by airlines, the rest only by general aviation. Continuing a trend, 387 aircraft landing facilities were abandoned in 1991. 1993 Aviation Fact Card published by Aircraft Owners & Pilots Association.

62. See *infra*, notes 82-86, and accompanying text.

such a consequence and would feel compelled to take their business elsewhere if it were to come to pass. The bank quickly yielded to this expression of public opinion, announcing with great magnanimity that of course everyone already knew that they were really the biggest and best bank in town and they didn't have to go build some silly skyscraper to prove it. The airport's approaches remain unobstructed to this day.<sup>63</sup>

Washington, D.C.'s National Airport has long been a noisy annoyance to its neighbors. In an effort to reduce the airport's noise impact on the surrounding communities without resort to overt restrictions, the FAA (then the airport's owner and operator)<sup>64</sup> announced a "voluntary jet curfew", requesting that corporate operators voluntarily refrain from conducting jet operations at the airport between the hours of 11:00 p.m. and 7:00 a.m. Not surprisingly, when this voluntary program took effect not all corporate jet operators volunteered. Local newspapers then published the names of major corporations which had flown in or out of the airport with their jets during curfew hours. The airport's neighbors, angered by this intrusion into their night's quiet sleep, wrote letters to the management of those corporations, expressing their outrage.<sup>65</sup> Corporate jet operators swiftly responded to this public reaction and within only a few months, voluntary participation in the curfew had reached 100%.

### C. PROPRIETARY RESTRICTIONS ON AIRPORT USE

A state or local government or regional airport authority which owns and operates a public airport may, as proprietor,<sup>66</sup> regulate the use of that airport. Such proprietary regulations or restrictions, however, must not substantially burden interstate or foreign commerce, must not discriminate against interstate or foreign commerce, and must be reasonable.<sup>67</sup>

The courts have struck down as unreasonable an airport ban on all jets, adopted for noise abatement purposes, where the evidence showed that louder piston-engine aircraft were still allowed to use the airport.<sup>68</sup> Likewise, an airport authority's refusal to allow the Anglo-French Concorde supersonic transport to use an airport operated by the authority

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63. And despite efforts to restrict its use and direct traffic (especially airline traffic) to the Dallas-Ft. Worth Regional Airport ("DFW"), Love Field is busier than ever.

64. The FAA has since turned both National Airport and Dulles International Airport over to the Washington Metropolitan Airport Authority.

65. Hamilton, *supra*, note 58, at 166-67.

66. *City of Burbank v. Lockheed Air Terminal*, 411 U.S. 624, 635 n.14 (1973).

67. *Santa Monica Airport Ass'n v. City of Santa Monica*, 659 F.2d (9th Cir.1981).

68. *Id.*; *Santa Monica Airport Ass'n v. City of Santa Monica*, 647 F.2d 3 (9th Cir. 1981) (the second of three landmark noise cases at this airport, referred to as "Santa Monica II").

was also struck down where the evidence showed that the aircraft could operate within the authority's general noise limit applicable to all other air craft.<sup>69</sup>

Proprietary restrictions which have been upheld by the courts include: a night curfew on all aircraft takeoffs and landings, a prohibition against low approaches and "touch and go" landings on weekends, a prohibition against helicopter training flights, and the establishment and enforcement of maximum single event noise exposure levels against aircraft using the airport.<sup>70</sup> Such restrictions may be imposed only where the governmental entity is the proprietor of the airport. Where the state or local government is not the airport's proprietor, the police power is unavailable to impose such restrictions against the airport.<sup>71</sup>

### III. AIRPORT PLANNING

Appropriate planning, fully and properly implemented and continuously updated in light of changing circumstances, can benefit the public by assuring that valuable airport facilities are available to serve the public's demands free of artificial restraints on capacity.<sup>72</sup> In practice, however, that is often more easily said than done. Typically, airport authorities must rely on local governments having zoning authority to implement zoning for compatible uses and limiting the height of structures. Even where the airport is being developed by a local government possessing zoning power, the airport's projected noise footprint may extend over neighboring cities and counties. Effective zoning would then require the cooperation of the neighboring cities and counties in implementing and maintaining appropriate land use and height zoning ordinances to protect the airport from the encroachment of developments that are incompati-

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69. *British Airways Bd. v. Port Auth.*, 564 F.2d 1002, 1010-11 (2d Cir. 1977), *stay denied*, slip opinion of the U.S. Supreme Court (Oct. 17, 1977).

70. *Santa Monica II*, *supra* note 69; *Air Transp. Ass'n v. Crotti*, 389 F. Supp. 58 (N.D. Cal. 1975).

71. However, it is not unusual for adjacent local governments to enter into intergovernmental agreements to harmonize the airport's needs with those of non-proprietor communities. Typically, in such agreement, the adjacent government agrees to use its police power to impose height zoning to protect the airport's approaches and use zoning to assure that only land uses which are not particularly noise sensitive (such as industrial) are permitted under the airport's approach and departure paths, while the airport proprietor government agrees in exchange to enforce noise limits on aircraft using the airport and perhaps a nighttime curfew against flight operations, as well.

72. Where residential communities have been permitted in proximity to an airport, public outcry for aircraft noise limits, nighttime curfews and other noise-abatement restraints is common. While such a reaction is understandable, these restraints markedly diminish the airport's usefulness as an element of the national transportation system. On the subject of restricted airport access by slot allocation, *see* 14 C.F.R. §§ 93,211-93,227 (1993).

ble with the airport either by virtue of their noise sensitivity or height.<sup>73</sup> Unfortunately, there are virtually no examples of wholly successful long term intergovernmental cooperation in the United States to accomplish these goals.<sup>74</sup>

Land use zoning can be the most cost effective method for assuring that the noise generated by aircraft using the airport does not provoke litigation in inverse condemnation against the airport operator or citizen animosity which may be effectively felt as political pressure to restrain the airport's future operations.<sup>75</sup> Airport developers, in creating a master plan,<sup>76</sup> must accurately predict the "noise footprint" of the airport and its traffic, as it will fall on surrounding land.<sup>77</sup> Noise sensitive uses such as homes, schools, hospitals, and churches should not be permitted within the projected 65 Ldn noise contour.<sup>78</sup> Where this 65 Ldn noise contour extends beyond the jurisdiction of the government constructing the airport or where the airport is being developed by an airport authority not possessing zoning power, the airport sponsor must obtain an intergovernmental agreement with local governments having zoning jurisdiction over all potentially affected areas to cooperate in zoning out potentially noise sensitive uses from these areas and to keep the airport's approaches clear of dangerous obstructions through height zoning or application of their power of eminent domain to condemn and take necessary land and aviation easements. Even if such a cooperative intergovernmental working

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73. For example, planning for DFW involved extensive rezoning of at least two counties and several cities and towns.

74. Both Dulles International Airport, which serves the Washington, D.C. metropolitan area and the Dallas-Fort Worth Regional Airport (DFW) were considered models of planning at the time of their construction. Both, however, now face real potential constraints on future growth and development as a result of land uses that have been approved by surrounding governments in the years since these airports were first constructed. Helms, *Noise Pollution and Airport Regulation*, 47 J. AIR. L. and COM. 405 (1982); Newman, *An Innovative Approach to Airport Planning*, 39 J. AIR. L. and COM. 353 (1973).

75. Smith, 52 Cal. Rptr. 292 (1966). See also, *supra* note 44, and accompanying text. On the airport planning process, see generally Robert Hardaway, AIRPORT REGULATION, LAW & PUBLIC POLICY, ch. 4 (1991); Lawrence Gesell, THE ADMINISTRATION OF PUBLIC AIRPORTS, ch. 4 (1981).

76. 14 C.F.R. Pt. 150 (1992); Gesell, *supra*, note 76, at ch. V.

77. The "footprint" projects on contour maps aircraft noise expected to fall upon the surface of surrounding lands and waters.

78. Industrial parks have been particularly successful land uses in these noisier areas, since a worker operating a turret lathe or other noisy machinery may be totally oblivious to the passage of a jetliner overhead. Indeed, the proximity of the airport as a transportation hub may make such properties especially valuable in an industrial application. Herbert Conway, THE AIRPORT CITY: DEVELOPMENT CONCEPTS FOR THE 21ST CENTURY 93-133 (1980); *supra* note 44.



relationship can be established and maintained, the best plans and projections are always subject to being rendered irrelevant by FAA changes in flight patterns and airspace use.<sup>79</sup>

Although Congress has delegated to the FAA broad plenary power to allocate the use of the navigable airspace, which includes airspace necessary for the takeoff and landing of aircraft,<sup>80</sup> the FAA has made very limited use of that power to protect airport approaches from obstruction. Part 77 of the Federal Aviation Regulations<sup>81</sup> requires that before constructing anything which could be an obstacle to aircraft, the sponsor of that construction must notify the FAA.<sup>82</sup> Upon receipt of this notice, the FAA performs an obstruction analysis to determine whether the proposed structure would adversely affect air navigation.<sup>83</sup> At the conclusion of its analysis, the FAA issues an official finding as to whether the proposed construction would constitute a hazard to air navigation.<sup>84</sup> This concludes the FAA's involvement in the issue.<sup>85</sup> The FAA neither permits nor prohibits the proposed construction, leaving that decision to the local government having jurisdiction over land use and height zoning and the issuance of construction permits.

The state or local government developing a public airport may use its power of eminent domain to condemn and purchase both land and aviation easements over land in the vicinity of the airport.<sup>86</sup> Beyond that land needed for the airport's initial structures and facilities (including runways, approach lighting structures and radio navigational transmitter installations), there is no hard and fast rule by which to determine whether additional land should be purchased in fee for noise abatement purposes (or optioned for future acquisition), or whether acquisition of aviation easements over that land (generally a considerably less expensive proposition when dealing with undeveloped land) would suffice. It may, however, be stated as a general proposition that the closer the proximity of a

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79. On the other hand, if the local governments maintain a close and cooperative working relationship with the FAA, at least where the airport is served by an FAA-operated control tower, the FAA can assist the airport proprietor in developing noise-abatement procedures appropriate to the airport, including runway use preferences that (winds permitting) route departures over the least noise-sensitive neighboring

80. Federal Aviation Act of 1958, as amended, 49 U.S.C. Section 1348(a), *Airline Pilots Ass'n v. Quesada*, 276 F.2d 892, 894 (2d Cir. 1960).

81. 14 C.F.R. §§ 77.1 to 77.75 (1992).

82. 14 C.F.R. § 77.13 (1992), which describes in considerable technical detail construction requiring notice.

83. 14 C.F.R. §§ 77.33 to 77.35 (1992).

84. 14 C.F.R. § 77.31(b) (1992).

85. Hardaway, *supra* note 1, at 86-87; Comment, *Allocation of Property Interests in Air Space*, 20 U. FLA. L. REV. 237 (1967).

86. U.S. CONST., amend. V.; Robert Hamilton, *Airport Zoning*, 5 COLO. LAW. 499, 501 (1976).

particular parcel of property to a runway threshold, the greater consideration should be given to purchasing that property in fee. Likewise, if the property is farther from the airport (and the less its projected noise contour), an aviation easement may suffice.

Federal matching funds are available from the Airport and Airway Trust Fund to acquire land and aviation easements for noise abatement purposes, but the federal government has been reluctant to provide matching funds for the purchase of land for anticipated future airport expansion.<sup>87</sup> Thus, the development of surrounding properties (even if such developments are noise compatible with the airport's original plan by virtue of then seemingly prudent land use zoning) may constrain future extension or multiplication of runways to allow the airport to keep abreast of originally unforeseen increasing demands for capacity.<sup>88</sup>

Airport development in the United States has not relied heavily on general obligation ("full faith and credit") bonds for financing,<sup>89</sup> which is probably a good thing considering the increasing resistance of voters to tax increases. Instead, airport revenue bonds, supplemented by grants from the federal Airport and Airway Trust Fund, have been the primary financial tools of choice to finance airport development.<sup>90</sup> The federal Airport and Airway Trust Fund, about \$14 billion at this writing, consists of the proceeds of airline passenger ticket taxes and general aviation fuel taxes.<sup>91</sup> Many states also earmark certain tax revenues to be expended for airport development purposes, such as state registration fees and specific ownership taxes on aircraft and taxes on aviation fuels.<sup>92</sup> These state revenues may be used to match federal funds.

Air carrier airports may also impose a passenger facility charge (PFC) on airline passengers using the airport.<sup>93</sup> Unlike general obligation bonds, airport revenue bond obligations are secured by the pledge of

87. Airport and Airway Improvement Act of 1982, as amended, 49 U.S.C. § 2204(c)(1)(b) (1992).

88. Helms and Newman, *supra* note 74. See also comment, *Obstacles to Increasing Airspace: Jumping Through Environmental Law Hoops*, 58 J. AIR L. & COM. 221, 230-32 (1992).

89. David Lewis, FINANCING U.S. AIRPORTS IN THE 1980's 60 (1984).

90. Gesell, *supra* note 75, at VII-28 to 30.

91. The Airport and Airway Trust Fund was established by Section 9502 of the Internal Revenue Code of 1954. Current excise tax provisions derive from the Tax Equity and Financial Responsibility Act of 1982 (TEFRA), 26 U.S.C. § 1. These revenue sources include an 8% domestic air passenger ticket tax, a 5% tax on air freight weigh bills, a \$3 per person international departure tax, a 12% per gallon tax on aviation gasoline used for non-commercial purposes, a 14¢ per gallon tax on other aviation fuels used for non-commercial purposes and a tax on aircraft tires and tubes. Congress has been notoriously slow to approve expenditures from the Trust Fund for reluctance to increase the federal deficit.

92. See, e.g., Hamilton, *Aircraft Registration and Taxation in Colorado*, 5 COLO. LAW. 17 (1976).

93. Hardaway, *supra* note 1, at 104.

revenues earned by the airport and are not backed by the general taxing power of the issuing government.<sup>94</sup> The issuance of general obligation bonds may require approval by popular vote whereas the issuance of airport revenue bonds usually does not require such approval.<sup>95</sup>

Where an airport development project is viewed by the financial community as justifiable in scope and feasible under the circumstances, and where the airport's revenue projections are viewed as realistic, airport revenue bonds have generally found a ready market.<sup>96</sup> This has proved to be so even where airlines that are prospective users of the new airport have not yet signed long term use agreements with the airport operator.<sup>97</sup> No doubt a major reason for this level of acceptance is the simple historical fact that no U.S. airport has ever failed to make a payment on a revenue bond and none has ever defaulted.<sup>98</sup>

Upon recommendation of the FAA and specific authorization by Congress, as much as ninety percent of the allowable project costs may be paid from the Airport and Airway Trust Fund.<sup>99</sup> Acceptance of such federal grant-in-aid funds does, however, contractually obligate the airport's sponsor to keep the airport open for a long term (typically twenty years from the date of the last federal grant to the sponsor), and prohibits the airport operator from entering into exclusive use agreements and from discriminating against any kinds or classes of aeronautical users of the airport.<sup>100</sup> Funded projects must also comply with federally prescribed airport construction standards.<sup>101</sup>

The type of bond relied upon to finance an airport project may be influenced by the airport's size. Thus, larger air carrier airports are less likely to use general obligation financing than smaller general aviation fields. Between 1978 and 1982, general obligation debt accounted for only two percent of total bond financing at the nation's largest commercial air carrier airports, fourteen percent at medium sized commercial air

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94. C. Buschman & R. Gibbons, *THE MUNICIPAL BOND HANDBOOK II*, Ch. 15 (1983).

95. Gesell, *supra* note 75, at VII-28.

96. Buschman & Gibbons, *supra* note 94, ch. 15.

97. *Id.* However, signed airline long-term use agreements do add a further measure of security which may be reflected in the bonds' rating and thus the interest the issuer pays. *See also* Blais, *Airport Financing the Need for Long-Range Planning*, in Speaker Syllabus, U.S. Dept. of Transportation, Federal Aviation Administration, *The Law of Aviation Symposium*, Washington, D.C. (Dec. 1-2, 1981).

98. Lewis, *supra* note 89, at 72-73.

99. 49 U.S.C. § 2209(a) (1992). Allowable project costs are itemized at 49 U.S.C. § 2212 (1992), and include planning costs. *See also* U.S. Dept. of Transportation, Federal Aviation Administration, *Planning the State Airport System*, Advisory Circular 150/5050-3A at 23 (1972).

100. 49 U.S.C. § 2210 (a)(1)-(2) (1992).

101. 49 U.S.C. § 2214(a) (1992) and U.S. Dept. of Transportation, Federal Aviation Administration, *Standards for Specifying Construction of Airports*, Advisory Circular 150/5370-10A (1989).

carrier airports and thirty percent at small commercial air carrier airports. Among general aviation reliever airports, by contrast, about forty-nine percent of all tax exempt debt capital has general obligation backing. At non-reliever general aviation airports, more than eighty-three percent of debt financing is secured by general obligation backing.<sup>102</sup>

Airport development and its funding is considered a major federal action which may significantly affect the quality of the environment, bringing into play the National Environmental Policy Act of 1969 (NEPA) requirement for preparation of an environmental impact statement (EIS).<sup>103</sup> Some states have also adopted similar statutes requiring preparation of an environmental impact statement (EIS) for projects which could affect the environment.<sup>104</sup> These requirements may apply to improvements to existing airports, as well as to the development of new airports. Opponents of airport development have achieved some success in enjoining federal funding of airport projects where an EIS fails to meet NEPA requirements.<sup>105</sup> Further, where the EIS and the process of conducting that study come to be viewed by persons who stand to be adversely affected by the project as an "inside job" with little real consideration given to citizen concerns, the necessary intergovernmental cooperation becomes much more difficult to achieve. It is crucial that the study leading to the EIS be thorough and legitimate, and be completed as early as possible in the planning phase to avoid the risk of an injunction interrupting construction or financing of the project once ground has been broken.

Regardless of whether federal funds are being sought or have been used to develop the airport, the FAA must be notified of every proposal to construct, alter, activate or deactivate a civil or joint use (shared civil and military) airport.<sup>106</sup> The FAA then conducts an airspace analysis to determine the effects of the project on existing or contemplated air traffic patterns of neighboring airports and the existing airspace structure, together with the effects of existing or proposed manmade objects known to the FAA and the area's terrain features on flight operations at the air-

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102. Lewis, *supra* note 89, at 60.

103. 42 U.S.C. § 4332(2)(c) (1976); Bennett, *Airport Noise Litigation: Case Law Review*, 47 J. AIR L. & COM. 449, 486-88 (1982).

104. See, e.g., Cal. Pub. Res. Code § 2202.1, 21061 (Supp. 1989); Cal. Admin. Code, Title 14, R. 15,000-15,203 (1989).

105. *City of Romulus v. County of Wayne*, 392 F.Supp. 578 (E.D. Mich. 1975), *vacated* 634 F.2d 347 (6th Cir. 1980); 42 U.S.C. § 4332(2)(C) (1992), *Virginians for Dulles v. Volpe*, 541 F.2d 442 (4th Cir. 1976); *State of Illinois v. Butterfield*, 396 F.Supp. 632 (N.D. Ill. 1975).

106. 14 C.F.R. § 157.3 (1993).

port.<sup>107</sup> Following completion of the airspace analysis, the FAA will issue one of three determinations: No objection, no objection if certain conditions are met (such as the establishment of traffic patterns compatible with those of pre-existing adjacent airports), or that the proposal is objectionable and stating specific objections.<sup>108</sup> The FAA neither permits nor prohibits execution of the proposal.<sup>109</sup>

Airports receiving regularly scheduled commercial passenger service are also required to establish security programs that meet with the approval of the FAA's Director of Civil Aviation Security.<sup>110</sup> If the airport serves any commercial passenger operation conducted with aircraft having a seating capacity of more than thirty passengers (whether these operations are scheduled or unscheduled), the airport must also obtain FAA certification under FAR Part 139, which imposes additional requirements, including but not limited to: crash, fire, and rescue equipment; personnel; and training.<sup>111</sup>

Airports projects will also need to provide for large capacity storage of aviation fuels. Therefore, planners must take into account federal underground storage tank (UST) regulations promulgated under the federal Resource Conservation and Recovery Act (RCRA).<sup>112</sup> Local land use planners need to also consider adding soundproofing requirements to building codes applicable to areas within the airport's potential noise footprint.<sup>113</sup>

#### IV. AIRSPACE ALLOCATION AND AIR TRAFFIC CONTROL

Under the Federal Aviation Act of 1958, as amended, the Secretary of Transportation is authorized and directed to develop plans and formulate policy for the use of the navigable airspace and to assign by rule, regulation, or order the use of the navigable airspace under such terms, conditions, and limitations as he may deem necessary in order to insure

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107. 14 C.F.R. § 157.7 (1993); U.S. Dept. of Transportation, Federal Aviation Administration, Procedures for Handling Airspace Matters, Handbook 7400.2D at Part 200-Terminal Airspace (1993).

108. 14 C.F.R. § 157.7(b) (1992).

109. *Id.*

110. 14 C.F.R. §§ 107.1-3 (1992).

111. 14 C.F.R. §§ 139.1 - .343 (1992).

112. 42 U.S.C. § 6991 (1989); 40 C.F.R. § 280 (1992); 53 Fed. Reg. 37194 (Sept. 23, 1988); 53 Fed. Reg. 43370 (Oct. 26, 1988), 53 Fed. Reg. 51274 (Dec. 21, 1988), 54 Fed. Reg. 5452 (Feb. 3, 1989).

113. U.S. Dept. of Transportation, Federal Aviation Administration, Report to Congress, Study - The Feasibility, Practicability and Cost of the Soundproofing of Schools, Hospitals and Public Health Facilities Located Near Airports (July, 1989).

the safety of aircraft and the efficient utilization of such airspace.<sup>114</sup> The Secretary has delegated this authority to the Administrator of the Federal Aviation Administration.<sup>115</sup>

#### A. AIRSPACE ALLOCATION

The FAA performs its delegated obligations primarily through the promulgation of rules.<sup>116</sup> The substantive and procedural rules governing the allocation of airspace are adopted in accordance with the Administrative Procedure Act<sup>117</sup> and appear in the Federal Aviation Regulations.<sup>118</sup> These regulations establish the following categories of airspace.

##### 1. Class A Airspace

Formerly known as the Positive Control Area, Class A Airspace includes all airspace above Flight Level 180 (approximately 18,000 feet above mean sea level (MSL)),<sup>119</sup> but varying somewhat with atmospheric pressure) and continuing upward to the presently undefined boundary between airspace and outer space. This is positively controlled airspace, within which all aircraft are required to: operate under instrument flight rules (IFR);<sup>120</sup> maintain radio communication with, and subject to, the direction of FAA air traffic controllers;<sup>121</sup> and be equipped with an operating mode-C transponder.<sup>122</sup> This is the airspace used by most airline and corporate jets in cruise.

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114. 49 U.S.C. § 1348(a) (1992).

115. 49 C.F.R. § 1.47(f)(3) (1993).

116. The principal exception is areas where flight is temporarily either totally prohibited or significantly restricted as a result of transitory phenomena not suited to the ponderous rule making process, such as disaster areas, space flight recovery areas, and areas to be visited or travelled by the President, Vice President or other designated security-sensitive public figures. In these cases, a Notice to Airmen (NOTAM) issues immediately without rulemaking. 14 C.F.R. § 91.137 - .143 (1993). See also note 55, *infra*, and accompanying text. Other exceptions are alert areas, controlled firing areas and military training routes (see notes 149 - 154, *infra*, and accompanying text) which are established by the FAA outside the APA rulemaking process. U.S. Dept. of Transportation, Federal Aviation Administration, Special Military Operations, Handbook 7610.4H at paragraph 11-51 (1990).

117. 5 U.S.C. § 553 (1992).

118. 14 C.F.R. §§ 11.61 - .75 (1993).

119. Rather than adjusting their altimeters to compensate for local barometric pressure as is done when operating below 18,000 feet MSL, pilots operating aircraft at or above 18,000 feet MSL utilize a nationwide standard barometric setting of 29.92 inches of mercury. 14 C.F.R. § 91.121 (1993).

120. 14 C.F.R. §§ 71.31-33, 91.135 (1993).

121. *Id.* See also 14 C.F.R. § 91.123 (1993).

122. 14 C.F.R. §§ 91.135 and 91.215 (1993). When interrogated by ATC radar, the mode-C transponder allows the air traffic controller to display on his radar screen an alpha numeric data block showing the aircraft's identification, altitude and speed across the ground. The complete listing for all Class A, Class B, Class C, Class D, and Class E airspace areas and for all reporting points can be found in U.S. Dept. of Transportation, Federal Aviation Administration Airspace

## 2. Class B Airspace

Formerly referred to as Terminal Control Areas, Class B Airspace is designated at airports serving a high density of airline jet traffic, to more effectively protect and separate that traffic from other aircraft.<sup>123</sup> The basic design of Class B Airspace begins with a circular configuration resembling an inverted three tier wedding cake, having a 10 nautical mile (NM) radius inner circle extending from ground level to 12,000 feet (MSL), a second tier having a radius of 20 NM with a floor altitude predicated on a 300 foot per NM climb rate from the distal end of each runway and also extending upward to 12,000 feet MSL, and a third tier having a radius of 30 NM with a floor again predicated on the 300 foot per NM climb rate and also a 12,000 foot MSL ceiling.<sup>124</sup> Each Class B Airspace designation is, however, specifically designed to take into account local topography, airport configuration, airspace needs of other airports in the area and planned traffic flows and routings, with the result that all are considerably more complex than the simple "upside down wedding cake" model.<sup>125</sup> This is also positively controlled airspace within which all air-

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Designations and Reporting Points, Handbook 7400.9A (1993). 14 C.F.R. § 71.1 (1993). The new U.S. airspace nomenclature became effective on September 16, 1993. It was adopted by the FAA for the avowed purposes of simplification and conformity with international nomenclatures used by the International Civil Aviation Organization (ICAO). Oertly, *The ABC's of Airspace Reclassification*, FAA AVIATION NEWS (1991); Cook, *Understanding the New Airspace*, PRIVATE PILOT, Aug. 1993 at 71.

123. 14 C.F.R. § 71.41 (1993); Tom Benenson, *The ABCs of Airspace Now In Effect*, FLYING, Oct. 1993 at 96.

124. See, e.g., The example depicted at the left in Figure 1, which served as the starting point for design of the Class B airspace for the new Denver International Airport (DIA). U.S. Dept. of Transportation, Federal Aviation Administration, Northwest Mountain Region, Air Traffic Division, Letter to Airmen No. 90-2 (July 13, 1990). Such an initial, generic design is referred to as a "straw man", set up to be knocked down.

125. See, e.g., The final configuration of Class B Airspace designed for DIA. Following receipt of the FAA's Letter to Airmen No. 90-2 cited in note 124, *infra*, the Colorado Division of Aviation (a state administrative agency) served as host to organize an airspace user group which came to be known as the New Denver International Airport TCA Ad Hoc Committee, to review and refine the FAA's "straw man" configuration. The Committee consisted of representatives of the Denver area airports (public and private, civil and military, airline, designated general aviation reliever and others), the airlines (represented by the Air Transport Association, United Airlines and a number of individual airline pilots); military aviation (including the Colorado Air National Guard and Colorado Army National Guard); general aviation (represented by the Colorado Pilots Association and a number of special interest pilot organizations), along with members of the Colorado Aeronautics Board, Colorado Division of Aviation, Colorado Airport Operators Association and commercial aeronautical chart maker Jeppesen/Sanderson Company. The FAA provided the committee with continuing technical assistance in the person of airspace and procedures specialists and air traffic controllers who advised the committee on applicable FAA technical standards and reviewed specific committee draft proposals in light of these technical standards. The National Aeronautics and Space Administration (NASA) through its Aviation Safety Reporting System provided the committee with a search of all reports involving inadvertent incursions into the existing Denver (Stapleton International Airport) TCA (Class B

craft are required to be in radio communication with and subject to the direction of FAA Air Traffic Controllers and equipped with an operating mode-C transponder. An operating mode-C transponder is also required for all aircraft operating within a 30 NM radius of the center of a Class B Airspace, even if the aircraft is operating outside the boundaries of that airspace.<sup>126</sup>

### 3. Class C Airspace

Formerly called an Airport Radar Service Area (ARSA), Class C Airspace is designated at medium sized commercial airline airports. All aircraft operating within Class C Airspace are required to be in radio communication with FAA air traffic controllers and equipped with an operating mode-C transponder.<sup>127</sup>

### 4. Class D Airspace

Formerly designated as a Control Zone (CZ) with Airport Traffic Area (ATA), Class D Airspace is designated at airports having operational air traffic control towers. Class D Airspace is tubular in configuration having a 5 NM radius from the airport and extending vertically to 2500 feet AGL. All aircraft operating in this airspace are required to be in radio communication with, and subject to the direction of, FAA air traffic controllers in the tower.<sup>128</sup>

### 5. Class E Airspace

Class E Airspace includes airspace formerly designated as: Airways, Control Zones at airports not having air traffic control towers, and transition areas (TA).<sup>129</sup> Class E Airspace is designated for en route air navigation at altitudes below flight level 180,<sup>130</sup> for operations in IMC<sup>131</sup> at

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airspace) and traffic conflicts occurring within that airspace, together with a draft study of issues including design and boundary identification considerations in terminal airspace, which were also valuable to the committee in its work.

126. 14 C.F.R. §§ 91.131, 91.215 (1993). The 30 NM radius is referred to as the "Mode-C veil".

127. 14 C.F.R. §§ 71.51, 91.130, and 91.215. *See also* Bennenson, *supra* note 123. Examples of Class C airspace are found at such locations as Santa Barbara, CA; Albuquerque, NM, Colorado Springs, CO; Little Rock, AR; and Fayetteville, NC, among others.

128. 14 C.F.R. §§ 71.61, 91.129; Bennenson, *supra* note 123. Examples of Class D airspace are found at Denver area general aviation relievers Jefferson County Airport and Centennial Airport.

129. Bennenson, *supra* note 123; 14 C.F.R. §§ 71.71-.79 (1993).

130. Along federal airways depicted on aeronautical charts and described in sub-part E of FAA Order 7400.9A, *supra* note 122. An example of a federal airway is V-356 from Cheyenne, WY to Denver, CO.



certain airports not having an air traffic control tower<sup>132</sup> and to permit operations in IMC at a lower altitude than would otherwise be permissible at other airports not having an air traffic control tower.<sup>133</sup> Class E Airspace is also typically designated along travelled air routes where the need for IFR<sup>134</sup> capability exists and where the ATC<sup>135</sup> services and facilities required for navigation and separation of aircraft operating under IFR can be provided.<sup>136</sup> Class E Airspace designed for en route navigation typically extends 4 NM either side of a center line extending between radio aids to navigation (usually very high frequency omnidirectional ranges (VOR)) and extending vertically from 1200 feet AGL up to the floor of Class A Airspace at flight level 180. At airports having no control tower, but where IFR operations are permitted, Class E Airspace extends down to the surface.<sup>137</sup> At airports not having a control zone and where takeoffs and landings under IFR are not permitted, the Class E Airspace is 700 feet AGL.<sup>138</sup>

#### 6. *Special Use Airspace*

Special Use Airspace is airspace over which the FAA has ceded control to another agency. Special Use Airspace includes restricted areas, prohibited areas, warning areas, military operations areas, alert areas, and controlled firing areas.<sup>139</sup>

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131. Instrument meteorological conditions (IMC) are said to exist when visibility is less than 3 statute miles or the ceiling is less than 1,000 feet above ground level (AGL). 14 C.F.R. § 91.155 (1993).

132. This airspace was formerly designated as a Control Zone at an airport not having an air traffic control tower. Examples are found at Garden City, Dodge City and Liberal, KS, among others.

133. This airspace was formerly known as a transition area. U.S. Dept. of Transportation, Federal Aviation Administration, *Procedures for Handling Airspace Matters*, Handbook 7400.2C, Ch. 24 (1984).

134. Instrument Flight Rules, 14 C.F.R. §§ 91.167-.193 (1993).

135. See notes 161-171, *infra*, and accompanying text.

136. Such as the former Continental Control Area, including all airspace between 14,500 MSL and the base of Class A airspace at FL 180.

137. Louise Overtly, *The ABCs of Airspace Reclassification*, FAA AVIATION NEWS Mar.-Apr. 1992 at 1.

138. Joel Hamm, *Making Sense of it All*, FLIGHT TRAINING, Sept. 1992, at 18.

139. 14 C.F.R. §§ 73.1-73.85, 91.133 (1993); U.S. Dept. of Transportation, Federal Aviation Administration *Procedures for Handling Airspace Matters*, Handbook 7400.2D (1993) at Part 7; Peter BedeII, *Stealth Airspace: What You Don't Know Can Hurt You*, AOPA PILOT, July 1994 at 65. Where the activities to be conducted in special use airspace and along military training routes may impose a noise burden on underlying lands, the NEPA requirement for an EIS applies. See note 104, *infra*. Where an EIS is to be prepared, there may be expanded opportunities for public participation. For example, when the Department of Defense's Air National Guard Readiness Center proposed to modify and add to MOAs and MTRs in Colorado via the Colorado Airspace Initiative, a citizens' committee representing civil aviation, residents of the potentially affected areas and regional economic interests was formed to review the proposal and advise the gover-

a. Restricted Areas

Restricted areas are designated in locations where activities incompatible with the flight of civil aircraft are conducted. Examples are areas of military artillery or missile firing, aerial gunnery and bombardment.<sup>140</sup> During times when the area is not in use for such activities, ATC may have authority to permit civil use of this airspace.<sup>141</sup>

b. Prohibited Areas

Prohibited areas are established primarily for national security reasons and exclude all civil aircraft at all times.<sup>142</sup> An example of a prohibited area is P-56, the area encompassing the White House and Capitol buildings in Washington, D.C.<sup>143</sup>

c. Warning Areas

A warning area is airspace of defined dimensions over international waters that contains activities which may be hazardous to nonparticipating aircraft. Because international agreements do not provide for prohibition of flight in international airspace, no restriction to flight is imposed. The designation and charting of such airspace, however, serves to alert pilots of nonparticipating aircraft to the potential danger. The term "warning area" is synonymous with the International Civil Aviation Organization (ICAO) term "danger area."<sup>144</sup>

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nor and legislators. The Colorado Airspace Initiative Working Committee received technical assistance and expertise from the Air National Guard Readiness Center, Bureau of Land Management, Colorado Air National Guard, Colorado Department of Natural Resources, Colorado Division of Wildlife, Federal Aviation Administration, Great Sand Dunes National Monument, and U.S. Fish and Wildlife Service. The committee's recommendations were incorporated into the EIS process. Letter to Governor Roy Romer from Colorado Airspace Initiative Working Committee dated May 27, 1994.

140. 14 C.F.R. § 73.3(a) (1993). Restricted areas are not established only over federally-owned lands.

141. Handbook 7400.2D, *supra* note 139 at para. 7305. An example is R-2601 at Ft. Carson, CO.

142. 14 C.F.R. §§ 73.81-.85, 91.133 (1993) and Handbook 7400.2D, *supra* note 139, at Ch. 28.

143. Prohibited areas are identified on aeronautical charts by the prefix letter "P", followed by a dash, a two digit number and a location (city, town or military reservation), e.g.: "P-66 Rancho de Cielo, Goleta, CA." They are normally designated from the surface to a specified altitude and are continuously in effect.

144. Special Federal Aviation Regulation (SFAR) No. 53, *Establishment of Warning Areas in the Airspace Overlying the Waters Between 3 and 12 Nautical Miles From the United States Coast* (Dec. 29, 1993); Handbook 7400.2D, *supra* note 140, at Ch. 30. Warning areas are identified on aeronautical charts by the prefix letter "W", followed by a dash, a two or three dash digit number and a location (city, town, area, military reservation and state); e.g.: "W-72 VACAPES VA".

## d. Military Operations Areas

A military operations area (MOA) is airspace established outside Class A airspace to separate/segregate certain non-hazardous military activities from IFR civil air traffic and to identify for VFR civil air traffic where these activities are conducted.<sup>145</sup> MOAs are established where the U.S. military services have a continuing requirement to conduct training activities such as air combat maneuvers, air intercepts, acrobatics, and low altitude tactics.<sup>146</sup> MOAs are, in effect, always joint use airspace in that civil aircraft operating under visual flight rules are not denied access, but are merely alerted by charting of this airspace to the nature of the activities conducted therein and civil IFR aircraft may be routed through the airspace by ATC when the required separation can be provided from MOA activity.<sup>147</sup>

## e. Alert Areas

Alert areas are established to inform pilots of specific areas where a high volume of pilot training or an unusual type of aeronautical activity is conducted. The establishment of alert areas does not impose any flight restrictions or communication requirements.<sup>148</sup>

## f. Controlled Firing Areas

Controlled firing areas are established to contain activities which, if not conducted in a controlled environment, would be hazardous to non-participating aircraft. Controlled firing areas are used instead of restricted areas only for activities which are either of a short duration or of such a nature that they could be immediately suspended on notice that the activity might endanger nonparticipating aircraft. Examples of such activities include the firing of missiles, rockets (both military and civilian, professional and amateur), anti-aircraft artillery and field artillery, static

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145. Handbook 7400.2D, *supra* note 139, at para. 31-1.

146. *Id.* at para. 31-2.

147. Handbook 7400.2D, *supra* note 139, at para. 31.7. An example is the LaVeta MOA in southern Colorado, where jet fighters engage in simulated air combat. Air National Guard Readiness Center, Airspace Management Branch, Environmental Division, *Final Description of Proposed Action and Alternatives (DOPAA) for the Colorado Airspace Initiative*, July 1993, at 35. While the top of a MOA is no higher than 18,000 feet MSL, the FAA may establish Air Traffic Control Assigned Airspace (ATCAA), such as the Chama ATCAA which overlies the LaVeta MOA, to permit higher altitude dog-fighting if and when such activities do not conflict with other air traffic in the Class A airspace; and if controller workload permits. Discussion with Paul McConnellogue, FAA Denver Air Route Traffic Control Center, at Pueblo, CO on Mar. 8, 1994.

148. Handbook 7400.2D, *supra* note 139 at Ch. 32. An example is A-260 at the U.S. Air Force Academy, which has an extraordinarily high level of flight training in powered airplanes, gliders and parachuting in a small area.

testing of large rocket motors, blasting, ordinance disposal, and chemical disposal.<sup>149</sup> The user of a controlled firing area is required to maintain active surveillance of the airspace for at least 5 miles beyond the area and to cease hazardous activity if an aircraft approaches the area.<sup>150</sup>

### 7. Military Training Routes

The FARs impose speed limits on aircraft operating below 10,000 feet MSL.<sup>151</sup> By Letter of Authorization granted to the Department of Defense, the FAA allows certain military operations to be conducted in excess of the speed limit below 10,000 feet MSL in MOAs and while proceeding en route along established Military Training Routes (MTR).<sup>152</sup> As with MOAs, MTRs are always joint use in that civil aircraft operating under VFR are not denied access, but merely alerted to the possibility of high speed military traffic along the charted route, and civil IFR aircraft may be routed through the airspace when required separation can be provided from military aircraft using the route.<sup>153</sup>

### 8. Temporary Flight Restrictions

By issuance of a Notice to Airmen (NOTAM), the FAA also imposes temporary flight restrictions on areas to be visited by the president, vice president and other security sensitive public figures as well as space flight operational areas (such as Cape Canaveral, Vandenberg Air Force Base and Edwards Air Force Base), in areas where sightseeing or news gathering aircraft might interfere with disaster relief, law enforcement or fire fighting aircraft operations, and in other areas where an unsafe congestion of sightseeing and other aircraft above an event (such as the Super Bowl) might otherwise occur.<sup>154</sup>

149. Handbook 7400.2D, *supra* note 139, at paras. 7700-01.

150. Handbook 7400.2D, *supra* note 139 at paras. 7730-33. Controlled firing areas are not depicted on civil aeronautical charts, since the firing area activity is required to cease upon radar or visual sighting of non-participating aircraft. Bedeil, *supra* note 139 at 69.

151. 14 C.F.R. § 91.117 (1993).

152. FAA Handbook 7610.4H, *supra* note 116, at para. 11-2 and Appendix 18. *See also* notes 141 and 105, *supra*, re: applicability of NGPA EIS requirements. The Department of Defense (DOD) also designates low-altitude tactical navigation areas (LATN) and slow-speed low-altitude training routes (SRs) for military use, but military aircraft operating along these routes must obey the same air traffic rules as a civil aircraft, including the speed limit. Bedeil, *supra* note 139, at 66-67.

153. *See supra* note 147, and accompanying text.

154. 14 C.F.R. § 91.137 (1994). Temporary flight restrictions may also be used as an interim measure pending rulemaking to establish or chart special use airspace. For example, when the U.S. Customs Service installed a tethered aerostat (balloon) bearing a radar system on a 15,000 foot unlighted cable near Glencoe, LA in August of 1993 to detect low flying drug smugglers, a temporary flight restriction area was announced at that location pending establishment and charting of restricted airspace.

### 9. *Class G Airspace*<sup>155</sup>

Formerly called Uncontrolled Airspace, this is what remains (below FL 180, and outside other lettered classes of airspace, special use airspace and areas of temporary flight restrictions).<sup>156</sup> While aircraft in uncontrolled airspace are not subject to any requirement to communicate with ATC (regardless of weather conditions), it is not an area where anything goes,<sup>157</sup> since many FARs apply here, as well. Because this category of airspace defies the FAA's obsession for direct control over everything that moves in the sky, there is not much of this airspace to be found outside of the State of Alaska, although there is more to be found in the western United States than in the east, where overlapping airways have laid down a virtually continuous blanket of Class E airspace.<sup>158</sup>

### 10. *Air Defense Identification Zones (ADIZ)*

Additionally, Air Defense Identification Zones are established around U.S. borders. Aircraft operating in these areas are required to have filed flight plans notifying the FAA ahead of time of their intentions, to be in radio communication with the appropriate ATC facility, and to have an operating mode-C transponder.<sup>159</sup> Aircraft operating in these areas are subject to interception by military aircraft for visual identification.<sup>160</sup>

## B. AIR TRAFFIC CONTROL

The air traffic control (ATC) system is based upon radio control in a largely radar environment, meaning that aircraft are directed by voice radio instructions given to pilots by ground based air traffic controllers, who are usually observing the aircraft's three dimensional position, track, and speed on a radar screen. In areas not covered by radar or where radar equipment is not available to the particular controller, such as a nonradar air traffic control tower, the controller's instructions are based on position reports radioed by pilots, supplemented in some instances by

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155. Under ICAO nomenclature, international Class F airspace is designated where IFR traffic separation is provided "to the extent practicable". There is no U.S. equivalent to the ICAO nomenclature for Class F airspace. *Supra* note 123.

156. Hamm, *supra* note 138; Cook, *supra* note 122; *Preparing for Airspace Reclassification*, FLIGHT TRAINING, Jan. 1993 at 39.

157. 14 C.F.R. § 91.126 (1994).

158. U.S. Dept. of Commerce, National Oceanic and Atmospheric Administration, National Ocean Survey, IFR Wall Planning Charts.

159. 14 C.F.R. §§ 99.1-.47 (1994).

160. Originally established during the Cold War era as a line of defense against the Soviet bomber threat, the ADIZ is now more frequently used in efforts to intercept drug-smuggling aircraft.

visual observation of the aircraft.<sup>161</sup> The basic ATC facilities are air traffic control towers, air route traffic control centers (ARTCC or centers), flight service stations (FSS) and central flow control (CFC).

### 1. Towers

Air traffic control towers control air traffic in the terminal area, including arrivals, departures and aircraft movements on the airport and may include terminal radar approach control (TRACON or approach) facilities.<sup>162</sup> Depending on the type and level of activity at the airport and the structure of the surrounding airspace, a tower's area of responsibility may extend over an area as small as the airport's Class D Airspace to as much as a 40 mile radius up to FL 200. Letters of Agreement between ATC facilities outline the areas of responsibility and coordination procedures for each.<sup>163</sup>

### 2. Air Route Traffic Centers (ARTCC)

"Centers" control en route traffic operating under IFR over wide geographical areas of the country and provide radar traffic advisory to aircraft operating under VFR upon request, on a workload permitting basis.<sup>164</sup>

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161. See generally OTA Study, *supra* note 4, at Ch. 7; Gesell, *supra* note 76, at III-18; U.S. Dept. of Transportation, Federal Aviation Administration, *Air Traffic Control*, Handbook 7110.65 (1994).

162. Not all air traffic control towers are operated by the FAA. Some are "contract towers" operated by private enterprise, usually under contract to the state or local government which owns and operates the airport. Following decimation of the FAA's air traffic control staff by the mass firing of controllers by President Reagan in response to the Professional Air Traffic Controllers (PATCO) strike and tightening federal budgets, all Level I towers (those control towers having the lowest level of annual activity) which remain operational are now operated under contract by private enterprise. Level II towers may follow suit as the FAA faces further budget cuts.

163. As matters of internal policy, letters of agreement are considered to fall outside the APA's requirements. For example, a letter of agreement between the FAA air traffic control towers at Denver and Colorado Springs (both of which include TRACON facilities) and the Denver Center allow IFR traffic between the two airports (which are less than 60 miles apart) to be handled by the two towers without an intermediate phase of center control. Letters of agreement may also exist between ATC facilities and airspace users when such an agreement may improve safety and efficiency. For example, skydiving and soaring operators frequently enter into letters of agreement with ATC facilities in whose airspace they operate.

164. At this writing, all centers are operated by the FAA (*But see* notes 168-172, *infra*, and accompanying text). An example is the Denver Center, which serves air traffic over almost all of Colorado as well as portions of Utah, Arizona, New Mexico, Kansas, Nebraska, South Dakota, Montana and Wyoming.

### 3. *Flight Service Stations (FSS)*

Flight Service Stations observe, collect and disseminate weather and other aviation safety information, briefing pilots in person, by telephone, by radio and by computer terminal. They also receive and disseminate flight plans and pilot reports of weather conditions encountered in flight.<sup>165</sup>

### 4. *Central Flow Control (CFC)*

Central Flow Control at the new Air Traffic Control System Control Center in Hemdon, Virginia (near Dulles International Airport) monitors and manages the flow of more than 150,000 flight per day, adjusting for weather conditions and other factors affecting airport and airspace capacity nationwide. The center anticipates delays and accomplishes fuel savings by holding flights on the ground prior to departure, allowing delays to be taken on the ground rather than inflight and by providing fuel efficient routings.<sup>166</sup> Air traffic control on a typical commercial flight is depicted in Figure 2.

## V. CURRENT ISSUES IN CONTROVERSY

### A. REINVENTING ATC

Citing intolerable restrictions of federal procurement and personnel policies on efforts to modernize the ATC system (a federal project which may have set a new record as behind schedule and over budget), the Clinton Administration is advocating creation of an independent government corporation to take over the air traffic control function from the FAA.<sup>167</sup>

The proposal has proved itself quite controversial in the aviation industry. It is generally accepted that although imperfect, the U.S. ATC system is the safest and most efficient in the world. Opponents of the proposal point out the disappointing experiences of the U.S. Postal Ser-

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165. In addition to the FAA's Direct User Access Terminals (DUAT), a number of private enterprises also offer weather report and flight planning services via computer modem or fax. Both the FAA and private industry rely upon not only FAA observers at the flight service stations, but also on automated observation systems—Automated Weather Observation System (AWOS), Automated Surface Weather Observation System (ASOS), National Weather Service (NWS) observers, and certified weather observers in private industry.

166. *Global ATC Command Center Moves To Expanded Facility*, GENERAL AVIATION USE & FLYER, first June issue 1994, at 5.

167. AIR SAFETY WEEK, Apr. 11, 1994 at 4; FAA Administrator David R. Hinson in AOPA PILOT, July, 1994 at 22. Americans for Sound Aviation Policy (ASAP), founded Aug. 28, 1993 in Washington, DC by a group of former airline executives, industry experts, government officials, consumer advocates and academics with a goal of giving U.S. aviation policy more substantive direction has recommended expeditious updating of the air traffic control system. P. Dempsey, Annual Report, Americans for Sound Aviation Policy (June 23, 1994).

vice and Amtrak, independent government corporations created to overcome similar problems.<sup>168</sup> Many in the aviation industry have expressed fears that an independent government ATC corporation would, like the Postal Service and Amtrak, cause rising costs to be passed along to consumers, while efforts to contain costs would simultaneously lead to deteriorating service.<sup>169</sup>

Another concern is the proposed management of the new ATC corporation would give airlines virtual control over the system, potentially prejudicing other airspace users (particularly general aviation).<sup>170</sup>

Indeed, the administration's own pronouncements of late have called into question the validity of the justifications originally advanced for the recommendation.<sup>171</sup>

### B. CHALLENGES TO FEDERAL PREEMPTION

It is generally accepted that the Supreme Court's 1973 decision in *City of Burbank v. Lockheed Air Terminal*,<sup>172</sup> founded the principle that the federal government has preempted the regulation of the use of the navigable airspace and the regulation of airplanes in flight in the navigable airspace. State and local governments are therefore prohibited from regulating in this area.

While recent challenges to this premise have uniformly met with failure, it is interesting to note 20 years after the Court's supposedly definitive answer in *Burbank*, the holding has been questioned in a number of recent cases.

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168. See, e.g., *The Great ATC Giveaway*, SPORT AVIATION, Apr. 1994, at 48.

169. *Id.*; U.S. Representative James L. Obestar, Chairman, Aviation Subcommittee of House Public Works and Transportation Committee in AOPA PILOT, June, 1994 at 22; Experimental Aircraft Association news release, *EAA Voices Opposition to Corporate Air Traffic Control System* (Feb. 24, 1994).

170. *Id.*; President of Aircraft Owners & Pilots Association, Phil Boyer, address at the AOPA Town Meeting, Englewood, CO. (May 31, 1994).

171. In a recent press release announcing the opening of the new central flow control facility, the FAA claims that by leasing the building, equipment and computer services from a private company, the FAA gained the capability to adopt new technologies without making new purchases, allowing the agency to exploit rapidly changing technology without having to go through the cumbersome federal procurement process. Editorial, *Clinton Administration Trying To Fool Us on ATC*, GENERAL AVIATION NEWS and FLYER, First June Issue 1994, at 20; Guest Opinion by W. Hamilton, *For Federico Pena, ATC Represents Larger Stage, Greater Folly*, *Id.* at 21. (The lesser of Secretary of Transportation Pena's follies, according to the latter writer, being the new Denver International Airport (DIA)).

172. 411 U.S. 624 (1973).



1. *Alaska Airlines, Inc. v. City of Long Beach*<sup>173</sup>

On October 24, 1991, the U.S. Court of Appeals for the Ninth Circuit affirmed a permanent injunction issued by the district court against the City of Long Beach, ending 10 years of litigation over efforts by the City to regulate noise emanating from aircraft using the Long Beach Municipal Airport. The airport opened in 1923 on city property surrounded by residential housing. Throughout its history, the airport had heavy military and general aviation usage. In 1981, the city council adopted its first noise control ordinance, the "Aircraft Noise Control Regulation" which limited airline flights to 15 per day and required airlines to use quieter aircraft.<sup>174</sup> On June 28, 1983 Alaska Airlines filed suit seeking an injunction against enforcement of the ordinance; other commercial airlines subsequently intervened. During the ten year course of the litigation, the ordinance was amended. By the time the case was tried, the principal elements of the ordinance included a limit of 65 decibels on the Community Noise Equivalent (CNEL) scale, limited the number of air carrier jet flights to 15 per day, and set noise limits for individual aircraft. Relying on footnote 14 to *Burbank*,<sup>175</sup> the Court of Appeals found that federal regulation of air commerce did not preempt the municipality, as proprietor of the airport, from adopting and enforcing noise regulations in the interest of avoiding liability for excessive noise generated by aircraft using the airport,<sup>176</sup> stating: "the goal of reducing airport noise to control liability and improve the aesthetics of the environment is a legitimate and permissible one".<sup>177</sup> The Court of Appeals declined to find any of the

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173. 951 F.2d 977 (9th Cir. 1991).

174. Later, an FAA-funded noise study was conducted at the airport under 14 C.F.R. §§ 150.1 - 150.35. Based on that study, the city submitted a noise compatibility program (NCP) to the FAA for review and approval in July of 1986. By the time the case came before the Court of Appeals 5 years later, it did not appear to the court that the FAA had yet acted on the city's proposed NCP.

175. *Supra* note 172, at 635.

176. Footnote 14 to *Burbank*, has been problematic. At the time that decision was announced, the airport was the only privately-owned airport in the United States serving scheduled passenger-carrying airlines. This fact, along with the Court's insertion of footnote 14, appeared to yield a result which applied only to that one airport. Indeed, the decision did not apply to that airport for long as the owner (Lockheed) soon sold the airport to a public entity: the Burbank-Glendale-Pasadena Airport Authority. This left no airports serving regularly scheduled passenger carrying airlines fitting within the footnote 14 exception. Some, including this author, thought that it would have been more appropriate for the Supreme Court to have dismissed certiori as improvidently granted, once the court found it necessary to insert footnote 14, under these facts. The decision has, however, proved to serve delimit the boundaries of federal, state and local authority.

177. 951 F.2d 977, 984 (9th Cir. 1991). Of course, only the proprietor of the airport may enforce these regulations and not, for example, a neighboring (non-owner) municipality upon which the airport's noise falls.

substantive provisions of the ordinance completely arbitrary or unreasonable and concluded the ordinance did not violate the Commerce Clause.<sup>178</sup>

The airlines also argued the ordinance violated their equal protection rights, since it imposes the entire burden of noise regulation on the airlines while leaving other users of the airport (general aviation and the military) unregulated. The court found the right to avoid reduction in the number of allocated flights is not a fundamental right and the airlines were not a suspect class. The court stated they could not find that the ordinance violated of equal protection unless it were found not rationally related to a legitimate interest of the city.<sup>179</sup> Since the court found the city's interest in reducing airport noise to control liability and improve the aesthetics of the environment legitimate, it found the ordinance not violative of the airlines equal protection rights.

Finally, the airlines argued the ordinance denied the airlines procedural due process by authorizing the airport manager, alone and without a hearing, to require airlines to reduce flights, further providing that the determination of the airport manager "shall be conclusive unless it is demonstrated to lack a rational basis." The ordinance provided no procedures for notifying carriers of a contemplated change in quota, or to allow them to challenge the determination of the airport manager.<sup>180</sup> The Court of Appeals agreed with the airlines that they have a property interest in the number of flights they have been allocated, which could be considered a license "essential in pursuit of a livelihood" so as "not to be taken away without that procedural due process required by the Fourteenth Amendment."<sup>181</sup> The ordinance included a non-severability clause, so the Court of Appeals found the denial of procedural due process a fatal flaw to the entire ordinance thereby affirming the district court's permanent injunction of the ordinance's enforcement.<sup>182</sup>

## 2. *Country Aviation, Inc. v. Tinicum Township*<sup>183</sup>

In a case involving the Van Zant Airport, home to a glider club in Upper Bucks County, Pennsylvania, the local government attempted to use its police power to enforce an aviation noise control ordinance against aircraft operating at the privately owned airport.<sup>184</sup> The airport owner and operators filed suit in the United States District Court for the

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178. *Alaska Airlines v. City of Long Beach*, 951 F.2d 977, 985 (9th Cir. 1991).

179. *Id.* at 986.

180. *Id.*

181. *Id.*, *i.e.* notice and a meaningful hearing.

182. *Id.* at 987.

183. No. 92-3017, 1992 WL 396782 (E.D. Pa. 1992), *aff'd* 9 F.3d 1539 (3d Cir. 1993).

184. Towplanes, not gliders.

Eastern District of Pennsylvania seeking an injunction against enforcement of the ordinance. The FAA, at the court's invitation, participated as *amicus curiae*, supporting the position of the airport owner. The FAA and the plaintiffs argued it is long settled that except for reasonable noise control regulations adopted by airport proprietors, all state and local regulation of the noise of aircraft in flight is preempted by pervasive federal regulations governing airspace management and aviation noise control.<sup>185</sup> The trial court agreed, stating that *Burbank* continues to govern the law of preemption in this case despite defendants' renewed contention that the case was wrongly decided.

The United States Court of Appeals for the Third Circuit affirmed the permanent injunction in a two sentence order citing *Burbank*.<sup>186</sup>

### 3. *Gustarson v. City of Lake Angelus*<sup>187</sup>

In this case, a waterfront homeowner and seaplane pilot challenged the southeast Michigan city's ordinance prohibiting the operation of seaplanes on Lake Angelus, a one and one half mile long lake within the city. The ordinance also prohibited operation by any aircraft below 500 feet over the lake.<sup>188</sup>

The United States District Court found that federal law preempts local ordinances in matters concerning aircraft operation, rendering the city's ordinance unconstitutional.<sup>189</sup>

The city has appealed the decision to the United States Court of Appeals for the Sixth Circuit.<sup>190</sup>

### 4. *A Aerial Advertising Banners, Inc. v. City of Boulder*<sup>191</sup>

In Colorado, the Boulder<sup>192</sup> City Council, finding that commercial signs towed over the city by aircraft are a distraction impairing traffic safety, and a source of noise,<sup>193</sup> enacted a city ordinance prohibiting com-

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185. Memorandum of the United States as *Amicus Curiae*, *County Aviation v. Tincum Township*, No. 92-3017.

186. 9 F.3d 1539 (3rd Cir. 1993).

187. *Gustafson v. City of Lake Angelus*, No. 92-73976, 1993 WL 719863 (E.D. Mich. Oct. 22, 1993) (Memorandum Opinion and Order Granting Plaintiff's Motion for Declaratory Judgment and a Permanent Injunction and Granting Defendants' Motion for Summary Judgment on Plaintiff's §1983 Claims).

188. *Id.*

189. *Id.* at 6.

190. LAWYER-PILOTS BAR ASSOCIATION JOURNAL, Winter 1994 at 38.

191. 868 P.2d 1077 (Colo. 1994).

192. Known locally as the "People's Republic of Boulder" for marching to the beat of a different drummer.

193. Boulder Rev. Code § 10-11-1(e) (1981).

mercial signs towed aloft by aircraft.<sup>194</sup> (The ordinance did not apply to personal, political or other noncommercial messages.)<sup>195</sup> A Aerial Advertising Banners, Inc., d/b/a Banner Advertising, Inc. (Banner), believed the ordinance unconstitutional by operation of federal preemption, declined to obey its prohibitions. Ignoring a strongly worded letter from the FAA's chief counsel expressing preemptive intent,<sup>196</sup> each time the city identified one of Banner's aircraft violating the ordinance, charges were filed and increasing fines imposed. (Interestingly, during the four years of this litigation, while Banner's competitors were warned by the city and threatened with similar enforcement actions, they also continued to disregard the ordinance, however, none were charged.) In the last of several cases, the municipal court not only imposed the maximum \$2,000 fine against Banner, it also issued a cease and desist order against Banner and the corporation's president, stating he would be jailed for contempt in the event of a future violation.<sup>197</sup> A state district court affirmed the municipal court's convictions and the Colorado Supreme Court granted certiorari to decide whether the city code prohibiting commercial signs towed by aircraft was preempted by federal law, by operation of the Supremacy Clause of the United States Constitution.<sup>198</sup> The Aircraft Owners and Pilots Association, a 350,000 member national organization, participated on Banner's side as *amicus curiae*.

The Supreme Court noted Banner did not use Boulder's Municipal Airport on the days it violated the ordinance, so the limited exception to overall federal preemption carved out for state or local governments who own airports set forth in footnote 14 to *Burbank* did not apply.<sup>199</sup> The court considered the three types of federal preemption (explicit preemp-

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194. Boulder Rev. Code § 10-11-3(c) provides: Specific Signs Prohibited: No person shall erect, install, post, display, or maintain any of the following signs: (1) Airborne Advertising: a commercial sign towed aloft by aircraft.

195. "Commercial Sign" is defined in the Boulder Rev. Code § 10-11-2(a)(10) as "a sign which identifies, advertises, or directs attention to a business or is intended to induce a purchase of a good, property, or service, including without limitation, any sign naming a brand of good or service and any sign which is not a non commercial sign."

196. Letter of Mar. 6, 1991 from FAA Chief Counsel Kenneth P. Quinn to Jane W. Greenfield, Acting Boulder City Attorney.

197. Judgment of Aug. 26, 1992 in consolidated Case Nos. Y15378, Y15379, Y15380, and Y15381 in the Municipal Court for Boulder County, Colorado, Municipal Court Judge James Kozlowski, presiding.

198. The Colorado Supreme Court has denied certiorari in the first of these case, which had received similar treatment in the municipal and state district courts. See *Banner Advertising v. City of Boulder*, No. 91CR269, 1991 Lexis 894 (Colo. 1991), cert. denied No. 91SC485 (Colo. Dec. 23, 1991).

199. *Banner Advertising v. City of Boulder*, 868 P.2d 1077, 1083 n.6 (Colo. 1994).

tion, exclusive domain, and obstacle to the accomplishment and execution of federal regulation) individually, and applied their tests to the Boulder ordinance.

On the first test, the Court found that the Federal Aviation Act contains no explicit provision by Congress manifesting an intent to preempt local regulation in the area of air traffic and airspace management, nor, specifically, banner towing by an aircraft. Thus, the Court found the ordinance not explicitly preempted by the Federal Aviation Act.<sup>200</sup>

Turning to the second preemption test, however, the Court found the letter from the FAA's Chief Counsel to be instructive in its interpretation of the FAA's regulation governing towing of objects by civil aircraft, including banners. The Court found the regulation of towing of banners by aircraft within the exclusive domain of the federal government, preempting application of the city ordinance.<sup>201</sup>

Turning to the third preemption test, whether the ordinance was preempted because it "stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress," the Court found the city's ordinance more stringent than the federal regulation and its purpose (the protection of the safety of persons and property on the ground) identical. Therefore, the court found the ordinance "stands as an obstacle to the accomplishment and execution of the federal regulation and is therefore preempted."<sup>202</sup>

### C. AIRSPACE OVER NATIONAL PARKS

All aircraft are requested to maintain a minimum altitude of 2,000 feet above the surface of National Parks, National Monuments, National Seashores, National Lakeshores, National Recreational Areas and Scenic Riverways administered by the National Park Service.<sup>203</sup> National Wildlife Refuges, Big Game Refuges, Game Ranges and Wildlife Ranges administered by the U.S. Fish and Wildlife Service, and Wilderness and Primitive Areas administered by the U.S. Forest Service have identical

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200. *Id.* at 1081.

201. *Id.* at 1081-83.

202. *Id.* at 1083-84.

203. U.S. DOT, FAA, Advisory Circular 91-36C (Oct. 19, 1984).

altitude requests.<sup>204</sup> Boundaries of these areas are depicted on VFR aeronautical charts.<sup>205</sup> The majority of general aviation pilots honor this voluntary restriction.<sup>206</sup>

However, there have been citizen complaints from visitors on the ground in national parks (particularly Grand Canyon National Park) that aircraft noise was diminishing the quality of the national park experience and traumatizing wildlife.<sup>207</sup>

These complaints led Congress in 1987 to mandate a study of the problem by the Department of the Interior and the FAA<sup>208</sup> to impose Special Flight Rules in the vicinity of the Grand Canyon National Park, AZ.<sup>209</sup> This SFAR, which expires on June 15, 1995, imposed "flight free zones" over certain large areas of the park where overflights below 10,500 feet MSL are prohibited except in emergencies, and confining park overflights to narrow corridors within which minimum flight altitudes ranging from 5,000 feet MSL to as high as 14,500 feet MSL (all above the canyon's rim) apply.<sup>210</sup> Since implementation of this SFAR, there has been an eighty percent reduction in visitor complaints about aircraft noise at the Grand Canyon.<sup>211</sup>

204. *Id.*

205. These charts are published in Washington, DC by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Ocean Service, and are typically updated on a 6-month cycle, unless substantial changes (such as the opening of the new Denver International Airport) necessitate revision in a shorter time frame.

206. Advanced Notice of Proposed Rulemaking (ANPRM), 59 Fed. Reg. 12740, 12744 (Mar. 17, 1994).

207. *Id.* at 12743.

208. Study to Determine Appropriate Minimum Altitudes for Aircraft Flying Over National Parks, 16 U.S.C. § 1a-1 (1988). The study took longer than anticipated as many of the issues involved are on the cutting edge of technical and scientific capability. As the FAA and NPS note in the ANPRM (*infra* note 206): "Measuring degrees of quiet and perception of quiet is very different from measuring amounts of noise." The Colorado Airspace Initiative Working Committee expressed similar concern that the Ldn methodology being used in the EIS for proposed military special use airspace changes "will not accurately reflect noise impact of the CAI on humans, livestock and wildlife in remote rural and mountainous areas . . . such methodology will seriously underestimate or fail to take into account . . . the startle effect of sudden onset noise generated by the . . . high speed, low altitude flights." Letter to Governor Romer, *supra* note 139, at 8.

209. 14 C.F.R. Pt. 91, SFAR 50-2 (1988 as amended).

210. *Id.*

211. Facsimile message to the author from Melissa Bailey, Associate Director of Technical Services, AOPA, Frederick, MD (June 22, 1994).

Some complaints continue to be received, and the FAA and the National Park Service (NPS) have published an Advanced Notice of Rule Making (ANPRM) soliciting comments on proposed National Park Overflight Regulations.<sup>212</sup> Such regulations are expected to apply to overflight of all national parks.<sup>213</sup>

A total of 42 aviation companies from Arizona, California, Nevada, Utah and New Mexico provide aerial tours of Grand Canyon National Park to approximately 750,000 people annually, seventeen percent of the park's 4.5 million visitors. During peak summer months, the number of air tours exceeds 10,000 per month. The industry accounts for approximately 300 pilot jobs and generates \$250 million in economic impact.<sup>214</sup> While Grand Canyon aerial tour operators supported the adoption of the SFAR,<sup>215</sup> most (if not all) have voiced opposition to the ANPRM. Air tour operators note the SFAR has eliminated the impact of aircraft sound on more than ninety-nine percent of the park's ground visitors, air tours relieve congestion at the canyon's rim, contribute nothing to the erosion of trails, and provide equal access to those with disabilities. They also note some sixty percent of the aerial tourists are foreigners on vacation, and commercial air tours provide an opportunity to enjoy park vistas when time or physical constraints otherwise exclude them.<sup>216</sup> Others have expressed concern that under hot conditions where the effects of density altitude reduce aircraft performance some aircraft (particularly helicopters) will be unable to attain the altitude required to comply with a mandatory 2,000 foot AGL overflight requirement, necessitating lengthy circumnavigations of meandering national park boundaries.<sup>217</sup>

## VI. CONCLUSION

Like real estate, airspace is a finite resource. Demands for use of a share of this resource come from all aspects of aviation. Earthbound interests, such as the broadcasting industry which has a need to erect tall signal transmission towers which rise into the navigable airspace, also compete for this resource.

Tall structures and activities on the surface such as military artillery firing may conflict with aviation activities. Various aviation activities may conflict with each other: military high altitude dogfight training, unless

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212. See Advance Notice of Proposed Rulemaking, *supra* note 205.

213. *Id.* at 12745.

214. *Air Charter Operators Preparing to Defend Park Overflights*, GENERAL AVIATION NEWS & FLYER, First May Issue, 1994, at 5.

215. BUSINESS AVIATION, Dec. 15, 1986, at 187.

216. See *supra* note 213.

217. Telephone conversation with Michael A. Silva, Chief Pilot, KCNC-TV Denver, CO., June 24, 1994.

carefully controlled and coordinated, may conflict with airliners cruising to their destinations, while military low level training may pose a hazard to crop sprayers and aircraft patrolling pipelines and powerlines. Aviation activities in the navigable airspace may also conflict with terrestrial interests: Low flying aircraft may interfere with the solitude sought by hikers, campers, spiritualists and residents of rural areas and may disturb wildlife. As was witnessed during the recent O.J. Simpson chase, the noise of news gathering helicopters made more difficult the communications which ultimately led to Simpson's arrest. Where there are conflicts, the legal profession will be called upon to aid in resolution.

In the past the FAA leaned towards an autocratic approach to airspace allocation, that agency is becoming more open to input from users and others affected by airspace uses. A similar trend is noted in the EIS process for proposed military special use airspace, and at the international level with the IATA effort to lobby governments to deal with the problem of growing congestion in world airspace.

Effectiveness in such an arena frequently depends heavily upon not only advocacy, but diplomacy and consensus building skills. Opportunities abound for lawyers to serve a beneficial function in rationalizing the allocation of scarce airspace among competing needs and interests.