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Balancing the Rights of Landowners with the Needs of Airports: The Continuing Battle over Noise

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**BALANCING THE RIGHTS OF LANDOWNERS WITH THE
NEEDS OF AIRPORTS: THE CONTINUING BATTLE
OVER NOISE**

LUIS G. ZAMBRANO

TABLE OF CONTENTS

I. INTRODUCTION..... 445

II. DEVELOPMENT OF THE “HUB AND SPOKE”
SYSTEM..... 448

III. FEDERAL STATUTORY FRAMEWORK..... 453

IV. FEDERAL PREEMPTION OF LOCAL
ORDINANCES 461

V. IMPACT OF LOCAL ZONING ORDINANCES ON
AIRPORT OPERATIONS 467

VI. USE OF ENVIRONMENTAL IMPACT
STATEMENTS IN LOCAL PLANNING 471

VII. “TAKINGS” CLAIMS AND INVERSE
CONDEMNATION..... 476

VIII. THEORIES OF NUISANCE AND TRESPASS 484

IX. AN ECONOMICALLY BALANCED APPROACH
TO AIRPORT CAPACITY..... 490

I. INTRODUCTION

THE GROWTH IN the economy and the increase in passenger and cargo activity have forced airports to expand to prevent congestion and serve the needs of airlines flying through these airports. Expansions frequently result in increased noise and pollution, reducing the value of property surrounding airports. At the same time, airport expansions have provided economic benefits to the regions in which these airports operate and to the nation as a whole. In an effort to address these issues, parties at the federal, state, and local level have developed mitigation programs to compensate property owners for noise impacts, zoning ordinances to regulate land use, legislation to

coordinate airport development, and limited judicial recognition of damages resulting from noise impacts.

The United States Department of Transportation (USDOT) and the Federal Aviation Administration (FAA) primarily govern the airspace of the national air transportation system.¹ Despite the broad federal preemption of airspace, each airport remains largely subject to independent, local government control with respect to land use planning, noise and environmental pollution control, and zoning.² This patchwork of local, state and federal control has created significant litigation as airports have expanded to meet the increasing demands for air service. Attendant problems of increased noise and pollution have resulted in significant problems for landowners around airports. In many cases, landlocked airports lack the capacity to expand without significantly affecting the property rights of surrounding landowners.

Property owners complain that their property values significantly decline as a result of increased noise. In addition to this localized economic impact, owners also complain that increased noise adversely impacts their enjoyment of the property. Proponents of more restrictive noise control standards argue that airports are "bad neighbors" that do not work with the surrounding communities to develop solutions that can effectively protect the economic interests of landowners.³ Noise control opponents argue that the need for increased air capacity to meet current and future transportation requirements outweighs the risk of localized economic loss. Opponents also claimed that, in many instances, property owners voluntarily buy property around airports despite notice that airport operations might change in the future.

In many instances, airports devise Airport Development Plans (ADP) in order to provide adequate notice to communities of planned airport expansions. Courts have invalidated noise control zoning ordinances that conflict with these comprehensive

¹ See 49 U.S.C. § 40103(a) (1999) (stating "The United States Government has exclusive sovereignty of airspace of the United States.").

² See Lyn Loyd Creswell, *Airport Policy in the United States: The Need for Accountability, Planning and Leadership*, 19 TRANSP. L.J. 1, 6 (1990).

³ One organization based in Vermont demonstrates the degree of popular reaction against airport expansions. The Noise Pollution Clearinghouse operates as a national non-profit organization that distributes noise-related information to concerned citizens. See *The Noise Pollution Clearinghouse* (visited Dec. 10, 1999) <<http://www.nonoise.org/>>.

development plans.⁴ Despite some airports' best efforts, developers and landowners develop and buy property regardless of airport planning. Developers or landowners may also acquire property with no expectation that airport noise might become a future problem, particularly when local zoning permits such development. To the extent that airports provide sufficient notice, landowners may not be able to collect damages from noise impacts. Individuals may, however, recover damages for noise attributable to airport operations if they show that after acquiring a property interest, there was a "significant" change in the type or frequency of operations, the airport layout, flight patterns, nighttime operations, or the extent of noise damages.⁵

When airports become landlocked and unable to develop additional capacity without acquiring surrounding property, landowners may have no choice but to sell their property to airport authorities in return for compensation, or accept an easement or other encumbrance permitting airports to operate near their property. Alternatives such as land banking⁶ have not proven economically feasible in light of the desire to maximize wealth-producing value of land. Landlocked airports can therefore either exercise eminent domain and compensate property owners accordingly, or build new facilities. Although an airport may have the present ability to expand, continuous airport expansion inevitably reaches the limit of available land, causing problems between property owners and airport management. Regardless of these problems, developers continue to build around airports to take advantage of obvious benefits, including ease of transportation.

This comment analyzes the legal issues surrounding airport expansion. Part II traces the development and economics of the "hub and spoke system." The section argues that overburdened primary hubs constrain airports' ability to expand. Part III examines the federal statutory framework as it relates to the operation of airports, land use planning, and noise impacts. The

⁴ See Steven H. Magee, Comment, *Protecting Land Around Airports: Avoiding Regulatory Taking Claims by Comprehensive Planning and Zoning*, 62 J. AIR L. & COM. 243, 266 (1996) (citing *Pennington County v. Moore*, 525 N.W.2d 257 (S.D. 1994)).

⁵ See 49 U.S.C. § 47506(a)(1), (2) (1999); see also *infra* note 193 and accompanying text.

⁶ Generally, land banking involves the acquisition of property by airport operators or government agencies for the purposes of future development. See *infra* note 115 and accompanying text.

section summarizes attempts by Congress to develop a coordinated national transportation policy that balances the goals of safety, economic development, and preservation of property rights. Part IV analyzes the federal preemption doctrine, under which courts have attempted to determine whether state and local governments can adopt noise control ordinances not expressly prohibited by federal statute. Part V analyzes the impacts of local zoning and land use planning on airports. In regulatory areas not preempted by federal law, zoning allows local governments to minimize noise impacts by planning land uses consistent with airport activity. Part VI analyzes the requirement of environmental impact statements in the process of airport development. Environmental Impacts Statements (EIS) must be included in any planned expansion, and require airport authorities to carefully weigh less environmentally harmful alternatives. Courts have routinely declined to interpret these requirements strictly, and frequently defer to agencies' decisions. Part VII examines the use of "takings" claims as a way to enjoin airports from creating excessive noise, or to collect damages from harm resulting from unconstitutional "takings" by government agencies. Part VIII analyzes common law public nuisance or trespass theories. When takings claims fail, landowners claim damages under these common law theories. Courts typically disfavor such claims where airports provide actual or constructive notice of operations, the potential harm would be apparent to the landowner, or the noise does not exceed expected and proper levels. Finally, Part IX offers a series of alternative proposals that might better balance the needs of landowners with the needs of the air transportation system. The section recommends developing under-utilized airports and re-routing traffic to alleviate over-capacity.

II. DEVELOPMENT OF THE "HUB AND SPOKE" SYSTEM

From the 1930s to the 1960s, the air transportation system primarily operated as a "point to point" network in which passengers embarked at an origin airport and disembarked at a destination airport without connecting through a central point. During the 1970s, air carriers began to concentrate their operations in a "hub and spoke" system. In this system, passengers were routed through connecting hubs to their final destination. The hub and spoke system allowed the airlines to concentrate traffic through a small number of central points. A greater number of flights could also be scheduled at particular points in

time. The hub and spoke system, however, required that hub airports have the necessary capacity to handle the increased number of flights.⁷ The development of this system accelerated after airline deregulation in 1978.⁸

Deregulation's objective was to provide a competitive environment for airlines, in which market forces would improve service and decrease ticket prices.⁹ Prior to airline deregulation, the federal government controlled pricing and routing through the Civil Aeronautics Board (CAB), discouraging airlines from developing economic efficiencies and market share through novel pricing and routing techniques. Deregulation created a new, competitive marketplace that forced airlines to develop ways to cut the unit costs of transporting passengers. The hub and spoke system was ideal for the dual goals of building traffic while decreasing unit costs. Through hubbing, airlines could take advantage of network and scale economies by routing all traffic through hubs, while offering more frequent service to "spokes" or destination markets. The concentration of operations also allowed airlines to build de facto regional service monopolies through their hubs, freezing out competition seeking to fly out of the same airports.¹⁰

The primary economic justification for hubbing is increasing load factors and yields in planes traveling through central hubs. "Load factor" is the proportion of revenue passenger miles to available seat miles, essentially, the percentage of seats in a plane actually sold and occupied by passengers. "Yield" is the revenue per unit of traffic carried, either revenue per passenger per mile or revenue per ton of cargo per mile. The distance traveled in mileage is essential in the calculation because of the costs of delivery over distance, including fuel and time.¹¹ Hubbing efficiencies are realized when staffing costs, terminal fees, facility charges, maintenance overhead, lease of airport prop-

⁷ For in depth analysis of the hub and spoke system, see PAUL STEPHEN DEMPSEY & LAURENCE E. GESELL, *AIR TRANSPORTATION: FOUNDATIONS FOR THE 21ST CENTURY* 452 (1997).

⁸ See Airline Deregulation Act of 1978, Pub. L. No. 95-504, 92 Stat. 1705 (1978) (codified at 49 app. U.S.C. § 1305(b)(1) (1988)).

⁹ See DEMPSEY & GESELL, *supra* note 7, at 452. The concentration of flights in hubs has drawn significant criticism from opponents of the hub and spoke concept, who argue that large airlines dominate traffic in key airports at the expense of "monopoly pricing at Fortress Hubs." *Id.*

¹⁰ See *id.* at 451-61. Modern examples include Delta Airlines in Atlanta, United Airlines in Chicago, and American Airlines in Dallas/Fort Worth.

¹¹ See *id.* at 457.

erty, and other costs are reduced as the yield and load factors increase.

Predictably, hubbing can also produce lower quality of service and increased delays. Airlines operating in the hub and spoke system have overloaded the ability of major airports to handle increased traffic. The "variability factor" in passenger travel contributes to a large extent to the difficulty in providing adequate capacity.¹² Passenger traffic experiences variations seasonally, by day of the week, and by hour of the day. Airline passenger load factors will correspondingly vary depending on whether travel is scheduled on peak days or peak times during the day, or "trough" periods in which the number of passengers on the plane decreases.¹³ In order to produce the highest possible load factors, airlines will typically schedule flights over small windows in time in order to increase load factors. Hubs allow airlines to perform this "compressed" scheduling more effectively than if airlines operated in point to point systems, in which airlines would be more susceptible to variations in demand. Increased scheduling, in turn, strains airport capacity because an airport can handle only so many landings and takeoffs during peak hours within safety limits. Noise problems exacerbated as the number of flights approaches capacity are further magnified when airports expand by adding new runways.

Another factor affecting capacity is the "S-curve" phenomenon.¹⁴ The phenomenon results from the relationship of frequency of service to market share. An airline's market share increases as frequency of service increases, and decreases as frequency is reduced. As a result, airlines will compete for market share by providing excess capacity.¹⁵ The S-curve suggests that passengers prefer airlines with more frequent service because

¹² For a discussion of the characteristics of demand for air service and the process of calculating air rates, see WILLIAM E. O'CONNOR, *AN INTRODUCTION TO AIRLINE ECONOMICS* 78-120 (3d ed. 1985).

¹³ Airlines schedule flights over peak times in order to take advantage of the "rush" of passengers, who typically travel over small windows of time, at 9 a.m. and 5 p.m. If airlines were to schedule flights during "trough" periods, changes in scheduling may produce changes in passenger behavior. Thus, airlines use off-peak pricing and discounts in order to encourage flight during trough periods. Increased revenues may, however, be a function of the demand elasticity resulting from price changes, rather than changed passenger behavior. See *id.* at 81-82.

¹⁴ See *id.* at 88-91. The "S-curve" refers to the mathematical relationship between increases in the frequency of service and increases in passenger demand, graphically represented in a flattened S shape. See *id.* at 89.

¹⁵ See DEMPSEY & GESELL, *supra* note 7, at 440.

they can find more desirable departure times and available space on the carrier with greater capacity.¹⁶ Deregulation opponents argue that the theory demonstrates the problems with the free market, and advocate controlling excess capacity through better control of scheduling. Deregulation proponents have argued that competitive forces in fact discourage excess capacity because an airline will simply transfer operations to more profitable markets if demand is too slack, rather than increase capacity along the imaginary S-curve. They also deride the S-curve theory as counter-intuitive to market experience, because an airline will not add capacity simply to add market share if not enough passengers are available or interested in that carrier's service.¹⁷

The key feature of the "S-curve" phenomenon is that it tends to result in excess capacity, which in turn results in more flights being scheduled during peak times than airports can safely handle. One commentator has stated that "[t]he provision of too many air transport seats brings ruin to the air transportation marketplace commons' when capacity exceeds demand. Airline seats are a perishable commodity, and unfilled seats have a cost which cannot be recovered."¹⁸ An equally detrimental "tragedy of the commons"¹⁹ stems from the insistence that airports and the air traffic control (ATC) system provide the infrastructure to meet the increasing demand stemming from carriers' desire for additional market share. Like airplane seats, airport "slots" for landing or departure are perishable commodities, and the ability of airports to provide additional space is significantly constrained.

Overburdened primary hubs coexist with regional airports that are significantly underserved because the smaller regional airports did not fully integrate into the national hub and spoke system. As a result, major cities in the United States have both huge, overburdened "international" airports, and empty, underserved "regional" airports.²⁰ Hubbing has also changed the rela-

¹⁶ See O'CONNOR, *supra* note 12, at 88.

¹⁷ See *id.*

¹⁸ DEMPSEY & GESELL, *supra* note 7, at 441.

¹⁹ The concept refers to the economic theory that rational wealth-maximizers will exploit a common resource to point of depletion (the "tragedy") because the positive utility to a single user of taking one unit of the resource outweighs the cost of exhausting the resource with this cost is spread out over all common users of the resource.

²⁰ See DEMPSEY & GESELL, *supra* note 7, at 452.

tionship among major carriers and the hub airports through which they fly. Traditional leases designed to encourage and retain carriers for long periods of time have evolved to restrict new entrants from competing through the major hubs.²¹ Thus, major hub airports have a limited number of available gates and available runways primarily controlled by incumbent tenants.

Increased hub service strains the ATC system's ability to schedule a larger number of flights through smaller slivers of airspace over smaller periods of time. As airlines increase load factors and frequency, passengers face longer delays because of the difficulty of managing airspace. Many CEOs of U.S. airlines blame the FAA for the ATC's problems, arguing that "the government's management of the ATC system [is] . . . an artificial barrier to free competition, and totally incongruous with the tenets of airline deregulatory policy."²² Former American Airlines Chairman Robert Crandall opined that the FAA and the ATC system possess the ability to process a greater number of flights through airspace, but choose not to because of bureaucracy and inefficiency.²³ Jonathan Howe, the Director General of Airports Council International (ACI), stated in a March 12, 1998 media release that "airport operators must be ready and able to accommodate increased air traffic as better airspace management brings more aircraft to terminal areas." ACI also supports the goal of improving the ATC in order to increase capacity at noise-constrained airports.²⁴ Problems with the underlying infrastructure prompted Congress to consider initiatives to privatize the FAA in order to make it more responsive to the needs of airports, air carriers, and the marketplace.

Some commentators also argue that the evolution of major airport hubs has created an "entrenchment" mentality among these airports, removing any incentives to design an alternate integrated national system that would more efficiently route traffic. Given the huge economic benefits of hub airports to communities, and the amount of revenue generated for the airport proprietors, the predictable result is a lack of political will to propose solutions other than expansion.²⁵ But the hub and

²¹ See *id.*

²² *Id.* at 458.

²³ See *Speaker's Forum: Robert Crandall* (NPR radio broadcast, December 12, 1999) (on file with the author).

²⁴ See Airports Council International, ACI Media Releases (visited December 16, 1999) <<http://www.airports.org/media/index.html>>.

²⁵ See DEMPSEY & GESELL, *supra* note 7, at 453.

spoke system has driven the economic growth of the nation by dramatically decreasing ticket costs and increasing service frequency. It is difficult to imagine that the air transportation system would have developed as quickly or effectively in a point to point system without the economies of scale produced by hubbing, notwithstanding the success of point to point carriers like Southwest Airlines, based out of Dallas Love Field. Airlines' principal goals in today's system are to increase capacity, both in the ATC and on the ground, and to schedule more frequent flights. Higher frequency of flights increases yield and load factors, while decreasing unit operating costs and landing fees per plane. These legitimate goals of the airlines clash directly with the problem of capacity constraints in already overburdened airports and the ATC.

A more economically sensible method of handling airport traffic should include routing flights through underutilized airports in the national air transportation system. "More efficient use of airport resources might be achieved if the large peaks and valleys of aircraft takeoffs and landings could be spread more evenly throughout the day, particularly at congested hub airports."²⁶ On the other hand, using underutilized airports as safety valves might result in a separate set of problems. Community resistance to loss of revenue, costs of upgrading underutilized airports to handle excess capacity, economic impacts on air carriers and other associated expenses would sap the political will to alter the way the national system currently operates.²⁷ Expanding existing hub airports may only provide an illusory solution to capacity problems, because a limited number of flights can be scheduled at a particular point in time. Expansion may produce some positive short-term benefits of decreased congestion, but the upper limit on capacity would be reached by the very nature of the hub concept.

III. FEDERAL STATUTORY FRAMEWORK

Since the passage of the Civil Aeronautics Act in 1938, the federal government has worked to define a coherent national air policy that places the responsibility for regulating the air transportation system in the hands of federal agencies, while at the same time attempting to retain traditional local control over land use and zoning. The tension between federal statutes and

²⁶ *Id.* at 291.

²⁷ *See id.*

local regulations has restricted the ability to craft balanced solutions to the problem of increased noise. The FAA, pursuant to federal law, does not allow airports to develop noise mitigation programs at the expense of interstate commerce. Municipalities are also restricted by statutory language that tends to favor federal preemption over state or local laws that have a potentially negative impact on the air transportation system as a whole.

Congress first passed laws regulating air transportation with the Air Mail Act of 1925, which governed the transportation of mail by air. Congress subsequently passed the Air Commerce Act of 1926, which provided revenue to support airline operations, created an airspace infrastructure, and promoted the industry.²⁸ In 1938 Congress attempted for the first time to develop a national commercial air policy that addressed the needs of passenger and cargo air carriers. The McCarren-Lea Act, also known as the Civil Aeronautics Act, established the Civil Aeronautics Board (CAB), the agency with primary responsibility for regulating the air industry.²⁹ The Act set forth the general policy of the United States: the encouragement and development of the air transportation system, the regulation of air transportation to assure a high degree of safety and sound economic conditions, and the promotion of efficient service by air carriers without unfair competitive practices or unjust discrimination.³⁰ The Act also gave the CAB sweeping regulatory authority to set fares, approve or disapprove mergers, decide what routes airlines should fly, negotiate routes with foreign governments, and issue waivers of regulations to air carriers.³¹

The Civil Aeronautics Act was superceded in 1958 by the Federal Aviation Act, which established the FAA. The Federal Aviation Act retained the policy language of the Civil Aeronautics Act and maintained the CAB as the primary regulatory agency with respect to decisions on airfares and routes.³² Prior to 1978,

²⁸ See *id.* at 201-207.

²⁹ See PAUL BIEDERMAN, *THE U.S. AIRLINE INDUSTRY*, xi (1982); 49 U.S.C. §§ 401-722, *repealed by* Federal Aviation Act of 1958, Pub. L. No. 85-726, 72 Stat. 731 (current version at 49 U.S.C. §§ 1301-1542 (1999)).

³⁰ See BIEDERMAN, *supra* note 29.

³¹ See *id.* at xii.

³² See *id.*; Federal Aviation Act of 1958, Pub. L. No. 85-726, 72 Stat. 731 (current version at 49 U.S.C. §§ 1301-1542 (1999)). In 1984 Congress enacted the Civil Aeronautics Board Sunset Act of 1984, Pub. L. No. 98-443, 99 Stat. 1703 (1984), formally transferring the functions of the CAB to the Secretary of Transportation, thus removing the last vestiges of the Federal regulatory scheme of the early 1900s.

federal agencies had broad preemptive authority, and states and municipalities could not easily enact regulations and ordinances that affected airports. Congress did not significantly alter these statutory responsibilities until the Airline Deregulation Act of 1978, although Congress did enact the National Environmental Policy Act ("NEPA")³³ in 1969 to regulate environmental issues related to airport development and operations.

The NEPA plays a significant role in regulating airport noise and other environmental impacts. This statute requires federal agencies to produce detailed statements describing the potential environmental impact of a proposed action. Such environmental impact statements (EIS) must include: any adverse environmental effects that cannot be avoided should the proposal be implemented; alternatives to the proposed action; a comparison of local environmental impacts with long-term productivity enhancement; and any irreversible or irretrievable commitments of resources should the proposed action be implemented.³⁴ The Act requires that any proposed federal action with significant impact on the quality of the human environment should include an EIS.³⁵

The statute does not clearly apply to local or state governments that promulgate regulations within the scope of local authority. This section does, however, apply to "any major Federal action funded under a program of grants to States."³⁶ It further provides that an EIS is not "legally insufficient" solely by reason of having been prepared by a state agency if the state agency had statewide jurisdiction and responsibility for the proposed action, the "responsible" federal official offered guidance, and the responsible federal official independently evaluated the EIS.³⁷ Arguably, Passenger Facility Charges collected in the Aviation Trust Fund, and the provision of federal grants for airport development pursuant to the Airport and Airway Improvement Act,³⁸ would implicate § 4332(D) of Title 42 and require federal agencies to review any EIS produced by a state agency. The uncertainty of this law is magnified by the fact that the federal government controls the airspace above the airport, while the local

³³ See National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321-4370d (1999).

³⁴ See *id.* § 4332(2)(C).

³⁵ See *id.*

³⁶ *Id.*

³⁷ See *id.* § 4332(2)(D).

³⁸ See *infra* note 41 and accompanying text.

or state government controls the ground space and airport property. Any alteration of airport property, with attendant effects on pollution, would presumably impact the federal government's ability to manage airspace with the goal of improving the efficiency of the air traffic system. However, the state action would not appear to automatically trigger the publication of an environmental impact statement by the responsible federal agency, unless the airport receives federal funds.³⁹

After the passage of the Airline Deregulation Act of 1978,⁴⁰ Congress attempted to enact a systematic national air aviation policy designed to address capacity and noise impact problems in the air transportation system.⁴¹ The Airport and Airway Improvement Act of 1982 described the highest aviation priority of the United States as the "safe operation" of the airport and airway system.⁴² In the context of safety as the primary concern of air transportation, Congress provided that aviation facilities should be constructed and operated to "minimize current and projected noise impact on nearby communities" with "special emphasis on developing 'reliever' airports."⁴³ To accomplish the development of additional capacity, Congress recommended the conversion of appropriate former military air bases

³⁹ See DEMPSEY & GESELL, *supra* note 7, at 291. Congress also addressed noise pollution in the Noise Control Act of 1972, Pub. L. No. 92-574, 86 Stat. 1234 (codified at 42 U.S.C. §§ 4901-4918 (1999)). The Act amending the Federal Aviation Act of 1958 expressed Congressional policy to noise pollution, and is mainly codified in Title 42 (The Public Health and Welfare) rather than Title 49 (Transportation). The Act established the Quiet Communities Program, mandating grants to state and local agencies for noise abatement under the administration of the Environmental Protection Agency (EPA). See 42 U.S.C. § 4913(c) (1999). Section 4913 expressly provides for the development of noise control technology and cooperation between FAA and EPA in regulations to control and abate aircraft noise under 49 U.S.C. § 44715 (1999) (originally codified at 49 U.S.C. § 1431 (1999)).

⁴⁰ See *supra* Part II for a discussion of the impacts of deregulation on the development of the hub and spoke system.

⁴¹ See Airport and Airway Improvement Act, 49 U.S.C. §§ 47101-47533 (1999) (original version at Pub. L. No. 97-248, Title V, 96 Stat. 671).

⁴² *Id.* § 47101(a)(1).

⁴³ *Id.* § 47101(a)(2), (3). The statute also places a high priority on reducing "noncompatible" land uses around airports that would lead to noise problems. See *id.* § 47101(c). Although the statute does not define what constitutes "non-compatible" land uses, possible categories might include airport activities that affect residential or business developments unrelated to air transportation. In contrast, road development or the construction of a passenger rail station near airport property would probably be a compatible land use. The determination of "noncompatible" land uses will likely devolve to local zoning authorities. See *infra* Part V.

to civilian use.⁴⁴ Congress also emphasized the need to develop and enhance cargo hub airports, possibly signaling Congress' recognition that routing both passenger and "pure" cargo traffic through the same congested hubs is not an effective distribution of traffic.⁴⁵ The statute further recommended airport construction and improvement projects to increase capacity of current hubbing facilities, while ensuring safety and efficiency.⁴⁶ Congress warned against the use of "artificial restrictions" on airport capacity unless less restrictive alternatives have been considered and such restrictions do not discriminate unjustly between types of aircraft.⁴⁷ The statute does not explain what would constitute an "artificial restriction," although any attempt by state or local governments to limit the ability of airports to expand might qualify as artificial restrictions that are not in the public interest according to § 47101.

The statute, more importantly, provides for coordination of airport development and planning among the local, state, and federal governments. It specifically states that the Secretary of Transportation "shall . . . [c]ooperate with State and local officials in developing airport plans and programs that are based on overall transportation needs. The airport plans and programs shall be developed in coordination with other transportation planning and considering comprehensive long-range land-use plans and overall social, economic, environmental, system performance, and energy conservation objectives."⁴⁸ The statute encourages airport sponsors and public officials to develop master plans that effectively coordinate airport and local planning, provide for multimodal planning,⁴⁹ and integrate metropolitan land use into a master plan.⁵⁰ Section 47106 of Title 49 provides for grants by the Federal government for the purposes of airport development, consistent with the statutory goals of compatible land use. The Secretary of Transportation may approve an application for an airport development grant if the airport sponsor or public agency has good title to land to be used

⁴⁴ See *id.* § 47101(a)(10).

⁴⁵ See *id.* § 47101(a)(4).

⁴⁶ See *id.* § 47101(a)(7).

⁴⁷ See 49 U.S.C. § 47101(a)(9) (1999).

⁴⁸ *Id.* § 47101(g)(1).

⁴⁹ Generally, multimodal planning addresses the combinations of land, rail, water, and air transportation infrastructure to improve the efficient distribution of resources.

⁵⁰ See 49 U.S.C. § 47101(g)(2) (1999).

for development, the interests of the community near the proposed project have been given fair consideration, and an opportunity for a public hearing was given to consider the environmental effects of the development.⁵¹

The Airport and Airway Safety and Capacity Expansion Act of 1987⁵² and the Airport and Airway Safety, Capacity, Noise Improvement, and Intermodal Transportation Act of 1992⁵³ amended the Airport and Airway Improvement Act to address noise impacts affecting communities surrounding airports. Currently, Section 47502 of Title 49 requires the Secretary of Transportation to develop a regulatory system for measuring noise impacts identifying land uses compatible to various noise exposures. An airport proprietor may submit noise exposure maps prepared in consultation with public agencies and planning authorities showing the levels of noise and noncompatible uses in each area.⁵⁴ Additionally, airport proprietors may submit noise compatibility programs for approval by the Secretary of Transportation after discussion with planning authorities and notice and opportunity for public hearing.⁵⁵ Noise compatibility programs "shall state the measures the operator has taken or proposes to take to reduce existing noncompatible uses and prevent introducing additional noncompatible uses in the area covered by the map." In order to reduce noncompatible land use, an airport operator may design a program that:

- establishes preferential runway systems;
- restricts aircraft with certain noise characteristics from using the airport;
- constructs barriers and acoustical shielding for public buildings;
- uses flight procedures to limit noise exposure;
- acquires easements, land rights, and development rights to property to be developed in ways compatible with airport operations.⁵⁶

⁵¹ See *id.* § 47106(b)-(c).

⁵² Pub. L. No. 100-223, 101 Stat. 1486 (current version in scattered sections of 49 U.S.C.).

⁵³ Pub. L. No. 102-581, 106 Stat. 4872 (current version in scattered sections of 49 U.S.C.).

⁵⁴ See 49 U.S.C. § 47503 (1999).

⁵⁵ See *id.* § 47504(a)(1).

⁵⁶ *Id.* § 47504(a)(2).

By approving a noise compatibility program, the Secretary may incur obligations under Section 48103⁵⁷ to provide grants for soundproofing residential buildings as part of a noise mitigation program.⁵⁸ Despite the ability of airport operators and planning agencies to provide ways of mitigating noise impacts, the statute does not confer automatic approval by the DOT. The Secretary “shall approve the program . . . if the program— (A) does not place an unreasonable burden on interstate or foreign commerce”⁵⁹

Congress passed the Airport Noise and Capacity Act of 1990⁶⁰ to develop a national aviation noise policy. Congress found that “community noise concerns have led to uncoordinated and inconsistent restrictions on aviation that could impede the national air transportation system.”⁶¹ Congress further stated that community concerns about noise pollution “can be alleviated through the use of new aircraft technology and the use of revenues, including those available from passenger facility fees, for noise management.”⁶² Under the statute, the Secretary of Transportation must establish regulations mandating the phaseout of Stage 2 aircraft, and phase-in of Stage 3 aircraft that generate significantly lower noise levels.⁶³ These regulations must take into account an economic analysis of the impacts of Stage 2 phaseout, including: (1) the ability of air carriers to achieve capacity growth; (2) the impact of competition in the airline industry; (3) the impacts of the phaseout on small community airports; and (4) the impacts of “new entries” in the in-

⁵⁷ Section 48103 of Title 49 provides money in the Airport and Airway Trust Fund established under section 9502 of the Internal Revenue Code of 1986 (Title 26) to make grants for airport planning and airport development, airport noise compatibility planning, and carrying out noise compatibility noise programs. See 49 U.S.C. § 48103 (1999).

⁵⁸ See *id.* § 47504(c).

⁵⁹ *Id.* § 47504(b)(1)(A). The statute appears to be consistent with the U.S. Supreme Court’s holding in *City of Burbank v. Lockheed Air Terminal, Inc.*, 411 U.S. 624 (1973), that federal law preempts a local ordinance when the ordinance affects interstate commerce. See *infra* note 78 and accompanying text.

⁶⁰ Pub. L. No. 101-508, Title IX, Subtitle D, 104 Stat. 1388-378 (current version at 49 U.S.C. §§ 47521-47529 (1999)).

⁶¹ 49 U.S.C. § 47521(2) (1999).

⁶² *Id.* § 47521(5). Congress’ position on the availability of passenger facility fee revenues is curious in light of other statutes currently in force which prevent states from taxing passenger facility fees for the purposes of noise mitigation unless the airport is an eligible public agency that actually controls a commercial service airport. See 49 U.S.C. § 40117(a)(2), (b)(2) (1999).

⁶³ See *id.* § 47523(a) (1999).

dustry.⁶⁴ Presumably, if the impacts of Stage 2 phaseout have an unreasonably adverse impact on competition or capacity in the air transportation system, the Secretary can modify the regulations to waive the phaseout of Stage 2 aircraft, or extend the period of time for compliance with regulations. Pursuant to the statute, the FAA enacted regulations calling for the phaseout of Stage 1 aircraft, and the transition to Stage 3 aircraft by 1999.⁶⁵

The Airport Noise and Capacity Act of 1990 also restricts the ability of municipalities and airports to restrict noise, in part to encourage the development of additional airport capacity.⁶⁶ For example, the statute limits local restrictions on Stage 2 aircraft unless an airport operator goes through a formal notice procedure.⁶⁷ The statute specifically provides:

No airport noise or access restriction shall include a restriction on operations of Stage 2 aircraft, unless the airport operator publishes the proposed noise or access restriction and prepares and makes available for public comment at least 180 days before the effective date of the restriction—

- (1) an analysis of the anticipated or actual costs and benefits of the existing or proposed noise or access restriction;
- (2) a description of alternative restrictions; and
- (3) a description of the alternative measures considered that does not involve aircraft restrictions, and a comparison of the costs and benefits of such alternative measures to the costs and benefits of the proposed noise or access restriction.⁶⁸

Section 2153(h) (currently 49 U.S.C. § 47524) of the Act provides, however, that the statute does not supercede existing law with respect to “airport noise or access restrictions by local authorities.”⁶⁹ Nevertheless, in light of existing statutes in force, it could be argued that this provision has the effect of further restricting the ability of airports to pursue noise mitigation, if pro-

⁶⁴ See *id.* § 47523(b).

⁶⁵ See 14 C.F.R. § 36.1(f) (1992) (discussing classifications); 14 C.F.R. § 91.807 (1992) (calling for phase-in of Stage 3 aircraft).

⁶⁶ See Airport Noise and Capacity Act of 1990, Pub. L. No. 101-508, Title IX, Subtitle D, 104 Stat. 1388-378 (originally codified at 49 U.S.C. §§ 2151-2158 (Supp. 1991)).

⁶⁷ See 49 U.S.C. § 47524 (1999) (originally codified at 49 U.S.C. § 2153(c) (1999)).

⁶⁸ *Id.*

⁶⁹ *Id.* § 47533 (1999) (originally codified at 49 U.S.C. § 2153(h)).

posed regulations even marginally affect air transportation capacity or interstate commerce.⁷⁰

IV. FEDERAL PREEMPTION OF LOCAL ORDINANCES

Over the last fifty years, courts have attempted to determine how to balance the power of the Federal government to regulate commerce through its statutory framework, and municipalities' police power to regulate aircraft noise on its citizens' behalf. Courts generally limit local municipal powers under the federal preemption doctrine. The doctrine stems from the Supremacy Clause of the Constitution which states "[t]his Constitution, and the Laws of the United States which shall be made in Pursuance thereof; and all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land; and the Judges in every State shall be bound thereby, any Thing in the Constitution or Laws of any State to the Contrary notwithstanding."⁷¹ Courts generally construe federal statutes as preemptive under three circumstances: first Congress may expressly preempt state law in the statute; second, absent express preemption, federal law may have an "implied preemptive effect" if Congress intended to "occupy the field" of regulation, or where federal law is so pervasive that states have no room to supplement the law; finally, preemption occurs where the state law hinders the execution of the purposes and objectives of Congress.⁷² Generally, the preemption doctrine restricts the ability of local and state agencies to pass laws and ordinances governing airport operations. Problems typically occur when a state or local agency attempts to restrict the types of planes using an airport, or impose curfews on times that planes may fly into airports.

In *All Am. Airways v. Village of Cedarhurst*,⁷³ the Village of Cedarhurst passed an ordinance preventing aircraft from flying lower than 1,000 feet when passing over residential areas. The village alleged that the aircraft represented a public nuisance

⁷⁰ See Christopher S. Marchese, *The Dormant Commerce Clause and Airport Noise: A Case for Narrow Judicial Review*, 44 BAYLOR L. REV. 645, 665 n.112 (1992) (citing 49 U.S.C. § 2153(h) and 56 Fed. Reg. 48,661, 48,662 (1991)).

⁷¹ U.S. CONST. art. VI, cl. 2.

⁷² See *Gustafson v. City of Lake Angelus*, 76 F.3d 778, 782-83 (6th Cir. 1996); see also *Country Aviation, Inc. v. Tinicum Township*, Civ. A. No. 92-3017, 1992 WL 396782 at *3 (E.D. Pa. 1992).

⁷³ *All Am. Airways v. Village of Cedarhurst*, 201 F.2d 273 (2d Cir. 1953).

and constituted trespass over public property.⁷⁴ The District Court for the Eastern District of New York granted an injunction *pendente lite*,⁷⁵ enjoining enforcement of the ordinance. The Court of Appeals for the Second Circuit refused to overturn the lower court's injunction and validate the ordinance. The court stated that there was "a sufficient question of the validity of the Cedarhurst ordinance as against the supremacy of national power so that we are in no way justified in now declaring it valid. . . ."⁷⁶ Nevertheless, the court expressed an unwillingness to hold that the ordinance was per se preempted by federal statute.⁷⁷

In *City of Burbank v. Lockheed Air Terminal, Inc.*,⁷⁸ the Supreme Court, in an opinion by Justice Douglas, affirmed a decision by the Ninth Circuit invalidating a noise control ordinance on the grounds that federal law preempted the local ordinance. A majority of the Court held that local governments are preempted by federal statute from enacting regulations through the exercise of their municipal police powers that directly affect interstate commerce. Justice Douglas noted:

If we were to uphold the Burbank ordinance and significant number of municipalities followed suit, it is obvious that fractionalized control of the timing of takeoffs and landings would severely limit the flexibility of the FAA in controlling air traffic flow. The difficulties in scheduling flights to avoid congestion and the concomitant decrease in safety would be compounded.⁷⁹

The Court concluded that the legislative objectives in the Noise Control Act of 1972 left no room for local control.⁸⁰ The FAA's effort to balance safety and efficiency in the air transportation system required a "uniform and exclusive" system of federal regulations.⁸¹ Nevertheless, the Court determined that local governments could legitimately regulate land use around air-

⁷⁴ See *id.* at 275; see also *infra* Part VIII.

⁷⁵ *Pendente lite* translates to "pending the lawsuit." BLACK'S LAW DICTIONARY 1134 (6th ed. 1990).

⁷⁶ *All Am. Airways*, 201 F.2d at 276.

⁷⁷ See *id.* at 277.

⁷⁸ *City of Burbank v. Lockheed Air Terminal, Inc.*, 411 U.S. 624, 626 (1973).

⁷⁹ See *id.* at 639.

⁸⁰ See *id.* at 638. See generally *San Diego Unified Port Dist. v. Gianturco*, 651 F.2d 1306 (9th Cir. 1981) *cert. denied* 455 U.S. 1000 (1982) (holding that under the Quiet Communities Act of 1978, Congress intended to preserve federal preemption of state regulation in the areas of airspace management and noise control).

⁸¹ See *Burbank*, 411 U.S. at 638.

ports, under what has been called the "proprietor exception."⁸² Justice Douglas appeared to draw a distinction between municipalities exercising control as proprietors and municipalities exercising police powers in a way that conflicts with Federal law.⁸³

Justice Rehnquist, in a dissent, argued that because noise regulation was traditionally an area of local concern, federal statutes should not supercede local police powers unless Congress expressed a "clear and manifest purpose" for federal law to preempt local ordinances.⁸⁴ Justice Rehnquist noted that "control of noise, sufficiently loud to be classified as a public nuisance at common law, would be a type of regulation well within the traditional scope of police power possessed by states and local governing bodies."⁸⁵ Justice Rehnquist concluded that if Congress intended for federal statutes to preempt a valid exercise of police power in the form of noise control ordinances, Congress would have expressly provided for this preemption.⁸⁶

More recently, the Sixth Circuit reinterpreted the *Burbank* decision in *Gustafson v. City of Lake Angelus*.⁸⁷ The plaintiff brought suit challenging city ordinances that prohibited the operation of seaplanes on the surface of Lake Angelus. The city asserted that the ordinances were intended to protect the public health, safety, and welfare of its citizens, and were designed to minimize the destruction of property values and the deleterious effects of noise and pollution on the use and enjoyment of land.⁸⁸ The plaintiff argued that Congress promulgated a scheme of federal regulation so pervasive that the court could reasonably infer that Congress did not intend for the states to supplement or change the law.⁸⁹

The district court agreed, and applying *Burbank's* rationale, held that the Federal Aviation Act expressly declared that the United States exercised exclusive national sovereignty over airspace, and that regulations promulgated pursuant to the Act comprehensively governed the aircraft operations at issue in *Gustafson*.⁹⁰ On appeal, the Sixth Circuit stated that although

⁸² See *id.* at 635 n.14.

⁸³ See *id.*

⁸⁴ See *City of Burbank*, 411 U.S. at, 643. Justices Stewart, White, and Marshall joined in the dissent.

⁸⁵ *Id.* at 643.

⁸⁶ See *id.* at 653.

⁸⁷ *Gustafson v. City of Lake Angelus*, 76 F.3d 778 (6th Cir. 1996).

⁸⁸ See *id.* at 781.

⁸⁹ See *supra* note 72 and accompanying text.

⁹⁰ See *Gustafson*, 76 F.3d at 783.

federal regulations clearly established that noise regulation is a field completely occupied by the federal government, no such scheme of federal regulation existed with respect to ordinances governing aircraft operations on the ground.⁹¹ The court noted that the Act expressly exempted local land use planning and zoning from federal regulations governing ground-based operations.⁹² The court upheld the autonomy of local municipalities to regulate airport facilities through the exercise of traditional local police powers in the absence of express congressional intent to preempt local zoning.⁹³

In reaching its conclusion, the court distinguished between federal regulation of airspace and local regulation of the surface, in part relying on Justice Rehnquist's explanation that local governments could extend their police powers to any ground-based activity.⁹⁴ The regulation of land and water use, the issuance of construction permits, or other "ground space" control thus conformed to *Burbank*'s recognition that Congress only intended to regulate aircraft "in flight."⁹⁵ *Gustafson* suggests that local governing bodies have exclusive control over air transportation up until the moment that the plane lifts off of the ground and enters airspace. This interpretation hampers the ability of local regulating bodies to plan adequately on the basis of overall noise impacts. *Gustafson* seems to indicate that although local planning bodies can regulate every aspect of land development, the same governing bodies must stop regulating the moment a plane enters airspace, although the noise continues to impact the land.

Burbank and *Gustafson* also contradict other case authority dealing with causes of action where noise impacts affect landowners' use and enjoyment of land, or constitute an unconstitutional property deprivation.⁹⁶ Under these causes of action, some courts have held that plaintiffs may sue when noise adversely impacts their property, using Fifth Amendment claims of

⁹¹ See *id.*

⁹² See *id.* at 785 (quoting 14 C.F.R. § 157.7(a) (year)).

⁹³ See *Gustafson*, 76 F.3d at 787 (relying on Justice Rehnquist's dissent in *Burbank* in which he stated that a local governing agency could exercise its police powers to control zoning for facilities within its territorial jurisdiction).

⁹⁴ See *id.* (quoting *Burbank*, 411 U.S. at 643, in which Justice Rehnquist analyzed the legislative history of the Federal Aviation Act of 1958 and comments by Senator Monroney, the author of the Act, that the FAA would not have control over the ground space of airports).

⁹⁵ See *id.*

⁹⁶ See Parts VII and VIII.

"compensatory takings." These decisions are difficult to reconcile with *Gustafson's* rationale that federal regulations, with respect to noise, conclusively preempt local regulations governing land use around airports that affect interstate commerce. *Gustafson's* rationale suggests that local municipalities cannot minimize the risk of loss to property owners by reducing the external effects of jet engine noise. Instead, courts must look to the federal regulatory scheme to address the varying impacts of noise. Such uniformity is difficult when the noise impacts vary by the type of engine, frequency of airfield operations, characterization of flights as military or civilian, and the extent to which local landowners acquiesce to operations upon adequate notice. A completely preemptive federal regulatory scheme also prevents local airport operators and government agencies from minimizing the risk of litigation by voluntarily adopting noise control ordinances.

Although the *Gustafson* decision restores some local control, Justice Rehnquist's dissent goes further by not limiting the exercise of police power solely to ground-based activity. Justice Rehnquist instead stated that the legislative history of the 1968 noise control amendment to the Federal Aviation Act, and the subsequent 1972 Noise Control Act, provided for local land use planning as a means of controlling the noise impacts on communities surrounding airports.⁹⁷ Justice Rehnquist further noted that the House Committee on Interstate and Foreign Commerce specifically advocated the cooperation of state and local governments in achieving noise control.⁹⁸ Justice Rehnquist concluded from the legislative history that Congress intended only that the FAA regulate the "source" of noise, specifically the "mechanical and structural aspects of jet and turbine aircraft design."⁹⁹ The statute did not, however, limit the states from "enacting every type of measure, which might have the effect of reducing aircraft noise . . ."¹⁰⁰ Justice Rehnquist's dissent suggests that so long as local or state governments do not regulate aircraft noise emissions directly, for example by requiring aircraft to meet certain noise standards or requiring certain technical modifications to jet engine design, they are free to regulate noise for the common benefit.

⁹⁷ See *Burbank*, 411 U.S. at 647.

⁹⁸ See *id.*

⁹⁹ *Id.* at 650.

¹⁰⁰ *Id.* at 650-51.

Justice Rehnquist's analysis more reasonably interprets local police power over land use, because it reconciles the importance of federal regulation of noise at its source with local regulation of noise impacts on the ground. Justice Rehnquist recognized that "control of noise, sufficiently loud to be classified as a public nuisance at common law, would be a type of regulation well within the traditional scope of police power possessed by States and local governing bodies."¹⁰¹ Justice Rehnquist also summarized the "demanding and vexing" problem of balancing the needs of air transportation with the needs of communities "frequently burdened [by noise] to the point where they can neither enjoy nor reasonably use their land because of . . . aircraft operations which create the unwanted noise."¹⁰² Furthermore, Justice Rehnquist pointed out that under the proprietor exception in *Burbank*, a local governing body would have the authority to permanently close down air facilities, or prevent the expansion of an airport within its territory.¹⁰³ Justice Rehnquist concluded that if local police powers can extend to these actions, far less intrusive noise control ordinances would be appropriate under the same standard. Justice Rehnquist's opinion suggests that local communities have a valid interest in preserving the rights of local property owners against excess noise.¹⁰⁴

Recently, the Second Circuit applied the *Burbank* proprietor exception to the federal preemption doctrine to conclude that the City of New York could impose curfews on airport operations for the purpose of restricting noise.¹⁰⁵ In *National Helicop-*

¹⁰¹ *Burbank*, 411 U.S. at 643.

¹⁰² *Id.* at 647.

¹⁰³ *See id.* at 653.

¹⁰⁴ Additionally, the composition of the Supreme Court has significantly changed. The current court may reinterpret the proprietor's exception to allow for greater zoning authority in local government bodies. *See generally* Pamela B. Stein, *Comment, The Price of Success: Mitigation and Litigation in Airport Growth*, 57 J. AIR L. & COM. 513, 525 (1991) (noting the changed composition of the court).

¹⁰⁵ *See National Helicopter Corp. v. City of New York*, 137 F.3d 81, 92 (2d Cir. 1998); *see also Alaska Airlines Inc. v. City of Long Beach*, 951 F.2d 977, 982 (9th Cir. 1991) (holding that goal of reducing airport noise to control liability and improve environment was permissible exercise of local police powers); *British Airways Bd. v. Port Auth.*, 558 F.2d 75, 85 (2d Cir. 1977) (stating that Congress reserved to airport proprietors the authority to enact reasonable noise regulations because they are in the best position to protect public safety); *City of Burbank v. Burbank-Glendale-Pasadena Airport Auth.*, 72 Cal. App. 4th 366, 379, 85 Cal. Rptr. 2d 28, 37 (Cal. Ct. App. 1999) (citing 42 U.S.C. § 4901 (1999) for the proposition that "a local regulation may not restrict the use of aircraft or directly control aircraft emissions, but may otherwise use its land-use powers to mitigate the noise.").

ter, the court held that the city could use its police powers under the proprietor exception to impose noise control conditions on a special permit issued to National Helicopter Corporation.¹⁰⁶ The court noted that the Airline Deregulation Act of 1978 specifically preserved the ability of local and state government agencies to carry out their proprietary powers and rights under a cooperative scheme with the federal government.¹⁰⁷ Local authorities could exercise these powers without restriction, so long as they did not promulgate unreasonable, arbitrary or discriminatory regulations, or interfere with pricing, routes, or air carrier service.¹⁰⁸

V. IMPACT OF LOCAL ZONING ON AIRPORT OPERATIONS

The federal government has not been willing to supersede completely the ability of municipalities to control land within their borders. Local ordinances subject airports and surrounding landowners to varying land use requirements. The situation has led to a patchwork quilt of zoning ordinances that impact the ability of airports to expand. Air carriers, faced with an uncertain zoning scheme, frequently must endure capacity constraints in some airports, but not in others. As a practical matter, zoning that favors particular airports tends to give air carriers incentive to relocate to those airports to take advantage of increased capacity. An air carrier that flies out of an airport with liberal zoning requirements can take advantage of greater capacity to increase the number of flights at a particular time, and thereby increase market share, load factors, and yields. By shifting their operations, air carriers can avoid unfavorable zoning schemes.

Conflicts among different local ordinances, stemming from the effort to attract airlines with liberalized regulations, can create adverse impacts on the legal rights of landowners to sue for loss of enjoyment of property, trespass, or damage to property. The market power of air carriers in some instances forces mu-

¹⁰⁶ See *National Helicopter Corp.*, 137 F.3d at 88-89.

¹⁰⁷ See *id.* at 88; see also Airline Deregulation Act of 1978, Pub. L. No. 95-504, 92 Stat. 1705 (1978), codified at 49 U.S.C. § 41713(b)(3) (1999) (noting that nothing in the Act "shall be construed to limit the authority of any State or political subdivision . . . as the owner or operator of an airport served by any air carrier . . . to exercise its proprietary powers and rights.").

¹⁰⁸ See *National Helicopter Corp.*, 137 F.3d at 88-89; see also 49 U.S.C. § 41713(b)(1) (originally codified at 49 U.S.C. app. § 1305(a) (1999)).

municipalities to restrict the rights of landowners, and potentially encourages other regulatory agencies to rubberstamp expansion plans. While this can be a problem for landowners with noise concerns, municipalities have a legitimate interest in ensuring that local airports have the broadest possible capability to serve air passengers, or lose out on the economic development benefits of a large airport. Restrictive zoning may protect the interests of a vocal minority of citizens, but have a drastically negative effect on a regional economy if air carriers shift operations elsewhere to take advantage of capacity.

Airports typically protect themselves by advocating for zoning ordinances that prevent certain land uses from encroaching within a certain distance of airport property or restrict the height of land uses in order to ensure the safety of aerial approaches to runways. Despite these protections, severe encroachment frequently occurs with concomitant noise impacts on the encroaching property.¹⁰⁹ In order to protect airports from encroachment, nearly every state has adopted enabling statutes that grant authority to local governments to promulgate special airport zoning regulations that restrict incompatible land uses.¹¹⁰ Many jurisdictions have also developed "overlay zoning" plans that map separate zoning provisions on top of existing zoning districts in order to encourage different forms of development.¹¹¹ Additionally, general standards organizations have developed uniform zoning laws that serve as blueprints for land use planning around airports.¹¹² The Standard State Zon-

¹⁰⁹ See Magee, *supra* note 4, at 246-47 (noting that "[s]evere encroachment of existing airports, by incompatible land uses, increase[s] the problem of aircraft noise and its adverse impact on adjacent property [and] limits the full utilization of airport facilities.").

¹¹⁰ See, e.g., ALASKA STAT. § 02.05.020 (Michie 1999); CAL. GOV. CODE § 50485.3 (West 1999); FLA. STAT. ANN. § 333.03 (West 2000); GA. CODE ANN. § 6-3-22 (1998); HAW. REV. STAT. § 262-3 (1996); 620 ILL. COMP. STAT. 25/13 (West 1999); IND. CODE § 8-21-12-13 (1991); MD. CODE ANN., TRANSP. I §§ 5-4A-01, 5-502 (1993); MICH. COMP. LAWS § 259.445 (1990); N.Y. GEN. MUN. LAW § 356 (McKinney 1999); N.C. GEN. STAT. § 63-31 (1985); OHIO REV. CODE ANN. § 4536.031 (West 1999); 74 PA. CONS. STAT. ANN. § 5912 (West 1999); TENN. CODE ANN. § 42-6-103 (1999); TEX. LOC. GOV'T CODE ANN. § 241.011 (West 1999); WASH. REV. CODE § 14.12.030 (1992). See generally 14 C.F.R. § 151.26. (1995) (requiring airport to show that it has taken action to restrict non-compatible uses around airport property through zoning and acquisition of property interests in order to receive federal funding for proposed expansions).

¹¹¹ See Magee, *supra* note 4, at 269-73 (discussing overlay zoning and citing cases approving overlay zoning plans as legitimate exercises of local zoning authority).

¹¹² See *id.* at 258, 261.

ing Enabling Act (SZEa) and the ALI Model Land Development Code provide guidance on comprehensive master planning that would designate airport property as specially planned zones.¹¹³ The ALI Model Land Development Code would enable the development of a "precise plan" that would permit land development only after consideration of noise impacts, identify areas for future airport expansion, prohibit land development inconsistent with the plan, and resolve existing non-conforming land uses.¹¹⁴

In addition to zoning, other possible alternatives would decrease the potential impacts of non-conforming land uses on airports and surrounding landowners.¹¹⁵ For example, airports can acquire interests such as easements in surrounding property in order to prevent or mitigate non-compatible use, or acquire land for future use as part of a comprehensive development strategy.¹¹⁶ Property owners can relocate to less noise-impacted areas, allowing surrounding property to be redeveloped.¹¹⁷ Local governments can engage in noise compatibility planning, require property to be soundproofed under appropriate building code provisions, and develop purchase assurance programs that would guarantee the sale of property at fair market value subject to aviation easements.¹¹⁸ One commentator recommends the use of "transferable development rights," creating a market for development credits in which property owners can transact in credits sufficient to allow them to expand their property. A limited supply of transferable rights would ensure the development is slowed to a more controllable pace.¹¹⁹

Courts have wrestled with the power of local authorities to promulgate zoning ordinances. Generally, local governments can control land use around airports so long as zoning ordinances are a reasonable and proper exercise of local police powers.¹²⁰ The validity of a zoning ordinance depends on meeting two elements: (1) Does the zoning regulation substantially relate

¹¹³ See *id.*

¹¹⁴ See *id.* at 265.

¹¹⁵ See Jeffrey Schoen, Comment, *Airport Noise: How State and Local Government Can Protect Airports from Urban Encroachment*, 1986 ARIZ. ST. L.J. 309, 310 (1986).

¹¹⁶ See *id.* at 320.

¹¹⁷ See *id.*

¹¹⁸ See *id.*

¹¹⁹ See *id.*

¹²⁰ See Magee, *supra* note 4 at 254. Cf. *Baker v. Burbank-Glendale-Pasadena Airport Auth.*, 39 Cal. 3d 862, 705 P.2d 866, 868 n.4, 218 Cal. Rptr. 293 (Cal. 1985) (stating in dicta that allegations of unreasonable zoning permit remedy

to public health, safety, and general welfare; and (2) Is the public interest sufficient for the reasonable imposition of restrictions on property adjacent to an airport, without having to compensate the property owner for loss of property value?¹²¹ The public interest in zoning might be demonstrated by arguing that a zoning regulation ensures the safety of people living near the airport. Airport authorities might also argue that transportation is a per se predominant interest that encourages economic growth.

Cases involving local zoning and airports typically fall into five categories. First, landowners challenge local zoning ordinances that designate certain areas as "airport hazard areas" and prevent development inconsistent with the hazard designation in the interests of public safety.¹²² Second, landowners assert that zoning ordinances are violations of equal protection under the U.S. and state constitutions, or challenge a particular zoning ordinance as an illegal government taking in violation of due process.¹²³ Third, landowners challenge zoning restrictions that prevent them from developing private airports or helipads incidental to other business activities.¹²⁴ Fourth, landowners argue

not by inverse condemnation, but by declaratory relief or mandamus); *supra* note 105 and accompanying text.

¹²¹ See Magee, *supra* note 4, at 254; see also *infra* Part VII discussing takings claims.

¹²² See generally *Citizens for Equal Property Rights v. Board of Supervisors*, 730 So. 2d 1141 (Miss. 1999) (holding that an ordinance zoning property in order to prevent "hazardous" structures from obstructing flight paths was in substantial compliance with state authorizing statute); *Northwest Properties v. Outagamie County*, 589 N.W.2d 683 (Wis. Ct. App. 1998) (holding that statute authorizing zoning for protection of aerial approaches to airport runways permitted municipality to limit residential units to minimum lot sizes); *City of Bridgeport v. Town of Stratford*, No. CV 890257140, 1997 WL 430655 at *1 (Conn. Super. Ct. 1997) (holding that comprehensive statutory scheme for regulation of airport hazards imposed mandatory duty on Town of Stratford to establish airport hazard zones).

¹²³ See generally *Comes v. City of Atlantic*, 601 N.W.2d 93 (Iowa 1999) (holding that the city could obtain a conditional use permit for airport expansion, and that permit was a reasonable exercise of eminent domain consistent with the Takings Clause); *City of Kansas City v. Hon*, 972 S.W.2d 407 (Mo. Ct. App. 1998) (holding that because the city could not adopt zoning regulations applicable to landowners outside the city limits, city's proposed condemnation of land for airport expansion was a matter of "public necessity"); *Schmidt v. City of Kerosha*, Wis. 2d 527, 571 N.W.2d 892 (Wis. Ct. App. 1997) (holding that plaintiff's equal protection claim failed because zoning ordinances were rationally related to the reasonable state purpose of promoting safety along aerial approaches).

¹²⁴ See generally *Capital Region Airport Auth. v. Carter Township*, N.W.2d 141 (Mich. Ct. App. 1999) (holding that airport authority had to comply with local ordinances to build non-aeronautical facility on airport property); *Bonte v. Town*

that non-conforming uses prior to enactment of new zoning regulations should be exempted from new requirements.¹²⁵ Finally, landowners challenge local zoning ordinances that do not comply with coordinated planning processes, including airport development plans or regional master plans.¹²⁶

VI. USE OF ENVIRONMENTAL IMPACT STATEMENTS IN LOCAL PLANNING

During the land-use planning process, federal statutes such as the NEPA require an airport to develop an EIS prior to construction of additional facilities that is subject to public comment, if that airport wants to receive federal grants.¹²⁷ An EIS complies with NEPA requirements if it takes a "hard look" at the environmental impact of proposed construction.¹²⁸ The definition of "hard look" is not clear in the NEPA, and has been variously interpreted by courts. To a large extent, Congress has limited the ability of individuals to sue for damages from noise exposure if they received proper notice of planned airport expansions or modifications. Section 47506 of Title 49 eliminates private rights of action for damages stemming from excess noise for persons "acquiring an interest in property after February 18,

Bd. of Fishkill, 670 N.Y.S.2d 597 (N.Y. App. Div. 1998) (holding that private owner had to comply with applicable zoning ordinances to use his property as a private helipad incidental to his business); *Tanis v. Township of Hampton*, 704 A.2d 62 (N.J. Super. Ct. App. Div. 1997) (holding that zoning applied to plan for private helipad incidental to business).

¹²⁵ See generally *Clackamas County v. Gay*, 986 P.2d 588 (Or. Ct. App. 1999) (holding that statute preventing local governments from limiting future airport uses did not extend to existing airport uses prohibited by judicial decision); *North/South Airpark Assoc. v. Haagen*, 942 P.2d 1068 (Wash. Ct. App. 1997) (holding that appellant could retain "grandfathered rights" allowing it to continue using a landing strip extension because it had a "prior nonconforming use" before new zoning ordinance was passed); *Riggs v. Burson*, 941 S.W.2d 44 (Tenn. 1997) (holding that heliport operators could not maintain "prior nonconforming use" because statute specifically required operations to be eliminated within statutory period).

¹²⁶ See, e.g., *City of Des Moines v. Puget Sound Reg'l Council*, 988 P.2d 993 (Wash. Ct. App. 1999) (holding that regional comprehensive master plan prevailed over inconsistent local zoning ordinances); *Board of County Comm'rs v. City of Olathe*, 952 P.2d 1302 (Kan. 1998) (holding that although proposed local zoning regulation conflicted with comprehensive master plan, zoning authority had the right to "prescribe, change, or refuse to change zoning" as long as the action was reasonable).

¹²⁷ National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321-4370d (1999); see also *supra* note 33 and accompanying text.

¹²⁸ See *id.* § 4332(2)(C).

1980, in an area surrounding an airport for which a noise exposure map has been submitted under section 47503¹²⁹ of [Title 49] and having actual or constructive knowledge of the existence of the map”¹³⁰ A person is deemed to have constructive knowledge of the existence of a noise exposure map if notice is published at least three times in a newspaper of general circulation in the county in which the airport operates, or the person is given a copy of the map when she acquires the property interest.¹³¹

In addition to noise exposure maps, the NEPA requires airport planners to explore reasonable alternatives to a proposed action. In *City of Richfield v. Federal Aviation Admin.*, the Eighth Circuit required that a “reasonable alternative” at least meet the goals of the airport project to comply with the NEPA.¹³² In this case, the Metropolitan Airports Commission (MAC) proposed building a taxiway and altering flight patterns at Minneapolis-St. Paul International Airport in order to shift noise impacts from the northwest area of the airport to the southwest. The MAC also proposed soundproofing homes near the southwestern edge of the airport in an effort to mitigate the increased noise. The MAC’s goal was to more equitably distribute noise impacts to landowners along the western side of the airport.¹³³ The court noted that several federal statutes, including the NEPA, require an airport to develop an EIS that examines “reasonable” or “possible and prudent” alternatives to a proposed project.¹³⁴ An alternative is “unreasonable” if it does not accomplish the goals of the project.¹³⁵ The city argued that the MAC should have examined the possibility of establishing noise mitigation measures such as soundproofing for homes near the northwest quadrant of the airport, where the majority of noise impact occurred.¹³⁶ The Eighth Circuit upheld the MAC’s plan, however, because the city’s suggested alternative was inconsistent with the purpose of equitably distributing noise impacts among as many

¹²⁹ See *supra* note 54 and accompanying text.

¹³⁰ 49 U.S.C. § 47506 (1999).

¹³¹ See *id.* § 47506(b); see also *Provident Mut. Life Ins. Co. v. City of Atlanta*, 938 F. Supp. 829 (N.D. Ga. 1995).

¹³² 152 F.3d 905, 907 (8th Cir. 1998).

¹³³ See *id.* at 906.

¹³⁴ See *id.* at 907; see also 49 U.S.C. § 47106(c)(1)(C) (1994); 40 C.F.R. § 1502.14(a) (1999) (implementing the NEPA).

¹³⁵ See *City of Richfield*, 152 F.3d at 907.

¹³⁶ See *id.*

landowners as possible, and was therefore unreasonable.¹³⁷ The Court noted that “soundproofing homes would merely limit noise impact, and would have no effect whatsoever on noise outdoors or inside buildings other than the soundproofed homes.”¹³⁸

Other courts have interpreted the “reasonableness” requirement of the NEPA as a procedural guideline that does not necessarily require that the agency adopt more “reasonable” alternatives.¹³⁹ Recently, in *Citizens Concerned About Jet Noise, Inc. v. Dalton*, the United States District Court for the Eastern District of Virginia assessed the reasonableness of a Final Environmental Impact Statement produced by the Navy in support of its plan to transfer naval aircraft to the Virginia Beach Naval Air Station.¹⁴⁰ In order to comply with the NEPA, federal agencies must prepare an EIS discussing the environmental impacts of a proposed action, possible reasonable alternatives, and the reasons why the agency eliminated alternatives.¹⁴¹ The court determined that the NEPA did not place any substantive requirements on federal agencies to weigh environmental impacts.¹⁴² Instead, the NEPA only required that federal agencies “consider” environmental concerns in their deliberative processes.¹⁴³ The NEPA process “does not mandate a particular outcome, but only describes the process necessary to reach an informed decision.”¹⁴⁴ Thus, agencies can freely choose a course of action that has greater environmental impact as long as “reasonable” alternatives are addressed and “other values” outweigh these impacts.¹⁴⁵ Relevant factors that can, on balance, trump environmental concerns include economic and technical considerations, national policy, and agency statutory missions.¹⁴⁶

¹³⁷ See *id.*

¹³⁸ *City of Richfield*, 152 F.3d at 907.

¹³⁹ See *Citizens Concerned About Jet Noise, Inc. v. Dalton*, 48 F. Supp. 2d 582 (E.D. Va. 1999); see also *Valley Citizens for a Safe Env't. v. Aldridge*, 695 F. Supp. 605, 613-14 (D. Mass. 1988).

¹⁴⁰ See *Citizens Concerned About Jet Noise*, 48 F. Supp. 2d at 585.

¹⁴¹ See 42 U.S.C. §§ 4321-4370d (1999); 40 C.F.R. §§ 1502.14-1502.16 (1999).

¹⁴² See *Citizens Concerned About Jet Noise*, 48 F. Supp. 2d at 588.

¹⁴³ See *id.*

¹⁴⁴ *Id.* at 588-89 (citing *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332 (1989)).

¹⁴⁵ See *Citizens Concerned About Jet Noise*, 48 F. Supp. 2d at 589.

¹⁴⁶ See *id.* (citing 40 C.F.R. § 1505.2 (1999)).

The court also found that there was no basis in fact or law for the plaintiff's assertion that the EIS was inadequate.¹⁴⁷ The plaintiff alleged a series of problems with the EIS, including a flawed cost-benefit analysis, the failure to consider reasonable alternatives or practical noise mitigation measures, and the failure to address foreseeable environmental impacts resulting from the "cumulative impact" of higher noise from the F/A-18 "Hornet" aircraft.¹⁴⁸ The court determined that the Navy's operational requirements, and the recommendations of the Base Realignment and Closure Commission (pursuant to the Defense Base Realignment and Closure Act of 1990), resulted in the choice of Virginia Beach as the best possible location for operations based on several criteria, including environmental impact.¹⁴⁹ With respect to the EIS noise measurements, the court deferred to the agencies' scientific methodology, noting that the plaintiff's noise arguments "basically constitute[d] a dispute over non-material matters."¹⁵⁰ The court's reasoning suggests that EIS alternatives and noise measurement methodology are "reasonable" when the decision-making process considers all relevant factors, and procedural due process is satisfied, for example by notice and comment procedures, open meetings, and solicitation of community opinions. Furthermore, noise measurements are within the "sound discretion"¹⁵¹ of the agency, limiting the likelihood that a plaintiff can successfully challenge the underlying data used to justify an airport development or expansion project.

With respect to the potential costs of increased noise on surrounding property values, the court concluded that the measurement of noise impacts and costs would be too speculative to require the Navy to engage in a precise cost-benefit analysis.¹⁵² In essence, the court concluded that it is practically impossible to determine exactly what factors result in decreased property values. The court agreed with the Navy's argument that:

Property values are determined by a combination of neighborhood characteristics (e.g., the quality of local schools, local property taxes, access to transportation, and the crime rate) and individual housing characteristics (e.g., age of the house, num-

¹⁴⁷ See *id.* at 589-90.

¹⁴⁸ See *id.* at 589.

¹⁴⁹ See *id.* at 590-93.

¹⁵⁰ *Id.* at 593-94.

¹⁵¹ See *Citizens Concerned About Jet Noise*, 48 F. Supp. 2d at 596.

¹⁵² See *id.* at 597-98.

ber of rooms, and amenities such as garages). There are no definitive federal standards for quantifying the impact of aircraft noise on property values.¹⁵³

On this basis, the court concluded that because the EIS plainly explained the difficulty in precisely measuring the cost-benefits of the proposed action, the Navy did not act arbitrarily or capriciously in failing to quantify these impacts.¹⁵⁴ The court's conclusion stems from its interpretation of the NEPA as a set of guidelines, in which reasonableness is not measured by the potential impact of aircraft operations on landowners, but by *de minimis* compliance with the procedural requirements.

Such a conclusion suggests that even if a landowner has a colorable claim of property damage, courts should not scrutinize an agency's determination unless there is proof of procedural flaws in the agency's actions. Such a conclusion not only affects the procedural requirements of an EIS, but also potentially prevents an individual from collecting damages based on a legitimate takings claim, discussed below in Part VII. More importantly, the court misinterprets the NEPA's purpose holding that it merely provides a set of procedural requirements negates the purpose of the Act. The Act requires that any proposed federal action with significant impact on the quality of the human environment should include an EIS.¹⁵⁵ In the Congressional declaration of purpose for the NEPA, Congress stated that

The purposes of this chapter are: To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality.¹⁵⁶

By deferring to an agency's unilateral balancing of factors relevant only to its own priorities, and allowing agencies to conclude that environmental impacts are outweighed by other concerns, the purpose of preventing actions with significant environmental impacts is negated. Nevertheless, courts have, for

¹⁵³ *Id.* at 598 n.16.

¹⁵⁴ *See id.* at 598-99.

¹⁵⁵ *See id.*

¹⁵⁶ 42 U.S.C. § 4321 (1999).

the most part, determined that an agency meets NEPA requirements by listing alternatives and providing a reasonable explanation for proceeding with a less environmentally desirable alternative.¹⁵⁷

VII. "TAKINGS" CLAIMS AND INVERSE CONDEMNATION

Unlike environmental claims, landowners have some success in collecting damages from the federal government on the theory that airfields and military air bases operated by the government "take" property without just compensation, in violation of the Takings Clause of the Fifth Amendment of the Constitution.¹⁵⁸ Courts have also applied the Takings Clause of the Fourteenth Amendment¹⁵⁹ to the states in situations where a state agency takes a property right through an illegal deprivation of property. Thus, the holdings on the federal level with respect to government takings can be analogized to similar causes of action brought against state government takings.

Using a takings cause of action, a landowner asserts that a government taking of a property right constitutes a compensable injury. Suits can be brought as inverse condemnation actions, in which a property owner seeking just compensation for land taken for a public use sues a government or private entity having the power of eminent domain.¹⁶⁰ In the context of noise impacts from airport expansions, this cause of action has not been effective because of the difficulty of linking damages in the form of lower real estate values with noise when other factors may have more direct impact on declining property values.¹⁶¹ To avoid the difficulties of determining liability and measuring noise-related damages, courts have been willing to draw a bright line: flights a certain distance above the property do not trigger a Takings Clause cause of action. Additionally, landowners near airports may not have suffered a substantial or material decrease in property value warranting relief.¹⁶² The assumption that

¹⁵⁷ As discussed in this section, courts hold that 42 U.S.C. § 4332(2)(C) requires only that impacts and alternatives be considered, not necessarily adopted.

¹⁵⁸ "[P]rivate property [shall not] be taken for public use, without just compensation." U.S. CONST. amend. V.

¹⁵⁹ "No State shall . . . deprive any person of life, liberty, or property, without due process of law." U.S. CONST. amend. XIV.

¹⁶⁰ See BLACK'S LAW DICTIONARY 830 (7th ed. 1999).

¹⁶¹ See *supra* note 152 and accompanying text.

¹⁶² See Pamela B. Stein, Comment, *The Price of Success: Mitigation and Litigation in Airport Growth*, 57 J. AIR L. & COM. 513, 555-56 (1991).

homeowners do not suffer a substantial decrease in property value may be flawed because even if property values do not materially change over time, economic impacts may still arise when property values increase at a decreasing rate compared with homes farther away from sources of noise. Arguably, these opportunity costs arising from declines in real estate value growth can still be considered a "taking" of property value in which landowners lose the opportunity to sell property at the potentially higher market rate.

One situation, in which plaintiffs have asserted an illegal government taking, is in the instance of direct flights over areas surrounding airports. The Supreme Court addressed the issue of property damage from over flights in the seminal case of *United States v. Causby*.¹⁶³ In that case, the plaintiff sued for damages caused to the plaintiff's home and chicken farm, alleging a government taking as a result of military flights within 83 feet of the plaintiff's property.¹⁶⁴ Accepting the argument that the Civil Aeronautics Act granted the United States "exclusive national sovereignty" over airspace,¹⁶⁵ the Court repudiated the common law view that ownership of land extends to the "periphery of the universe."¹⁶⁶ The Court stated that the common law concept needed to give way to the modern notion that airspace is a public highway, and private claims to airspace would "clog these highways."¹⁶⁷ Nevertheless, the Court recognized that under some circumstances, flights over land could constitute a taking of an easement that deprived owners of property value.¹⁶⁸ The Court concluded that if a landowner is to have "full enjoyment of the land, he must have exclusive control of the *immediate* reaches of the enveloping atmosphere . . . The fact that he does not occupy it in the physical sense . . . is not material . . . [T]he flight of airplanes, which skim the surface but do not touch it, is as much an appropriation of the use of the land as a more conventional entry upon it."¹⁶⁹ The Court ultimately determined that the flights complained of in this case were so low and frequent as to directly interfere with the enjoyment and use of the

¹⁶³ See *United States v. Causby*, 328 U.S. 256 (1946).

¹⁶⁴ See *id.* at 258.

¹⁶⁵ See *id.* at 260; see also 49 U.S.C. § 40103(a) (1994).

¹⁶⁶ *Causby*, 328 U.S. at 260-61 (quoting 1 COKE, INSTITUTES, 19th ed. 1832, ch. 1 § 1(4)(a)).

¹⁶⁷ *Id.* at 261.

¹⁶⁸ See *id.* at 261-62.

¹⁶⁹ *Id.* at 264 (emphasis added).

land, thus entitling plaintiff to just compensation.¹⁷⁰ The Court, however, declined to speculate on how frequent or low flights must be to constitute a taking, and remanded to the Court of Claims to determine the extent of damages.¹⁷¹

Subsequent courts, interpreting *Causby's* holding, have attempted to clarify how low planes can fly without triggering a claim for government taking based on physical interference with property.¹⁷² Most courts have applied a rule that an agency might be liable for overflights below 500 feet, but that "flights at higher altitudes [do] not interfere with the landowner's use of the surface."¹⁷³ In some instances, however, a plaintiff may have a viable cause of action for government taking of property even though a plane flies within "navigable airspace," and not below the 500-foot demarcation line.¹⁷⁴ The Supreme Court, in *Armstrong v. United States*, for example, noted the difficulty of trying to draw a bright line between what property takings were compensable, and what takings were merely "consequential" and therefore not compensable.¹⁷⁵ Justice Black, writing for the majority, concluded that the "Fifth Amendment's guarantee that private property shall not be taken for a public use without just compensation was designed to bar Government from forcing some people alone to bear public burdens which, in all fairness and justice, should be borne by the public as a whole."¹⁷⁶

In *Branning v. United States*,¹⁷⁷ the Court of Claims dealt with an action by plaintiffs for just compensation for the taking of an easement over their property resulting from aircraft operations. The court held that although the flights were above 500 feet, these flights nevertheless constituted a taking of an easement over the plaintiff's property warranting recovery.¹⁷⁸ The court

¹⁷⁰ See *id.* at 266-67.

¹⁷¹ See *id.* at 267-68.

¹⁷² See, e.g., *Lacey v. United States*, 595 F.2d 614 (Ct. Cl. 1979); *Aaron v. United States*, 311 F.2d 798 (Ct. Cl. 1963); *Matson v. United States*, 171 F. Supp. 283 (Ct. Cl. 1959).

¹⁷³ *Argent v. United States*, 124 F.3d 1277, 1281 (Fed. Cir. 1997).

¹⁷⁴ See *Branning v. United States*, 654 F.2d 88, 101 (Ct. Cl. 1981).

¹⁷⁵ See 364 U.S. 40, 48 (1960).

¹⁷⁶ *Id.* at 49.

¹⁷⁷ *Branning*, 654 F.2d at 88.

¹⁷⁸ See *id.* at 101-102. The Court also noted in dicta that, although the plaintiffs purchased their property after they had public notice that their property was designated as unsuitable for residential use, the main issue was whether the change in frequency and types of planes flying overhead constituted a new taking. See *id.* at 94. For a discussion of public notice and noise impact studies, see *infra* note 130 and accompanying text.

noted that in the years following the Supreme Court's decision in *Causby*, commentators recognized that noise pollution alone might constitute an encroachment on private property, even though aircraft may pass over the property at a considerable distance.¹⁷⁹ Although Congress had plenary power to regulate navigable airspace,¹⁸⁰ this congressional authority did not preclude a claim under the Takings Clause, even where flights operated within navigable airspace, an area traditionally within Congress' authority.¹⁸¹ The court disagreed with the "great weight of Federal authority" that noise impacts alone, without a physical invasion of airspace within 500 feet of the property, was merely "consequential damage" and thus not compensable under the Fifth Amendment.¹⁸² Instead, the court held that because of the effects of aircraft noise, and the diminution of property value resulting from that noise, the plaintiff had a viable takings claim.¹⁸³

The court distinguished between the need for safety, which justifies a judicially created minimum altitude, and minimum noise levels. Depending on the type of aircraft and frequency of flights, the level of noise may be considerable even though the aircraft flies at altitudes above the bright line test set forth in *Causby*, *Lacey v. United States*, and their progeny. For example, in footnote 22 of the *Branning* decision, the court stated that gliders produced no noise impact below 500 feet. Gliders might, however, be a substantial accident risk, warranting a minimum safe altitude.¹⁸⁴ In the instant case, on the other hand, the property damage asserted by the plaintiffs arose from the noise impacts as distinguished from physical invasion below a minimum safe distance.

In a recent case decided in 1997, the Federal Circuit attempted to reconcile the seemingly conflicting opinions of

¹⁷⁹ See *id.* at 97 (citing *Airport Noise Regulation: Burbank Aaron and Air Transport*, 8 TRANSP. L.J. 403 (1976) and *Current State of the Law in Aircraft Noise Pollution Control*, 43 J. AIR L. & COM. 799 (1977)).

¹⁸⁰ "Navigable airspace" was originally defined as airspace above the minimum safe flight altitudes prescribed by the Civilian Aeronautics Authority. See 49 U.S.C. § 180 (repealed). Section 40102 currently defines "navigable airspace" as "airspace above the minimum altitudes of flight . . . needed to ensure safety in takeoff and landing of aircraft." 49 U.S.C. § 40102(30) (1999).

¹⁸¹ See *Branning*, 654 F.2d at 98.

¹⁸² See *id.* at 99.

¹⁸³ See *id.* at 102.

¹⁸⁴ See *id.* at 102 n.22.

Causby and *Branning*.¹⁸⁵ In *Argent v. United States*, the Federal Circuit determined that “overflight takings disputes def[ied] per se rules” for determining whether potential noise impacts would give rise to a cause of action.¹⁸⁶ Instead, the Federal Circuit announced a new test that gives a remedy when a government action singles one out for a “disproportionate burden” of a public benefit.¹⁸⁷ In announcing the new test, the Federal Circuit noted that *Causby* continued to provide useful guidance in evaluating the strengths of a takings claim, but did not give rise to an automatic rule under all circumstances.¹⁸⁸ Applying its “disproportionate burden” test, the court concluded that the plaintiff in *Argent* stated allegations sufficient to overcome summary judgment.¹⁸⁹ The court analogized to the *Branning* court’s conclusion that the uniquely noisy and intrusive character of military aircraft was a “vital factor” in its decision to allow a Fifth Amendment cause of action because of the “peculiar burden” imposed by these aircraft operations.¹⁹⁰ Furthermore, although the plaintiffs stated in their affidavits that military flights only “occasionally” flew at low altitudes directly over their property, the Federal Circuit rejected the government’s argument that these admissions in the record defeated the plaintiffs’ claim. The court noted that the government could not only take private property by physical occupancy, “but also by imposing such burdens upon the use of the property as to deprive the owner of the enjoyment of the land.”¹⁹¹ Thus, the Takings Clause extends to government actions that are non-invasive, even where no direct interference with the property occurs.¹⁹²

Although the court significantly altered the general *Causby* rule, it nevertheless carefully limited its decision to noise impacts resulting from “peculiarly burdensome” flight activity that “significantly” impaired landowners’ use and enjoyment of land.¹⁹³ The *Causby* 500 feet rule would still apply where the allegedly harmful noise results from “normal aircraft operations” in which planes do not fly directly over the plaintiff’s

¹⁸⁵ *Argent v. United States*, 124 F.3d 1277 (Fed. Cir. 1997).

¹⁸⁶ *Id.* at 1282.

¹⁸⁷ *See id.*

¹⁸⁸ *See id.*

¹⁸⁹ *See id.*

¹⁹⁰ *See Argent*, 124 F.3d at 1282.

¹⁹¹ *Id.* at 1283.

¹⁹² *See id.*

¹⁹³ *See id.* at 1284.

property.¹⁹⁴ The court also noted that the government acquires an avigation easement over the property where the government operates aircraft regularly over the land with the intention to continue these flights indefinitely, and the plaintiff fails to file suit for alleged taking of private property within six years of the date on which the cause of action arose.¹⁹⁵ The court limited the effect of easements, however, to the first instance when an airport or other facility begins regular operations over surrounding land.¹⁹⁶ If the frequency of flights or intensity of the noise increases as a result of operational changes, these changes may trigger a second taking that allows a plaintiff to file a new cause of action.¹⁹⁷ The court's opinion creates the possibility that a landowner may file a claim under the Takings Clause for changes in activity that place an excessive burden upon him or her, even though he or she initially acquiesced to the initial government action by failing to pursue his or her remedies in court.

In order to collect remedies from harm caused by increased over flights, the landowner must still show that the takings claim is not barred by an existing easement burdening the property. In *City of Austin v. Travis County Landfill Co.*,¹⁹⁸ the Court of Appeals of Texas in Austin noted that the city airport, Austin-Bergstrom International Airport, acquired an "obstruction" easement on property owned by a landfill company, granting it rights to remove obstructions encroaching upon airport lands, and ingress and egress to clear any obstructions.¹⁹⁹ The court also noted that the military base formerly located at the airport acquired an avigation easement that gave it the right of unobstructed passage in all airspace above the property.²⁰⁰ The court held that the city's obstruction easement did not give it over flights rights over the landfill property, and the avigation easement provided only military aircraft, not general or commercial aircraft, the right of unobstructed passage in the airspace above Travis County Landfill Company's (TCLC) land.²⁰¹

¹⁹⁴ See *id.*

¹⁹⁵ See *Argent*, 124 F.3d at 1285.

¹⁹⁶ See *id.*

¹⁹⁷ See *id.*

¹⁹⁸ No. 03-98-00455-CV, 1999 WL 644808 at *1 (Tex. App.—Austin August 26, 1999) (subject to revision or withdrawal until released in the permanent law reports).

¹⁹⁹ See *id.* at *6.

²⁰⁰ See *id.*

²⁰¹ See *id.* at *7.

Finding that the city failed to retain an air easement, thus intruding on the plaintiff's land, the court then provided a formula for calculating damages in the type of takings claim asserted by the plaintiff. The court indicated that damages are measured by the difference between the value of the landowner's entire tract before the taking and the market value of the remainder after the taking, allowing for the uses to which the condemned land is to be subjected.²⁰² In calculating the available damages, the fact that the land will be taken cannot be used in calculating the fair market value.²⁰³ Such an analysis might harm the affected landowner, however, because the fact of taking and subsequent noise impacts might considerably decrease market value. By not including the fact of taking in damages calculations, the landowner may lose more property value due to noise impacts than would normally occur in the market.

For example, assume that a landowner purchased his or her property near an existing airport at a price of \$100,000. Ten years after purchasing the property, the airport increases the frequency of over flights by 50%, resulting in greater noise impacts. As a result of these impacts, the landowner's property devalues to \$70,000. Assume also that the property would currently be worth \$90,000 but for the noise impacts. The landowner would not be able to obtain a permanent injunction preventing the additional flights. In the absence of injunctive relief, an airport can complete a taking and simply pay appropriate compensation according to the damages formula. Under *Travis County Landfill Co.*, the market value of the property must be assessed without regard to the existence of the government taking, which could mean without regard to the increased noise from over flights. Thus, under the formula, the landowner will be compensated for \$10,000 in damages (property value before the taking less fair market value without noise impacts) even though the actual property damages totaled \$30,000.

Other interpretations of the court's opinion are possible. The formula may be designed to prevent a landowner from

²⁰² See *id.* at *8. Significantly, the court determined that a permanent injunction could not be a valid remedy because federal law gave the United States government exclusive sovereignty of United States airspace. See *id.* at *12; see also *supra* Part IV.

²⁰³ See *Travis County Landfill Co.*, 1999 WL 644808 at *8. Cf. *United States v. Causby*, 328 U.S. 256, 261 (1946) (stating "[m]arket value fairly determined is the normal measure of the recovery. And that value may reflect the use to which the land could readily be converted, as well as the existing use.") (citation omitted).

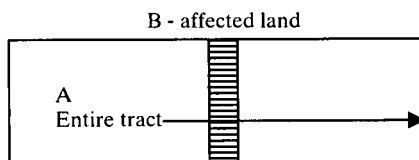
claiming damages beyond the immediate loss of the condemned land (or the diminution of value due to the taking of an easement), particularly when the remainder may still hold value. Two possible formulas might be considered:

X - Original appraised value²⁰⁴

Y - Current appraised value

(Formula 1) Damages = X-Y

(Formula 2) Damages = (B/A)(X-Y)



The representation is not necessarily limited to land, but could also be the property right lost as a result of the taking

The first formula measures the actual loss of value to the landowner as a result of the encumbrance, in this case, the aviation easement, regardless of the extent of harm to the property. The second formula, however, requires that the actual loss be limited to the proportion of the land affected. The second formula also assumes that Y, the current appraised value of the land, is less than X, the original appraised value. Otherwise, the formula produces a negative value; in other words, the landowner takes nothing. The second formula limits any noise impacts to B, or the area subject to the aviation easement or other condemned use. Such a formulation might more accurately reflect the loss of value because it limits damages specifically to those areas directly affected; the remainder presumably can continue in productive use without the impacts. The second formula, however, may not reflect other considerations that affect the value of the property to the landowner. In particular, it ignores the impact of noise on use and enjoyment of land and the extent to which sound waves might affect an entire tract.²⁰⁴ As other injuries from noise are considered, (B/A) in the formula approaches 100%, rendering the second formula into a mere restatement of

²⁰³ These formulas might lead to different results if X is the original purchase price and Y is either the current appraised value or the current market value. The original purchase price may be larger or smaller than the appraised value of the land at the time of purchase; thus using the original purchase price might overcompensate or undercompensate the landowner. An argument could be made, however that court should measure damages based on the actual price as a reflection of the original expectations of the parties to the contract.

²⁰⁴ See, e.g., *United States v. Causby*, 328 U.S. 256, 265 (1946).

the first, i.e., the measurement of the actual loss regardless of the portion of land directly affected.

Accurate calculation of damages is difficult because of the different variables that can affect valuation.²⁰⁵ Residential landowners may not collect full damages if they bought property subject to notice of existing airport operations or an existing avigation easement. On the other hand, a commercial developer would have no claim for damages when real estate is highly valued due to its location near air transportation. Nonetheless, developers may suffer economic harm in the form of lost opportunity because property values might have increased more rapidly without the presence of excess noise. Ultimately, such claims are speculative and difficult to measure.

VIII. THEORIES OF NUISANCE AND TRESPASS

Landowners have also sued airport operators and government agencies on tort theories of trespass and nuisance. Both causes of action vary across state jurisdictions and share roots in tort principles of foreseeability, causation and legal injury, and statutes of limitations/repose. Both claims also involve a careful balancing of the benefits and costs of the activity causing the alleged tort, particularly in the context of airport operations. Under standards of reasonableness, plaintiff landowners not only must demonstrate that the benefits of ceasing offending noise outweigh the discounted loss to their property, but they must also demonstrate that they are entitled to a remedy even though the airport activity is statutorily protected.

Trespass actions allege harm stemming from the physical invasion of one's property, either intentionally or negligently, when the invader does not have a right of access. Proving up physical trespass, as has been shown in Part VII in the context of takings claims, can be extremely difficult. Generally, an individual is liable for trespass if he intentionally enters land in possession of another, remains on the land, or fails to remove an intrusion which he has a duty to remove.²⁰⁶ Such conduct is classified into

²⁰⁵ See *supra* note 153 and accompanying text. It may be possible, however, to correlate noise impacts to lost property value (or opportunity cost if the appraised property value increases at a lower rate than similar property outside of noise-affected areas) if noise contour maps were overlaid on maps showing real estate valuations. Any resulting correlation through the overlay maps might more accurately demonstrate the relationship between noise and appraised value.

²⁰⁶ See RESTATEMENT (SECOND) OF TORTS § 158 (1963-1964 Main Vol.).

either continuing trespasses, in which the possessor suffers damage from an unprivileged presence on his property during the entire duration of the tortious conduct, or separate trespasses, in which the possessor only suffers damage caused in the short duration of each particular intrusion.²⁰⁷ An individual's conduct is not a trespass if it is privileged, either by the consent of the possessor, or by law.²⁰⁸ Aircraft flights above another's land may be trespassory if such flights enter into the "immediate reaches" of air space and such an intrusion "interferes substantially" with a person's use and enjoyment of land.²⁰⁹ Such protection does not extend to the edges of space, but is limited to the immediate reach of the affected property.²¹⁰ Protection against trespass is also denied unless there is an actual interference with a property right, as opposed to a potential or prospective interference.²¹¹

Even if an interference with a possessory right is not within the "immediate reaches" of land, the interference may create tort liability, on the basis of nuisance. Nuisance actions do not involve claims of physical invasion of property rights. Instead, landowners assert that excessive noise causes a compensable harm resulting from interference with the landowner's use and enjoyment of the property.²¹² Courts generally distinguish between public and private nuisances. A public nuisance is an unreasonable interference with a right common to the general public, the public peace, or conduct proscribed by statute.²¹³ A plaintiff must show that she suffered harm "of a kind different from that suffered by . . . the general public."²¹⁴ Under a public nuisance claim, public agencies may also sue on behalf of the general public, for example, where private landowners encroach

²⁰⁷ See *id.* § 158 cmt. m.

²⁰⁸ See *id.* § 158 cmt. e. Cf. *id.* § 192 (stating that an individual is privileged to enter the portion of land on which there is a "public highway," so long as such an entry is a reasonable use of the highway). A public highway can include "the air space through which aircraft are privileged to travel." *Id.* at cmt. d. Reasonable use of such a highway can depend on community usage and the public's needs, legislative enactment, or judicial decision. See *id.* at cmt. e.

²⁰⁹ See *id.* § 159.

²¹⁰ See *id.* at cmt. g (quoting Sir Edward Coke's maxim, *cujus est solum, ejus est usque ad coelum*); see also *supra* note 163 and accompanying text discussing *United States v. Causby*, 328 U.S. 256 (1946).

²¹¹ See RESTATEMENT (SECOND) OF TORTS § 159 cmt. k (1963-1964 Main Vol.).

²¹² See generally Stein, *supra* note 104.

²¹³ See RESTATEMENT (SECOND) OF TORTS § 821B (1963-1964 Main Vol.).

²¹⁴ *Id.* § 821C.

on airport land or otherwise interfere with aerial approaches to airports.²¹⁵

A private nuisance, on the other hand, "is a nontrespassory invasion of another's interest in the private use and enjoyment of land."²¹⁶ Private nuisance generally imposes liability only if the affected landowners suffer "significant harm, of a kind that would be suffered by a normal person in the community or by property in normal condition and used for a normal purpose."²¹⁷ Thus, the standard of care for determining the significance of noise impacts is whether normal persons in the community would regard the interference as intolerable, seriously annoying, or definitely offensive.²¹⁸ Liability is not imposed if "normal persons" would consider the interference merely annoying or disturbing, even if the plaintiff suffers greater subjective harm.²¹⁹ Greater damages may be available if a plaintiff can demonstrate that the interference with her property resulted from an "intentional interference" of her interest in the use and enjoyment of her land.²²⁰ To prove private nuisance, landowners must generally demonstrate that the gravity of the harm outweighs the utility of the tortfeasor's conduct, and that the harm itself is serious enough to subject the tortfeasor to potential liability if other landowners sue on similar claims.²²¹

In assessing the gravity of harm, courts may look to several factors, including: the extent of the harm involved; the character of the harm involved; the social value attached to the affected use or enjoyment; the suitability of the affected use and enjoyment for the locality; and the burden on the injured person of avoiding the harm.²²² These factors must be weighed against the utility of the conduct that allegedly causes the nui-

²¹⁵ See *id.*

²¹⁶ *Id.* § 821D.

²¹⁷ *Id.* § 821F.

²¹⁸ See *id.* § 821F cmt. d.

²¹⁹ See RESTATEMENT (SECOND) OF TORTS § 821F cmt. d (1963-1964 Main Vol.).

²²⁰ *But cf. Bieneman v. City of Chicago*, 864 F.2d 463, 468 (7th Cir. 1988) (noting in dicta that plaintiff could not establish intent or recklessness in creating noise pollution because noise was an unwelcome byproduct, not purposeful operation with the goal of creating noise. "[T]he proposition [that] to know of the adverse consequences, and to do nothing to palliate things, is to 'intend' that consequence . . . fails.").

²²¹ See RESTATEMENT (SECOND) OF TORTS § 826 (1963-1964 Main Vol.).

²²² See *id.* § 827.

sance.²²³ Using this balancing test, courts will generally find that a nuisance is unreasonable, and thus compensable, under limited circumstances: where the conduct offends common standards of decency;²²⁴ where the harm resulting from the invasion is greater than the landowner should be required to bear without compensation;²²⁵ where the tortfeasor can avoid causing the injury without undue hardship;²²⁶ or where the tortfeasor's conduct is unsuitable for the locality.²²⁷

In *Provident Mutual Life Insurance Co. v. City of Atlanta*, the United States District Court for the Northern District of Georgia addressed the issue of whether property owners on contiguous land could sue airports for public nuisance or trespass.²²⁸ The plaintiffs contended that the William B. Hartsfield Atlanta International Airport represented a nuisance as a result of high levels of noise, vibrations, and dust from over-flying planes.²²⁹ The court, however, stated that a "structure" constructed in accordance with the law, and authorized to conduct public transportation, could not be considered a nuisance unless it was improperly constructed or negligently operated, such that noise or pollution exceeded what would occur from its proper operation.²³⁰ Consistent with the balancing test suggested in Restatement (Second) of Torts § 826, the court appeared to conclude that because the airport's activities were authorized by law, and in the interests of the general public, the utility of the airport's conduct outweighed any harm caused to the landowners. The court determined that an entity that benefits the public could not be enjoined from engaging in operations.²³¹

The court's decision in *Provident Mutual* also limits the ability of individuals to sue airports for monetary damages on a nuisance theory, if the individuals are put on notice that noise is likely to increase. Courts would more than likely conclude that constructive notice has been given where construction has begun on a new runway or where the airport has published an ADP. Furthermore, even assuming that individuals do not re-

²²³ See *id.* § 828.

²²⁴ See *id.* § 829.

²²⁵ See *id.* § 829A.

²²⁶ See RESTATEMENT (SECOND) OF TORTS § 830 (1963-1964 Main Vol.).

²²⁷ See *id.* § 831.

²²⁸ 938 F. Supp. 829 (N.D. Ga. 1995).

²²⁹ See *id.* at 831.

²³⁰ See *id.* at 832-33.

²³¹ See *id.* at 835.

ceive notice, the level of noise must exceed what would normally be expected for airport operations for a nuisance theory to be a viable cause of action.

For the same reasons, the court determined that the statute of limitations precluded suit against the city because the increased noise and pollution that caused the harm should have been apparent to the plaintiff immediately after flights from the airport began operating in 1987.²³² The airport was a permanent facility with traffic patterns that did not significantly change since the occurrence of the original alleged injury to the plaintiff's property in 1987.²³³ Consequently, the court also dismissed the plaintiff's claim, stating that the plaintiff's right to sue "must be exercised within four years of the creation or increase of the nuisance if the harm is readily apparent."²³⁴

Provident Mutual demonstrates that if the private nuisance is a permanent nuisance, a landowner must file a claim before the relevant statute of limitations has run. If the private nuisance is a continuing nuisance, however, a landowner may be able to file suit at any time during the duration of the nuisance. The California Supreme Court, in *Baker v. Burbank-Glendale-Pasadena Airport Authority*²³⁵ addressed the issue of whether airport operations were a permanent nuisance that barred the plaintiff's claim under the statute of limitations. In *Baker*, the plaintiffs filed an inverse condemnation suit against the airport authority, alleging that noise impacts resulted in a nuisance.²³⁶ The trial court found that because the alleged nuisance was permanent, and the plaintiffs filed suit after the statute of limitations had run on their claim, the plaintiffs were barred from proceeding.²³⁷ The California Supreme Court held, however, that airport operations were the "quintessential continuing nuisance," and the statute of limitations did not apply.²³⁸ Such a continuing nuisance would allow a landowner to sue for each successive noise impact until the nuisance is abated. Damages,

²³² The Court determined that the statute of limitations had already run for both the nuisance and trespass causes of action. See *id.* at 834-36.

²³³ See *id.* at 835.

²³⁴ *Provident Mut. Life Ins. Co. v. City of Atlanta*, 938 F. Supp. 829, 836 (N.D. Ga. 1995).

²³⁵ *Baker v. Burbank-Glendale-Pasadena Airport Auth.*, 39 Cal. 3d 862, 705 P.2d 866, 869 n.4, 218 Cal. Rptr. 293 (Cal. 1985).

²³⁶ See *id.* at 868-69.

²³⁷ See *id.* at 869.

²³⁸ *Id.* at 873.

however, are limited to actual injury suffered prior to the commencement of each action.²³⁹

The court also discounted the airport's argument that it had a statutory privilege that protected it against nuisance suits. The court stated that the "airport operator's separate duty to reduce noise . . . is particularly compelling in the present case."²⁴⁰ The court noted that the California statute explicitly required the airport authority, as a proprietor, to make all reasonable efforts to reduce airport noise pollution.²⁴¹ Although flights to and from the airport were generally privileged under the federal preemption doctrine, the doctrine did not absolutely eliminate local responsibility for airport noise control.²⁴² The airport operator had an affirmative duty to minimize noise levels using mitigating measures such as natural noise buffers and barriers.²⁴³ Furthermore, state remedies through tort actions such as nuisance remained available against an airport proprietor even though federal law precludes direct regulation of airspace.²⁴⁴

Interestingly, local agencies have used the theory of nuisance offensively in instances where property impedes an airport's ability to function effectively. In *County of Westchester v. Town of Greenwich*,²⁴⁵ the County of Westchester filed a claim against various landowners, claiming that trees on their property constituted a public nuisance by blocking the airspace near an airport runway, thus limiting its usable length.²⁴⁶ The County had to show that the obstructive condition interfered with a right common to the general public.²⁴⁷ The County also had to demonstrate that: (1) the obstructive condition had a natural tendency

²³⁹ See *id.* at 870.

²⁴⁰ *Id.* at 872.

²⁴¹ See *Baker v. Burbank-Glendale-Pasadena Airport Auth.*, 705 P.2d 866, 873, (Cal. 1985).

²⁴² See *id.* at 872 (citing the proprietor exception in *City of Burbank v. Lockheed Air Terminal*, 411 U.S. 624 (1973)). Cf. *DiPerri v. Federal Aviation Admin.*, 671 F.2d 54 (1st Cir. 1982) (noting that the FAA could not be sued for conspiring with Port Authority to create a noise nuisance because aircraft noise abatement with respect to particular airports was primarily up to the local proprietor).

²⁴³ See *Baker*, 705 P.2d at 873.

²⁴⁴ See *id.* at 872; see also *Greater Westchester Homeowner's Ass'n v. City of Los Angeles*, 603 P.2d 1329, 1335-36 (1979), *cert. denied*, 449 U.S. 820 (1980) (holding that local government could impose liability on airport proprietor for property damages stemming from nuisance even though federal law preempted local police power).

²⁴⁵ *County of Westchester v. Town of Greenwich*, 76 F.3d 42 (2d Cir. 1996).

²⁴⁶ See *id.* at 43.

²⁴⁷ See *id.* at 45.

to create danger and inflict injury upon persons or property; (2) the obstructive condition represented a continuing danger; (3) the use of the land was unreasonable or unlawful; and (4) the nuisance was the proximate cause of the injuries.²⁴⁸ Citing *Griggs v. Allegheny County*,²⁴⁹ the court noted that the county was responsible for securing air easements necessary for airport operations, including purchasing land around the airport.²⁵⁰ The court also noted that the County, when it purchased the airport from the federal government to convert it from military to civilian use, acquired an airport "with an inherent potential for future limits on flight operations."²⁵¹ The court held that the airport operator had the burden to obtain the necessary land to maintain its operations.²⁵²

IX. AN ECONOMICALLY BALANCED APPROACH TO AIRPORT CAPACITY

A survey of the different legal theories behind suits against airport operators reveals that the law does not consistently enforce private property rights against airport operators and government agencies. The federal government has shown a clear desire to preserve the economic success of the air transportation system, and courts have generally resisted efforts by landowners to get recovery for increased noise impacts. Neither the federal government nor the courts have designed a bright-line balancing test that effectively protects the rights of property owners while ensuring the overall efficiency of the air transportation system. Under the current system, the essential issue remains whether the rights and interests of property owners have been adequately addressed in airport mitigation plans. Additionally, regardless of whether novel legal theories are developed under the current system, capacity problems will only intensify as airports continue to expand in the future. Any current solutions would not be sufficient to handle future growth.

The current legal framework has been unable to balance the interests of airport development with the interests of property owners for several reasons.²⁵³ First, geographic areas have dif-

²⁴⁸ See *id.*

²⁴⁹ *Griggs v. Allegheny County*, 369 U.S. 84 (1962); see also *supra* Part VII.

²⁵⁰ See *Westchester*, 76 F.3d at 45.

²⁵¹ See *id.* at 46.

²⁵² See *id.* at 47.

²⁵³ See Creswell, *supra* note 2, at 1 (recommending the development of a comprehensive system of planning with better allocation of federal, state, and local

ferent local zoning laws that affect airport development in different ways. Federal law does not necessarily preempt such inconsistent local laws, particularly when these laws fit within the "proprietary exception," or are encouraged under a congressional policy of multi-jurisdictional cooperation among federal and state governments. Second, courts have been unwilling to require airport developers to adopt less burdensome alternatives to development plans, because federal and state laws mandating environmental impact studies require only limited due process consideration. Third, courts differ in their willingness to grant tort remedies to landowners that sue for damages stemming from airport noise. Such noise impacts must produce foreseeable and calculable injuries before courts are willing to grant damages for government takings. Common law claims of nuisance and trespass fail when landowners do not suffer noise impacts beyond what would be foreseeable, reasonable, and proper in airports. Landowners lose the right to sue for compensation if they exceed a statute of limitations period. Courts have split on whether to grant damages when a landowner should have used reasonable diligence to identify potential noise sources, or when a landowner acquiesces to changes in airport operations.

An efficient solution must be both economically feasible and sufficiently curative to ensure that property owners do not suffer excessive economic loss and to ensure that the air transportation system can accommodate future growth. Rather than attempting to balance artificially these equally important rights, the federal government should focus on incentivizing economically efficient solutions that will ensure the continued growth of air capacity while minimizing the impacts of noise on local communities. In particular, the federal government should facilitate three solutions to the airport capacity problem. First, the government should provide incentives for the development of "wayports" located in relatively less populated areas for the purpose of hubbing connecting passengers. Second, the government should provide incentives to state and local governments to convert former military bases for civilian use. Finally, the government should route all "pure" cargo traffic through smaller regional hubs rather than through passenger airports.

resources and responsibilities to meet the long-term needs of the transportation system).

A policy of developing "reliever" airports to receive all traffic that is "connecting-only" underlies all of these policy recommendations. Connecting passengers do not have to be routed to airports in high population density areas because the connections are only temporary stops along the route to the final destination. The location of the stops is immaterial to the traveler. The hub concept would be equally workable if an airport operates in a remote area, because transporting large numbers of people through a small number of points generates economic efficiencies. At the same time, the transportation system can retain current airport capacity. The economic benefits to local municipalities would be retained because airlines could continue to route disembarking passengers, who provide the greatest amount of economic benefit, to destination airports. Cargo, in particular, can be routed through less congested points until it reaches its final destination. Cargo traffic, unlike passenger traffic, does not have to be scheduled during peak times to maximize load factors. Cargo does not produce the economic efficiencies generated by compressed scheduling. Existing facilities and space that is currently used for cargo processing can be more efficiently used for passenger deplanements.

Understandably, the cost of developing new facilities can be prohibitive. Additionally, airlines would likely sustain short-term losses as scheduling at high-capacity airports is spread out across the new reliever airport network. Rather than accept these losses, airports and airlines might be perfectly willing to absorb the combined transactional costs of litigation, regulatory fines, property declines, and loss of good will in exchange for the status quo of expanding overburdened hubs. Wayports may not have been a historically acceptable solution because the costs of absorbing litigation are significantly less than building an airport system designed solely for connecting passengers. Clearly, in terms of economic development, businesses would still want existing hubs. Indeed, the location of a major international airport has been a major factor in many businesses' decisions to move to a particular city. For example, large amounts of money are spent on adding capacity to existing airports. For instance, on December 15, 1999, the Dallas and Fort Worth City Councils in Texas approved over \$2 billion to expand Dallas/Fort Worth International Airport.

Despite these drawbacks, wayports or "reliever" airports would provide a number of social benefits, including:

- Preserving the rights of local property owners in the value of their land, and use and enjoyment of their property;
- Decreasing the demand pressure on the overburdened airport system;
- Preserving local autonomy in land use planning and zoning;
- Minimizing noise impacts by decreasing flights in high density population areas; and
- Ensuring future economic prosperity.

The use of remote cargo airports, reliever airports, or wayports would likely produce a mixed bag of economic benefits and costs that should be balanced when assessing the feasibility of new airport construction. The following non-exclusive list suggests that in terms of overall economic impact, the benefits of such construction might outweigh the costs.

Benefits	Costs
Savings in construction costs and taxes through bond issues to airports and local governments.	Conversion of existing military air bases for civilian use, and other costs of construction.
Decreased noise in larger hub communities.	Costs of acquiring sufficient land suitable for airport use, including acquiring property interests and securing necessary zoning approvals.
Potential for "S-curve" increases in market share and revenue as a result of increased capacity.	Increased noise in remote communities in which the airports are constructed
Decreased litigation (either through lower number of lawsuits filed or by increased likelihood of pre-trial disposition.*	Loss of hubbing efficiencies for airlines at large hubs.
Preservation of existing economic development benefits by retaining hub operations for disembarking passengers.	Increased strains on the ATC.
Economic development opportunities at reliever airports, particularly by combining industrial park development with airport development.	Costs of building necessary freight facilities.

* Such "litigation" savings are likely to occur because existing military airfields typically have acquired the necessary easements, and landowners near the military bases already have notice of probable noise impacts. Additionally, less lawsuits would be filed because the number of people potentially affected by noise in remote areas is likely to be lower than the number of people living near airports in large urban centers.

Clearly, some of the benefits described above would take time to produce any net gain. Before these gains could be realized, short-term costs could be significant. For instance, conversion of air bases would require significant resources, as would acquiring the necessary land for airport development purposes. Some cost factors can probably be excluded using a common sense approach: for example, loss of economic development in larger hub cities is unlikely when disembarking passengers form the core of this economic development, and the proposed wayport plan would continue to route disembarking passengers to existing airports. Any losses would likely stem from decreased landing fees as air carriers transfer their operations to reliever airports. Regional variations might also affect the extent of benefits and costs. For example, the costs of converting certain military air bases may be higher or lower depending on the existing infrastructure such as runways, waste management, and road access. Similarly, noise impacts on smaller communities may vary depending on the population's location, size, and concentration near the airport. These variations should be carefully weighed to determine whether the benefits of constructing remote airports truly outweigh the costs.

Austin-Bergstrom International Airport is an excellent example of how a former military airbase can be converted to civilian use.²⁵⁴ The City of Austin's former airport, Robert Mueller Municipal Airport, reached the limits of available capacity and caused noise impacts for nearly 20,000 people. Because the airport was landlocked on 711 acres in the middle of Austin, there was no room for expansion. The city decided that the former Bergstrom Air Force Base, decommissioned by the Base Realignment and Closure Commission, provided an ideal location for the development of a new airport. The site already had runways and other facilities, and was located in a less populated area of Austin eight miles from the city. The city budgeted \$585 million for the airport's construction, out of which one fourth of the

²⁵⁴ See City of Austin, Austin-Bergstrom International Airport Project Summary, (last visited Feb. 6, 2000) <<http://www.ci.austin.tx.us/newairport/proj-sumnr.htm>>. Alliance Airport is another example of a reliever airport that has generated significant economic development impact. Alliance Airport, north of Fort Worth, operates as a purely industrial airport dedicated to cargo transportation and industrial park development. Alliance is in a remote location of Fort Worth, with sufficient land to accommodate any necessary expansion. See Alliance Airport, (last visited Feb. 5, 2000) <<http://www.hillwood.com/prop/aa.cfm>>.

cost was funded by the FAA. In May 1993 voters approved \$400 million in revenue bonds to build Austin's new airport at Bergstrom Air Force Base. In October 1993, the former military base reverted to the City of Austin, and construction of a south access road and airport rescue station commenced on March 6, 1995.²⁵⁵ Planners utilized an existing 12,250 foot runway and added a second, shorter 9,000 foot runway parallel to the first, allowing simultaneous landings and takeoffs. The city projected that reusing the existing runway saved 75 percent of the cost of building a new one.²⁵⁶ Austin also planned the redevelopment for the formerly operational Robert Mueller Municipal Airport. An original version of the master plan recommended the creation of a mixed-use district, a state office urban campus complex, and residential areas.²⁵⁷

Using Austin as a model, Congress should provide incentives to private and public developers to build airports in remote areas or expand existing underutilized airfields.²⁵⁸ Congress has already addressed the issue of constructing new hub airports in the Airport and Airway Improvement Act.²⁵⁹ Under the Act, in order for the Secretary of Transportation to approve an agency's project grant application to construct a new hub airport, the Secretary must submit a report to Congress analyzing the anticipated impact of a new hub on landing fees to be charged to air carriers at the new facility, air transportation to be provided in the geographic area of the new airport, and the availability and cost of providing air transportation to rural areas in the region.²⁶⁰ The statute expressly applies to new hub airports that are expected to have at least 0.25 percent of total annual enplanements in the United States. Although the statute provides

²⁵⁵ See City of Austin, Austin-Bergstrom International Airport Milestones, (last visited Feb. 6, 2000) <<http://www.ci.austin.tx.us/newairport/abiamil.htm>>.

²⁵⁶ See City of Austin, Austin-Bergstrom International Airport Project Summary, (last visited Feb. 6, 2000) <<http://www.ci.austin.tx.us/newairport/projsumnr.htm>>.

²⁵⁷ See City of Austin, Redevelopment of Robert Mueller Municipal Airport, (last visited Feb. 6, 2000) <<http://www.ci.austin.tx.us/mueller/redevelop.htm>>.

²⁵⁸ See generally Donald W. Tuegel, *Note, Airport Expansions: The Need for a Greater Federal Role*, 54 WASH. U.J. URB. & CONTEMP. L. 291 (1998) (suggesting that the federal government play a greater role in encouraging locally-derived solutions that balance all competing interests); Christopher S. Marchese, *The Dormant Commerce Clause and Airport Noise: A Case for Narrow Judicial Review*, 44 BAYLOR L. REV. 645 (1992) (arguing that the Congress is better able to properly balance the needs of different constituencies with respect to noise).

²⁵⁹ 49 U.S.C. § 47106(e) (1999).

²⁶⁰ See *id.*

some guidance in encouraging new airport construction, more financial and regulatory incentives are required to encourage government and private developers to build remote airports.

In addition to the construction of new facilities, other possible solutions would help to ameliorate the effects of noise on communities surrounding airports. Possible alternatives include:

Airport Master Planning to ensure a unified intergovernmental approach consistent with overall municipal development.

Such planning can stop problems before they start by allowing all interested parties to participate in the decision-making process. Additionally, effective planning can minimize incompatible land uses, streamline the zoning process, and balance environmental and economic concerns.

Creation of short haul routes in a point-to-point system coexisting with the current hub and spoke system.

Assuming that reliever airports are too expensive to construct, existing underutilized airports can easily be adapted to handle short haul, point-to-point flights. Southwestern Airlines has demonstrated the success of this strategy by flying point-to-point routes out of Love Field in Dallas, Texas.

Airport acquisition of easements and other rights-of-way.

Airport authorities can avoid liability for nuisance or trespass by acquiring easements over surrounding property. By compensating landowners in exchange for property rights, future uncertainties and litigation can be significantly reduced. The federal government should encourage mitigation programs by providing tax incentives to private operators and transportation funding to public operators to compensate landowners in order to avoid future problems.

More stringent environmental impact standards.

Noise impacts can be reduced if airports comply with more demanding environmental standards. Stricter standards may encourage more effective land use planning by forcing airports to take surrounding property interests into account. In order to avoid liability for failure to comply with environmental standards, airports may be more likely to structure their operations to minimize such impacts.

Spreading the burden of mitigation to tenants of airport property, including airlines.

One commentator has suggested that the current transportation system places too great a burden on local governments to

mitigate noise.²⁶¹ These local governments are not in the best position to design an efficient system because of the importance of airports' economic development impacts, and the tendency to protect local revenues at the expense of other concerns. To avoid this, liabilities from noise impacts should be distributed among governments at all levels and private businesses such as airlines, fixed base operators, and businesses located on airport property. Fear of liability would incentivize all parties to design effective solutions that would minimize these risks.

Mixed-use development related to transportation that would increase the value of surrounding land despite the increase in noise.

Multi-modal transportation, free trade zones, industrial parks, warehousing districts, and other novel solutions would maximize the value of property surrounding airports. Efforts should be made to zone particular areas in ways that complement and improve the value of airports. At the same time, property put to the correct uses will maximize local, state, and national economic gain while increasing the value of the property itself.

²⁶¹ See Creswell, *supra* note 2, at 6.



Articles

