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AIRPORT NOISE: DID THE AIRPORT SAFETY AND NOISE ABATEMENT ACT OF 1979 SOLVE THE PROBLEM?

ROBERT J. ROCKEtt

THE INTRODUCTION OF jet airplanes into commercial aviation in 1959\(^1\) marked the beginning of an era of conflict between the aviation industry and airport neighbors.\(^2\) Today, approximately five million United States airport neighbors reside within areas affected by an average day-night sound level of sixty-five decibels or greater.\(^3\) The Environmental Protection Agency estimates that noise levels in excess of forty-five decibels are sufficient to interfere with indoor activities.\(^4\) Airport noise reduces the value of residential real estate in the area surrounding airports.\(^5\) Additionally, airport noise

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\(^3\) Federal Aviation Administration, *Alternatives Available to Accelerate Commercial Aircraft Fleet Modernization* 10 (1986) [hereinafter cited as FAA, Commercial Fleet Modernization]. A 1979 study prepared for the Environmental Protection Agency (EPA) had projected that only 3.8 million airport neighbors would be subjected to airport noise levels in excess of 65 decibels (dB). Environmental Protection Agency, *Noise Exposure of Civil AirCarrier Airplanes Through the Year 2000* 4-17 (1979). The shortfall in the 1979 estimate results primarily from increased air carrier operations at U.S. airports. FAA, Commercial Fleet Modernization, *supra*, at 10.


\(^5\) Policy Alternatives, *supra* note 4, at 130. "[N]oise uses up a real resource—quiet. When noise is 'dumped' on property, the productivity of that property is affected in absolute and relative terms. Property affected by noise of high intensity is less productive for virtually any use than comparable quiet property, and its
has a human cost. Human exposure to high noise levels may cause feelings of annoyance and anger sufficient to cause ill health in some persons. Naturally, airport neighbors who are subjected to high levels of noise have sought both political and judicial remedies to their problems. This comment includes a brief summary of judicial and legislative activity prior to the Airport Safety and Noise Abatement Act of 1979, a more detailed analysis of judicial decisions subsequent to 1979, and finally, a critique of the overall regulatory scheme.

Two events signalled the beginning of extended judicial and legislative activity that resulted in the current regulatory system. First, the Supreme Court considered the issue of redressing injuries resulting from commercial airport noise in the 1962 case of *Griggs v. Allegheny County.* Second, Congress initiated regulation of airport noise in 1968 by amending the Federal Aviation Act. The 1968 amendment authorized the Federal Aviation Administration (FAA) to promulgate rules for the abatement of aircraft noise.

The *Griggs* case provides a legal framework that involves three entities in controlling airport noise. First, the federal government provides a minimum level of noise abate-

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6 Kryter, *Extraauditory Effects of Noise,* in *Effects of Noise on Hearing* 531-45 (D. Henderson, R. Hamerick, D. Dosnajih, J. Mills eds. 1976). Annoyance value of a particular noise varies between different people. Factors affecting individual response to noise include previous experience, prejudice toward a noise, the startle resulting from a noise and the emotional health of the individual. *Environmental Protection Agency, 7 Public Hearings on Noise Abatement and Control* 169 (1971) (statement of Dr. John Dougherty). Noise in general living environment causes annoyance because the noise disrupts oral communications and prevents sleep. Noise levels of 55 to 75 dB may be sufficient to interfere with speech communication and sleep, depending upon the duration of the noise. Kryter, *supra,* at 544.


9 Id.
Comment regulation by restricting noise at the source (the airplane).\textsuperscript{10} FAA regulations require airplanes to meet certain construction and equipment specifications that reduce the level of noise emissions.\textsuperscript{11} The federal government purports to require noise levels that are economically reasonable and technologically practicable while disclaiming liability for unacceptable airport noise.\textsuperscript{12} The Supreme Court has held that the federal government assumes no liability for unacceptable airport noise.\textsuperscript{13}

The second entity concerned with reducing airport noise is the local government within the airport vicinity. However, a pervasive scheme of federal regulation preempts state and local government efforts to regulate airport or airplane operations that affect airport noise.\textsuperscript{14} Congress alleviated this problem somewhat with the Airport Safety and Noise Abatement Act of 1979 (ASNAA). The ASNAA provides federal noise abatement grants to airport proprietors.\textsuperscript{15} These grants are available only if a noise abatement plan is developed through consultation with local governments and public agencies.\textsuperscript{16} The consultation process at least provides local governments a forum for bringing noise complaints to the attention of the airport proprietor.

Finally, the regulatory scheme recognizes airport proprietors as the third entity involved in reducing airport noise.\textsuperscript{17}

\textsuperscript{11} 14 C.F.R. § 36 (1985). See infra notes 83-86 and accompanying text.
\textsuperscript{12} 14 C.F.R. § 36.5 (1985). The applicable regulations provide; Pursuant to 49 U.S.C. § 1431(b)(1), the noise levels in this part have been determined to be as low as is economically reasonable, technologically practicable, and appropriate to the type of aircraft to which they apply. No determination is made . . . that these noise levels are . . . acceptable . . . for operation at . . . any airport.
noise. Airport proprietors can exercise a variety of options to minimize airport noise.\textsuperscript{17} Airport proprietors also assume sole liability for damages to airport neighbors from airport noise.\textsuperscript{18} The most recent Congressional restriction of airplane noise emissions, the ASNAA, provided for a phased compliance with national noise measurement guidelines.\textsuperscript{19} The compliance period expired January 1, 1985, so many of the benefits of the ASNAA have been substantially realized at the present time.\textsuperscript{20}

I. DEVELOPMENTS IN AIRPORT NOISE PRIOR TO 1980

A. Cases and Legislation Prior to 1970

In the 1946 case of \textit{United States v. Causby},\textsuperscript{21} the Supreme Court rejected the common law doctrine that ownership of land extended to the periphery of the universe.\textsuperscript{22} In \textit{Causby}, United States military aircraft took off from a nearby airport and passed less than seventy feet over the top of the plaintiff's house and chicken barn.\textsuperscript{23} The plaintiff alleged that the noise and lights from the military aircraft rendered the chicken barn unuseable for commercial chicken farming.\textsuperscript{24} The Supreme Court held that flights over private land so low and frequent as to be a direct and immediate interference with the enjoyment and use of the land constituted a taking compensable under the fifth

\begin{footnotesize}
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\item\textsuperscript{17} \textit{Id.} Airport proprietors are privileged to take any action to abate airport noise unless the actions are unreasonable, discriminatory or impinge on interstate commerce. \textit{British Airways Board v. Port Authority, 437 F. Supp. 804 (S.D.N.Y. 1977).}
\item\textsuperscript{18} \textit{City of Burbank}, 411 U.S. at 624.
\item\textsuperscript{20} \textit{Id. See also 14 C.F.R. § 91.303 (1985).}
\item\textsuperscript{21} 328 U.S. 256 (1946).
\item\textsuperscript{22} \textit{Id.} at 260-61. The Court reinforced its holding with the following passage: "The air is a public highway, as Congress has declared. Were that not true, every transcontinental flight would subject the operator to countless trespass suits. Common sense revolts at the idea." \textit{Id.} at 261.
\item\textsuperscript{23} \textit{Id.} at 258.
\item\textsuperscript{24} \textit{Id.} at 259.
\end{itemize}
\end{footnotesize}
amendment.\textsuperscript{25}

In the 1962 case of \textit{Griggs v. Allegheny County},\textsuperscript{26} the petitioner complained that commercial aircraft traffic from the Greater Pittsburgh Airport caused noise and vibration that forced the petitioner from his home.\textsuperscript{27} The Supreme Court considered whether Allegheny County as promoter and owner of the airport, the air carrier, or the Civil Aeronautics Administration should be liable for damages to the petitioner.\textsuperscript{28} The Court held that Allegheny County was solely liable for noise related damages noting that the owner controlled the airport location and the length and direction of the runways.\textsuperscript{29} The Court further reasoned that these factors put the airport owner in the best position to determine what navigational easements were necessary for airport operation.\textsuperscript{30}

Increasing air traffic during the 1960's intensified the airport noise problem and generated congressional concern for protecting the public from the effects of airport noise.\textsuperscript{31} In 1968 Congress amended the Federal Aviation Act authorizing the FAA to promulgate economically reasonable and technologically practicable noise standards.\textsuperscript{32} The 1968 amendment to the Federal Aviation Act shortly preceded an explosion of legislation and litigation as airport neighbors scrambled to find relief and protection from the airport noise problem.


\textsuperscript{26} 369 U.S. 84 (1962).

\textsuperscript{27} \textit{Id.} at 85. \textit{See also} Dygert, \textit{An Economic Approach to Airport Noise}, 30 \textit{J. AIR L. \\& COM.} 207 (1964); Russell, \textit{Recent Developments in Inverse Condemnation of Airspace}, 39 \textit{J. AIR L. \\& COM.} 81 (1973).

\textsuperscript{28} \textit{Griggs}, 369 U.S. at 89.

\textsuperscript{29} \textit{Id.}

\textsuperscript{30} \textit{Id.}


\textsuperscript{32} \textit{Amendment to the Federal Aviation Act of 1958, supra} note 31.
B. Developments Between 1970 and 1979

1. Federal Pre-emption: Can Local Governments Regulate Airport Noise?

The Supreme Court addressed the issue of whether a local government could legislatively restrict airport noise in *City of Burbank v. Lockheed Air Terminal, Inc.* Plaintiffs sought an injunction against enforcement of an ordinance passed by the City of Burbank prohibiting jet aircraft traffic at the Hollywood-Burbank Airport between 11 p.m. and 7 a.m. The Court relied largely on the legislative history of the Noise Control Act of 1972 to conclude that FAA control over airport noise preempts state and local control. This legislative history also provided a basis for limiting the *Burbank* holding to local government regulation of privately owned airports.

*Air Transport Association v. Crotti* was the first case to recognize an airport proprietor's right to control the service provided to airplanes using the facility. *Crotti* involved a California statute requiring airports to limit the

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54 Id. at 625.
55 Id. at 633-37. "State and local governments are pre-empted from establishing or enforcing noise emission standards for aircraft unless such standards are identical to standards prescribed under the Noise Control Act of 1972." S. REP. No. 1160, 92nd Cong., 2d Sess. 10 (1972). The Supreme Court also cited the legislative history of the Amendment to the Federal Aviation Act of 1958 to Require Aircraft Noise Abatement Regulation. *Burbank* 411 U.S. at 635; see also supra note 31-32. Secretary of Transportation Boyd stated in a letter to the Committee on Commerce that the Federal Government pre-empted local noise control legislation and that the Amendment to the Federal Aviation Act would expand the Federal Government's role in the already pre-empted area. S. REP. No. 1353, 90th Cong., 2d Sess. 6 (1968).
56 *Burbank*, 411 U.S. at 635 n.14. The Court referred to the legislative history of the Amendment to the Federal Aviation Act of 1958 to Require Aircraft Noise Abatement Regulation as a basis for the language that became the airport proprietor exception. Id. "[T]he proposed legislation will not affect the rights of a State or local public agency, as the proprietor of an airport, from issuing regulations or establishing requirements as to the permissible level of noise which can be created by aircraft using the airport." S. REP. No. 1353, 90th Cong., 2d Sess. 6 (1968) (quoting a letter from Secretary of Transportation Boyd dated June 22, 1968).
58 *Crotti*, 389 F. Supp. at 58.
noise exposure of surrounding residential communities. The statute suggested several means of reducing noise, but the airport proprietor was privileged to implement the most efficient and effective method. The \textit{Crotti} court reasoned that the right of the airport operator to control airport use was a necessary consequence of being liable for damages caused by airport noise. The airport proprietor could implement noise control procedures so long as the methods used were not unrealistic, arbitrary or unreasonable.

\textit{British Airways Board v. Port Authority} involved an attempt to prevent test flights of the Supersonic Concorde at John F. Kennedy Airport in New York. The court recognized the Port Authority's right as airport proprietor to use reasonable, non-arbitrary, and nondiscriminatory rules to define permissible levels of aircraft noise. The Port Authority opposed Concorde test flights even though the plane was capable of meeting noise standards that the Port Authority had applied to all other aircraft for twenty years. The court found that the Port Authority actions were unreasonable, arbitrary, and discriminatory and dissolved the ban on Concorde flights.

\textit{Santa Monica Airport Association v. City of Santa Monica} and \textit{National Aviation v. City of Hayward} are two California district court cases that upheld airport proprietor restrictions. The City of Santa Monica prohibited airplane take offs between 11:00 p.m. and 7:00 a.m. and imposed a

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59 \textit{Id.} at 61.
60 \textit{Id.}
61 \textit{Id.} at 63-64.
62 \textit{Id.} at 65.
64 \textit{British Airways Board}, 564 F.2d at 1004.
65 \textit{Id.} at 1011.
66 \textit{Id.}
67 \textit{Id.} at 1011-12.
noise level restriction on all aircraft using the airport. The City of Hayward prohibited airplanes exceeding a certain noise level from taking off between 11:00 p.m. and 7:00 a.m. Both district courts balanced the effects of the respective ordinances on interstate commerce against the local interest supporting the legislation and ruled in favor of the local controls. However, the Santa Monica court did strike down an ordinance banning all jets from the airport. The court found that this ordinance discriminated between jet airplanes and propeller aircraft with the same noise rating.

2. Litigation Issues: Causes of Action and Damages for Landowners

The plaintiffs in Causby and Griggs sought compensation for a governmental taking of property under the fifth and fourteenth amendments to the United States Constitution. This type of cause of action, commonly referred to as inverse condemnation, developed into one of the two significant avenues for landowner redress from airport noise. However, lower federal courts introduced a significant restriction on inverse condemnation actions in the 1962 case of Batten v. United States.

51 Santa Monica, 481 F. Supp. at 922-34.
52 Haywood, 418 F. Supp. at 419.
54 Santa Monica, 481 F. Supp. at 943-44.
55 Id.
56 See supra notes 21-30 and accompanying text.
57 BLACK'S LAW DICTIONARY 740 (5th ed. 1979) defines inverse condemnation as a cause of action against the government agency to recover the value of property taken by the agency though no formal exercise of the power of eminent domain has been completed. Id. When a landowner has been deprived of an essential element of his relationship to that land by the action of a government entity, he should be compensated whether or not the government brings an action for condemnation. Martin v. Port of Seattle, 64 Wash. 2d 309, 313, 391 P.2d 540, 544 (1964), cert. denied, 379 U.S. 989 (1965); see also Bauman, The Supreme Court, Inverse Condemnation and the Fifth Amendment: Justice Brennan Confronts the Inevitable in Land Use Controls, 15 Rutgers L.J. 15 (1983).
59 306 F.2d 580 (10th Cir. 1962).
In *Batten*, the plaintiff complained of noise and vibrations from military jet operations that caused windows and dishes to rattle inside the plaintiffs' home.\(^60\) The noise occurred not from direct overflights but from engine idling during pre-flight check procedures.\(^61\) The *Batten* court held that a taking could occur only if the plaintiff was actually displaced from space within which he was entitled to exercise dominion.\(^62\) The court reasoned that direct overflights caused displacement and, thus, distinguished *Causby* and *Griggs* from *Batten*.\(^63\)

Federal courts generally follow the *Batten* line of reasoning.\(^64\) Also, at least one state court adopted the *Batten* requirement that overflights are a precondition of an inverse condemnation action.\(^65\) However, some other state courts refused to make the rather insignificant distinction\(^66\) of whether substantial interferences with property...
result from direct or indirect overflights.\textsuperscript{67} Damages in an inverse condemnation action are limited to diminution of property values.\textsuperscript{68}

The second alternative for redress against airport proprietors is a cause of action for nuisance.\textsuperscript{69} Nuisance arises from a disturbance of one in possession of his property that renders use of such property uncomfortable.\textsuperscript{70} Initially, some jurisdictions held that federal pre-emption prevented nuisance recoveries.\textsuperscript{71} Even in jurisdictions that allowed recovery of money damages on the nuisance theory, federal pre-emption precluded equitable suits for injunction under the same theory.\textsuperscript{72} Courts reasoned that granting injunctive relief under a nuisance theory amounted to imposing the very type of local regulation construing a 'taking' . . . . We are unable to accept the premise that recovery for interference . . . should depend upon anything as irrelevant as whether the wingtip of the aircraft passes through an inch of the plaintiff's land. Plaintiffs are not seeking recovery for a technical trespass, but for a combination of circumstances [caused] by nearby flights." \textit{Id.}

\textsuperscript{67} Alevizos v. Metropolitan Airports Commission, 216 N.W.2d 651 (Minn. 1974) (Minnesota court upheld an inverse condemnation action involving landowners adjacent to, but not directly under, airport flight path); Martin v. Port of Seattle, 64 Wash. 2d 309, 391 P.2d 540 (1964), \textit{cert. denied}, 379 U.S. 989 (1965); Thornburg v. Port of Ireland, 223 Or. 178, 376 P.2d 100 (1962) (holding that the government is liable for airport activities on its own land that disturb the use of adjoining lands even in the absence of direct overflights).

\textsuperscript{68} United States v. Causby, 328 U.S. at 256 (1946); \textit{see also} Martin v. Port of Seattle, 64 Wash. 2d 309, 391 P.2d 540 (1964) (inverse condemnation damages are measured by injury to market value alone); Aaron v. City of Los Angeles, 40 Cal. App. 3d 471, 115 Cal. Rptr. 162 (Cal. Ct. App. 1975) (municipal airport operator liable only to the extent the landowner can show a measurable reduction in market value due to operation of the airport); Adams v. County of Dade, 335 So. 2d 594 (Fla. Dist. Ct. App. 1976) (plaintiff failed to demonstrate diminution of property value where value increased due to inflation).

\textsuperscript{69} Greater Westchester Homeowners' Association v. City of Los Angeles, 26 Cal. 3d 86, 603 P.2d 1329, 160 Cal. Rptr. 733 (1979). \textit{See infra} notes 74-78 and accompanying text.

\textsuperscript{70} \textit{See} \textit{BLACK'S LAw DICTIONARY} 961 (5th ed. 1979).


\textsuperscript{72} \textit{See} Luedtke v. County of Milwaukee, 371 F. Supp. 1040 (E.D. Wis. 1974).
prohibited by the Supreme Court in *Burbank*.

In 1979, the California Supreme Court decided *Greater Westchester Homeowner’s Association v. City of Los Angeles*. The *Greater Westchester* plaintiffs alleged that noise created by jet aircraft at Los Angeles International Airport interfered with person to person communication giving rise to inconvenience, discomfort and emotional distress. Plaintiffs sought damages for these injuries under a nuisance theory in addition to diminution of property value under an inverse condemnation theory. The California court held that federal pre-emption did not bar the nuisance cause of action. Also, the *Greater Westchester* decision marked the first instance where a court allowed recovery for personal injuries in addition to diminution of property value in an airport noise suit.

3. **Legislative Actions**

While airport neighbors sought recoveries from airport operators through the courts, Congress and the FAA took steps to abate noise at its source, the airplane. The Noise Control Act of 1972 introduced the Environmental Protection Agency (EPA) to the regulatory scheme. The 1972 Act provided that the EPA should propose aircraft noise regulations for FAA consideration. Although the Act did not require the FAA to adopt EPA proposed regulations, it did require both the proposed regulations and

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73 Id. at 1044; see generally, Allegheny Airlines v. Village of Cedarhurst, 238 F.2d 812 (2d Cir. 1956)(nonproprietor local government enjoined from enforcing unnecessary noise ordinance against airplanes flying into John F. Kennedy Airport because enforcement would necessarily affect flight paths); American Airlines, Inc. v. Town of Hempstead, 398 F.2d 369 (2d Cir. 1968)(nonproprietor local government ordinance prohibiting air flights at altitudes lower than one thousand feet is federally pre-empted).


75 26 Cal. 3d at 91, 603 P.2d at 1331, 160 Cal. Rptr. at 734.

76 Id.

77 26 Cal. 3d at 100, 603 P.2d at 1336, 160 Cal. Rptr. at 739.

78 26 Cal. 3d at 100-02, 602 P.2d at 1336-37, 160 Cal. Rptr. at 740-41; see also Bennett, supra note 37 at 481-83.


80 Id.
FAA responses be published in the Federal Register.\(^8^1\) This requirement supposedly prevented the FAA from ignoring EPA proposals.\(^8^2\)

The FAA and EPA collaborated in 1977 to amend the FAA regulation governing aircraft noise standards.\(^8^3\) The 1977 amendment increased the minimum level of federal noise protection by reducing the allowable level of noise emissions for aircraft designed after November 5, 1975.\(^8^4\) In addition to tightening noise emissions standards on new design aircraft, the FAA promulgated regulations to limit the noise emissions on the existing carrier fleet.\(^8^5\) The new standards required an estimated 1600 aircraft which were designed prior to 1969 and exempt from the 1969 noise standards to comply with the 1969 regulation.\(^8^6\) Implementing the required new technology involved a phase-in of quieter aircraft or a retooling of existing aircraft.\(^8^7\) The new FAA regulation created a

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\(^8^1\) Id.

\(^8^2\) The required publication of EPA proposed regulations and FAA responses reflected Congressional belief that the importance of noise abatement differed greatly between the two agencies. Section 2 of the Noise Control Act of 1972, Pub. L. 92-574, 86 Stat. 1234 (1972) (stressing the dangers of uncontrolled noise to the health and welfare of the nation). Congress may have doubted the enthusiasm of the FAA in carrying out the legislative purpose because of opinions of the FAA within the industry. One commentator described the FAA position on noise abatement as being at best a secondary concern and at worst as serving only the interests of the air carrier industry. Berger, Nobody Loves an Airport, 43 S. CAL. L. REV. 631, 713, 724 (1970).


\(^8^4\) 14 C.F.R. § 36.7 (1986). Maximum noise emission levels for airplanes designed after November 5, 1975, vary between 106 decibels and 89 decibels depending upon the size of aircraft and the number of engines. Id. This noise limit standard is referred to as the Stage III noise limit. Id. The Stage II noise limit, which was adopted in 1969, varied between 108 decibels and 93 decibels depending solely on the weight of the airplane. Id. at Appendix C. See also 34 Fed. Reg. 18,364 (1969) (adopting noise standard regulations codified at 14 C.F.R. § 36 (1985)).


\(^8^6\) Id. The FAA estimated that without mandatory compliance regulations non-complying aircraft would remain in service as late as 1990. Id.

\(^8^7\) 14 C.F.R. § 91.305 (1986). The FAA regulation required each air carrier to have 50% of its carrier fleet in compliance by Jan. 1, 1981 and 100% compliance by Jan. 1, 1988. Id.
controversy in the air carrier industry because of the cost of implementing the new requirements.\textsuperscript{88}

Congress passed the Aviation Safety and Noise Abatement Act of 1979 (ASNAA) before the aviation industry was required to meet the compliance deadlines adopted by the FAA in 1976 and 1977.\textsuperscript{89} The ASNAA adopts most of the technological requirements of the 1977 regulations.\textsuperscript{90} However, responding to industry objections over the heavy financial strain caused by the proposed FAA regulations, Congress extended the technology implementation deadlines.\textsuperscript{91} The ASNAA also differs from the FAA regulation because it provides financial incentives to encourage airport operators to voluntarily implement noise controls.\textsuperscript{92} Incentives include eligibility for federal grants to airport proprietors that submit noise exposure maps to the FAA.\textsuperscript{93} Noise exposure maps depict land uses in the airport area that are incompatible with the noise levels generated at the airport.\textsuperscript{94} The ASNAA prohibits use of noise exposure maps as evidence in noise suits against airports.\textsuperscript{95} Also, airport proprietors are relieved

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\textsuperscript{88} 41 Fed. Reg. 56,051 (1976). The FAA published its responses to the airline industry regarding the cost of implementing the new standards. Without referring to a specific cost of total implementation, the FAA concluded that the societal benefits outweighed the cost of implementation. \textit{Id.}


\textsuperscript{90} 49 U.S.C. app. § 2102 (1982).

\textsuperscript{91} 49 U.S.C. app. §§ 2123-24 (1982). The ASNAA extended the most significant implementation date from January 1, 1983 to January 1, 1986. \textit{Id.} \textit{See also} notes 69-71 and accompanying text.


\textsuperscript{93} \textit{Id.}

\textsuperscript{94} \textit{Id.} Preparation of noise exposure maps requires an empirical study of noise levels in the vicinity surrounding an airport. 14 C.F.R. § 150.9 (1986). The information obtained from the study is transposed onto a map of the area that shows noise levels as determined under the ASNAA noise measurement system. \textit{Id.} The noise levels appear on the map as contours of noise emanating from the airport. \textit{Id.} The map also identifies land uses within each noise contour that are incompatible with the noise level of that particular contour. 14 C.F.R. § 150.11 (1986). The ASNAA requires airport operators to consult with public agencies and land planning agencies located in the area surrounding the airport while preparing a noise exposure map. 49 U.S.C. § 2103 (1982).

\textsuperscript{95} 49 U.S.C. app. § 2106 (1982).
from liability to landowners who acquire their property subsequent to submission of a noise exposure map. This provision alone portends a decrease in airport noise litigation. Since many airports have filed or will file these maps, the number of potential litigants diminishes every time real property in the airport vicinity changes hands. Thus, Congress provided a vehicle for reducing the amount of airport noise litigation. The question remains, however, whether the level of noise abatement already obtained through litigation, noise source regulations, and voluntary compliance is adequate.

II. DEVELOPMENTS IN THE AIRPORT NOISE CONTROVERSY SUBSEQUENT TO PASSAGE OF THE ASNAA

A. Judicial Developments

The most significant judicial trend during the first five years of the 1980's is the mixed response of state courts to the California Supreme Court decision in Greater Westchester Homeowner's Association of Los Angeles. Recall that in the 1979 decision, the California court held that an airport

96 49 U.S.C. app. § 2107 (1982). The ASNAA states that filing a noise exposure map constitutes constructive notice of noise levels to prospective purchasers. Id. However, this provision allows suits for damages resulting from airport layout, flight pattern or nighttime operation changes that occur subsequent to filing of the noise exposure map. Id.

97 The FAA anticipates approximately 85 airports will have filed noise exposure maps by the Dec. 31, 1986 cutoff for funding projects under the ASNAA. Telephone interview with Richard Tedrick, Noise Policy and Regulations Branch, Office of the Environment and Energy, Federal Aviation Administration (January 28, 1986). The original funding cutoff date has been established as Dec. 31, 1985. Id. As of that date approximately 25 airports had filed noise exposure maps. Id. The FAA extended the filing cutoff by notice published at 50 Fed. Reg. 7,024 (1985). Id. The deadline extension was partly necessitated by the ASNAA requirement of local government consultation in the study. Id. Another factor contributing to the delay is the fact that the FAA's administrative regulations first published at 46 Fed. Reg. 8,320 (1981) only became final by publication at 49 Fed. Reg. 49,267 (1984). Id. Federal funds pay the expense of preparing a noise exposure map so the FAA has an excellent mechanism for monitoring which airports are preparing maps. Id. The cost of preparing a map usually exceeds $200,000 and preparation of the map takes between one and two years. Id.

98 Greater Westchester Homeowners Ass'n v. City of Los Angeles, 26 Cal. 3d 86, 603 P.2d 1329, 160 Cal. Rptr. 733 (1979), cert. denied, 449 U.S. 820 (1980). See also supra notes 74-78 and accompanying text.
propietor could be liable under a nuisance theory for personal injuries sustained by airport neighbors. Courts in Georgia and Wisconsin have joined the California court in holding that federal pre-emption does not prohibit a nuisance recovery. The Wisconsin court further allowed recovery for personal inconvenience and annoyance despite the absence of a showing of monetary loss.

However, not all jurisdictions agreed with the Greater Westchester decision. In Long v. City of Charlotte, the North Carolina Supreme Court dismissed nuisance allegations against an airport proprietor. That court stated that inverse condemnation is the sole remedy for a landowner harmed by commercial aircraft overflights. The Missouri Court of Appeals also held that a pervasive scheme of federal regulation pre-empted nuisance and trespass remedies for residents affected by aircraft overflights.

26 Cal. 3d 99, 603 P.2d 1335, 160 Cal. Rptr. 738. The holding in Greater Westchester reflects the opinion of many observers that diminished property values don't always represent the total cost of airport noise. See supra note 6 and accompanying text.


Krueger, 332 N.W.2d at 743. The Wisconsin Court upheld a lower court decision allowing recovery for inconvenience, annoyance, and discomfort resulting from an unreasonable and substantial interference. Id. at 735. This case involved a privately owned airport that was open to public use. Id. The plaintiffs did not allege any monetary losses or a taking. Id.

506 N.C. 187, 293 S.E.2d 101 (N.C. 1982). The City of Charlotte expanded its municipally owned and operated airport by opening a new runway in 1979. Id. at 105. Takeoffs and landings passed directly over the plaintiff's home at altitudes as low as 100 feet. Id. Plaintiffs alleged these takeoffs created great noise and vibration that disrupted ordinary conversation and physically damaged plaintiff's home. Id. Plaintiffs alternatively filed actions for inverse condemnation, nuisance and trespass. Id. The issue on appeal was whether the plaintiff stated a claim for which relief could be granted on each of the three counts. Id. at 106.

Drybread v. City of St. Louis, 634 S.W.2d 519 (Mo. Ct. App. 1982). The Drybread plaintiffs were residents of a subdivision in close proximity to St. Louis International Airport. Id. at 520. Plaintiffs alleged that frequent and continuous air traffic less than 1,000 feet directly above plaintiff's residence interfered with the use and enjoyment of property. Id. The plaintiffs sought damages for nu-
Finally, the Arizona Court of Appeals refused a request for injunction based on nuisance theories in *Northeast Phoenix Homeowners' Association v. Scottsdale Municipal Airport.*\(^{105}\) The Arizona holding comports with pre-1980 case law in which injunctions were federally pre-empted regardless of the theory used.\(^{106}\) The Arizona plaintiffs did not seek money damages and accordingly the court did not address the question of whether damages could be recovered on a nuisance theory.\(^{107}\)

The apparent lesson from the post-1980 nuisance decisions is that inverse condemnation remains the primary method of obtaining damages for airport noise injuries. The nuisance theory does have advantages in that recovery might be had for personal discomfort as opposed to mere property damage.\(^{108}\) However, some jurisdictions will not hear nuisance allegations due to federal pre-emption.\(^{109}\)

Two significant inverse condemnation cases were de-

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\(^{105}\) 130 Ariz. 487, 636 P.2d 1269 (Ariz. Ct. App. 1981). Phoenix homeowners appealed from the trial court’s dismissal of a request for injunctive relief on theories of trespass, nuisance, and violation of state statutes. 636 P.2d at 1271. The Arizona Court of Appeals analogized to *City of Burbank v. Lockheed Air Terminal, Inc.*, 411 U.S. 624 (1973), which held that federal pre-emption prohibited local regulation of aircraft operations. *Id.* at 1272. The Arizona court reasoned that injunctive relief based on common law and state statutes would also be federally pre-empted. *Id.* at 1273. The appellate court affirmed the trial court decision noting that the plaintiff’s claim for damages under an inverse condemnation theory was pending at the trial court level. *Id.* at 1279.

\(^{106}\) See supra notes 33-37. The FAA is responsible for balancing the interests of safety, efficiency, and noise abatement in aircraft operations. The Supreme Court held in *City of Burbank v. Lockheed Air Terminal, Inc.*, 411 U.S. 624 (1973), that local ordinances imposing curfews on aircraft flights are pre-empted by pervasive federal regulation. Allowing injunctions based on common law causes of action would have the same effect as allowing local curfew ordinances. *Northeast Phoenix Homeowners*, 636 P.2d at 1273-74.


\(^{108}\) See supra note 101.

\(^{109}\) See supra note 102-105.
cided in 1985. The California Supreme Court allowed an inverse condemnation action against a privately owned airport in *Baker v. Burbank-Glendale-Pasadena Airport Authority*. That holding expanded the scope of inverse condemnation actions which previously applied by definition only to governmental entities. In that same case, the California court held that the plaintiff in a nuisance cause of action is privileged to choose whether the nuisance was continuing or permanent. These holdings viewed in conjunction with the 1979 *Greater Westchester* decision seem to indicate a willingness on the part of the California court to expand the law to encourage recoveries for airport noise.

In the other recent inverse condemnation decision, the Minnesota Supreme Court reversed certification of a class action for inverse condemnation of avigational easements. The Minnesota court found that the plaintiff

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112 *See supra* note 110. A plaintiff may recover only once for a permanent nuisance. *Baker*, 19 Cal. 3d at 868, 705 P.2d at 870, 218 Cal. Rptr. at 297. That recovery includes both present and prospective damages. *Id.* A continuing nuisance recovery includes only present damages. *Id.* There is no statute of limitations on filing an action for a continuing nuisance while the statute of limitations for filing a permanent nuisance action begins running at the inception of the nuisance. 19 Cal. 3d at 870, 705 P.2d at 871, 218 Cal. Rptr. at 298. Thus, actions involving a permanent nuisance that could be barred by the statute of limitations may be allowed if the nuisance can be classified as permanent. *Id.* *See also* RESTATEMENT (SECOND) OF TORTS § 930 (1978).

113 *See supra* note 98.

114 *See generally* Carroll, *supra* note 58, at 629 (prior to 1981 California was the only state to allow recovery for emotional distress caused by airport noise); Bennett, *supra* note 37, at 482 (the California court in Greater Westchester expanded traditional nuisance theory to allow a recovery for emotional distress resulting from airport noise without a showing of physical injury).

115 Ario v. Metropolitan Airports Commission, Av. Cas. (CCH) 17,640, 17,642 (Minn. 1985). The Minnesota Supreme Court was seeing the *Ario* case for the second time. In the first action the court denied a proposed class consisting of over 27,000 homes, apartments, churches and businesses because the class was so diverse it lacked commonality. *Alevizos*, 216 N.W.2d at 668. The Court also held that inverse condemnation and not nuisance or trespass was the proper remedy for excess airport noise. *Id.* The court remanded the case for trial where the plaintiff sought to certify a new class composed solely of homeowners. *Id.* Certifi-
met all the procedural requirements for certification of a class action.\textsuperscript{116} However, the court further stated that diminution of property value is an essential element in proving inverse condemnation.\textsuperscript{117} Noting that each of two thousand plaintiffs would be required to individually prove diminution of property value, the Minnesota court held that this requirement made class actions inappropriate for inverse condemnation allegations.\textsuperscript{118}

Post-1980 judicial decisions did not drastically alter any of the pre-1980 case law. The issues pertinent to airport noise actions remain largely unchanged. The airport proprietor remains solely liable for damages resulting from aircraft noise.\textsuperscript{119} Injunction based on any theory a plaintiff chooses is prohibited by federal pre-emption.\textsuperscript{120} Land use planning remains the sole method for local governmental entities to abate airport noise.\textsuperscript{121} The various theories for recovery of money damages have undergone expansion in some jurisdictions with jurisdictional splits possibly creating a need for clarification.\textsuperscript{122} However, the Airport Safety and Noise Abatement Act of 1979 by its very terms minimizes the possibility of future airport noise litigation.\textsuperscript{123} The effectiveness of the ASNAA has become the

\textsuperscript{116} Ario, 19 Av. Cas. (CCH) at 17,642. The four prerequisites of a class action under Minnesota law are (1) plaintiffs so numerous as to make joinder impracticable, (2) questions of law or fact common to the class, (3) representative parties' interests are compatible with the class and (4) representative parties will fairly and adequately protect the interests of the class. \textit{Id.} (quoting Minn. R. Civ. P. 23.01 (1985)).

\textsuperscript{117} \textit{Id.} at 17,644.

\textsuperscript{118} \textit{Id.}

\textsuperscript{119} Griggs v. Allegheny County, 369 U.S. 84 (1962); Adams v. City of Atlanta, 18 Av. Cas. (CCH) 18,525 (Ga. 1985). \textit{See generally} Werlich & Krinsky, \textit{supra} note 2, at 82-84.

\textsuperscript{120} \textit{See supra} notes 33-37 and accompanying text.

\textsuperscript{121} Gary Leasing, Inc. v. Town Board, 19 Av. Cas. 17,304 (CCH) (N. Y. Sup. Ct. 1985) (federal regulation pre-empts Town Board from proposing an airport curfew); Treisman v. Kamen, 19 Av. Cas. (CCH) 17,872 (N.H. S. Ct. 1985) (upheld injunction preventing construction of a heliport where zoning ordinance did not prohibit use of a heliport, but also did not expressly permit the use of a heliport).

\textsuperscript{122} \textit{See supra} notes 98-101 and accompanying text.

\textsuperscript{123} \textit{See supra} notes 90-95 and accompanying text. The airports participating in
dominant issue.

B. Effectiveness of the Airport Safety and Noise Abatement Act of 1979

A review of the ASNAA effectiveness involves an analysis of three different methods of controlling airport noise. The three methods include local political action, federal airplane noise regulation, and local land use planning. This review was accomplished in part through an interview with Tom Golson, Chairman of the Love Field Citizens Action Committee (LFCAC). The LFCAC represents people who live and work in the area surrounding Love Field located in Dallas, Texas.¹²⁴ The LFCAC functions as an intermediary between a variety of neighborhood organizations, the City of Dallas, and the carriers using Love Field.¹²⁵ The City of Dallas owns and operates Love Field which was selected for this study partly because it is located in close proximity to several large residential communities.¹²⁶ As previously noted, residential development is the land use that is most incompatible with airport noise.¹²⁷ The following analysis will address both the nationwide impact of the ASNAA and the impact on the citizens living in the vicinity of Dallas-Love Field.

1. Noise Compatibility Planning

One significant aspect of the ASNAA was airport noise compatibility planning.¹²⁸ The voluntary program allows airports to submit studies to the FAA showing airport noise patterns and the effects on surrounding commu-

¹²⁴ Telephone interview with Tom Golson, Chairman of the Love Field Citizens Action Committee (Jan. 31, 1986).
¹²⁵ Id.
¹²⁶ Id.
¹²⁷ See supra note 5.
ties. Participation in the program qualifies an airport proprietor for access to federal grants. The ASNAA also releases participating airport proprietors from liability to landowners who purchase in the airport vicinity subsequent to preparation of a noise compatibility study. Congress provided funding for the noise compatibility program in the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA). TEFRA increased excise taxes on fuels used in noncommercial aviation and extended taxes on transportation of persons by air. The revenues raised by these taxes are appropriated to the Airport and Airway Trust Fund for funding noise compatibility and airport development grants.

The FAA estimates that approximately eighty-five airports will file noise exposure maps before the grant funding deadline on December 31, 1986. Program participants primarily include medium size airports that perceive a risk of future liability. The main thrust of noise compatibility planning has been in promoting cooperation between airports and airport neighbors. Funding of programs goes primarily to acquire avigation easements while local government entities use city planning and zoning to promote compatible uses of land in the airport area. The goal of these efforts is to get peo-

129 49 U.S.C. app. § 2103 (1982). "[A]ny airport operator... may submit... a noise exposure map... which sets forth... the noncompatible uses in each area of the map... a description of the projected aircraft operations... and the ways, if any, in which such operations will affect such map." Id.
130 Id.
132 Id.
133 Id. at § 281, 96 Stat. 565. The Airport and Airway Trust Fund may be used partially for acquisition of avigation easements under the noise compatibility program. This result effectuates commentators recommendations of federal relief from the airport noise immediately following passage of the ASNAA. See Werlich & Krinsky, supra note 2 at 98-99.
134 See supra note 96.
136 Id.
137 Id. One novel program submitted to the FAA requested funding to
ple away from the airport area.\textsuperscript{138} The ultimate success of these efforts remains to be seen because approximately seventy-five percent of the anticipated programs have not been finalized as of this writing.\textsuperscript{139} Funding of programs by the Airport and Airway Trust Fund extends through October, 1987.\textsuperscript{140}

Although the ultimate degree of success for noise compatibility planning cannot be discerned at the present time, certain shortcomings become immediately apparent in the context of the Dallas Love Field situation. The City of Dallas and the LFCAC eschewed the federal grants partly because of fundamental differences between the program goals and LFCAC objectives.\textsuperscript{141} The program goal of removing people from the airport vicinity fails to completely satisfy the needs of the Love Field community.\textsuperscript{142} The large number of people affected by Love Field noise makes removal of all non-compatible land uses undesirable at best and perhaps virtually impossible at worst.\textsuperscript{143} The LFCAC prefers to use land use planning as just one means of controlling the noise problem.\textsuperscript{144} The preferable alternative is to minimize relocation of neighborhoods and schools by restricting noise at the source.\textsuperscript{145} The LFCAC considers the federal noise compatibility program as an undesirable last resort.\textsuperscript{146} This response indicates that federal noise regulation and local political action are essential elements to an airport noise solution.

\textsuperscript{138} Id.
\textsuperscript{139} Id.
\textsuperscript{141} Tom Golson, supra note 124.
\textsuperscript{142} Id.
\textsuperscript{143} Id.
\textsuperscript{144} Id.
\textsuperscript{145} Id.
\textsuperscript{146} Id.
2. *Local Political Action*

The second piece of the noise abatement puzzle is the effect of local political action groups on municipally owned airports. The ASNAA requires that the airport proprietor consult with local public agencies prior to receiving noise compatibility grants. However, the local political process is certainly not limited to communities participating in the federal program. The local political process may be effectively used to persuade municipal airports to change flight schedules, exclude planes that fail to meet specific noise standards, and prohibit maintenance activities after midnight. The LFCAC has used the local political process to successfully solicit promises regarding noise control from air carriers using Love Field. These promises primarily involve hastening the conversion to quieter Stage III airplanes. However, the promises were obtained only after five years of extensive lobbying. The LFCAC approach to noise control is intended to accomplish two objectives. First, the LFCAC believes the carrier will be unresponsive to the noise problem without some form of mandatory regulation or economic incentive. Second, the LFCAC believes local control is preferable to additional federal noise regulations because local restrictions allow airports that are not noise impacted to continue providing facilities to Stage II airplanes. Air carriers respond that random local noise regulations make flight scheduling extremely difficult. There is no federal requirement that airport proprietors select controls that are least restrictive to interstate com-

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147 *Id.*
149 Tom Golson, *supra* note 124.
151 Tom Golson, *supra* note 124.
152 *Id.*
153 *Id.*
154 *Id.*
155 *Id.*
156 *Id.*
157 *Id.*
158 *Id.*
159 FAA, *Commercial Fleet Modernization*, *supra* note 3 at 23.
Consequently, some airport segments of the national air transportation system are shrinking due to capacity constraints caused by airport proprietor imposed noise restrictions. Measuring the aggregate effect of local restrictions on national commerce is difficult. These problems indicate that local political action alone may not be the optimum solution to the airport noise problem.

3. FAA Noise Regulations

Federal regulations required a mandatory five year phase in of Stage II aircraft technology. The five year phase in period expired on January 1, 1985. Most non-complying aircraft were prohibited from flying out of any American airport after that date. However, the FAA granted some insignificant deadline extensions due to lack of available hush kits. These deadline extensions expired during 1986.

The ASNAA also mandated establishment of Stage III standards. Stage III emission standards are not required on aircraft designed before December, 1975, but are mandatory for those designed after that date.

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157 Id.
158 Id.
159 Id.
162 50 Fed. Reg. 41,327 (1985). Hush kits are noise reduction equipment that can be installed on four-engine aircraft to enable them to meet the Stage II noise emission regulations. The FAA granted some limited exemptions from Stage II compliance because sufficient hush kits were not available. The FAA became involved in a number of lawsuits because of arbitrary and capricious exercise of the exemption authority. The FAA issued new guidelines for exercise of the exemption authority which appear to have settled the controversy. Id. See generally, Independent Air, Inc. v. FAA, 19 Av. Cas. (CCH) 17,667 (11th Cir. 1985); Airmark v. FAA, 19 Av. Cas. (CCH) 17,230 (D.C. Cir. 1985).
164 Id. Stage III aircraft have a maximum noise emission level for a 75,000 lb. plane at 89 decibels. Id.
165 Id.
version of the fleet from Stage II to Stage III planes would have a profound impact on noise abatement.\textsuperscript{166} The FAA estimates that converting the entire U.S. commercial fleet to Stage III planes by 1995 would reduce the area of land impacted by airport noise to thirty-one percent of the area currently impacted.\textsuperscript{167} By comparison, if the 1995 U.S. fleet mix of Stage II and Stage III planes should remain the same as in 1985, the area of impacted land would increase due to increased air traffic.\textsuperscript{168} The national air carrier fleet is gradually converting to Stage III airplanes.\textsuperscript{169} Very few Stage II planes are being manufactured today.\textsuperscript{170} The Boeing 727, the most popular Stage II plane, has been replaced by the Stage III Boeing 757 design.\textsuperscript{171} Still the FAA estimates that eleven percent of the air carrier fleet will consist of Stage II planes in the year 2005.\textsuperscript{172} FAA experience indicates that old airplanes have been slower to phase out of operation than forecasting models estimate.\textsuperscript{173} Older aircraft tend to remain in use longer than operational efficiency would dictate.\textsuperscript{174}

The air carrier industry objects to mandatory Stage III compliance because of the cost of converting to Stage III aircraft.\textsuperscript{175} Converting the commercial fleet from Stage I to Stage II planes was facilitated by development of retrofit technology that modified Stage I planes bringing them into compliance with Stage II noise standards.\textsuperscript{176} No retrofit is available that would modify Stage II planes

\textsuperscript{166} FAA, Commercial Fleet Modernization, supra note 3, at 5.
\textsuperscript{167} Id. at 10.
\textsuperscript{168} Id. at 12.
\textsuperscript{169} Richard Tedrick, supra note 135.
\textsuperscript{170} FAA, Commercial Fleet Modernization, supra note 3, at 5.
\textsuperscript{171} Id.
\textsuperscript{172} Id. This estimate may be optimistic. The European Economic Community is considering 1994 as the date to ban all Stage II planes. An EEC ban could dump a large number of inexpensive Stage II planes into the United States carrier fleet prolonging the date of total conversion of the U.S. fleet. Id.
\textsuperscript{173} FAA, Commercial Fleet Modernization supra note 3, at 11.
\textsuperscript{174} Id.
\textsuperscript{175} Id. at 20.
\textsuperscript{176} Id.
to comply with Stage III noise standards. Converting the carrier fleet to Stage III standards could be accomplished only by replacing the existing Stage II planes with new Stage III models. The FAA estimates that the cost of replacing all existing Stage II planes would be approximately forty-two billion dollars. In addition to the capital outlay, air carriers could lose nine billion dollars on the premature retirement of Stage II planes. A recent FAA report to Congress outlined several methods for encouraging carriers to incur these expenditures and convert the fleet to Stage III.

The FAA report summarized several alternatives for accelerating fleet modernization. The FAA made no attempt to quantify the impact of imposing any of the alternatives, and limited the alternatives to methods for which some precedent existed. The FAA did not recommend or endorse any of the alternatives. The alternatives are summarized below as economic incentives and regulatory approaches.

a. Economic Incentives

The report refers to proposals that leave operators with a choice of implementation as incentives. The purpose of the incentive is to alter the market place to make acquisition of quieter Stage III airplanes economically attractive to operators. Investment tax credits and accelerated depreciation for Stage III airplanes are eco-

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177 Id.
178 Id.
179 Id. at 9.
180 Id. The loss on premature retirement was calculated by subtracting the present value of an airplane's replacement cost in the normal year of replacement from the replacement cost of the same airplane in 1985. Id. at app. IV.
181 FAA, COMMERCIAL FLEET MODERNIZATION, supra note 3, at 1.
182 Id. at 14.
183 Id.
184 Id. at 2.
185 Id. at 14, 21.
186 Id. at 14.
187 Id. at 14.
nomic incentives. The benefits of accelerated depreciation and investment tax credits are that they require no direct government outlay of funds, and that they may make more Stage III aircraft available through leasing companies to operators who are not in a position to make large capital expenditures.

The proposed Tax Reform Bill of 1986 would alter the accelerated cost recovery system and investment tax credit schemes in effect prior to 1986. The Tax Reform Bill would repeal the investment tax credit. It would also accelerate the depreciation method for assets used in commercial carrying of passengers and freight by air from the 150 percent declining balance to 200 percent declining balance. Accelerating depreciation deductions is intended to partly compensate for the repeal of the investment tax credit. The proposed system is designed to eliminate tax considerations from investment decisions. The primary goal of the new bill is to use reduced statutory tax rates to encourage efficient allocation of resources. The tax neutrality of the new bill does not appear conducive to accelerating the acquisition of any capital asset prior to expiration of the asset’s useful eco-

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188 Id. at 14-15. Tax benefits are desirable only when an operator has a tax liability. Many airlines lease aircraft from banks and other entities that are in a better position to utilize these benefits. Leasing increases the number of available aircraft. Approximately one-third of the world's fleet is leased. Id. at 15.

189 Id. at 14-15.

190 Id.


194 Id.

195 Id.
nomic life. Other methods will be needed to accelerate replacement of Stage II aircraft.

Federal loan guarantees and federal funding of Stage II retrofit technology are other proposed economic incentives. Loan guarantees would direct economic resources toward acquisition of quieter Stage III aircraft. Since small new airlines purchase most Stage II airplanes, a loan guarantee program directed toward these entities would hasten the removal of those planes from the fleet. However, guarantees could also encourage over-investment by marginal operators. That result would appear to be contrary to the administration goal of achieving the greatest possible economic growth by encouraging efficient allocation of capital resources.

Federal funding for the development of technology that converts Stage II airplanes to Stage III airplanes is the final economic incentive to be considered. Development of similar technology for converting Stage I to Stage II airplanes was instrumental in that conversion. Development of this technology would encourage fleet modernization by substantially reducing the cost to air carriers of Stage III conversion. Federal participation in commercial enterprises and a substantial commitment of Federal funds are the main disadvantages.

b. Regulatory Approaches

Banning Stage II airplanes from operating in the United States is one potential method of accelerating fleet modernization. A ban could take one of several forms in-

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196 Id.
197 FAA, Commercial Fleet Modernization, supra note 3.
198 Id.
199 Id.
200 Id.
201 Id. at 19.
203 FAA, Commercial Fleet Modernization, supra note 3 at 20.
204 Id.
205 Id.
206 Id.
cluding a fixed date ban, an age of airplane ban, or a non-addition rule. A fixed date ban involves prohibiting Stage II airplanes that have been in service for longer than a maximum service life from using U.S. airports. Both the fixed date and age of airplane bans could be limited by production capacity for Stage III airplanes. These bans could also have competitive repercussions due to differing fleet compositions among individual air carriers. The third alternative is Stage II non-addition. Prohibiting addition of Stage II airplanes to the U.S. fleet would not accelerate fleet modernization but would prevent introduction of Stage II planes that would extend the conversion period. Air carriers object to Stage III conversion because of the economic cost of early retirement of Stage II aircraft. The FAA estimates the cost of retiring all Stage II aircraft in 1995 would be nine billion dollars. That cost decreases to four billion dollars in 2000 and one billion dollars in 2005. Implementation of a Stage II operating ban coordinated with the useful economic lives of the current U.S. fleet would help alleviate airport noise and minimize the cost of conversion to Stage III aircraft.

**CONCLUSION**

Airport noise and the resulting conflict between the airline industry and their airport neighbors are problems that will never be totally eliminated. The Congres-
sional commitment of federal funds through the Airport and Airway Trust Fund for airport noise compatibility planning was an important step in solving the problem. The ASNAA leaves the possibility of litigation against airports available to airport neighbors where the airport has a significant change in layout, flight patterns or nighttime operations. This factor and the local political process are important components in controlling airport noise.

However, the time has come to implement a mandatory conversion to Stage III airplanes. The conversion should be phased in a fashion similar to the Stage II conversion. The time period for the phase-in should be longer, starting in 1987 with the current fleet average of twenty percent Stage III planes. The required percentage of Stage III planes would be increased to forty percent in 1990, sixty percent in 1995, seventy-five percent in 2000, and finally one hundred percent in 2005. The final implementation of Stage III requirements in 2005 should apply to both the air carrier industry and to the fleet of noncommercial business and corporate aircraft. The long phase-in period coupled with reduced fuel consumption and cost savings of Stage III airplanes appear to be sufficient to economically justify the operating ban on Stage II airplanes.

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noise within acceptable levels and to change land uses within the airport area to be more compatible with the airport. *Id.* Even if a completely silent jet engine were feasible, noise caused by the airplane structure moving through air layers would create noise during take offs and landings. FAA, *Commercial Fleet Modernization*, supra note 3, at 13.


220 *Id.* at 3.

221 *Id.* at app. IV.