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**LEGAL AND INSTITUTIONAL ANALYSIS OF
AIRCRAFT AND AIRPORT NOISE AND
APPORTIONMENT OF AUTHORITY
BETWEEN FEDERAL, STATE,
AND LOCAL GOVERNMENTS**

**ENVIRONMENTAL PROTECTION AGENCY
AIRCRAFT/AIRPORT NOISE STUDY REPORT**

27 JULY 1973

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27 JULY 1973

ELIZABETH CUADRA, TASK GROUP CHAIRPERSON

This report has been approved for general availability. The contents of this report reflect the views of this task group, and do not necessarily reflect the official views or policy of EPA. The chairperson is responsible for the accuracy of facts and data presented herein, and for the accuracy with which the consensus recommendations of the task group are reflected in Section 6. This report does not constitute a standard, specification, or regulation.

PREFACE

The Noise Control Act of 1972 (Public Law 92-574) directs the Environmental Protection Agency (EPA) to study the adequacy of current and planned regulatory action taken by the Federal Aviation Administration (FAA) in the exercise of FAA authority to abate and control aircraft/airport noise. The study is to be conducted in consultation with appropriate Federal, State and local agencies and interested persons. Further, this study is to include consideration of additional Federal and State authorities and measures available to airports and local governments in controlling aircraft noise. The resulting report is to be submitted to Congress on or before July 27, 1973.

The governing provision of the 1972 Act states:

"Sec. 7(a). The Administrator, after consultation with appropriate Federal, state, and local agencies and interested persons, shall conduct a study of the (1) adequacy of Federal Aviation Administration flight and operational noise controls; (2) adequacy of noise emission standards on new and existing aircraft, together with recommendations on the retrofitting and phaseout of existing aircraft; (3) implications of identifying and achieving levels of cumulative noise exposure around airports; and (4) additional measures available to airport operators and local governments to control aircraft noise. He shall report on such study to the Committee on Interstate and Foreign Commerce of the House of Representatives and the Committees on Commerce and Public Works of the Senate within nine months after the date of the enactment of this act."

Under Section 7(c) of the Act, not earlier than the date of submission of the report to Congress, the Environmental Protection Agency is to:

"Submit to the Federal Aviation Administration proposed regulations to provide such control and abatement of aircraft noise and sonic boom (including control and abatement through the exercise of any of the FAA's regulatory authority over air commerce or transportation or over aircraft or airport operations) as EPA determines is necessary to protect the public health and welfare."

The study to develop the Section 7(a) report was carried out through a participatory and consultive process involving a task force. That task force was made up of six task groups. The functions of these six task groups were to:

1. Consider legal and institutional aspects of aircraft and airport noise and the apportionment of authority between Federal, state, and local governments.
2. Consider aircraft and airport operations including monitoring, enforcement, safety, and costs.
3. Consider the characterization of the impact of airport community noise and to develop a cumulative noise exposure measure.
4. Identify noise source abatement technology, including retrofit, and to conduct cost analyses.
5. Review and analyze present and planned FAA noise regulatory actions and their consequences regarding aircraft and airport operations.
6. Consider military aircraft and airport noise and opportunities for reduction of such noise without inhibition of military missions.

The membership of the task force was enlisted by sending letters of invitation to a sampling of organizations intended to constitute a representation of the various sectors of interest. These organizations included other Federal agencies; organizations representing State and local governments, environmental and consumer action groups, professional societies, pilots, air traffic controllers, airport proprietors, airlines, users of general aviation aircraft, and aircraft manufacturers. In addition to the invitation letters, a press release was distributed concerning the study, and additional persons or organizations expressing interest were included into the task force. Written inputs from others, including all citizen noise complaint letters received over the period of the study, were called to the attention of appropriate task group leaders and placed in the public master file for reference.

During the task force efforts, from mid-February to mid-June, there were seven full days of meetings of Task Group 1, supplemented by numerous working meetings of writing groups and extensive additional work on the part of many of the task group members.

Methods of participation by task group members included:

1. Presentation of data and position papers and associated discussion during task group meetings.
2. Participation in structuring the scope and outline of the task group report.
3. Authorship of sections of the initial draft of the task group report.
4. Review and comment (both within writing groups and in the full task group) upon initial chapter drafts by others.

After completion of a rough initial draft report (except for the recommendations section), the EPA staff made a critical editorial review and revised the draft report, performing a complete rewrite of Sections 4 and 5 and incorporating a new "recommendations" section for the task group review. Prior to preparation of the "recommendations" section, the chairperson requested all organizations represented to submit their preliminary recommendations, and those received to date of that draft were considered in drafting the preliminary section on "recommendations" and were circulated with the draft report to all task group members.

At the final meeting of the task group, the draft report and the recommendations were discussed, with emphasis on the recommendations. The chairperson had at first believed that the difficult and controversial subjects of the task group assignment would make it nearly impossible to obtain a set of consensus recommendations from the task group. However, during the final task group meeting, by a process of discussion by all members present, some preliminary recommendations were discarded, some modified and new recommendations added. The recommendations presented herein, in Chapter 6, represent the consensus of Task Group 1, as agreed upon in the meeting, with the following two provisions (also agreed upon in the meeting):

1. That not every participant concurs with every recommendation, though consensus existed on each.
2. That the positions of the individual organizations represented in the task group are those submitted by them for printing herein in Appendix B.

The remaining participation process included a final meeting of the entire task force (all six task groups together). In preparation for this meeting, the reports of all six task groups were cross-mailed to all task force members for their review prior to the final meeting. That meeting provided the final opportunity for task force members orally to present their positions and to comment upon task group reports before those reports were finalized. All participating organizations were provided the opportunity either to reconfirm their previous written positions or to provide new position papers for the record, for incorporation in Appendix B.

This task group process has not, of course, succeeded in resolving all the differing opinions held by the various group members. However, there has been a beneficial learning and mutual communication experience in which the development of solution concepts has prospered, and by which many of the members have at least come to understand and respect the various points of view.

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SECTION 1

INTRODUCTION

Congress in enacting Section 7 of the Noise Control Act of 1972, was basically asking the question, "Why hasn't the aircraft noise problem been solved?" Previous estimates of the number of persons dwelling within severely noise-impacted communities around airports range from 7 to 15 million; and whatever the number, it continues to increase. Major difficulties face proponents of new airports, airport expansions or introduction of jet service because of the severe environmental disbenefits which the public has learned to expect along with the economic benefits. In spite of the existence of much available knowledge for making aircraft and airports quieter and for designing and controlling land use patterns, there are no comprehensive plans and implementation programs which will enable all levels of government and all concerned sectors to participate effectively in the solution of the aircraft/airport noise problem. To the extent the present legal/institutional framework for aircraft/airport noise regulation is intended to address and solve this problem, it has not been notably successful to date.

Task Group 1, "Legal/Institutional Analysis," was therefore charged with the following task:

1. Clearly setting forth the existing legal/institutional framework for aircraft/airport noise control, including all levels of government.
2. Identifying constraints and shortcomings of the existing legal/institutional system that may be impeding the implementation of available solutions.
3. Making recommendations for structuring of legal/institutional changes that would facilitate an accelerated and comprehensive solution of the aircraft/airport noise problem, both by actions within existing authorities and through legislative changes if required.

In the following sections, the existing legal/institutional structure is described, as it relates to the exposure of people to the noise of aircraft. Criteria for the evaluation of legal/institutional arrangements, whether existing or proposed, are then developed.

Using these criteria, an evaluation of the existing legal/institutional system is provided in order to illuminate the major constraints and problem areas which exist. Potential alternatives involving both (a) modifications of some aspects of the existing system and (b) fuller utilization of the existing system are proposed and discussed as to their relative merits. Finally, the consensus recommendations of Task Group 1 are presented for consideration.

Appended to this report are a list of the members of the task group (Appendix A), the formal recommendations submitted by member organizations (Appendix B), a list of the master file documents collected by the task group efforts (Appendix C), and related reports generated by the task force effort (Appendix D), including both the reports of other task groups and reports resulting from contracted studies.

SECTION 2

THE EXISTING LEGAL/INSTITUTIONAL STRUCTURE

The Noise Control Act of 1972¹ directs the Environmental Protection Agency (EPA) to study, in consultation with appropriate Federal, State and local agencies and interested persons, the adequacy of current and planned regulatory action by the Federal Aviation Administration (FAA) in the exercise of its authority to abate and control aircraft/airport noise. This study is to include consideration of additional Federal and State authorities and measures available to airports and local governments in controlling aircraft noise. The resulting report is to be submitted to Congress on or before July 27, 1973. The governing provision of the 1972 Act² has been quoted in the preface of this report.

The purpose of this section will be to analyze with objectivity the existing legal and institutional authority covering the problem of airport/aircraft noise from the point of view of what now exists and what has been done. On the basis of this analysis, consideration will then be given as to how the legal-institutional framework can be better used or changed so as to provide both short-run improvement and long-run accomplishment of the Congressional charge to abate and control aircraft and airport noise.

CONSTITUTIONAL FRAMEWORK

Under the Constitution Congress has the power to regulate interstate air commerce.³ In theory this power is complete; but in areas where Congress has not completely exercised the power and the States have acted the test becomes more practical; i. e., does the State regulation substantially impede or burden interstate commerce? Here a second Constitutional provision comes into play. This is the Supremacy Clause⁴ which so far as is relevant here, has been interpreted to mean that where

Congress has acted or where it has provided for Federal regulatory action that has been specifically taken, the area covered is said to be "preempted" so as to preclude any State or local government action that conflicts with or denigrates from the Federal action. This matter of "preemption" sounds simple enough to be workable. However in the area of aircraft/airport noise, the case law has added a complication that will be discussed in detail later (ref. p. 2-44).

Suffice it here to point out that if a State or local government by use of its police power attempts to protect its citizens by limiting the flight of noisy aircraft, the attempt is invalid as a matter of Federal preemption.⁵ On the other hand, if the airport owner makes the same attempt as its right as a property owner, the resulting control of use of the airport either on the basis of time of day or night or by type of aircraft may well be valid.⁶ As will also be discussed later (ref. p. 2-48), this result is arguably reasonable because of the fact that the case law also consistently holds that it is the airport owner which is liable for adjacent property destruction caused by the aircraft/airport noise.

FEDERAL AGENCY POWERS AND IMPLEMENTATION

FEDERAL AVIATION ADMINISTRATION AND DEPARTMENT OF TRANSPORTATION

The basic Federal aviation legislation is the Federal Aviation Act of 1958.⁷ For purposes of this discussion and analysis, Titles III and VI of that Act are relevant.

"Expenditure of Federal Funds for Certain Airports, etc.

"Airports for Other Than Military Purposes

"Sec. 302. (a) No Federal funds, other than those expended under this Act, shall be expended, other than for military purposes (whether or not in cooperation with State or other local governmental agencies), for the acquisition, establishment, construction, alteration, repair, maintenance, or operation of any landing area, or for the acquisition, establishment, construction maintenance, or operation of air navigation facilities thereon, except upon written recommendation and certification by the Administrator that such landing area or facility is reasonably necessary for use in air commerce or in the interests of national defense. Any interested person may apply to the

Administrator, under regulations prescribed by him, for such recommendation and certification with respect to any landing area or air navigation facility proposed to be established, constructed, altered, repaired, maintained, or operated by or in the interest of such person. There shall be no exclusive right for the use of any landing area or air navigation facility upon which Federal funds have been expended.

"Location of Airports, Landing Areas, and Missile and Rocket Sites

"(b) In order to assure conformity to plans and policies for allocations of airspace by the Administrator under section 307 of this Act, no military airport or landing area, or missile or rocket site shall be acquired, established, or constructed, or any runway layout substantially altered, unless reasonable prior notice thereof is given the Administrator so that he may advise with the appropriate committees of the Congress and other interested agencies as to the effects of such acquisition, establishment, construction, or alteration on the use of airspace by aircraft. In case of a disagreement between the Administrator and the Department of Defense or the National Aeronautics and Space Administration the matter may be appealed to the President for final determination. . ."

"Airspace Control and Facilities"

"Use of Airspace

"Sec 307. (a) The Administrator is authorized and directed to develop plans for and formulate policy with respect to the use of the Navigable airspace; and assign by rule, regulation, or order the use of the navigable airspace under such terms, conditions, and limitations as he may deem necessary in order to insure the safety of aircraft and the efficient utilization of such airspace. He may modify or revoke such assignment when required in the public interest.

"Air Navigation Facilities

"(b) The Administrator is authorized within the limits of available appropriations made by the Congress, (1) to acquire, establish, and improve air navigation facilities wherever necessary; (2) to operate and maintain such air navigation facilities; (3) to arrange for publication of aeronautical maps and charts necessary for the safe and efficient movement of aircraft in air navigation utilizing the facilities and assistance of existing agencies of the Government so far as practicable; and (4) to provide necessary facilities and personnel for the regulation and protection of air traffic.

"Air Traffic Rules

"(c) The Administrator is further authorized and directed to prescribe air traffic rules and regulations governing the flight of aircraft, for the navigation, protection, and identification of aircraft, for the protection of persons and property on the ground, and for the efficient utilization of the navigable airspace, including rules as to safe altitudes of flight and rules for the prevention of collision between aircraft, between aircraft and land or water vehicles, and between aircraft and airborne objects. . . .

"Exemptions

"(e) The Administrator from time to time may grant exemptions from the requirements of any rule or regulation prescribed under this title if he finds that such action would be in the public interest.

"Exception for Military Emergencies

"(f) When it is essential to the defense of the United States because of a military emergency or urgent military necessity, and when appropriate military authority so determines, and when prior notice thereof is given to the Administrator, such military authority may authorize deviation by military aircraft of the national defense forces of the United States from air traffic rules issued pursuant to this title. Such prior notice shall be given to the Administrator at the earliest time practicable and, to the extent time and circumstances permit, every reasonable effort shall be made to consult fully with the Administrator and to arrange in advance for the required deviation from the rules on a mutually acceptable basis. . . .

"Other Airports

"Sec. 309. In order to assure conformity to plans and policies for, and allocations of, airspace by the Administrator under section 307 of this Act, no airport or landing area not involving expenditure of Federal funds shall be established, or constructed or any runway layout substantially altered unless reasonably prior notice thereof is given to the Administrator, pursuant to regulations prescribed by him, so that he may advise as to the effects of such construction on the use of airspace by aircraft. . . .

"Other Powers and Duties of Administrator

"General

"Sec. 313. (a) The Administrator is empowered to perform such acts, to conduct such investigations, to issue and amend such orders, and to make and amend such general or special rules, regulations, and procedures pursuant to and consistent with the provisions of this Act, as he shall deem necessary to carry out the provisions of, and to exercise and perform his powers and duties under, this Act."

The rules FAA establishes under the 1958 Act are called Federal Aviation Regulations (FARs) and are printed in Parts 1 to 200 of Title 14 of the Code of Federal Regulations. Pursuant to the "direction" in Section 307 (c) "to prescribe air traffic rules and regulations governing the flight of aircraft . . . for the protection of persons and property on the ground . . .," the Federal Aviation Agency (now the Federal Aviation Administration or FAA) issued regulations for noise abatement, requiring preferential runway systems and courses, approaches and altitudes for landings and takeoffs first at specific airports with severe noise problems, including J. F. Kennedy and Washington National⁸ and subsequently at all airports with FAA operated control towers.⁹

To justify this action the FAA has stated that it "considers [its] statutory authority [under Section 307 (c)] adequate to prescribe rules restricting the pollution of the airspace by aircraft engines when that pollution has an adverse effect upon person or property on the ground. . . ." ¹⁰

While it is clear that the actions taken by the FAA, as well as the applicable case law, which will be analyzed later in this report, confirm the view that Title III of the 1958 Act authorized and directed aircraft noise abatement under air traffic rule and flight regulation authority, whether or not that authority was fully exercised, it is equally clear that Title VI of the 1958 Act conveyed no such authority until Title VI was amended by the addition of Section 611 in 1968. ¹¹

Title VI sets forth the general FAA safety powers and duties. Section 601 sets forth the general safety standards that were to be met in the issuance of certificates that were to be issued by the FAA under the subsequent sections of Title VI. Section

602 provides for "Airman Certificates," Section 603 for "Aircraft Certificates," and Section 604 for "Air Carrier Operating Certificates." Section 606 deals with the certification of an "Air Navigation Facility," which includes airports.¹²

The text of Section 606 is as follows:

"Sec. 606. The Administrator is empowered to inspect, classify, and rate any air navigation facility available for the use of civil aircraft as to its suitability for such use. The Administrator is empowered to issue a certificate for any such air navigation facility."¹³

The 1966 Department of Transportation (DOT) Act,¹⁴ which established the FAA as an agency within DOT, directed the Secretary of Transportation to "promote and undertake research and development relating to transportation, including noise abatement, with particular attention to aircraft noise."¹⁵ Further, the Secretary of DOT and Administrator of the FAA were given the same authority previously vested in the Federal Aviation Agency, and the action of the Secretary and Administrator have the same force and effect as when exercised by their predecessors.¹⁶

Amendments to the 1958 Act

As noted previously, in 1968, Title VI of the 1958 Act was amended by the addition of Section 611 which requires aircraft/airport noise to be added to the criteria that must be taken into account in issuing a Title VI certificate. More specifically, the 1968 addition of the new Section 611 directs and empowers the FAA, after consultation with the DOT, to prescribe

"Standards for the measurement of aircraft noise. . . and prescribe and amend such rules and regulations as [the FAA] may find necessary to provide for the control and abatement of aircraft noise. . . including the application of such standards, rules and regulations in the issuance . . . of any certificate authorized by [Title VI]."

In 1970, the Airport and Airway Development Act (AADA)¹⁷, also by way of an amendment to the 1958 Act,¹⁸ required that every airport serving civil air carriers operated under a CAB certificate of public convenience and necessity must obtain an

airport operating certificate under Section 606 from the FAA. The text of the AADA amendment to the 1958 Act, which adds a new Section 612, reads as follows:

"AIRPORT OPERATING CERTIFICATES

"POWER TO ISSUE

"Sec. 612. (a) The Administrator is empowered to issue airport operating certificates to airports serving air carrier certified by the Civil Aeronautics Board and to establish minimum safety standards for the operation of such airports.

"ISSUANCE

"(b) Any person desiring to operate an airport serving air carriers certificated by the Civil Aeronautics Board may file with the Administrator an application for an airport operating certificate. If the Administrator finds, after investigation, that such person is properly and adequately equipped and able to conduct a safe operation in accordance with the requirements of this Act and the rules, regulations, and standards prescribed thereunder, he shall issue an airport operating certificate to such person. Each airport operating certificate shall prescribe such terms, conditions, and limitations as are reasonably necessary to assure safety in air transportation, including but not limited to, terms, conditions, and limitations as are reasonably necessary to assure safety in air transportation, including but not limited to, terms, conditions, and limitations relating to --

"(1) the installation, operation, and maintenance of adequate navigation facilities; and

"(2) the operation and maintenance of adequate safety equipment, including firefighting and rescue equipment capable of rapid access to any portion of the airport used for the landing, takeoff, or surface maneuvering of aircraft."

The most recent amendment to the 1958 Act is the amendment of Section 611 by the 1972 Act.¹⁹ As amended, Section 611 in pertinent part now reads as follows:

"Sec 611 (a) For purposes of this section:

"(1) The term 'FAA' means the Administrator of the Federal Aviation Administration.

"(2) The term 'EPA' means the Administrator of the Environmental Protection Agency.

"(b) (1) In order to afford present and future relief and protection to the public health and welfare from aircraft noise and sonic boom, the FAA, after consultation with the Secretary of Transportation and with EPA, shall prescribe and amend standards for the measurement of aircraft noise and sonic boom and shall prescribe and amend such regulations as the FAA may find necessary to provide for the control and abatement of aircraft noise and sonic boom, including the application of such standards and regulations in the issuance, amendment, modification, suspension, or revocation of any certificate authorized by this title. No exemption with respect to any standard or regulation under this section may be granted under any provision of this Act unless the FAA shall have consulted with EPA before such exemption is granted, except that if the FAA determines that safety in air commerce of air transportation requires that such an exemption be granted before EPA can be consulted, the FAA shall consult with EPA as soon as practicable after the exemption is granted.

"(2) The FAA shall not issue an original type certificate under section 603 (a) of this Act for any aircraft for which substantial noise abatement can be achieved by prescribing standards and regulations in accordance with this section, unless he shall have prescribed standards and regulations in accordance with this section which apply to such aircraft and which protect the public from aircraft noise and sonic boom, consistent with the considerations listed in subsection (d) . . .

"(d) In prescribing the amending standards and regulations under this section, the FAA shall - -

(1) consider relevant available data relating to aircraft noise and sonic boom, including the results or research, development, testing, and evaluation activities conducted pursuant to this Act and the Department of Transportation Act;

"(2) consult with such Federal, State and interstate agencies as he deems appropriate;

"(3) consider whether any proposed standard or regulation is consistent with the highest degree of safety in air commerce or air transportation in the public interest;

"(4) consider whether any proposed standard or regulation is economically reasonable, technologically practicable, and appropriate for the particular type of aircraft, aircraft engine, appliance, or certificate to which it will apply;

"(5) consider the extent to which such standard or regulation will contribute to carrying out the purpose of this section.

"(e) If any action to amend, modify, suspend, or revoke a certificate in which violation of aircraft noise or sonic boom standards or regulation is at issue, the certificate holder shall have the same notice and appeal rights as are contained in section 609, and in any appeal to the National Transportation Safety Board, the Board may amend, modify or reverse the order of the FAA if it finds that control or abatement of aircraft noise or sonic boom and the public health and welfare do not require the affirmation of such order, or that such order is not consistent with safety in air commerce or air transportation."

A rule issued pursuant to § 612 prohibiting domestic and flag carriers from operating large fixed wing airplanes into a regular airport in the U.S. after May 20, 1973 unless the airport has been certificated "supports the safety objectives" of FAR 139²⁰, and has no reference to noise considerations.

It would seem clear, however, that by exercising authority under § 611 to apply noise "standards and regulations in the issuance . . . of any certificate. . ." the FAA could include noise standards or regulations in an airport operator's certificate pursuant to § 612. In brief, authority exists for the FAA to certify airports for cumulative noise exposure levels, based upon standards recommended by the EPA for protection of the public health and welfare.

The National Environmental Policy Act of 1969 (NEPA),²¹ imposes environmental requirements on the FAA, as well as on the other agencies. NEPA was enacted to ensure that federal programs and activities, to the extent practicable, will not have consequences inimical to the environment. To make certain that full consideration is given to environmental factors in agency planning, Section 102(2) (c) of the Act²² provides that:

"To the fullest extent possible . . . all agencies of the Federal Government shall . . . include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official . . ."

The Council on Environment Quality (CEQ), a body established under Section 202 of NEPA²³ to review the activities of the federal agencies and in general to aid the President in formulating policy on environmental matters, has, pursuant to its mandate in Executive Order No. 11514,²⁴ issued guidelines for the preparation of impact statements.²⁵ The Department of Transportation has, for its own operating purposes, issued an order entitled "Procedures for Considering Environmental Impacts."²⁶ Paragraph 8 of the order requires that a proposal for agency action be accompanied either by a declaration that the proposed action will not have a significant impact on the environment or by a Section 102(2) (C) Environmental Impact Statement.

Section 12 of the 1970 Airport and Airway Development Act,²⁷ also requires DOT to formulate a "National Airport System Plan," which is designed to aid the development of public airports until at least May 21, 1982. Factors of mandatory consideration in the development of the Plan include "the relationship of each airport to the rest of the transportation system in the particular area, to the forecasted technological developments in aeronautics, and to developments forecasted in other modes of intercity transportation."²⁸ The Act specifically directs the Secretary to consult with the Council on Environmental Quality and the Secretaries of HEW, Agriculture and Interior, and to incorporate their recommendations "with regard to the preservation of environmental quality . . . to the extent . . . feasible . . ."²⁹

The AADA also established the Aviation Advisory Commission to "formulate recommendations concerning the long range needs of aviation. . . surrounding land uses, ground access, airways, air service and aircraft, compatible with [the National Airport System Plan]."³⁰ This Commission has recently submitted to the President and Congress a report on its studies and recommendations.³¹

Encompassing this entire process of application, hearing and approval at all levels for new airport or runway development, or runway extension, is a declaration of national policy that:

"airport development projects authorized pursuant to this subchapter shall provide for the protection and enhancement of the natural resources and the quality of environment of the Nation,"³²

The Secretary may not approve an airport development project found to have an adverse environmental impact unless he has issued a written statement that there is "no feasible and prudent alternative"³³ and that "all possible steps have been taken to minimize" the environmental damage.³⁴ Such rejection, however, is on an ad hoc basis, there being no advance Federal guidance for the planning of airport projects.³⁵

Even if a project satisfies the needs of local environmental conditions, it must also meet Federal substantive standards. Section 16(a)³⁶ requires that all proposed development be "in accordance with standards established by the Secretary, including standards for site location [and] airport layout" This allows DOT/FAA to prescribe standards for airport location, layout and improvements based on noise considerations.

Commencing with the Federal Aid to Airports Act of 1946,³⁷ there have been Federal grants-in-aid programs for establishing and developing publicly owned airports. In 1964 Congress amended the 1946 Act to require that any airport receiving Federal funds must have taken "appropriate action, including the adoption of zoning laws, . . . to the extent reasonable, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations. . . ."³⁸ This language allows the issuance of noise guidelines, for sponsors based in part on noise considerations. The current grant program³⁹ is funded from the Airport and Airway Trust Fund which was created by the Airport and Airway Revenue Act of 1970, the companion Act of AADA.⁴⁰

Section 16(c) of AADA provides:

"(3) No airport development project may be approved by the Secretary unless he is satisfied that fair consideration has been given to the interest of communities in or near which the project may be located.

"(4) It is declared to be national policy that airport development projects authorized pursuant to this part shall provide for the protection and enhancement of the natural resources and the quality of the environment of the nation. . . ."41

While it may be assumed that the grant allocations made thus far are consistent with the directives of the above provisions, it does not appear that aircraft/airport noise abatement has been a prime objective of such grants. However, there is no apparent reason why aircraft/airport noise should not be a prime factor for consideration under each of the ADAP and PGP programs.

Further regulatory action by Federal Aviation Administration is seen in the promulgation by the FAA of Part 36 of the Federal Aviation Regulations. Part 36 sets standards, as provided for by the 1968 amendment which added Section 611 to the 1958 Act, for type certification of future subsonic transport category aircraft and of turbojet aircraft regardless of category. Part 36 does not require the retrofit of existing aircraft; however, the FAA has stated in the preamble to Part 36 that further noise reduction will be required as technology progresses.

In the Noise Control Act of 1972⁴² Congress declared that "Federal action is essential to deal with major noise sources in commerce, the control of which requires national uniformity of treatment."⁴³ The purpose of the Act is the "effective coordination of Federal research and activity in noise control."⁴⁴ To this end the Act authorizes the establishment of Federal noise emission standards for products distributed in commerce as well as providing information concerning those standards to the public.⁴⁵

While the Noise Control Act requires each Federal agency to consult with the Administrator of the Environmental Protection Agency (EPA) in prescribing standards and regulations respecting noise,⁴⁶ it specifically provides that the 1968 Amendment

to the Federal Aviation Act of 1958, previously cited, applies to the FAA noise reduction programs in lieu of the more general provisions of the Noise Control Act.⁴⁷

A principal provision of the 1972 Amendment requires the FAA, after consultation with the Secretary of Transportation and EPA, to prescribe and amend standards for the measurement of aircraft noise and sonic boom in order to protect the public health and welfare.⁴⁸ The Noise Control Act further amends the 1968 Amendment by requiring the EPA to submit to the FAA proposed regulations to provide for the control and abatement of aircraft noise and sonic boom as EPA determines is necessary to protect the public health and welfare.⁴⁹

The FAA has final authority as between the two agencies on whether to implement the EPA recommendations, after due opportunity for a public hearing has been provided.⁵⁰ If the FAA does not adopt the EPA recommendations and the EPA has reason to believe that the FAA action does not protect the public health and welfare from aircraft noise and sonic boom, EPA may request the FAA to reconsider the original EPA proposal.⁵¹ This request is to be published in the Federal Register. The FAA must thereafter give a detailed report to EPA on its review. This report is to be published in the Federal Register, unless the FAA intends to implement the specific action proposed by EPA.

As mentioned above NEPA was enacted to ensure that Federal programs and activities, to the extent practicable, will not have consequences inimical to the environment. Furthermore CEQ has issued its guidelines for the preparation of impact statements; and DOT has issued its order entitled "Procedures for Considering Environmental Impacts." However, the only FAA order that has been released to date in compliance with the DOT order sets forth the Administration's policy and procedure concerning the abatement of environmental pollutants generated by FAA facilities.⁵² The purpose of the program is to build on existing legislation and efforts to abate air and water pollution at Federal facilities, including environmental pollutants such as noise, radiation and solid waste. The term "facilities" was defined to include aircraft owned by or constructed or manufactured for the purpose of leasing to the Federal government.

The order directed compliance by all FAA owned or leased facilities, and included the requirement that all future owned or leased facilities must be designed, operated, and maintained to conform with specific pollution standards.

In an earlier pronouncement, which set forth its plan for implementation of NEPA with regard to airport construction projects, the FAA declared that an action will be considered significant enough to warrant the preparation of an impact statement if it has effects similar to those outlined in the DOT order.⁵³ The Civil Aeronautics Board has issued a Statement of General Policy under NEPA, effective June 25, 1970.⁵⁴

Note should also be made of subchapter IV of the Intergovernmental Cooperation Act of 1968, which is concerned with development assistance programs.⁵⁵ Under its provisions the President is directed to establish rules and regulations governing the formulation, evaluation and review of Federal programs and projects that have a significant impact on area and community development. The objectives to be considered in formulating the rules and regulations include a balanced transportation system (including air transport), development and conservation of natural resources, and adequate outdoor recreation and open space. The viewpoints of national, regional, state, and local concerns are to be fully considered.

Under Section 307(c) of the Federal Aviation Act, the FAA has been given the power to protect "persons and property on the ground," as well as in the air.⁵⁶ Pursuant to this power, and its power to prescribe rules for the safe and efficient use of the navigable airspace, the FAA, as noted on page I-2-5, had prior to 1968, issued regulations for the purpose of noise abatement, prescribing, among other things, preferential runway systems and courses and altitudes for landings and take-offs, first at several airports including Washington National and Kennedy and later, under a general regulation, at all airports with control towers. The regulations were designed to require the use of approach and departure procedures in order to minimize noise levels to the surrounding community. Within the limitations of existing operating conditions, such as wind velocity, traffic volume and runway length,

the preferential runway system directs the use of the runway that will expose the community to the least noise possible.

Under the later regulation, FAA controllers, by their Air Traffic Control clearances, may bring individual operations within the scope of FAA regulatory power. Violations of FAA regulations or such clearances are subject to penalties prescribed by the Federal Aviation Act and FAA regulations.⁵⁷ Thus through tower clearances the FAA can play a substantial role in implementing the operational noise-abatement system of a particular airport. Of course the FAA controller, on his own or at the pilot's request or insistence, may determine that a preferred procedure should not be followed in a particular operation in the interest of safety.

In 1969 the FAA acted to limit the number of operations by different categories of aircraft, during certain hours, at 5 major airports.⁵⁸ This application of the FAA power over flow control in order to achieve the most efficient use of the navigable airspace was stated to be aimed at relieving air traffic delays, but it could have been exercised to reduce noise levels. These regulations of flow control have not been challenged as an exercise of Title III controls over efficient use of the navigable airspace. Those controls also authorize the protection of persons and property on the ground.

As an example of how these powers could be used to effect a reduction in noise, the FAA could ban flights at night at certain airports or on certain runways; it could direct flights to other less impacted airports; or perhaps order the elimination of flights, subject to the following paragraph.

There is a possibility of concurrent jurisdiction problems between the FAA and CAB. The CAB is authorized to permit discussions and agreements among carriers which affect air transportation.⁵⁹ The carriers have agreed to route-capacity agreements to limit the frequency of operations. The CAB has approved such agreements in certain instances.⁶⁰ At the same time, as explained, the FAA has the authority to change the flow of air carrier operations in order to lessen overall noise levels.

Since the considerations that guide each of the two agencies in allowing or ordering such changes in operations are premised on different bases, their powers could be reconciled.

In the specific instance of Washington National Airport (DCA) and Dulles International Airport (IAD) both of which are considered regional airports for the Washington, D. C. , area (Friendship Airport at Baltimore is considered the third regional airport for the D. C. area), the FAA has published in the Federal Register a notice that it proposes to refine its policy concerning the present and future roles of these two airports in meeting the needs of air transportation in the Washington area.⁶¹ It might be noted that the FAA, besides being the governmental agency empowered to regulate these two airports, is also the proprietor of them. However, the notice indicates that the FAA promulgated the notice in both capacities. The measure is in part directed to the reduction of noise levels at DCA. The FAA proposes that DCA by January 1, 1974, be operated solely as a short-haul airport insofar as air carrier operations are concerned, with the longer-haul flights being shifted to IAD. Air carriers would not be permitted to operate a new aircraft type into DCA unless the new aircraft were quieter and resulted on an average day in less air emissions on a per-passenger-seat basis than the aircraft it replaces and were to be used for service within the range of the short-haul provisions of this policy. On the other hand, there would not be any restriction at DCA on any type of aircraft that was more acceptable in these terms, except as might be dictated by safety considerations or the physical limitations of the airfield.

FAA Rule Making

As just noted, the only regulation promulgated to date by the FAA, pursuant to its authority under the 1968 Amendment "to prescribe and amend such regulations as (it) may find necessary to provide for the control and abatement of aircraft noise and sonic boom"⁶² is Part 36 of the Federal Aviation Regulations.⁶³ This part sets forth the noise emission limits for type certification of new subsonic jet or propeller driven transport category aircraft and all subsonic jet aircraft regardless of category.⁶⁴

On the rationale that the modification of aircraft already in use or manufactured under an existing type certificate involved different economic and technical considerations from the design of new aircraft, the FAA wrote Part 36 to apply only to airplanes for which new type certificates are sought, with the commitment to propose noise standards for older aircraft at the earliest possible time.⁶⁵

When Part 36 became effective a number of applications for new aircraft within its scope were pending. One application for certification of a major aircraft, the Boeing 747, had been pending before the 1968 amendment to the Federal Aviation Act was enacted and before the FAA proposed Part 36. Consequently, the designing of that aircraft was well along before it became clear that the government would impose mandatory noise limits.

Initially, Part 36 required all new aircraft having turbojet engines with bypass ratios of 2 or more to meet the standards imposed for future airplanes. With respect to aircraft on which applications had been filed, no matter how long ago, manufacturers were merely required to furnish information to flight crews on how to minimize noise in the operation of the planes.⁶⁶ This approach was changed in two ways when the rules were finally adopted.

The first change provided for an additional tradeoff provision permitting more noise by airplanes powered by more than three turbojet engines with bypass ratios of 2 or more and for which applications had been made before December 1, 1969.⁶⁷ Second, the FAA excused the 747 from the noise limits in Appendix C, requiring only that its noise levels be reduced "to the lowest levels that are economically reasonable, technologically practicable, and appropriate to the particular type design."⁶⁸ This dispensation was limited, however, by the imposition of a time period at the end of which the certificate for the 747 was to be suspended or modified unless the aircraft had been redesigned to meet the applicable limits set forth in FAR 36 Appendix C.⁶⁹ This requirement was later met, with the FAA certifying that the type design had been changed to meet those applicable limits.

Part 36 also regulates aircraft that were type-certified before its effective date but that, after that date, undergo voluntary design changes increasing the noise levels created by the aircraft.⁷⁰ Such a change is treated as an "acoustical change," and the manufacturer must obtain FAA approval before making any such change. The purpose of the rule is to prevent escalation of aircraft noise when and if the older type certified aircraft are enlarged.⁷¹

The noise evaluation technique contained in Part 36 involves measurement of the noise produced by an aircraft at the approach, takeoff and sideline points. Before Part 36 took effect it was amended to change the conditions for testing approach noise to make explicit that the landing configuration for the noise test is to be the same as that used in satisfying the safety requirements for type certification.⁷²

In 1971 the FAA published a notice of proposed rule making concerning a possible amendment to Part 36 to require altitude and temperature accountability throughout that Part in order to strengthen the test conditions for acoustical change approvals.⁷³ The FAA has never finally adopted this amendment. In October 1972 the FAA announced that it intended to propose an amendment to Part 36 that would lower the noise limits in Appendix C for aircraft types certified in the future.⁷⁴

Since the incorporation of noise-reducing features into an airplane at the time of manufacture can normally produce greater results at lower costs than can post-manufacture modification, the FAA in July 1972 published a proposal that would require new airplanes of types certified before Part 36 took effect to comply with Appendix C noise standards.⁷⁵ The proposed requirement would apply to all transport category and turbojet aircraft, including the 707, DC-8, 727, 737 and DC-9. The airworthiness certificate issued to each copy of a type-certified aircraft would be the vehicle for ensuring that new copies of these aircraft incorporate design changes to satisfy Appendix C. If the rule were adopted as proposed, Appendix C would apply to new copies of the older aircraft types produced after the effective date.

The power of the FAA to impose retrofit rules on existing type certificated aircraft not covered by Part 36 in order to reduce noise levels is clear, as is the prospect that noise levels will begin to go down once such rules have been applied to a significant extent.

Part 36 does not require retrofitting of any existing aircraft. But the FAA stated in the preamble to Part 36⁷⁶ that further noise reduction would be required as technology progresses, and on November 4, 1970, published an advance notice of proposed rule making concerning the retrofitting of the existing type certified subsonic turbofan engine powered airplanes as a condition to their further operation.⁷⁷ The 1968 Amendment to the Federal Aviation Act was cited as the authority to undertake such rulemaking. The notice stated that the legislative history of the Amendment contemplated that retrofit would be required when feasible. In the advance notice of proposed rule making for retrofit the Administrator of the FAA noted that "there is an obvious public need for relief. It was the noise of the current fleet of aircraft that, in large part, led to the enactment of 49 U.S.C. § 1431 and with respect to which the public need for protection is clearly the most urgent."⁷⁸ The notice itself, however, did not propose any specific rules. To achieve this retrofit noise reduction two alternative approaches were discussed:

1. Prescribing the entire modification scheme and equipment so that the means of compliance will be clear to the carriers.
2. Setting the conditions that must be met by the retrofitted plane without setting the means to achieve the reduction in noise, thereby allowing flexibility in technologies.

As detailed in the advance notice, NASA has conducted a 3-year research program, which has demonstrated that application of special acoustical material to the engine nacelles of 707's and DC-8's could reduce the noise from these aircraft on takeoff and approach by approximately 3.5 EPNdB and 12-15 EPNdB respectively.⁷⁹ By mid-1971, however, the Administrator of the FAA announced that retrofit of these two older model planes would, in his view, yield only small benefit to the

public in view of the cost of the remodeling, the time it would take, and their ultimate replacement by newer and quieter types, and that the focus of retrofit considerations should be directed to the less noisy 727, 737 and DC-9 airplanes.⁸⁰

Procedurally, the advance notice is to be followed by a notice of proposed rule making, and then by the final adoption of the retrofit rules. While no direct action has been taken to date with respect to ordering retrofit, the FAA, based on the comments to the advance notice, has issued an advance notice of proposed rule making concerning airline Fleet Noise Level (FNL).⁸¹

Civil Airplane Fleet Noise Level (FNL) would be the measure of the average noise level created by all old and new planes in a carrier's fleet. The FNL would be weighted by the number of flights made by each aircraft. The theory behind the proposal is that by pushing down the carrier's FNL, the overall aircraft noise will be reduced. The most efficient way to accomplish such reductions will be left to the carrier. Among the options that a carrier may select are: retiring noisier aircraft, reducing the frequency of their use, operating them at lower weights, and retrofitting.

The proposed regulation would:

- Prevent escalation of fleet noise levels.
- Require a reduction in fleet noise levels on or before July 1, 1976.
- Require airplanes to comply with Part 36 on or after July 1, 1978.

The proposal would apply to aircraft operated in interstate commerce, under Part 121 of the Federal Aviation Regulations⁸², by air carriers, supplemental air carriers and commercial and air taxi operators operating turbojet engine powered airplanes with maximum weights of 75,000 pounds or greater. The extent to which the proposal would apply to airplanes engaged in domestic as well as foreign operations is ambiguous. Pending achievement of the proposal's objective, the FNL concept would immediately establish an upper limit on the cumulative noise levels of each fleet operator and then would require a phased reduction of those levels so that

by July 1, 1976, at least 50 percent of the reduction required by July 1, 1978, would be achieved.⁸³ However, for reasons that are not entirely clear, the proposal would eliminate the sideline measurement.

There have been two proposals for rulemaking in the SST/sonic boom area. The first, the civil supersonic aircraft type certification rule is still in the advanced notice stage, no rules having been proposed.⁸⁴ Rather, the government has merely invited public participation to discuss different courses of action.

The period for public comment expired in November 1970 and no proposed rules have to date been published. The FAA, in the advance notice, took a definite stand that noise ceilings would be placed on such aircraft. This rule would amend Part 36 and would represent the first step in implementing the objective of establishing noise levels on supersonic airplanes and developing criteria concerning the airport noise characteristics of the airplane that must be met prior to the issuance of a type certificate.

The second proposal, in the sonic boom area, was published as a notice of proposed rule making on April 16, 1970,⁸⁵ and was promulgated on March 28, 1973.⁸⁶ It amends FAR 91,⁸⁷ which prescribes rules for the operation and maintenance of all aircraft in the country. Under the new rule, no person may operate a civil aircraft at a true flight Mach number greater than 1, except in compliance with conditions and limitations set forth in an authorization to exceed Mach 1 which is issued by the FAA to the operator under the terms of Appendix B to the new rule. Each application for an authorization to exceed Mach 1 must demonstrate that one or more of the following conditions is satisfied:

- The flight is necessary to show compliance with airworthiness requirements.
- The flight is necessary to determine the sonic boom characteristics of the of the airplane.

- The flight is necessary to establish means of reducing or eliminating the effects of sonic boom.
- The flight is necessary to demonstrate the conditions and limitations under which speeds greater than a true flight Mach number of 1 will not cause a measurable sonic boom overpressure to reach the surface.⁸⁸

Further, the application must demonstrate that the purpose of the test cannot be safely or properly accomplished by overocean testing.⁸⁹ An authorization to exceed Mach 1 is effective until it expires or is surrendered or until it is suspended or terminated by the Administrator. Such an authorization may be amended or suspended at any time, if the Administrator finds that such action is necessary to protect the environment. Any such suspension or amendment remains in effect during the period that any hearing on such action takes place.⁹⁰ The authority for the promulgation of this civil aircraft sonic boom rule is the 1968 Amendment to the Federal Aviation Act.⁹¹

The possible development of large STOL commercial aircraft during the next decade will create new demands for noise abatement technology. In addition to operating out of large commercial airports, these aircraft will operate out of short field general aviation airports, most of which have not previously created an appreciable adverse noise impact on the surrounding community. New STOL aircraft are expected to be subject to new noise certification regulations developed specifically for this type of aircraft.⁹² A design objective of 95 EPNdB at 500 feet for STOL aircraft has been tentatively selected.⁹³ Design of vehicles and propulsion systems meeting this goal is being approached by intensive research and development of suitable propulsion and lift concepts that may be examined with respect to potential jet noise technology.⁹⁴

The VTOL industry is primarily geared to military helicopter requirements, which account for approximately 80 percent of the more than 20,000 such vehicles produced prior to January 1970.⁹⁵ The industry has been engaged in research and development programs specifically aimed at reducing helicopter noise. There are no regulations, however, limiting the noise of helicopters for civil use. Thus, there is little motivation for transferring this helicopter noise abatement technology into the civil sector. Since it has been demonstrated that substantial noise suppression can be provided for current helicopter designs, it is practical to consider that the helicopter can eventually be compatible with community useage.⁹⁶ In the long run, this result can be achieved only by incorporating adequate noise reduction methodology into vehicles produced for the urban user. Application of available noise control technology, however, to currently marketed light piston-powered helicopters can be fostered by regulatory action.⁹⁷

When the FAA promulgated Part 36, it explained the exclusion of STOLs and VTOLs on the ground that such aircraft presented peculiar problems because of their unconventional propulsive systems and their ability to operate in close quarters, these problems required further study and separate treatment.⁹⁸ The FAA promised to propose further rules controlling airport noise from such aircraft "at the earliest possible time,"⁹⁹ but has not yet done so.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

NASA was established by the National Aeronautics and Space Act of 1958.¹⁰⁰ The purpose of NASA under the Act is to carry out the declared policy of the United States that aeronautical and space activities sponsored by the United States shall be the responsibility of and be directed by and under the control of a civilian agency, with the exception of defense activities.¹⁰¹ NASA is authorized to:

- Conduct research into the problems of flight within and outside the earth's atmosphere.
- Develop, construct, test and operate aeronautical and space vehicles for research purposes.
- Perform such other activities as may be required for the exploration of space.¹⁰²

Noise reduction technology has been accelerated by NASA through research and development programs aimed at utilizing existing turbofan engines by modifying them with a noise reduction retrofit package. An example of such an effort is the NASA Acoustically Lined Nacelle Program, which has demonstrated the feasibility of reducing engine noise on approach and of moderately reducing takeoff and sideline noise.¹⁰³ In September 1966 NASA in conjunction with Boeing and Douglas undertook a study of potential noise reduction with respect to the JT3D engine, which is the engine used with the DC-8 and 707. This study was finally concluded in October 1969 and indicated that noise attenuation results on approach were possible for Douglas DC-8 and Boeing 707 modifications. Attenuation in approach noise on the order of 10.5 EPNdB and 15.5 EPNdB were attained in this study for the Douglas DC-8 and the Boeing 707, respectively. The primary value of the program was the demonstration that the basic concepts of sound absorption developed in various laboratories were valid for aircraft in flight.

Another NASA program, due to be completed in 1973, is the Quiet Engine Program aimed at demonstrating the feasibility of designing a new turbofan engine with

takeoff and approach levels significantly lower than any achieved to date. The objective of the program is the development, from the first stage of design, of an experimental turbofan engine having low noise production as the primary configurational constraint.¹⁰⁴

NASA, in conjunction with the FAA, the Environmental Science Services Administration, and the Department of Defense, has conducted research on sonic boom and its effects on people, animals, terrain, structures, and ecology in general. Although these efforts have had many significant technical and psychological results, they have not established a ceiling below which sonic boom caused by civil aircraft in commercial air transportation would be considered "tolerable" or "acceptable."¹⁰⁵

In connection with this study for EPA, NASA submitted a preliminary report to EPA dealing with aircraft noise reduction technology.¹⁰⁶ Reference is made to this report for a detailed presentation of the various types of research programs in the area of aircraft noise and sonic boom conducted and sponsored by NASA. The present report purports to do no more than briefly present the different kinds of research programs for which NASA has been or is responsible.

NASA has supported studies to characterize and evaluate individual and community response to aircraft noise.¹⁰⁷ It has sponsored a number of community survey research studies with the objective of establishing a correlation between the manner in which people react to airport noise and their exposure time histories and existing measurement techniques.¹⁰⁸

Technology for sonic boom assessment has not been developed as systematically as that for aircraft noise assessment. Considerable effort has been expended, however, to characterize the statistical nature of the exposure; that is, its variability from a true N-wave along with associated community and individual responses.¹⁰⁹

Laboratory studies are planned, with the use of improved facilities, to study the intrusiveness of aircraft noise, particularly the significance of background noise and the effect of low frequency noise and noise induced vibrations on the psychological and physiological responses of people.¹¹⁰

Both short- and long-range plans have been developed for airport community noise research. Data will be obtained by means of special tower facilities to better define the propagation through an inhomogeneous medium from flight altitudes to the ground at various angles. The data will be correlated with actual ground contour measurements from aircraft in flight in order to improve the capability for predicting contour patterns, particularly at large distances. Long range plans call for repeating community surveys in selected localities in order to evaluate and correlate expected changes in the noise exposure and the associated responses.¹¹¹

NASA is initiating plans to conduct in-house combustor noise tests using the existing facilities in order to determine means for predicting core noise levels and to find viable means of reducing the core noise floor. Current research is being conducted on the basic principles and problems underlying combustion noise.¹¹² Also, NASA has initiated studies of thrust reverser noise.¹¹³

Theoretical work on noise suppressors is continuing in order to provide a better understanding of suppressors and to provide better design techniques. Experimental studies with sonic (or choked) inlets have been conducted.¹¹⁴ Present research efforts are directed at making noise suppressors more efficient. Emphasis is being placed both on theoretical and experimental programs.¹¹⁵

The NASA report notes that:

"In order to progress beyond the FAR 36-10 noise levels economically, a vigorous noise reduction technology program is required. Advances in noise source reduction and improved suppression efficiency are areas of major importance for future technology programs. The fan and possibly the turbine are the primary candidates for source noise reduction program. Improvements in suppression technology are needed to increase acoustic treatment effectiveness so that less treatment will be required for a given noise reduction and also to reduce the weight per unit area of treatment by incorporating new materials or fabrication concepts or both. The use of a sonic inlet also is a promising technique for reducing the cost of noise suppression. This concept will also be evaluated in future programs."¹¹⁶

NASA also has a refan program, which applies current source abatement technology to the engines that power the narrow-body aircraft in the United States civil fleet. No advances in the state-of-the-art are anticipated. The program objectives are to demonstrate, through development of retrofit kits, that the noise produced by the narrow-body fleet can be reduced by 5 to 10 EPNdB below the Part 36 requirements, while retaining demonstrated engine reliability and maintainability and causing no degradation of aircraft performance or safety, and all at an acceptable fleet retrofit cost. Close coordination of the program is being maintained with the Department of Transportation through the Joint DOT/NASA Office of Noise Abatement.¹¹⁷

Further NASA research programs include:

- Nonpropulsive (airframe) noise.¹¹⁸
- Jet noise abatement technology, including suppression devices, inflight effects on suppression devices and core noise.¹¹⁹
- Sonic boom.¹²⁰
- Powered lift aircraft, including augments wing noise, externally blown flap noise, quiet, clean short-haul experimental engine programs and short-haul aircraft system studies.¹²¹
- Rotorcraft.¹²²
- Operating procedures, including two-segment approach studies, microwave landing systems, curved approaches and decelerating approaches.¹²³

CIVIL AERONAUTICS BOARD (CAB)

The CAB was created in 1938 by the Civil Aviation Act of 1938.¹²⁴ The Board's current authority is contained in the Federal Aviation Act of 1958, as amended.¹²⁵ Under the 1958 Act the Board is directed to regulate the economic aspects of the airline industry. Board functions under the Act include the issuance of certificates of public convenience and necessity authorizing an air carrier to engage in air transportation,¹²⁶ the approval of mergers,¹²⁷ and the regulation of air fares.¹²⁸

The Board is required by the Act to consider six factors in deciding whether a course of action is in the public interest.¹²⁹ There is no explicit requirement in that Act that the CAB consider the environmental impact of its decision. However, on September 12, 1968, the Court of Appeals for the District of Columbia, in the case of Palisades Citizens Association v. C.A.B., held that consideration of the environmental impact was implicit in its statutory authority to regulate for the public convenience and necessity.¹³⁰ On January 1, 1970, the mandate of environmental protection became explicit, as on that date the National Environmental Policy Act¹³¹ became effective.

In June of 1970, the Board issued regulations implementing the requirements of NEPA.¹³² Although the Board stated that it can interject environmental considerations in other contexts, the Board's regulations implementing NEPA state that the need for an environmental impact statement will arise most often in instances in which the Board issues a certificate authorizing air transportation: (1) To an area not previously served by air transportation; or (2) to be operated under conditions or with equipment which might result in changes significantly affecting noise or air pollution levels.¹³³

Board regulations provide for consideration of environmental factors in the context of formal Board proceedings.¹³⁴ Under Board procedures, it is the responsibility of the hearing examiner to file a final environmental impact statement after the completion of the formal proceedings if he determines that Board action will result in "a major federal action significantly affecting the quality of the human environment." If the examiner determines that there is no need for the environmental impact statement he must set forth the basis for this decision.

The basic thrust of Board environmental procedures is to develop all the environmental information needed to make an intelligent decision at the hearing stage.¹³⁵ This assumes that "the primary burden of producing environmentally relevant evidence will fall upon the applicants, parties, and agencies with environmental expertise participating or commenting on any particular proceeding."¹³⁶ The Board has stated on several occasions that this procedure meets NEPA requirements because other

agencies have expertise and authority in areas directly concerned with the environmental impact of aircraft operation and because the Board is primarily concerned with the economic regulation of the airline industry.

Although the CAB has the authority to deny a certificate authorizing air transportation if it finds that the adverse impact of the operations on the environment outweighs whatever factors point to the grant of the certificate, it cannot according to its regulations, interfere if a carrier changes schedules, increases frequency, or introduces new equipment over its authorized routes which result in new, different, or increased impact on the environment.¹³⁷ The CAB, as justification for this position, cites section 401(e)(4) of the 1958 Act, which prohibits the CAB from attaching any conditions to the grant of a certificate, and the control of aircraft and aircraft operations granted to the FAA by the same Act.

The CAB has acted to reduce congestion and lower the frequency of flights by approving capacity limitation agreements among airlines.¹³⁸ These agreements allow all carriers on a particular route to reduce the frequency of flights on that route thereby raising airline load factors.

The CAB has also acted to reduce the noise impact around congested airports by requiring that carriers on certain routes use less congested airports. Under § 401(d)(1) and 401(e)(1) of the FAA Act, the Board can find that the public interest requires the use of a particular airport and so specify the airport in the carrier's certificate. The courts have held that Board specification of a particular airport is lawful, since it was merely a description of the "points" that a carrier is authorized to serve.¹⁴⁰

The CAB is considering the desirability of discouraging excessive schedules in order to reduce airport congestion, noise, air pollution and energy consumption in setting load factors for use in computation of fares.¹⁴¹

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT (HUD)

The HUD legislative authority contains no explicit provision mandating that HUD adopt regulations designed to protect the public health and welfare from aircraft noise. However, the Department of Housing and Urban Development Act of 1965¹⁴², which

created HUD, and the National Environmental Policy Act of 1969¹⁴³ implicitly provide authority for HUD to act. The Department of Housing and Urban Development Act declares that the general welfare of the nation requires the "sound development of the Nation's communities and metropolitan areas."¹⁴⁴ The Secretary was given the authority to adopt such rules and regulations as were necessary to carry out the purposes of the Act.¹⁴⁵ The National Environmental Policy Act of 1969 required all Federal agencies to develop procedures to carry out the purposes of NEPA.¹⁴⁶

In July of 1971, HUD promulgated Circular 1390.2, which established noise exposure policies and standards to be observed in the approval or disapproval of all HUD projects. The Circular cited the Department of Housing and Urban Development Act and NEPA as authority.¹⁴⁷ The Circular covers assistance for planning, for funding new construction, and for rehabilitation of existing structures. To be eligible for planning assistance, projects are required to take sufficient consideration of noise exposures and sources of noise so as to assure that new housing and other noise sensitive accommodations will not be planned for areas whose current or projected noise exposures exceed the standards of the circular. All forms of HUD assistance are prohibited for new dwelling units on sites which have or are projected to have unacceptable noise exposures. The circular also provides that HUD is to encourage modernization of existing buildings for noise purposes so long as such modernization does not extend the useful life of the buildings.

The Circular requires an environmental impact statement when a HUD official requests approval of a project with a noise exposure which is "normally unacceptable."

HUD, as part of the Federal Interagency Aircraft Noise Abatement Program, sponsored, together with the Department of Transportation, studies of four airports.¹⁴⁸ These Metropolitan Aircraft Noise Abatement Policy Studies (MANAPS) considered present alternative land use related strategies for achieving remedial and preventive relief from aircraft noise for residents in the vicinity of airports.¹⁴⁹ The Chicago MANAP Study recommended that HUD could take additional steps which could reduce the impact of aircraft noise on communities located near airports.¹⁵⁰ The recommendations included:

- Funding soundproofing programs by providing HUD-supported loans and loan insurance for rehabilitation¹⁵¹ and for home and property improvements to property owners in sound impacted areas to enable them to soundproof their own dwellings;¹⁵²
- Funding local and regional "701" planning programs to help stimulate regional planning which gives adequate consideration to the noise impact of airports in developing land use controls.¹⁵³

HUD combines the experience of 10 airport case studies, including the four MANAP studies, to develop planning guidelines for local agencies, including both airport and community options for reducing aircraft noise conflicts.¹⁵⁴

DEPARTMENT OF DEFENSE (DOD)

There is no separate statute primarily concerned with DOD aircraft noise abatement efforts. However, the annual military construction and appropriation acts provide enabling authority and funds for acquisition of land, facilities, and equipment for aircraft noise abatement.¹⁵⁵ While some authorizations are clearly set forth, for example, "AIR INSTALLATIONS COMPATIBLE USE ZONES—Various Locations, \$12,000,000",¹⁵⁶ to identify others resort must be made to the legislative history of the enactment.

DOD has directed that "Insofar as practicable, and with appropriate consideration of assigned missions and of economic and technical factors, programs and actions of all DOD components shall be planned, initiated, and carried out in a manner to avoid adverse effects on the quality of the human environment. When this is not feasible, all reasonable measures shall be taken to neutralize or mitigate any adverse environmental impact of the action."¹⁵⁷

Within DOD, aircraft noise abatement efforts include installation of sound suppressors and blast fences for power check pads and jet engine test stands; redesign of jet aircraft engine air inlets and ducting; and modifications and constraints in aircraft operational procedures.¹⁵⁸

DOD is currently coordinating a proposed draft directive¹⁵⁹ that provides policy guidance on DOD interest in privately owned real property near military bases having active aircraft runways. The plan seeks to assure that the use of such land is compatible with both mission accomplishment and protection of the public. This is to be attained, where possible, through zoning by the local governing body, state legislation, or through acquisition of the land or aviation interests by the Federal Government. The proposed policy defines the methods by which an air installation compatible use zone (AICUZ) may be determined and delineated. DOD believes that establishment of the AICUZ should promote the development of non-noise sensitive activities in the high noise areas near air installations. Such high noise areas would be determined by use of the present tri-Service manual "Land Use Planning with Respect to Aircraft Noise".¹⁶⁰ From the resultant contours, the AICUZ is obtained for each base by its Commander. Basically, it is the land subject to an intensity, frequency and duration of noise as to place it in Composite Noise Rating Zone 3 (a Noise Exposure Forecast above 40) or, in some cases, Composite Noise Rating 2 (a Noise Exposure Forecast of 30 to 40). Controls over the use of this land are to be sought to maximize compatible uses in the AICUZ. This may require prohibition of some uses of the land (such as restricting residential construction) and may permit other uses subject to appropriate restrictions. Wherever possible, local commanders would seek alleviation of the noise problem in their AICUZ through local governmental action. If local zoning or other desired action is not forthcoming and the problem is not otherwise resolved, then consideration is to be given to Federal acquisition of the necessary land interest. Because of budgetary limitations and statutory restrictions on land purchase, the acquisition of each land interest under the AICUZ concept would require Congressional approval and appropriation. Such acquisitions, thus, would be on an incremental basis extending over a period of years.

Each military department has issued regulations seeking aircraft noise abatement. Air Force Regulation 55-34, directs that "Commanders must take every precaution to protect communities near Air Force bases from annoyances and risks associated

with flight operations."¹⁶¹ The actions suggested to achieve these ends are familiar, involving:

- Preferential runways
- Traffic patterns
- Takeoff and landing techniques
- Location of engine test stands and run-up pads
- Use of blast fences and other protective devices

To minimize sonic boom disturbances, required supersonic flights are to be conducted at altitudes above 30,000 feet over land areas. Lateral separation from metropolitan and other specified areas of one mile for each 2,000 feet of altitude is directed, unless a waiver is obtained from Hq. USAF for a "mission essential operational requirement." Further, sonic booms may not be generated except incident to active missions, approved training or test flights, authorized demonstrations, or emergency.¹⁶² Consolidated Sonic Boom Logs have been established to record pilots' reports of supersonic flight. Such recording assists in early settlement of just sonic boom damage claims.¹⁶³

DOD and Service regulations establish policies, assign responsibilities, and provide criteria and standards for an environmental pollution abatement program.¹⁶⁴ Regulatory coverage includes "noise" as a "pollutant." It directs the establishment of an Environmental Protection Committee at Hq., USAF, major command, and at Base level. It establishes, as policy, the requirement to assess the environmental consequences of any proposed action at the earliest practicable stage in the planning process. A previously issued regulation¹⁶⁵ sets forth guidance for the preparation of environmental assessments and statements.

DEPARTMENT OF LABOR (DOL)

In the Occupational Safety and Health Act of 1970, Congress directed the Secretary of Labor to promulgate rules concerning the occupational safety and health of the

employees in the country.¹⁶⁶ The purpose of the Act was to ensure that every working person in the country had safe and healthful working conditions. Employers and employees were encouraged to reduce the number of safety and health hazards at their places of employment and to institute new and to perfect existing programs for providing safe and healthful working conditions.¹⁶⁷ "Employer" was defined to mean any person engaged in a business affecting commerce but not including the United States or any State or political subdivision thereof.¹⁶⁸ The term "employee" was defined as an employee of an employer in a business that affects commerce.¹⁶⁹ The geographical scope of the statute included the States as well as territories and possessions of the United States.¹⁷⁰ Each employer was directed to furnish employment conditions that were free from recognized hazards and to comply with the occupational safety and health standards promulgated under the Act.¹⁷¹

The Secretary of Labor was empowered to promulgate, modify or revoke by rule any occupational safety or health standard.¹⁷²

The terms of this statute appear to be sufficiently broad to authorize the Secretary to promulgate rules concerning the level of noise in the working area of employees of an airport, including employees inside the plane. It is unlikely that a conflict will exist between FAA regulation of noise at the source and DOL regulation of employee noise exposure.

The occupational safety and health rules promulgated by the Secretary of Labor pursuant to the Occupational Safety and Health Act, are contained in parts 1901 to 1950 of 29 C.F.R. Part 1910 deals specifically with occupational safety and health standards. Only one part, however, concerns occupational noise exposure,¹⁷³ and requires that protection against the effects of noise exposure be provided when the sound levels exceed the following values:

<u>Duration per day, hours</u>	<u>Sound level dBA slow response</u>
8	90
6	92
4	95
3	97
2	100

<u>Duration per day, hours</u>	<u>Sound level dBA slow response</u>
1-1/2	102
1	105
1/2	110
1/4 or less	115

This section in subsection (b) (1) requires "feasible administrative or engineering controls to be utilized" when employees are subjected to sounds exceeding those listed in the above table. If such controls fail to reduce the sound levels within the levels set forth in the table, then personal protective equipment is to be provided and used to reduce sound levels within the levels set forth in the table.

There is no description concerning what methods are to be utilized to insure acceptable noise levels or what equipment should be provided if those noise levels cannot be maintained. The paragraph is general and presumably applies to any area of occupational employment within the broad definition of the Act.

While this entire part in 29 C.F.R. deals with employment conditions in general, it also deals with certain specific areas of employment, none of which, however, are in any way related to aircraft operations. The specific areas of employment dealt with include ship repairing, shipbuilding, shipbreaking and longshoring.¹⁷⁴ This part also contains a subpart on "special industries," including:

- Pulp, paper and paperboard mills
- Textiles
- Bakery equipment
- Laundry machinery and operations
- Sawmills
- Pulpwood logging
- Agricultural operations¹⁷⁵

For each of the specific industries listed in the preceding two categories, specific occupational safety and health standards are set forth. None of these standards is directed to noise conditions, including the abatement of same or the supply of protective equipment. The general provisions set forth earlier would apply.

The part concerning occupational noise exposure is currently under review by OSHA. A standards advisory committee on noise was appointed by the Secretary of Labor early in 1973. Their deliberations are to be completed no later than the end of November 1973. OSHA staff has developed a draft regulation from which the Advisory Committee is presently working. Promulgation is due in late 1973 or early 1974. It appears that the new standard will be significantly more explicit and somewhat more protective than the present one. The current OSHA draft suggests lowering the maximum permissible exposure levels for 8 hours to 85 dBA in 5 years. More explicit hearing conservation measures are also outlined.

ENVIRONMENTAL PROTECTION AGENCY (EPA)

The legal authority of EPA as to all aspects of aircraft noise is essentially derived from the Noise Control Act of 1972.¹⁷⁶ The 1972 Act provides EPA with the authority to advise, to warn, to be consulted and to identify levels of environmental noise necessary to protect the public health and welfare with an adequate margin of safety.

Section 7(a) of the 1972 Act provides that EPA shall "study", inter alia, "implications of identifying and achieving levels of cumulative noise exposure around airports," and "shall report" the results of such study to Congress.¹⁷⁷ Section (7)(b) amends Section 611 of the Federal Aviation Act of 1958 (1968 amendment) to provide that after the submission of the report to Congress, "EPA shall submit to the FAA proposed regulations to provide . . . control and abatement of aircraft noise . . . as EPA determines is necessary to protect public health and welfare."¹⁷⁸ This limited grant is to be contrasted with all other EPA regulatory authority, for in the area of aircraft noise EPA has no authority itself to promulgate, much less to enforce, the regulations it proposes to the FAA.

Thereafter, should EPA have reason to believe that FAA action on the regulations proposed does not protect the public health and welfare, EPA has the right to request further review by and a report from the FAA.¹⁷⁹ The FAA is required to issue such a responding report, but no additional authority is granted to EPA except to "air" its differences with the FAA in the pages of the Federal Register.

The legislative history of the 1972 Act shows that Congress considered and rejected language that would have given EPA the authority to promulgate the standards in question after consultation with the FAA. As enacted, however, EPA authority at best is the right to try to propose the good and attempt to defeat by discussion the bad.

It is to be noted that Section 5(a)(1) of the 1972 Act requires EPA to "develop and publish criteria with respect to noise",¹⁸⁰ including indication of "the kind and extent of all identifiable effects on the public health or welfare which may be expected from differing quantities and qualities of noise." Under Section 5(a)(2) of the Act, EPA is to "publish information on the levels of environmental noise the attainment and maintenance of which in defined areas under various conditions are requisite to protect the public health and welfare with an adequate margin of safety."¹⁸¹

Section 4(c) of the 1972 Act gives EPA the authority to "coordinate" the noise control and noise research programs of all Federal agencies,¹⁸² This is in addition to the authority conveyed by the Clean Air Act of 1970 "to review and comment on" FAA actions with respect to regulating and constructing airports.

The National Environmental Policy Act (NEPA) of 1969 requires the responsible Federal official who prepares an environmental impact statement to "consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved," as cited on page 2-9.

THE DISTRIBUTION OF POWERS TO CONTROL AIRCRAFT/AIRPORT NOISE WITHIN THE FEDERAL GOVERNMENT

Within the Federal Government, the primary power to control and enforce aircraft/airport noise abatement is presently vested in the FAA. However, as was decided by the Supreme Court in the Burbank case, since the 1972 Act the FAA exercises this control "in conjunction with EPA." The FAA is charged with enforcement and EPA is charged with formulating aircraft/airport noise levels in accord with public health and welfare standards.

Six other Federal agencies or Departments also have authority to act in the area of aircraft/airport noise. The first is NASA, which has the authority to undertake research and development to abate aircraft noise at the source and to propose the results thereof to the FAA for incorporation in the Federal Aviation Regulations. Such R&D includes not only hardware items, design changes and model development, but also the software of noise abatement operating procedures.

The third Federal entity is the HUD, which has the authority and expertise to plan for and contribute to compatible land use in noise affected areas adjacent to airports and to advise on noise-resistant building constructions.

The fourth is the Department of Health, Education, and Welfare (and the National Institutes of Health), which conducts research on the health effects of noise. Fifth is the DOD, which has a continuing program for compatible land use at military airports and which conducts R&D on technology for quieter aircraft and a certain amount of research on health effects of noise. Sixth there is the CAB, which has the authority (as yet unexercised) to take noise abatement retrofit of the carrier fleet and other noise abatement needs into account in setting fares.

The foregoing Federal authority and power presently exists. Although it is widely dispersed and not yet focused, it can be of tremendous assistance in planning and achieving an abatement of the health and general welfare effects of airport/aircraft noise. This is especially the case under the 1972 Act as it pertains to the area in question. Under the Act, EPA has the authority to publish environmental noise

standards to protect public health and welfare. EPA is also charged with regulating, through source emission standards on products and through noise limits on interstate rail and motor carriers, toward eventual achievement of the established exposure limitation goals.

The only significant noise source for which neither EPA nor any other agency has been given exclusive regulatory authority, either in design or operation, is that produced by aircraft. This means that inputs from the other Federal agencies with expertise and authority is especially necessary if a Federal aircraft/airport noise abatement program is to succeed.

INTERNATIONAL LEGAL FRAMEWORK

The basic treaty is the Convention on International Civil Aviation ("the Chicago Convention"), a multilateral treaty that became effective on April 4, 1947.¹⁸³ The Chicago Convention is treaty law in the United States with respect to various matters including operations in the United States by aircraft of other contracting States, and the applicability to such operations of the air regulations, rules of the air and airport and similar charges of the United States. Articles 11 and 15 of the Chicago Convention should particularly be considered in connection with the application of noise restrictions to foreign aircraft. Those articles require that regulations and charges by a contracting state be imposed on a nondiscriminatory basis with regard to aircraft of all contracting states.

The Convention also established the International Civil Aviation Organization (ICAO). The ICAO Council adopts international standards and recommended practices and procedures relating to matters concerned with the safety, regularity and efficiency of air navigation. Under Article 38 of the Convention, any contracting state which finds it impossible to comply in all respects with an ICAO Standard or incorporate it in its own laws and regulations is required to notify ICAO of its differences. The United States and 127 other nations are parties to the Convention.

In 1969, ICAO convened an international conference in Montreal, as a result of which Annex 16 to the Chicago Convention was adopted containing international standards and recommended practices for aircraft noise certification. This ICAO Annex

follows closely FAR 36. It provides minimum noise certification standards for certain new types of subsonic jet aircraft and (Sections 1.4 and 1.5) for the recognition of noise certifications by other ICAO member States if they meet these Standards. The ICAO Committee on Aircraft Noise is working on noise reduction modification for existing jet aircraft and noise requirements for future SST's. Any additional United States noise limitations applicable to U.S. certification of foreign manufactured aircraft certified as meeting ICAO standards would have to be covered through bilateral arrangements.

The United States is not a party to the so-called Rome Surface Damage Convention¹⁸⁴, which came into force among ratifying nations in 1958 (Canada, Egypt, Luxembourg, Pakistan and Spain). At last report 22 additional nations had ratified. This convention limits the financial liability for damages to persons or property on the ground resulting from aircraft operations in the airspace of signatory nations.

In addition to the Chicago Convention, the United States has bilateral air transport agreements with many countries, and most of these follow a similar pattern. Using the one with France as an example,¹⁸⁵ each country gives the other country the right to conduct specified air transport services between them by carriers designated by the respective countries. The carriers of each are required to offer services that closely relate to the requirements of the public for such services and they must comply with the operational and navigational rules and regulations of the other, applied on a nondiscriminatory basis. Airport and other charges must be non-discriminatory.

Although most such bilateral agreements of the United States follow a pattern, there are variations among them, and each must be separately considered to ascertain whether any given noise restriction is consistent with the particular agreement.

While a subsequent Act of Congress can supersede a treaty or executive agreement, as domestic law, it would not eliminate the international obligation. Thus, whereas a subsequent statute is permissible insofar as its consequences affect only United States citizens or entities, any effect it would have upon citizens or entities of foreign signatories in conflict with treaty provisions would violate principles of international law.

STATE AND LOCAL GOVERNMENTS

CONTROL OF AIRCRAFT/AIRPORT NOISE

State and local efforts to achieve aircraft/airport noise abatement have taken place at three different levels. First, there are, and have been, efforts at the state level to regulate airport noise impacts, aircraft operations and engine noise at the source. For example, the Minnesota Noise Abatement statute¹⁸⁶ authorized the Minnesota Pollution Control Agency to adopt noise control regulations, including airport/aircraft noise rules.

An advanced and systematic approach to State regulation of airport noise has been adopted by California.¹⁸⁷ A variety of legal/institutional mechanisms and procedures support the objective of airport noise reduction. Each California county has an Airport Land Use Commission for purposes of assuring that there is some control over the area immediately adjacent to the airport other than the usual local zoning authority. New airport sites and additional runways require both State and local approval.

Under another statute, a performance standard is established by regulation regarding the Cumulative Noise Exposure Level (CNEL) that should not be exceeded in residential areas. A limit value of CNEL is set, applicable now to all airport actions which would impact existing residential areas with exposures above this value, and a timetable (ending at 1985) is set for airport proprietors to reduce existing exposures to this limit value. "Noise problem airports" as defined in the regulation are required to perform noise monitoring to assess their progress, as compared to their implementation plans, toward achieving the CNEL limits.

The regulation requires, under the state permit authority over airports, that a "noise impact boundary" be established, which is the location of the cumulative noise contour corresponding to the statewide timetable for "noise problem airports." The objective is to reduce the extent of this contour so that it no longer encloses incompatible land uses. The incompatible land use area within the noise impact boundary

is called the noise impact area. Airport proprietors may not operate their airports with a noise impact area other than zero without a variance, and specific criteria for issuing variances are set forth in the regulation.

The regulation sets forth a variety of means available to affected parties to reduce the noise impact area to zero. None is specifically required. It is provided that:

"5011. Methodology for Controlling and Reducing Noise Problems. The methods whereby the impact of airport noise shall be controlled and reduced include but are not limited to the following:

"(a) Encouraging use of the airport by aircraft classes with lower noise level characteristics and discouraging use by higher noise level aircraft classes;

"(b) Encouraging approach and departure flight paths and procedures to minimize the noise in residential areas;

"(c) Planning runway utilization schedules to take into account adjacent residential areas, noise characteristics of aircraft and noise sensitive time periods;

"(d) Reduction of the flight frequency, particularly in the most noise sensitive time periods and by the noisier aircraft;

"(e) Employing shielding for advantage, using natural terrain, buildings, et cetera; and

"(f) Development of a compatible land use within the noise impact boundary.

"Preference shall be given to actions which reduce the impact of airport noise on existing communities. Land use conversion involving existing residential communities shall normally be considered the least desirable action for achieving compliance with these regulations."188

The airport noise regulations also provide for "single-event noise exposure levels," for which statewide minimum standards are set based on the noisiest aircraft class utilizing the specific airport on a recurrent basis. Levels set are a "compromise to allow continuation of the basic level of existing service at an airport but prevent any

trend toward noisier aircraft and prevent typical operations of currently operating aircraft which lead to excessive noise." Airport proprietors may recommend numerically lower single-event levels, as a part of their implementation plan, to limit the use of their airport to acceptable aircraft types. Hence, the single-event limits are a useful tool for the use of the airport proprietor to control and decrease the noise environment associated with his airport.

The CNEL regulations do not directly control the individual aircraft or its noise level. Instead, they provide a quantitative framework for solving or abating the aircraft/airport noise problem at specific airports, to cause "the airport proprietor, aircraft operator, local government, pilots and the department (of aeronautics) to work cooperatively to diminish noise."

As stated in the background document supporting the California airport noise regulation:

"For existing airports which presently have a noise problem with respect to their residential neighbors, the processes of planned change must be set in motion so as to control and reduce the extent of the noise environment wherever it encompasses residential areas. When such land lies in extreme noise regions very near the airport boundaries, the earliest and most equitable means should be applied to provide relief for the residents. When all available methods have been utilized by the airport to reduce the noise in residential communities, processes should be set in motion to convert the remaining land to a compatible use." 189

Both New York and Illinois are currently conducting public hearings on proposed regulations to achieve aircraft noise abatement through cumulative noise standards and airport implementation plan development similar to the California model. Several States are considering bills to authorize similar regulations.¹⁹⁰ The recently published Council of State Governments suggested State Noise Control Act.¹⁹¹ proposes adoption of such aircraft/airport noise regulation, including both the airport-directed portion and the supplementary land use control mechanisms.

The second effort is the municipal ordinance approach to the noise abatement problem. These municipal ordinances are basically attempts by noise-affected municipalities to control the noise of aircraft at adjacent airports through exercise of their police powers. The third type of non-Federal effort to achieve noise abatement is that asserted and exercised by the airport owner as a proprietary right, e. g. as landlord.

All three types of non-Federal attempts to achieve aircraft/airport noise abatement were discussed and briefed before the Supreme Court in City of Burbank v. Lockheed Air Terminal, Inc., cited in footnote 6. The opinion of the Court in Burbank reviewed a municipal ordinance that made it unlawful for a privately owned airport located within the jurisdiction of the municipality to permit takeoffs or landings of jet aircraft between 11 p. m. and 7 a. m. The Court held that the Burbank ordinance was an invalid exercise of police power because the "pervasive nature of the scheme of Federal regulation of aircraft noise . . . leads us to conclude there is preemption."

To reach this conclusion, the Court started with a recitation of two sections of the Federal Aviation Act of 1958. Section 1508 of the Act provides that "The United States of America is declared to possess and exercise complete and exclusive national sovereignty in the airspace of the United States . . ." Section 1348 gave the FAA authority to regulate the use of the navigable airspace, "in order to insure the safety of aircraft and the efficient utilization of such airspace . . ." and "for the protection of persons and property on the ground . . ."

The Court then analyses The Noise Control Act of 1972 and concludes "that FAA, now in conjunction with EPA, has full control over aircraft noise, pre-empting state and local control."

The Court cites Rice v. Santa Fe Elevator Corp.¹⁹² for the proposition that even in areas such as aircraft noise which the states and localities "have traditionally occupied. . . . The scheme of Federal regulation may be so pervasive as to make reasonable the inference that Congress left no room for the states to supplement it. . . ." Then

the Court cited Northwest Airlines, Inc. v Minnesota¹⁹³ to establish that "Federal control is [so] intensive and exclusive [that the] . . . moment a ship taxis onto a runway it is caught up in an elaborate and detailed system of controls." Accordingly, "the pervasive control vested in EPA and in FAA under the 1972 Act seems to leave no room for local curfews or other local controls."

The Court then discussed a prior FAA action in 1960 where "the FAA rejected a proposed restriction on jet operations at the Los Angeles airport between 10 p. m. and 7 a. m. because such restrictions could "create critically serious problems to all air transportation problems! 25 Fed. Reg. 1764-5."

That ruling, "announced in 1960, remains peculiarly within the competence of the FAA, supplemented now by the input of the EPA. We are not at liberty to diffuse the powers given by Congress to FAA and EPA by letting the States or municipalities in on the planning."

There can be no doubt that the ruling in Burbank means that a State, or any political subdivision thereof, cannot use its police power to protect its citizens from aircraft noise. This raises the question of whether the airport owner may exercise its own proprietary rights to achieve noise abatement.

The Court citation of the 1960 FAA actions at LAX would indicate that the FAA could prevail over the airport owner in the exercise of its proprietary right to curfew or curtail the use of its property. However, in a footnote the Court declined to affirm that this would follow. The footnote in question deals with the legislative history of the 1968 Act. The text of the footnote is as follows:

"The letter from the Secretary of Transportation . . . expressed the view that "the 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. Airport owners acting as proprietors can presently deny the use of their airports on the basis of noise considerations so long as such exclusion is nondiscriminatory." (Emphasis in opinion)

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"Appellants and the Solicitor General submit that this indicates that a municipality with jurisdiction over an airport has the power to impose a curfew on the airport, notwithstanding Federal responsibility in the area. But, we are concerned here not with an ordinance imposed by the City of Burbank as 'proprietor' of the airport, but with the exercise of police power. While the Hollywood-Burbank Airport may be the only major airport which is privately owned, many airports are owned by one municipality yet physically located in another. For example, the principal airport serving Cincinnati is located in Kentucky. Thus, authority that a municipality may have as a landlord is not necessarily congruent with its police power. We do not consider here what limits if any apply to a municipality as a proprietor."

The distinction between the "police power of the state" and the "rights of property owners" is an interesting one. It must first be considered from the vantage point of who or what is an owner and who or what is a policeman.

The Office of Airport Service of the FAA takes the position that the airport owner (i. e. Lockheed Air Terminal Inc.) in the context of the Burbank ruling is a private person type of owner, not a governmental entity. This would limit the application of its case to those two or four privately owned airports used by the certificated jet carriers such as the appellee.

However, the Supreme Court does not note probable jurisdiction and affirm a case such as Burbank unless a substantial Federal question is presented. If after noting probable jurisdiction, the Court finds that the appellant constitute a class of one or two and that no broad question is therefore presented, the case will be dismissed. When the Court affirms with a precedent setting opinion it "must" have believed that state and local government owned airports could be included within the the preemption rationale. In other words, when state owned property is regulated, its regulation may nevertheless be invalidly based on police power. Nothing in the opinion explicitly suggests the foregoing, except that, with an exception or two, all air carrier airports are owned by states or political subdivisions thereof. If all such airports can be curfewed by their owners as owners, the Burbank opinion means very little.

It is submitted that the proprietary right in fact consists of the right to defend from liability. In other words, given the prior Court position in the Griggs case, the airport operator would have to have been left with its own right to protect itself from constitutional takings, or the Federal Government would have preempted the very ability of the airports to act and thus would have shifted liability to the Federal Government. If this be the proprietary right the Court left undefined, it must be viewed in the context of the Federal authority to certificate state and local government owned airports for noise abatement. Would that certification preempt the airport owner's proprietary right to act to defend itself from liability?

Whatever this proprietary right of the airport owner and however that right may be affected by certification, the result of the decision is clear: Airport operations, i. e. operations concerning aircraft, may not be regulated for noise purposes under the state and local police power. According to the Court, under the 1972 Act, this is so even if both the FAA and EPA were to do nothing.

The cases prior to Burbank developed a number of applicable concepts that must be kept in mind in any overall consideration of State and local authority in this area.

The first such case, Allegheny Airlines, Inc. v. The Village of Cedarhurst,¹⁹⁴ arose out of the adoption in 1952 by Cedarhurst of an anti-flyover police power ordinance prohibiting overflights that were less than 1,000 feet above the ground. The ordinance was said to be necessary because Cedarhurst was within some 4,000 feet off the eastern end of the JFK International Airport. Cedarhurst was then sued to prevent enforcement of the altitude ordinance by the Port of New York Authority as well as air carriers using JFK airport. The district court enjoined enforcement of the ordinance and the case was taken to the Court of Appeals for the Second Circuit.

In sustaining the injunction, the Court of Appeals noted that the predecessor to the FAA had been directed by the existing Federal law to prescribe air traffic rules regulating safe altitudes of flight and that in complying with these rules aircraft landing or taking off at JFK were required to fly as low as 450 feet over Cedarhurst under certain adverse weather conditions. As a result, the Court found it was not possible

for an aircraft at once to comply with the Federal rule and the Cedarhurst ordinance. Given the existence of such a direct conflict, the Court sustained the Federal Air Regulation under the Supremacy Clause of the Constitution. The Cedarhurst opinion also went on to rule that, without regard to the existence of a conflict, the Federal Air Regulations had completely preempted the field of air traffic regulations and had left no room for any other kind of regulation. As is illustrated by the result in the later case of American Airlines, Inc. v. The City of Audobon Park, Kentucky,¹⁹⁵ the Cedarhurst precedent put an end to State and local effort to achieve noise abatement by way of a "minimum altitude" type of legislation.

A second type of legislation that has been attempted on a local basis is illustrated by the "Unnecessary Noise Ordinance" enacted by the Town of Hempstead, New York, in 1964. The ordinance set a maximum noise limit that could legally be made by each aircraft which overflew the town. Hempstead, as was the case with Cedarhurst, was adjacent to JFK Airport. Given the location of the airport, the practical effect of the Hempstead ordinance was in many cases to prevent the use by jet aircraft of "the FAA landing approach and take-off procedures" used at the JFK airport. The air carriers using JFK sued to enjoin the enforcement of the ordinance and at trial the ordinance was enjoined on the ground of conflict, preemption, and a burdening of interstate commerce, American Airlines, Inc. v. The Town of Hempstead.¹⁹⁶

On appeal, the Court of Appeals relied on conflict alone, stating that in view "of the present state of development of noise suppression techniques, . . . compliance with the noise ordinance [of Hempstead] would require alterations in the flight patterns and procedures established by Federal regulations."

The case law defining private rights and remedies for aircraft noise has thus influenced the allocation of authority between state, local government and airport owners to deal with the aircraft noise problem. Given the relative lack of success of enjoining the operations of a noisy airport, nearly all of the case law concerns either damaging or constitutional taking. First, as to the taking, the taking cases generally represent the so-called Federal rule, which originates with the decisions

of the Supreme Court in United States v. Causby¹⁹⁷ and in Griggs v. Allegheny County.¹⁹⁸ The Causby case announced that Federal Government (apparently as a partial lessor of the Winston Salem Airport rather than as the operator of the military aircraft in question) had in the constitutional sense "taken" an interest or "aviation easement" in the property the aircraft overflowed. Because of this, the United States was required to pay just compensation under the Fifth Amendment to the Constitution, the measure of damages being the diminution in the value of the overflowed property. Some 10 years later in the Griggs case the Supreme Court had before it an airport owned by State authorities, and the airport was used by commercial aircraft, the flight patterns of which were regulated by Federal authorities. It was clear that there could be no taking in the constitutional sense by the commercial carriers who used the airport and generated the noise. The court held that the local governmental authority, *i. e.* the airport owner, was liable for taking the aviation easement on the directly overflowed property.

Since both Causby and Griggs involved direct overflights, the theory of the cases has been called the trespass theory of inverse condemnation which requires the actual physical invasion of the property, *i. e.* the air above the ground. This direct overflight approach has not been frequently followed in those State courts whose constitutions bar not only governmental takings but also governmental damaging unless there is just compensation. As will be discussed later, those jurisdictions have allowed recovery against the governmental airport owner on a broader rationale that does not require overflight.

The point to be made here is that the power still left with the states and local government to achieve aircraft noise abatement at the source appears to be their right as property owners to defend themselves from liability and to keep their air terminal systems viable. As will be discussed in the next section, the state and local governments continue to have the power to control exposure to aircraft through land use control and building design.

CONTROL OF EXPOSURE TO AIRCRAFT/AIRPORT NOISE THROUGH LAND USE AND BUILDING DESIGN CONTROLS

As indicated in the previous section, State and local government efforts to control aircraft noise at the source through an exercise of the police power are no longer valid under the Burbank rationale. However, land use planning and control measures are still available to the State and local governments.

Aside from the three land use measures that have been frequently proposed and that will be discussed below, several States have adopted, or are in the process thereof, an advanced and comprehensive approach to assure that there is some regional control over the area adjacent to airports other than the traditional zoning authority.

Minnesota, for example, has adopted an Airport Zoning Act (Chapter 1111, 1969 Session Laws, Attachment A, Appendix B, discussed later) that establishes State and regional airport neighborhood planning agencies. These agencies are responsible for determining incompatible land use boundaries. They are also responsible for promulgating land use regulations to preclude development of incompatible uses and encourage the conversion to compatible uses in airport affected areas. Such State and regional regulations are in addition to, and where inconsistent supersede the traditional local zoning authority.

As discussed at the outset of the preceding section, cited in footnote 187, the approach adopted by California includes not only the source regulation put into question by Burbank, but also a comprehensive procedure to obtain compatible land use. Every California county has an Airport Land Use Commission to insure that there is government control over all areas immediately adjacent to the airport. This, like the Minnesota approach, is in addition to and supersedes the usual local zoning authority. Additional airport sites require both state and local approval. The point to be made on the basis of the approaches taken by these two states is that compatible land use can normally be achieved only if a regional procedure is adopted so that there will be the necessary and uniform jurisdiction over all noise affected land surrounding the airport.

Traditional land use planning measures available to minimize the impact of aircraft noise fall into three basic categories. The first consists of the zoning ordinances, to exclude incompatible uses in noise-impacted areas. The second consists of a governmental unit acquisition of property by condemnation or purchase and the imposition of (similar type) limitations in its capacity as owner. And the third consists of imposing soundproofing requirements on residences located in noise sensitive areas.

The procedure to control land use most often suggested in the past is local government zoning. Generally, two types of zoning have been utilized in connection with airport operations. One limits the height to which structures may be erected so that airport approaches will be free from obstructions. The second, concerned more directly with aircraft noise problems, restricts the uses that may be made of property in the vicinity of an airport to those compatible with airport operations. This excludes erection of noise-sensitive uses, such as schools, hospitals and residences, while commercial and industrial development is permitted.

However, zoning, like every exercise of the police power, is limited by applicable constitutional requirements. This means at least three things. First, the restrictions imposed on property may not be so severe as to deprive the owner of all, or substantially all, of its beneficial use.¹⁹⁹ Applied more particularly, this rule prohibits legislation that limits the use of property to purposes for which there is no reasonable economic demand. Second, a zoning enactment cannot be arbitrary, capricious or unreasonable as applied to any particular land owner, or group of owners. And third, zoning may not be employed as a substitute for use of the condemnation power when an analysis of the governmental action involved discloses that the government is, for its own purposes acquiring, using or, in the words of the courts, "taking" the zoned property. The second and third limitations have thus far been the principal stumbling blocks to effective airport land use planning based upon the zoning power.

There are 19 reported decisions dealing with the validity of airport zoning. Twelve ruled that the particular ordinances in question went beyond the bounds of permissible regulation, amounting to an invalid taking of property without compensation.²⁰⁰ Only

7 of the 19 cases upheld, or at least refused to strike down, airport zoning enactments.²⁰¹ Analysis of the cases is difficult because eight involved zoning to assure an obstruction-free airport, six involved use limitation zoning and five involved both types of restrictions.

The earliest reported zoning case is the 1939 Maryland lower court decision involving an act that limited the height to which buildings could be erected on land located in the vicinity of public airports, Mutual Chemical Co. v. Mayor and City Council of Baltimore.²⁰² After pointing out that "[n]either the state nor the city can, through the guise of a zoning law or ordinance confiscate the property of an individual," the court ruled that the statute's restrictions amounted to "a practical confiscation" of property rights.²⁰³

The rule enunciated in this case received support by the inverse condemnation decisions of the Supreme Court in Causby,²⁰⁴ and Griggs.²⁰⁵ Typical of the cases in which airport zoning ordinances were invalidated on the basis of Causby and Griggs is a 1964 ruling of the Idaho Supreme Court invalidating an ordinance whose restrictions confined the use of land to agricultural purposes in certain zones and to single family residences in others. The court rules that "a landowner has a property right in the reasonable use of the airspace above his land which cannot be 'taken' for public use without just compensation."²⁰⁶

The rationale for the seven cases which have refused to strike down airport zoning enactment is ultimately derived from the leading American zoning decision, Euclid v Ambler Realty -- zoning is a valid exercise of the police power unless it is "clearly arbitrary."²⁰⁷ The most frequently cited case upholding airport zoning is the 1959 Florida decision in Harrell's Candy Kitchen v. Sarasota-Manatee Airport Authority,²⁰⁸ in which the court said that such regulations "are presumptively valid and the burden is upon him who attacks such regulation to carry the extraordinary burden of both alleging and proving that it is unreasonable and bears no substantial relation to the public health, safety, morals or general welfare."²⁰⁹ The ordinance upheld was a height limitation restriction, which precluded the complaining property owner from

constructing an ornamental roof on its premises designed primarily for advertising purposes.

In answer to the defendant's constitutional attack on the regulations, the court held: "The restriction. . . as applied to this particular property cannot be said to deprive the owner of the beneficial use of his land to such an extent that it violates the constitutional prohibition in this respect or is otherwise unlawful."²¹¹ The court noted that while the use of the superstructure "was beneficial to the operation of the main building, it could not be said that it was essential to it."²¹¹ The court emphasized that it was concerned here only with "whether this particular regulation as it affects these appellants' property is valid."²¹² Significantly, the court added, "[w]hether other. . . regulations enacted by this authority are valid depends upon the facts in each particular case. . . ." ²¹³

In Willoughby Hills v. Corrigan,²¹⁴ the Ohio court noted that an unconstitutional taking might result, in given factual situations, from the enforcement of zoning regulations. The court said that where "it is shown that the enforcement of any such airport zoning regulation as to specific property will result in an unconstitutional 'taking' of such property, a court may enjoin the operation of the. . . regulation. . . or may . . . direct the institution of eminent domain proceedings for the purpose of compensating the property-owner for such 'taking.'" ²¹⁵

The three most useful rulings from the point of view of upholding compatible land use zoning in the vicinity of airports are two California cases and a Pennsylvania decision. The California cases hold that a limitation on residential development designed to prevent inverse condemnation claims of the Causby and Griggs variety from arising, constitutes a valid exercise of the police power. Smith v. County of Santa Barbara;²¹⁶ Morse v. County of San Luis Obispo.²¹⁷ The first California decision upheld an ordinance that rezoned plaintiff's property from residential use to "design industrial," and the second sanctioned a zoning change from a single residence per acre to a single residence for every five acres. In the latter case plaintiff argued that any rezoning of land near an airport that reduces allowable population density should automatically

be presumed to represent an uncompensated taking of air easements for the purpose of flight. The court, however, held that the presumption of the law is just the opposite: zoning regulations are presumed to be valid exercises of the police power in furtherance of the public safety and general welfare.

On much the same basis, a 1967 Pennsylvania decision upheld an ordinance which prohibited any residential use of land located within an airport district, except for allowing an airport guard to reside with his immediate family upon airport property. Township of Hickory v. Chadderton,²¹⁸ The ordinance was upheld as a reasonable use of the police power "to prevent a congestion problem" and also because of "safety considerations."²¹⁹

Under a comprehensive zoning plan a land owner would have no sound basis for objection if the airport is able to benefit from the zoning. But zoning solely for the benefit of an airport seems in the final analysis to be nothing more than a sophisticated version of spot zoning, which courts almost universally strike down. The sine qua non of valid zoning has been held to be the existence of a comprehensive zoning plan. Idell v. Haas.²²⁰ Compatible land use zoning for airport purposes appears to present the identical view that the New York Court of Appeals struck down in the leading case of Vernon Park Realty, Inc. v. City of Mount Vernon.²²¹ There, an ordinance restricted the use of plaintiff's property to parking lot purposes--the use to which it had been devoted for many years. Although the city attempted to justify the restriction on the ground that congested traffic and parking conditions were such as to require the restriction in the public interest, the court disagreed, stating "However compelling and acute the community traffic problem may be, its solution does not lie in placing an undue and uncompensated burden on the individual owner of a single parcel of land in the guise of regulation, even for a public purpose."²²²

Even valid exercise of zoning power may be ineffective because of the commonly accepted doctrine of non-conforming uses, which allow the continuation, for reasonable periods of time, of non-conforming uses that exist when a zoning change is adopted. The two California cases, previously discussed, which upheld compatible

land use zoning as reasonable exercises of legislative power to prevent inverse condemnation claims from arising, were concerned solely with ordinances which were to be applied prospectively. In fact, of the nineteen reported airport zoning cases only one dealt with an attempted retroactive application of the ordinance and there the ordinance was invalidated. Sneed v. Riverside County.²²³

The black letter rule on non-conforming uses is set forth as follows by the present Chief Judge of the New York Court of Appeals:

"It is the law of this state that nonconforming uses or structures, in existence when a zoning ordinance is enacted, are, as a general rule, constitutionally protected and will be permitted to continue, notwithstanding the contrary provisions of the ordinance." People v. Miller.²²⁴

Finally we come to the last suggested means of reducing the adverse impact of aircraft noise by land use planning -- the requirement of soundproofing. This subject was studied in detail in a report prepared for the Tri-State Transportation Commission in February, 1970.²²⁵ The report dealt mainly with mandatory rather than voluntary soundproofing regulations, and pointed out that it is questionable whether, without proper enabling legislation, there presently exists local power to adopt soundproofing requirements. Furthermore, adherence to the following guidelines was considered essential:

1. The regulation should be applicable only in the highest noise areas.
2. It should be the least expensive and disruptive means of accomplishing the sound reduction.
3. The effective reduction of noise within the structure should be substantial.
4. The regulation should contain as much flexibility as possible to allow for individual differences, hardships and inconveniences.

The report indicated that accomplishment of mandatory soundproofing by means of the police power stands its best chance of successfully withstanding constitutional attack if its application is limited to the owners of multiple unit structures which are

rented, It is far simpler, the report states, to demonstrate benefit to a class of the public, and no restriction is placed on the freedom and privacy of the building owners subject to the regulations.

Soundproofing regulations for a single-family residence would, the report noted, face substantial obstacles. This is so not only because the smallest element of public benefit is conveyed (only the individual and his family are involved), but also because there would be the greatest interference with individual freedom to live as one chooses. But the report emphasized that even in the cases of multiple unit structures there were no cases directly in point.

In the California airport noise regulation, the list of land uses deemed "compatible" within the noise impact boundary of the airport includes acoustically treated homes, up to a limiting value of Cumulative Noise Exposure Level (CNEL). The use of acoustical treatment as an acceptable solution is limited to cases in which both the homes and the airport are pre-existing and quantitative performance requirements are set for the acoustical treatment in its finished form.

Major considerations, must, of course, be directed to the question of cost. The factors involved here are the determination of who must bear the expense of implementing the program, and the magnitude of the cost involved.²²⁶ The experience in the Los Angeles area indicates a cost of approximately \$3,000 per individual dwelling unit with a school experience of about \$10,000 per class room.

NOISE CONTROL EFFORTS BY AIRPORT PROPRIETORS

Discussed here are instances in which airport owners as proprietors have imposed noise control restrictions on the aircraft operators using their facilities.

The Port Authority of New York and New Jersey, in its capacity as an airport operator, has imposed restrictions on the use of jet aircraft at its four air terminals, Kennedy International, LaGuardia, Newark International, and Teterboro. Even prior to the advent of commercial jet flights, the Authority adopted a regulation providing

that no jet aircraft may use its airports without permission. Such permission has been granted only on the condition that the noise produced by each jet flight in the communities under the takeoff flight path, is no greater than that produced by 75 of the large four-engine piston aircraft in use at the time jet aircraft were being introduced commercially in 1958. That value, 112 PNdB, constitutes the limit for jet takeoff noise.

Additionally, at Kennedy International Airport the Port Authority has required the use of specific runways for takeoff during the hours between 10:00 p. m. and 7:00 a. m. in order to take advantage of the geographic location of the Airport to reduce noise impact. The southern boundary of Kennedy International Airport is formed by Jamaica Bay. At night the runways specified for takeoff have flight paths with initial climb portions over Jamaica Bay, thus keeping the noisiest portion of the takeoff over uninhabited areas.

At hearings held in 1959-62 before Subcommittees of the Committee on Commerce, House of Representatives, 86th and 87th Congress, the then General Counsel of the Authority advised that the legal basis for its restrictions was the

" . . . power [that] inheres in the very nature of the property ownership and control and unless surrendered by contract is possessed by all owners or operators of real property." Hearings, p. 657²²⁷

He further explained that the assertion of Port Authority power to restrict the use of its airports for noise abatement purposes:

" . . . was not an assertion . . . of any legislative power. It was a common-law right which inheres to the owner and operator of land." ²²⁸

The Authority right to impose restrictions on its airline tenants in the interest of noise abatement has been challenged in one case, Port of New York Authority v. Eastern Airlines, Inc. et al.²²⁹ The litigation arose out of the objection by an airline to following a temporary ban which the Authority had placed on jet aircraft using a recently completed runway at LaGuardia Airport until the construction of a second runway was also completed. The Authority wanted to avoid the concentration of jet

noise that would have resulted from the use of the one runway alone. The airline contended that the Authority restriction invaded a field preempted by Congress and although the Authority conceded that Congress had preempted, to a great extent, the field of air traffic regulation, it argued that Congress had not ousted an airport operator of jurisdiction to control the use of its facilities. The Authority asserted that a corollary to the Supreme Court holding in the Griggs case²³⁰ must be that an airport operator possesses the right to protect himself from possible liability by limiting the use that aircraft can make of his runways. Acceptance of the airline position would, the Port Authority argued, create an impossible situation for airport operators since in certain instances only by restricting the use of jet aircraft at their airports can such operators avoid monetary liability to property owners aggrieved by aircraft noise. The court ruled in favor of the Authority holding, first, that its prohibition was reasonable; second, that the prohibition neither conflicted nor interfered with the FAA ability to control air traffic; and, finally, that the Authority was entitled to injunctive relief without specifically showing irreparable damage or loss.

At the time that jet service was initiated at Washington National Airport (DCA), agreement was reached between the operator of the airport (the FAA) and the airlines that jet service would not be scheduled at the airport between the hours of 10:00 p. m. and 7:00 a. m. This agreement continues in force to date. In addition, the FAA has promulgated as a policy decision for Washington National Airport that "Air carriers will not be permitted to operate a new aircraft type into DCA unless the new aircraft is quieter and results on an average day in less emissions on a per-passenger-seat basis than the aircraft it replaced and is to be used for service within the range of the short-haul provisions of this policy."²³¹

The Santa Monica, California, City Council adopted a 7:00 p. m. to 9:00 a. m. curfew on business jet operations at the city-owned Santa Monica Municipal Airport. This was an extension of a curfew that was in force from 11:00 p. m. to 7:00 a. m. The original curfew was upheld in Stagg v. Municipal Court of Santa Monica.²³² The court, finding no conflict between Federal and State statutes and the local

ordinance, upheld the ordinance as within the municipality's home rule power to regulate municipally owned public utilities, and a municipally owned airport is classified as a public utility.

At Orange County Airport (California), there has been considerable success with lease restrictions requiring noise abatement. On the basis of the airport lease provisions, a noise preferential system is in effect as well as a restriction on the number of flights per day by each lessee airline, a noise monitoring system and a night curfew on operations from 10:00 p. m. to 7:00 a. m.²³³

At Los Angeles International Airport, a recently adopted rule (with which the air carriers have agreed), requires that all aircraft using the airport shall be certificated in compliance with Part 36 of the Federal Aviation Regulations on or before December 31, 1979. "This fleet noise rule shall stand as a regulation at Los Angeles International Airport unless and until a more stringent rule is adopted by the Federal Government."²³⁴ In the interim period, the Board of Commissioners of Los Angeles International Airport requires all aircraft approaching the airport between the hours of 11:00 p. m. and 6:00 a. m. to approach it from west to east. In the event that weather or wind conditions require the use of approaches over the residential areas east of the airport, only those aircraft that meet FAR Part 36 noise requirements may utilize runways that would affect the residential areas.²³⁵

PRIVATE (JUDICIAL) RIGHTS AND REMEDIES FOR CONTROL OR COMPENSATION

Persons sufficiently affected by aircraft noise who seek relief in the Courts are neighbors of airports. Thus, the case law relating to aircraft noise is concerned almost exclusively with airport neighbors, who have generally sought two kinds of judicial relief: an injunction to prevent or limit aircraft operations and damages for injury to their property or person.

Injunctive relief is logically the favorite remedy of airport neighbors since that remedy would stop or limit the noise. Damages on the other hand generates extra

income for the successful litigant but the noise remains. Thus, it is that injunctions are often sought as an alternative remedy in damage actions. However, they have also sometimes constituted the primary relief sought, especially in cases brought as class actions,²³⁶ by municipalities located near airports,²³⁷ or by an attorney-general on behalf of the State.²³⁸

Despite the understandable appeal of this type of litigation to airport neighbors and the often substantial measure of local support for it, injunctive relief has, with one exception,²³⁹ been denied in recent years. It has been suggested that the need for a national air transport system has made the courts reluctant to take any action that interferes with this scheme. On the other hand this suggestion may be at odds with the concession by the Secretary of Transportation to Congress in 1968 that:

"Airport owners acting as proprietors can presently deny the use of their airports to aircraft on the basis of noise considerations so long as such exclusion is non-discriminatory. . ."²⁴⁰

Moreover, in its report recommending the 1968 noise control amendment the Senate Committee stated that it concurred with this view of the Secretary of Transportation.²⁴¹

Plaintiffs have often asserted the theory that the airport operations constituted a nuisance. Courts have until a recent exception, rejected this on the theory of "legalized nuisance", which means there is no private remedy against the conduct of legislatively authorized activity that might otherwise constitute a nuisance.²⁴² Courts have also refused injunctive relief on the grounds that the balance of the equities did not warrant it and that it would conflict with applicable Federal statutory and administrative regulation.²⁴³

The exception to the denial of injunctive relief is seen in the case of Township of Hanover v. Town of Morristown,²⁴⁴ This suit was brought by several communities adjoining an airport as well as by individuals. The court granted "experimental" relief banning jet flights between 11:00 p. m. and 7:00 a. m. Monday through Saturday and any time on Sunday except between 1:00 p. m. and 3:00 p. m. and ordered a prescribed preferential runway system to go into effect upon completion of certain

improvements. The plaintiffs in the Morristown case had sought an injunction against an extension of a runway and the above injunctive provisions in the order were imposed by the court as part of the order permitting the runway extension.

In assessing the precedential value of the Morristown case, it should be noted, the Federal Government has instituted suit in Federal court to challenge the injunction granted by the State court.

The number of damage suits filed by airport neighbors against airport operators and the airlines has increased enormously since the introduction of jet aircraft in civil aviation. Although the aggregate size of the claims outstanding in such current lawsuits is spectacularly large, actual recovery to date has been very modest -- a total of not more than \$3 million.

Most claimed damages and virtually all judgments have been for "inverse condemnation" under the Federal or State constitutions. The origin of this theory as discussed above was the Causby case, in which the government was held liable for diminution in value of a property immediately adjacent to and in the flight path of one of the runways of the airport. The theory endorsed by the Supreme Court was that although the governmental authority had not completely expropriated the property-owner, it had taken an interest or "avigation easement" in the property, for which it was bound to pay just compensation under the Fifth Amendment to the United States Constitution. Again as discussed above in the Griggs case, the Supreme Court applied the doctrine in the more complicated context of an airport owned and operated by State government authorities, regulated by Federal authorities, and used by commercial airlines. It held that the governmental authorities that owned the airport, rather than the Federal government or the airlines, were liable for taking the avigation easement.

The doctrines of the Causby and Griggs cases have been followed by the lower Federal courts and these State courts that have State constitutions providing only for taking. The crucial question that faced the courts in these cases has been the type and degree of overflight "trespass" interference which constitutes a taking.²⁴⁵

This trespass approach has been modified in the State courts, which have tended to adopt a "nuisance" theory of damaging. The nuisance approach does not require direct overflight trespass, and looks rather to the impact of the noise on the property in determining whether there has in fact been a taking.²⁴⁶

More recently in Aaron v. City of Los Angeles the court relied heavily on an NEF ("Noise Exposure Forecast") contour map of the airport and its environs, which delineates the relative exposure of the areas surrounding an airport to aircraft noise, in much the same way that an altitude contour map shows the relative altitudes of the terrain on the map.²⁴⁷ The court held that any landowner located in the NEF area having the highest exposure was entitled to recover to the extent that he could establish that jet aircraft noise had substantially diminished the market value of his property. The court went on to hold that "damage is substantial if it is measurable as contrasted with that which is merely nominal."²⁴⁸

Though generalizations are difficult in this area of case law, it would appear that recently the courts are tending to conclude that it is the "noise" rather than the "aircraft" that is the trespassor. This avoids the problem of the legal nuisance and can arguably be said to recognize the reality of the fact that noise travels to a greater extent than do aircraft. However, most recently in Nestle v. Santa Monica,²⁴⁹ the court while finding no inverse condemnation, permitted a cause of action under the California Civil Code on a pure nuisance theory.²⁵⁰

SECTION 3

CRITERIA FOR ANALYZING LEGAL AND INSTITUTIONAL ARRANGEMENTS TO CONTROL AND ABATE AIRCRAFT/AIRPORT NOISE

Prior to evaluating the present legal/institutional structures governing the control and abatement of aircraft noise or analyzing possible solutions to problems encountered in such arrangements, it is necessary to define explicitly the considerations and criteria on the basis of which such structures should be measured. This section of the report will identify a number of considerations that bear upon the ability of the law and institutions regulating aircraft/airport noise successfully to fulfill that mission. Such considerations suggest criteria, or goals, for the proper design of a legal/institutional system to regulate noise, and focus upon the constraints imposed upon such institutions by legal, economic, political, and social factors.

It should be emphasized that the criteria discussed here relate to the analysis of legal/institutional arrangements for the control of noise. These are not criteria for the consideration of what regulations or enforcement priorities should be adopted to control noise. Rather, the question here is how to design laws and institutions which will promote the adoption and implementation of an ongoing aircraft/airport noise control program that is adequate to protect public health and welfare. This section will suggest and address which factors should be considered in adopting or evaluating particular noise control regulations or strategies. Nevertheless, the primary focus of this chapter is to evaluate the effectiveness of legal and institutional arrangements by which such regulations are adopted (and to recommend changes in those arrangements in order to address more effectively the aircraft/airport noise problem).

CRITERION I: PROMOTE ADEQUATE CONSIDERATION OF ALL RELEVANT FACTORS

The legal/institutional arrangement adopted for the control and abatement of aircraft/airport noise should promote and assure full and adequate consideration of all relevant factors in the development and implementation of noise control regulations, standards or strategies.

Section 611 of the Federal Aviation Act of 1958, as amended by the Noise Control Act of 1972, establishes four general factors which, *inter alia*, must be considered in the adoption of standards and regulations for the control of aircraft noise:

1. Available data relating to aircraft noise and sonic boom including the results of research, development, testing, and evaluation activities conducted by the Federal Government.
2. Whether the proposed standard or regulation is consistent with the highest degree of safety in air commerce.
3. Whether a proposed standard or regulation is economically reasonable, technologically practicable, and appropriate for particular types of aircraft, engine, or appliance or certificate.
4. Whether the standard or regulation will afford present and future relief and protection to the public health and welfare from aircraft noise and sonic boom.

FACTORS TO BE CONSIDERED

Further delineating the Congressional mandate, the legal and institutional arrangement (including Federal, State and local components) should assure adequate consideration and balancing of the following factors:

1. Effects of noise on public health and welfare
 - a. Direct health and welfare effects of noise (such as effects on hearing, sleep, annoyance, and other physiological and psychological impacts).

- b. Economic and social impacts of noise (such as effects on property value, use and enjoyment of private property, cost of land acquisition, displacement and relocation of impacted land uses, cost of litigation, disruption of human activities, speech, and communications, and costs of operational limitation).
2. Positive and negative effects of noise control and abatement equipment, procedures or strategies on air transportation safety (both with respect to persons flying and persons on the ground).
3. Technological practicability of implementing particular noise standards, procedures or strategies.
4. Economic feasibility of implementing particular noise standards, procedures or strategies (including short term financing, long term cost allocation, and interrelationships with other economic aspects of air transportation and pollution control).
5. Effects on the overall transportation system of implementing or failing to implement noise control regulations, standards or strategies.
6. Effects on the total environment (such as energy consumption and increases or decrease of other pollutants).
7. Effects of noise control strategies on social disruption, relocation, housing availability, employment, job disruption and other relevant welfare considerations.

Not all of these factors are quantifiable, nor is it advisable always to cost out such elements. Nevertheless, neither the law nor the institutions responsible for noise control should disregard those factors that are not capable of expression in monetary terms. Regulatory decision making regarding the control and abatement of aircraft noise must not be delayed because one or more factors cannot be accurately quantified or evaluated. Institutions responsible for aircraft and airport noise regulation can be expected, in determining appropriate regulations, to consider and evaluate such

factors to the maximum extent feasible and practicable. Certain of these factors will differ markedly in different airport situations, so that the balancing required in adopting a specific noise control implementation plan for an airport and its neighbors may best be done at the local or regional level.

AGENCY EXPERTISE AND INFORMATION

In order properly to evaluate and balance each of these factors, the agency or agencies assigned the duty of developing, adopting, and implementing aircraft/airport noise regulations must have the expertise and information necessary to assess each factor.

Two questions must be answered:

1. What expertise and information is necessary to assess adequately each factor?
2. What agencies have or can develop such expertise and information?

In the field of aircraft/airport noise control, expertise and information may be both overlapping and fragmented. The problem for the legal/institutional scheme is to get this expertise and information to the decision makers, whether on the Federal, State, or local level, who must select and adopt appropriate airport/aircraft noise regulations and strategies. Furthermore, it is incumbent that where there is a void in expertise and information in one or all agencies or levels of government, such areas be identified and corrective steps taken to develop the necessary basis for decision making.

INTEREST GROUP INPUT

If each factor is to be adequately assessed by the decision-making agency, all affected interest groups should have full opportunity to make adequate input to the decision-making process. Airport neighbors, general aviation operators, consumers, airlines, pilots, airport operators, manufacturers, environmental groups,

Federal, State, and local agencies should have access to an open decision-making process by the noise regulatory agency.

Thus, several questions should be addressed:

1. What formal interest group inputs are provided by the legal/institutional arrangement? Such formal inputs may include comments to proposed rules, hearings, study panels, representation before courts and on decision-making boards.
2. What informal interest group inputs are available? For example, what opportunities for contact are there between agency personnel and various interest groups working on other projects within the agency's purview?
3. Which interest groups are presently represented either formally or informally in those agencies responsible for airport/aircraft noise regulation? To what extent are such groups represented in those agencies?
4. What types of published invitations for interest group inputs are made? Which groups receive such invitations? How can a balanced invitation process be designed?

CRITERION 2: FULL, ADEQUATE, AND EXPEDITIOUS DECISION MAKING

The legal/institutional arrangement adopted for the regulation of airport/aircraft noise should assure decision-making power will be fully, adequately, and expeditiously exercised.

Full and adequate exercise of noise regulatory powers would require adoption of a comprehensive set of aircraft/airport noise control and abatement strategies, capable of attacking, after a period of time for implementation, the entire problem. Such a regulatory scheme would address source abatement, including design and retrofit requirements; operational procedures; airport siting, development and operations; and airport environ land use control.

Furthermore, a comprehensive regulatory program should be developed and adopted as soon as possible. Exercise of decision-making power should not be delayed by reference to the chimera of waiting for the optimum solution. Solution of the aircraft/airport problem will be incremental, and yet attack on each part of the problem must be coordinated with other aspects of the total effort. When new technology makes noise abatement technically feasible, authority to require implementation should be expeditiously exercised. However, regulatory efforts need not merely follow technology development, but may provide incentives to new research and development efforts, by setting future standards in advance. Without expeditious and progressive regulatory decisions, the state-of-the-art in aircraft/airport noise abatement is likely to advance at slower rates and in a more uncoordinated fashion.

Where they are found, existing regulatory powers have not been fully, adequately, or expeditiously exercised, and in order to avoid similar problems in the future, three questions must be asked:

1. What hindrances to decision making does the legal/institutional scheme create?
2. What pressures to exercise decision making power does the legal/institutional scheme provide?
3. To what extent, if any, has inadequate funding hindered decision making?

To the extent that present regulatory authority has not been fully, adequately, and expeditiously exercised, much of the problem must be laid to the hindrances and disincentives to regulation posed by legal doctrines and institutional structures. A number of such institutional hindrances have been suggested by commentators, including the following:

1. Conflicts between the primary mission of agency or agencies assigned the noise regulatory function and implementation of aircraft/airport noise regulations (e.g., the promotion of air commerce or the promotion of local land use and development).

2. Failure clearly to define and assign responsibility for various aspects of aircraft/airport noise regulation, resulting in confusion regarding authority and counterclaims of insufficient power and inadequate action by responsible agencies.
3. Reluctance to implement aggressively noise control options available under existing authority, lest the assertion of that authority result in increased liability of, or a shift in liability toward, the institution which has moved to implement its authority.
4. Inadequate funding and staff to make sound regulatory decisions, to adopt and implement regulations, or to conduct research regarding potential abatement strategies.
5. Failure of agencies responsible for aircraft/airport noise regulation and land use decisions to be politically accountable to all affected and interested parties, including air transport users and noise impacted neighbors.
6. Nonconcurrence of real, as well as legal, power to regulate airport/aircraft noise and responsibility to provide compensation for personal, property-taking or nuisance damages resulting from an excessive noise level.

In analyzing the present legal and institutional scheme, and suggested modifications thereof, it is important to determine the actual existence and significance of each of these alleged institutional problems.

CRITERION 3: CONTINUING REGULATORY PROCESS

The legal/institutional structure should provide the basis for a continuing process of noise control and abatement, rather than a one-time regulatory effort. Such a continuing process should establish goals for noise abatement in advance of technological development in order to provide targets and incentives for noise control and abatement research and to encourage implementation. Regulatory actions must be reviewed periodically and revised where appropriate to reflect the state-of-the-art when new and more effective noise control technology is developed.

CRITERION 4: CLEAR DEFINITION OF COMPENSATION LIABILITY

Liability for compensation for damages resulting from excess aircraft noise levels should be clearly defined. The compensation scheme adopted should promote amelioration of noise impact to the maximum extent possible. The methods of determining liability should not be overly repetitive, wasteful or costly, nor should they result in inequitable differences between various jurisdictions regarding theories or standards of liability.

CRITERION 5: ULTIMATE ALLOCATION OF NOISE COSTS

The ultimate allocation of noise damage and noise abatement costs should promote the economically rational use of transportation resources and promote rational decision making regarding the regulation of aircraft/airport noise,

The legal and institutional schemes adopted for the control and abatement of aircraft noise will determine, either explicitly or implicitly, the ultimate allocation of noise damages and noise abatement cost. It is, therefore, important to understand how legal doctrines and institutional arrangements will affect such cost allocations, and how such cost allocations will hinder or promote the rational use of transportation resources in adoption of noise regulations.

There are a number of alternative cost allocation schemes, which can largely be determined by the legal/institutional arrangements adopted. The first is to "let the costs fall where they may." Under such a system, the airport neighbor will continue to bear the cost of noise damages; the airline and the air transportation passenger and shipper would absorb the cost of noise control devices; and the taxpayer would bear the noise related losses to public buildings and the cost of airport relocation and construction.* A second possible allocation scheme would

*Where the airport is operated by an independent authority, rather than a general powers government, whose revenue derives from user charges rather than taxes, costs of airport relocation and construction will be borne, in general, by airport users, through landing fees, increased rentals, etc.

shift the cost of both noise damages and noise abatement to the general taxpayer through governmental, as opposed to airport proprietor or airline, liability for noise compensation and through governmental subsidies to airlines for the implementation of noise control technology. A third scheme would shift the cost of damages and noise abatement to the air transport consumer, by means of increased landing fees, taxes on air transport use, or direct liability of airlines. Due to market or institutional imperfections, the cost allocation method selected may never exist in pure form. For example, attempts to shift cost to general taxpayers or air transport consumers may not be wholly successful, due to the inability to adjust landing fees, tax rates, or governmental subsidies.

Furthermore, the distinction must be made between short term financing problems vs. the issue of long-term cost allocations. For example, if the requirement that the airlines install noise abatement equipment, without government loans or guarantees, creates serious short-term capital finance problems, expeditious implementation of noise regulatory decisions will be inhibited. However, solution of this problem is a separate though related matter from the question of how such noise abatement cost will ultimately be allocated. Both issues must be addressed and solved by the legal/institutional structure for noise control.

Theoretically, air transport beneficiaries should pay the full cost of providing air service, including secondary costs such as those of abating noise pollution. Economists suggest that where such costs are fully internalized, consumers can more rationally choose among different modes of transportation; and transportation, energy, and other resources will be used in a more economically rational fashion.

These considerations suggest the following subcriteria:

SHORT-TERM FINANCING

The legal/institutional scheme should provide adequate financing mechanisms to assure that noise abatement technology will be installed at the earliest feasible time and that problems, if any, of the commercial financing of large capital investments necessary for such implementation will be avoided.

COST INTERNALIZATION

The cost of noise abatement and noise damages should be ultimately internalized by the air transportation industry and passed on to the maximum extent possible to the air transport beneficiaries.

CRITERION 6: ENFORCEMENT RESOURCES

The institutions assigned the responsibility of developing and adopting noise regulations must have both the legal and practical power, and adequate resources to enforce such regulations,

One of the most difficult jobs in assigning responsibility for noise regulation and abatement is to assure that the institutions responsible for regulation have the power and resources to enforce rules once adopted. Some institutions presently assigned this task may have regulatory responsibilities, with no enforcement power or resources. For example, airport proprietors may have the duty to control noise impacts resulting from aircraft using the airport, but may be unable to impose such legal sanctions as fines or criminal penalties on noncomplying aircraft operators, or to control land use around the airport. Where enforcement sanctions must depend on economic pressures, the success of such regulations will depend on the market power of the institution involved. A small airport cannot be expected to affect aircraft design appreciably by imposing aircraft noise standards, particularly where traffic to and from such air terminal may be diverted to other, less restrictive, airports. For this reason, care should be taken to insure that responsible institutions have the real power to control that portion of the problem which they are assigned to regulate.

POWER TO IMPOSE VIABLE SANCTIONS

Institutions responsible for developing and adopting noise regulations must have the power to impose viable legal sanctions for noncompliance, including inter alia, fines, charges, and to allow equitable remedies.

LEVERAGE

The institution must have practical leverage over the aspect of the problem for which it is assigned regulatory responsibility.

SUFFICIENT RESOURCES

The institution must have sufficient resources to monitor compliance with the regulations for which adoption and implementation are its responsibility.

CRITERION 7: ADMINISTERABILITY

The legal/institutional scheme for compensating noise-caused damage and for developing and enforcing aircraft/airport noise regulations must be administerable. It should not be overly cumbersome, and should incur the least possible administrative cost compared to the benefits involved.

CRITERION 8: NATIONAL PROGRAM/LOCAL CONDITIONS

The institutional scheme for airport/aircraft noise regulation should allow for a coordinated national noise control program and provide sufficient flexibility to allow for adoption of additional regulations or strategies to meet special or unique local conditions or needs.

This criterion requires little explanation. It is a fundamental tenet of the Federal-State-local partnership, in this and other areas, that the best system provides for a coordinated national program while allowing sufficient flexibility to meet special or unique local conditions. In a large and diverse nation, centralized decision making may not provide for the most expeditious amelioration of the serious problem of aircraft/airport noise, and local experimentation or adjustment will be necessary to meet local problems as perceived on the local level. For example, if a Federal regulation were promulgated limiting cumulative noise exposure, it should

1. Be formulated as a performance standard, specifying the result to be achieved without limiting the specific means of achievement.

2. Allow for more protective limits to be established by State or local institutions in cases where they determine this is desirable. On the other hand, such local decisions must be subject to coordination with the national noise control program if the problem is to be effectively solved.

CRITERION 9: PLANNING GUIDELINES AND INCENTIVES

The legal/institutional arrangement adopted to control noise should provide guidelines for future planning, research and design by State and local governments, planning and other concerned agencies, aircraft operators, airports, and manufacturers. Such guidelines should allow substantial flexibility in the development and implementation of noise control strategies and should provide incentives for airlines, airport proprietors, and other concerned parties to maximize noise abatement in excess of imposed standards in the most expeditious fashion.

The promulgation of regulations, such as performance standards for noise emissions at the source, and cumulative noise exposure of the recipient, should precede the development of technology, design of aircraft, and land use planning activities. Such regulations should serve as goals or targets for researchers, designers and planners, rather than merely reflect what has previously been done. If engineers, planners, and government officials are adequately to solve the airport/aircraft noise problem, they must know -- in advance -- what the end results should be and what is expected of them to reach that result. With goals thus announced, a coordinated program involving source abatement, operational procedures, airport location, design and operation, and land use control can be cooperatively developed by the private parties and public agencies responsible for various aspects of the total solution.

CRITERION 10: INTERNATIONAL CONSTRAINTS

The legal/institutional scheme for noise control regulation should be consistent with international arrangements, treaty commitments, and allow to the maximum extent possible, for a coordinated international approach to the aircraft/airport noise problem.

At the same time, the mechanisms of formulating United States policy for noise regulation and abatement at the international level should be constructed so as to preserve the complete ability of the Federal, State and local governments of the United States to protect the health and welfare of the people. Thus, a coordinated national noise control program should form the basis for active U.S. leadership in formulating consistent international arrangements.

SUMMARY

To be effective, the legal/institutional scheme for dealing with airport/aircraft noise must meet the following criteria: It must assure all relevant factors are considered in adopting and implementing noise abatement regulation. Regulatory decision making must be complete, adequate and expeditious. Assignments of regulatory responsibility over various aspects of the problem should be clearly defined. The regulatory process should be continuing and not static. The legal/institutional scheme should develop a clear definition of compensability. The cost of noise abatement and land use conversion must be ultimately allocated to the air transportation users and beneficiaries. Institutions responsible for airport/aircraft noise regulation must have adequate resources. To enforce such regulation the legal/institutional scheme must also be administrable and must not incur excessive administrative cost compared to the benefits derived therefrom. The scheme should provide for a coordinated national program of noise control and abatement, and yet allow for the adoption of additional strategies or more stringent standards to meet local and regional conditions or needs. Regulations and guidelines should be adopted to provide guidance and goals for land use planning, aircraft design and research and development of noise abatement technology and procedures, and to establish incentives for airlines, airports, and concerned agencies to maximize noise reduction in excess of imposed standards in the most expeditious fashion. Finally, the legal/institutional scheme should be consistent with United States treaty commitments, and allow, to the maximum extent possible, for a coordinated international approach to the airport/aircraft noise problem, while guaranteeing the ability of the Federal, State and local governments to protect the health and welfare of their citizens.

SECTION 4

PROBLEMS IN THE PRESENT LEGAL/INSTITUTIONAL SCHEME FOR AIRCRAFT/AIRPORT NOISE REGULATION

The general problem faced in this report is self evident. The problem of aircraft/airport noise has not been solved, nor does such a solution appear likely in the near future. Specifically, the problem is that noise-sensitive, incompatible land uses in the vicinity of our nation's airports are subject to, and severely impacted by, intolerable noise levels from aircraft operations. A comprehensive national (i.e. Federal, State, and local) program to attack this problem of airport/aircraft noise has not been developed or implemented by regulatory actions of government agencies or voluntary efforts of private industry. To the extent the present legal/institutional framework for aircraft/airport noise regulation is intended to address and solve this problem, it has failed to date.²⁵¹

This section of the report will focus on the strengths and weaknesses of the present legal/institutional framework for solving the aircraft/airport noise problem. Using each of the criteria and questions set forth in Section 3, an attempt will be made to determine the extent to which the legal/institutional scheme has either hindered or encouraged development of viable solutions, and identify where further regulatory or legislative actions on the part of Federal, State, or local governments may be appropriate to assure full and adequate solution of the aircraft/airport noise problem in the shortest possible time. Thus, the discussion below will analyze the entire legal/institutional framework, taken as a whole, against the criteria and considerations outlined previously. Later sections of this report will suggest possible alternative institutional arrangements, as well as actions which could be taken pursuant to existing authorities, to address the shortcomings identified here.

COMPARISON OF THE PRESENT LEGAL/INSTITUTIONAL SCHEME WITH IDENTIFIED CRITERIA

ADEQUATE CONSIDERATION OF ALL RELEVANT FACTORS

On the Federal Level

Prior to adoption of the Noise Control Act of 1972 amendment,²⁵² § 611 of the Federal Aviation Act did not require a consideration of all the factors listed above, in the development, adoption and enforcement of Federal aircraft noise regulations. The 1968 Act, P.L. 90-411, required the FAA, in "prescribing and amending standards, rules, and regulations" for aircraft noise control, to consult with appropriate Federal, State, and interstate agencies, and to consider

1. Relevant available data relating to aircraft noise and sonic boom.
2. The consistency of a proposed rule with aircraft safety.
3. Economic reasonability and technological practicality.
4. The extent to which a proposed standard, rule or regulation will contribute to carrying out the purposes of § 611.

The major difference between the 1968 and 1972 acts lies not in the listing of these considerations,²⁵³ but in the section's statement of purpose. The stated purpose of § 611 as adopted in 1968 was to "afford present and future relief and protection to the public from unnecessary aircraft noise and sonic boom."²⁵⁴ The purpose of § 611 as amended by the Noise Control Act of 1972 is to "afford present and future relief and protection to public health and welfare from aircraft noise and sonic boom."²⁵⁵

Nowhere in the 1968 Act substantive provisions do the words "public health and welfare" appear. The goal of the 1968 provisions was relief from "unnecessary aircraft noise," not from noise detrimental to "public health and welfare." The "unnecessary noise" standard suggests a focus on the issue of what level of noise can be abated in an economically reasonable and technologically practicable manner.

"The [Public Law 90-411] statutory language on aircraft noise abatement was drafted in 1968 when fewer citizens were adversely affected by noise pollution and prior to the Nation's awakening to the problems caused by environmental degradation. In short, the 1968 statute contains 'aviation' language not 'environmental' language."²⁵⁶

The 1968 Act did not explicitly require a consideration or balancing of the demands of public health and welfare for a quieter environment on the one hand versus the economic and technological feasibility of instituting abatement measures on the other. Such a balancing was not, of course, precluded. Certainly, in assessing the economic reasonability of implementing certain noise control standards,²⁵⁷ the FAA could have and should have considered the economic, social, environmental costs of not implementing the standard, or of adopting a less stringent standard. These factors were certainly urged by numerous public comments—from local and State agencies, citizen groups, and airport proprietors—submitted in response to various proposed rules announced by the FAA since passage of the 1968 Act.

An examination of FAA Advanced Notices of Proposed Rule Making, Notices of Proposed Rule Making, and final Rule Making, with particular attention to the agency analysis of public comments, does not indicate the suggested approach was, in fact, implemented. While the FAA consistently "noted" receipt of public comments calling for stricter noise limitations, the vast majority of the agency analysis of proposed rules and comments have addressed the questions of economic reasonableness and technical feasibility as raised in aircraft manufacturer and air carrier comments to proposed rules.²⁵⁸

Clearly, one of the major obstacles to FAA consideration of environmental, social, and economic costs of noise pollution in assessing the reasonableness of various proposed aircraft noise rules has been its inability to quantify such effects. Public comments demanding increased protection from aircraft noise tend to address the issue of environmental effect with generality; and fail to adduce hard data on either direct noise effects or the indirect cost of additional noise pollution.

Nor has the FAA developed the expertise, information or criteria to evaluate such environmental effects on an in-house basis, or identify the most efficient solutions to the airport noise problem.

In 1968, the Air Transport Association and Aerospace Industries Association offered the FAA free use of the results of a jointly funded study,²⁵⁹ including computer software, which attempted to define a methodology for identifying the most cost-effective combination of actions for abating aircraft noise impact to a given level. Although generally recognized as the most extensive such effort to that date, the FAA has not yet made use of the methodology.²⁶⁰

In 1967, pursuant to an FAA contract, an acoustical consulting firm developed the Noise Exposure Forecast (NEF) methodology for evaluating cumulative noise exposure impacts on airport environmental land uses,²⁶¹ taking into account the various noise characteristics of different aircraft, the topography of the area, the number of aircraft operations by type and flight path, the time of day of aircraft operations, weather conditions, etc. The resulting contours were correlated to expected impacts on different land uses subject to given noise exposures.²⁶² The NEF methodology has been generally considered the most sophisticated system of evaluating airport noise impact developed to date.²⁶³ Although developed by and for the FAA, and initially promoted by that agency for the purposes of airport area land use planning, the FAA has consistently refused to use the NEF procedure to evaluate environmental impacts of noise exposure vis-a-vis its own regulatory actions. In contrast, the Department of Transportation Office of Noise Abatement has adopted the NEF System for evaluating the relative effectiveness of alternative aircraft noise abatement techniques, while the Department of Housing and Urban Development has incorporated NEF standards in its guidelines for FHA mortgage and other Federally assisted housing programs.

The FAA recently proposed a new system for evaluating noise impact, called the Aircraft Sound Description System (ASDS).²⁶⁴ This system does not account for the cumulative exposures resulting from different aircraft types or for operations at different times of day, e.g. the greater annoyance factor of night operations. Further, it does not provide a plot of exposure for use in land use planning in evaluation of the effectiveness of different combinations of abatement strategies, nor is it a quantity by which cumulative noise exposure can be measured at a given point on the ground.

ASDE has been severely criticized as being less accurate, less sophisticated, and less useful in evaluating environmental impacts of aircraft noise, and planning to prevent such impacts, than any analytical system developed in the last 20 years.²⁶⁵

The cost of abatement to airlines and manufacturers, on the other hand, is more readily quantified, and heavily documented in industry comments on proposed rules.²⁶⁶ The result has been a skewed analysis, focusing on abatement costs and financing difficulties and all but ignoring environmental effects and economic costs of non-abatement. This particular problem was underscored before the House Hearings on the 1972 Noise Control Act. There, the argument was made for a "full cost benefit analysis" under the "economically reasonable" standard of P. L. 90-411, including consideration of the human cost (annoyance), the cost of land acquisition, litigation costs, costs of limitations on operations, cost of ground transportation (where airports must relocate farther from the area they serve), costs of aircraft operating delays, and costs of noise abatement operating procedures.²⁶⁷

Although the 1968 Act may have used "aviation" language, it can be assumed, without lengthy citation, that Congress was concerned then, as now, with the detrimental effect of aircraft noise on communities neighboring airports. The 1968 Act was enacted for the purpose of protecting health and welfare—at least in the sense those words are used to describe statutory "police powers."

The 1972 Amendments, however, make this consideration explicit. The FAA is charged therein to consider health and welfare effects of noise.²⁶⁸ It further requires that the Environmental Protection Agency (EPA) initially propose those regulations and standards that, in EPA's opinion, are necessary to protect public health and welfare,²⁶⁹ and establishes a formalized mechanism for EPA challenge of any FAA regulations that EPA believes provide inadequate protection.²⁷⁰

Whether the 1972 Amendments to Section 611 afford a total solution to the problem of adequately assuring assessment on the Federal level of all the factors suggested in Criterion 1, A, is an open question at this time. No substantial aircraft regulatory action, other than final adoption of the sonic boom rule, has occurred since passage

of P.L. 92-574. However, an evaluation of the past and present institutional structure in terms of the subcriteria listed above is useful in identifying remaining areas for adjustment and improvement.

Agency Expertise and Information

To adequately evaluate the efficacy of proposed aircraft noise rules and standards, the responsible decision-making agency must have the expertise and information to address a wide variety of issues. It must have expertise in aeronautical engineering, particularly engine and airframe design, aircraft operating procedures and safety requirements, economics, acoustics, psychological and physiological sciences, and similar disciplines.

On the Federal level, expertise and information in the field of aircraft noise abatement is both overlapping and fragmented. For example, expertise and information regarding the technological and economic feasibility of implementing aircraft noise emission control technology exists in several agencies, e.g. NASA, FAA, Department of Transportation,²⁷¹ EPA, and Department of Defense.²⁷² On the other hand, expertise and/or information necessary to analyze the health effects of noise are largely concentrated in agencies such as EPA, HEW and Department of Defense. Expertise and information concerning social and economic impacts of aircraft noise are shared, for the most part, by EPA, HUD, and State and local planning agencies.

The problem is to assure that such expertise and information are available to, and considered by, the decision-maker responsible for adopting appropriate aircraft/airport noise regulations. At the present time that decision-maker is the Administrator of the FAA. Prior to the 1972 Noise Control Act, the primary mechanism for direct interagency exchange of data and opinion was the Interagency Aircraft Noise Abatement Panel (IANAP).²⁷³ IANAP was dissolved in April 1973. Another formal process, requiring EPA to review and comment upon the environmental effects of proposed administrative actions of other agencies,²⁷⁴ was operationalized to a limited extent. The directive of § 402(c) of the 1970 Clean Air Act Amendments²⁷⁵ that

Federal agencies consult with EPA whenever EPA determines noise resulting from a Federally sponsored activity constitutes a public nuisance has never been invoked in challenging inadequate aircraft noise regulatory actions. The latter two provisions were largely superseded by the Noise Control Act of 1972. First the 1972 Act assigns to EPA the task of coordinating all Federal noise control and noise research.²⁷⁶ In addition, and more important, the 1972 Act's Amendments to § 611 establish a unique procedure by which EPA determines and recommends to the FAA those levels of noise abatement which EPA believes are necessary to protect public health and welfare, and further provides EPA with a procedure for challenging FAA regulations which fail to adequately protect the public.

While the new institutional scheme established by the 1972 Act assures that noise-related health and welfare factors will be analyzed and brought to the FAA attention, what of the other considerations—technological feasibility, economic cost of abatement, and aircraft safety? Clearly, not all of the expertise and information regarding these factors are concentrated in the FAA. The majority of research experience and personnel relating to technical feasibility effectiveness, cost, and safety of implementing new noise abatement technology has been accumulated under the aegis of NASA, sometimes with grant assistance from FAA. Indeed most of the research reports forming the data base for aircraft noise regulatory decisions are a result of NASA sponsored, supervised, or conducted studies.

In terms of manpower and experience, NASA is in a good position to determine, on at least an initial basis, the feasibility, effectiveness, cost and safety of implementing various noise abatement strategies, whether they be retrofit, operational procedures, or a combination thereof. As a research agency, NASA's in-house and contracted studies provide an important data base for making such determinations.

One problem encountered in making such determinations, however, has been that in some cases—for example the nacelle treatment program—research has been artificially dichotomized between NASA and the FAA. In such instances, NASA has been assigned the task of initial development of abatement technology, after which the FAA

has undertaken a similar research program to bring the technology to experimental flight status. This has resulted, to a certain extent, in lost time, retraced steps, and split expertise.

In contrast, the approach taken in the refan research program appears more efficient, wherein NASA has accepted the assignment of developing the program—not just in its initial phases - but until a safe, flyable, economically and technically feasible technology is complete.

Only after such a thorough research and development program can rational determinations be made as to the feasibility, safety, cost, and effectiveness of the technology under study. Unfortunately, because of past partitions of research efforts, results have often been incomplete and unclear. As a result, interpretation of the results has been made a matter of debate before the regulatory agencies, based on comments presented for the docket by industry and public interest groups. Preferably, such issues would be settled by a complete research program whose results and determinations would be thoroughly reported by the research organization.

More important, the legal/institutional scheme does not provide a formal mechanism to assure government research results and determinations are conveyed directly to the agency which must ultimately adopt and implement noise control regulations, nor does it assure that such determinations will be reviewed and acted upon once received. The same is true of information and views held by other agencies concerned with aircraft/airport noise, in particular HUD, HEW and the CAB. It is most important that such information and viewpoints be relayed on a regular basis, not just in reaction to regulatory proposals, but in designing a comprehensive regulatory program and coordinating the activities of the government groups which have authority over various portions of the problem.

Interest Group Inputs on the Federal Level

Because the current law assigns primary Federal regulatory power over aircraft noise to the FAA, with EPA and DOT consultation, interest group inputs to those agencies are the most important for the purpose of this analysis.

The formal interest group inputs to FAA regulatory process are defined by the Administrative Procedures Act (APA),²⁷⁷ and to date have largely consisted of comments to Advanced Notice of Proposed Rule Making and Proposed Rule Making notices published in the Federal Register. As noted previously, comments to airport noise regulations have been submitted by State and local governments, airport neighbor, and environmental groups. However, the greater part of such input, in terms of document volume and detail, has come from airline, aircraft manufacturing, pilot, and airport operator associations.

Formal input to the FAA, requesting action be commenced, as opposed to commenting on proposed action, is provided by the APA petition process. In at least one instance, the petition process was invoked by environmental groups to require FAA publication of an Advance Notice of Proposed Rule Making in the aircraft noise field. On May 15, 1970, the Environmental Defense Fund, Inc. filed a petition with the FAA "requesting the immediate promulgation of the environmental standards that will govern certification of the supersonic transport".²⁷⁸ Responding to the petition, the FAA issued an ANPRM for "Civil Supersonic Aircraft Noise Type Certification Standards," stating its intent "to insure that supersonic aircraft, like subsonic aircraft, are subject to type certification standards that require the full application of noise reduction technology, and insure that these standards establish ceilings beyond which noise will not be permitted".²⁷⁹ The Agency to date has not progressed to "Notice of Proposed Rule Making" for SST noise type certification, although the British-French Concorde is expected to enter service on the North Atlantic routes in mid-1975, and the Russian TU-144 is expected to enter service even earlier.

Two other formal input mechanisms, public hearings and appeals of administrative actions, exist in theory. It should be noted that no formal hearings on proposed noise rules have ever been conducted, nor has any FAA noise regulatory action, or inaction, been appealed to the courts. On the other hand, both of these mechanisms have been used to require CAB consideration of noise effects in reviewing proposed certification of new air service.²⁸⁰

Perhaps the most important inputs to the decision making process are "informal", or at least less formal compared to the legally established notice and comment requirements of the APA. The most significant of these "informal" processes are the formation of advisory task forces to develop, review and comment upon proposed regulatory actions. In this regard, the current study is a product of such a task force approach, wherein the EPA invited representatives of concerned federal agencies, industry associations, airport operators, State and local governments, environmental and citizen groups to participate.

The FAA has also used such a study group mechanism, although it has been criticized as being less inclusive in its invitation. For example, in November, 1970, the FAA gave advance notice of proposed subsonic retrofit requirements,²⁸¹ requesting public comments and suggestions on appropriate standards. In early October, 1971 the Agency announced its failure to develop a standard which could obtain the concurrence of airport operators, airlines, and environmental groups. As a result, the FAA stated that it was turning over responsibility for drafting the new regulations to a task force, including representatives of the Air Transport Association and the Airport Operators Council International. Invitations to participate in the study group were not extended to representatives of State or local governments, airport neighbors, pilots, or environmental groups.

To this extent, at least, the legal/institutional framework has not been wholly successful in assuring all concerned parties have an adequate opportunity to input to an open regulatory process. Clearly, "equal" inputs from all interest groups should not be expected or required. But the regulatory process should insure, through either its formal or informal mechanisms, that a balanced view is obtained and that all relevant facts and viewpoints are considered.

Perspective in Developing and Adopting Regulations

One of the greatest difficulties with the present arrangement for insuring adequate consideration of all relevant factors in Federal aircraft noise regulation is the lack of

an agency, or interagency body, with perspective to coordinate the various inputs described above, and to formulate appropriate regulatory responses. Perspective, in this sense, means the ability to analyze simultaneously the myriad of noise-related health and welfare, safety, general welfare, technical and economic factors relating to aircraft noise regulation, together with the capability to see such regulatory action in the context of the larger issues of overall transportation and environmental policy.

The Interagency Aircraft Noise Abatement Panel served this function to a limited extent prior to its dissolution in April 1973, although the primary IANAP function was to coordinate Federal aircraft noise research efforts. The research coordinating mission of IANAP was transferred to the Environmental Protection Agency by the Noise Control Act of 1972, but no effort has as yet been undertaken to replace IANAP with another continuing structure to coordinate inputs and formulate regulatory response on a continuing basis.²⁸² It is clear that neither the FAA nor EPA, alone, provides a viable structure for achieving such perspective. The FAA is not particularly capable of dealing with environmental policy issues, nor is either agency responsible for viewing aircraft noise in light of an overall transportation program. The consultative roles assigned EPA and DOT by § 611²⁸³ may somewhat ameliorate this problem, but will only be effective to the extent such consultation is progressive and continuous, rather than ad hoc and reactive. The Section 611 structure, furthermore, still does not establish a coordinated program of aircraft noise regulatory development to the extent other concerned Federal agencies - such as NASA, HEW, HUD and the Department of Defense - are not regularly included in such consultation.

On the State and Local Level

Four institutional structures are concerned with aircraft/airport noise regulation on the State and local levels:

1. Airport proprietors
2. State legislatures

3. State administrative agencies

4. Municipal and county governments.

Have these institutions considered all relevant factors in their aircraft noise related decisions? Do they have the expertise and information to consider and balance such factors? What inputs are available to them?

It is hard adequately to assess, across the board, whether State and local governments, and airport proprietors, have adequately considered all relevant factors in making decisions affecting the aircraft/airport noise problem. In some instances, the result of such decisions suggests that some factors have not been considered—for example, where zoning around airports not only allows, but mandates, residential uses in noise impacted environs. In other cases, certain actions or inactions by responsible State and local institutions may indicate problems other than imbalanced consideration of environmental, social, economic and technological facts—such as lack of economic leverage, power, or resources to implement effective noise abatement strategies. Thus, the analysis of the problem on the State and local level must rely on answering the questions regarding availability of expertise, information and interest group input opportunities. Such an analysis will suggest whether, all other factors being equal, the branches of State and local government can adequately consider all relevant factors.

Most airport proprietors possess substantial experience and expertise in the economic and technical aspects of aviation. The in-house noise control expertise available to airport proprietors, on the other hand, is extremely limited. For the most part, airport operators requiring information on noise effects and noise abatement must rely on Federal agency assistance and private consulting firms. Airports of smaller size and more limited fiscal resources are unable to field the more sophisticated noise control studies conducted by their larger counterparts, yet their problem may be proportionately less serious and solution less complicated. A major airport noise control program, however, requires substantial funds and personnel resources for monitoring, planning, and implementation. Because many city, State and local

authority airports are already operating on a marginal, non-profit basis, such resources are not readily available for the purchase of necessary equipment and consultative services without some outside assistance.

Several State and municipal governments have in-house noise staffs, as well as personnel versed in aviation. Often, this expertise is not concentrated in one agency, but divided among many; for example, departments of environmental control, health, aeronautics and commerce. In the actual drafting of noise legislation and regulations, States and local governments, like airport proprietors, have turned to private consultants for additional expertise and information. In the area (of the problem) where State and local governments have the clearest responsibility, land use planning, they are often hampered by an inability to assess airport noise exposures and determine land use compatibilities. With the FAA's retraction of the NEF contours, which were originally distributed to state and local planners to assist in planning, State and local agencies have been severely hampered in undertaking land use control around airports. Yet the cost of NEF or similar studies, and experience required properly to prepare them, place them beyond the fiscal capabilities of many planning agencies.

The quality and extent of interest group inputs to airport operator, state and local government decision-making process varies depending on location and institution. Generally, hearings before state legislatures include considerable comment from all interested parties and organizations. Lobbying efforts are less easy to gauge, and vary according to the resources of the groups involved.

On the municipal level, particularly in cities neighboring airports, most interest group activity is concentrated in citizen-environmental group and business-chamber of commerce efforts. Airline association, airframe manufacturers, and pilot comment is usually minor or nonexistent--except where such organizations challenge, by litigation, the legality of local noise control actions. Affected airport proprietors have often presented their views before local government legislative bodies. Unfortunately, efforts of airport operators thereby to stimulate local land use control measures have been, with few exceptions, ineffective and unsuccessful.

Input to airport proprietor decision making is much more complicated. Where airports are operated by line agencies of municipalities or counties, input mechanisms generally run through the local governmental legislative body. In addition, hearing requirements contained in the Airport and Airway Development Act guarantee direct opportunities to input to and sometimes confront an airport operator on proposed controversial airport development projects.

A number of airports are operated by independent or semi-autonomous authorities or commissions. Enabling legislation for these authorities may require appointment of certain interest group representation. For example, the Massachusetts Port Authority Board,²⁸⁴ by law, must contain persons with backgrounds in business, labor, and engineering professions. Pursuant to executive policy, a few representatives of noise impacted communities have been appointed to the governing bodies of a few such authorities.

Specifically with respect to the noise problem, at least one airport proprietor has formed an advisory noise abatement committee, formed of representatives from the FAA, State aeronautics commission, airlines, pilots, and neighboring communities.

The advisory committee has the duty of developing proposed noise abatement guidelines for consideration by the airport proprietor, and in theory, at least, provides a basis for continuing, regular input by all interested parties.

FULL, ADEQUATE, EXPEDITIOUS REGULATORY DECISION-MAKING

With perhaps the sole exception of the State of California, no level of government or agency acting either alone or in cooperation with other responsible agencies has attempted to formulate a comprehensive regulatory program for aircraft/airport noise abatement.

Existing regulatory measures address only a small portion of the problem. FAA aircraft type certificate noise standards apply to only five percent of the present fleet; 95 percent of all commercial and business jet aircraft are unregulated with respect to noise emissions. Yet the unregulated portion of the fleet contains those aircraft which create the greatest noise, and dominate the noise problem at every major

American airport. Preferential runway procedures, as noted on page 25 have been published as regulations since the early 1960's. Their enforcement is accomplished by way of Air Traffic Control clearance procedures whereby the control tower clears the pilot for the preferred runway and the pilot is bound by the clearance unless he informs the tower of his objection for safety reasons. Few Federal regulations have been adopted with respect to the other areas necessary to complete a comprehensive noise control program; that is, approach and takeoff procedures, community exposure standards, single-event aircraft operational noise standards, or land use control and incompatible land use conversion guidelines. Only one State and a small number of local governments and airport proprietors have attempted to address the latter regulatory areas. In some instances, these efforts are beginning to show promising results, particularly in the California system. Nevertheless, the amount of success possible is severely delimited by the absence of a coordinated national plan and adequate Federal action.

Federal aircraft/airport noise regulation to date reflects a history of inadequate, nonexpeditious decision-making. Evidence of nonexpeditious FAA rule making appears in several areas, for example:

1. Retrofit and fleet noise standards for existing first-generation, low-bypass ratio subsonic jet aircraft.
2. Type certification standards for new supersonic transports.
3. Standards for new production units of previously type certified low-bypass ratio subsonic aircraft.

As noted previously, in November 1970, the FAA issued an ANPRM covering subsonic retrofit requirements, requesting public comments and suggestions on appropriate standards. The comment period expired on February 26, 1971.²⁸⁵ In October 1971, the FAA announced it was unable to develop a standard acceptable to both industry, airport and environmental groups.²⁸⁶ Two days later, John. H. Shaffer, then FAA Administrator, stated that the FAA would soon issue proposed retrofit rules for two and three engine aircraft, but not for the four engine low bypass ratio jets (DC-8 and Boeing 707).²⁸⁷ These proposed rules were never issued, and

on January 24, 1973, 15 months later, the FAA issued a new ANPRM on Civil Airplane Fleet Noise Level Requirements.²⁸⁸

Following receipt of the Environmental Defense Fund petition requesting FAA promulgation of noise standards for civil supersonic transport type certification,²⁸⁹ the FAA issued an ANPRM for civil SST noise standards on October 6, 1970.²⁹⁰ Although the initiation of procedures is encouraging, the Agency to date has not progressed to the "notice of proposed rule making" stage. Application for certification of the British-French Concorde SST has been submitted to the FAA, and said aircraft is expected to be in trans-Atlantic service by mid-1975. At the date of this report, the FAA is more than 32 months behind its originally announced schedule for final promulgation of SST type certification noise regulations.²⁹¹

On July 7, 1972, the FAA issued proposed rules for newly produced aircraft of older type design, which would have required all subsonic aircraft first flown after July 1, 1973, to comply with FAR 36 noise standards. Currently, technology is available to significantly quiet new units of previously type certified aircraft. The Boeing Company, for example, presently is offering new 727-200 and 737-300 aircraft with an optional acoustically treated nacelle. Some airlines have ordered new planes with this noise abatement package, but Federal regulations do not make the package mandatory, and other carriers are still buying aircraft that do not incorporate best available abatement technology. Such new untreated aircraft will have to be retrofitted if and when the FAA adopts a retrofit rule or retroactively applies the new aircraft regulations. As of this date, the FAA has not adopted the new aircraft rules proposed in July 1972.

As stated in the Section I-3, a number of reasons have been suggested for the present inadequate, incomplete, unexpeditious process of noise regulation. Each of these criticisms must be analyzed to determine if it validly identifies a constraint imposed by the present legal/institutional structure, and the seriousness of that constraint.

TABLE 4-1

FAA ESTIMATED AND ACTUAL RULE MAKING UNDER FEDERAL AVIATION ACT SECTION 611

Subject of Rule Making	1970 (Quarters)				1971 (Quarters)				1972 (Quarters)				1973 (Quarters)				COMMENTS	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th		
New Subsonic Type Standards	(Issued Nov. 1969)																	
Retrofit: Estimated & Fleet Noise		A		P				R										P&R Not Issued to Date; P(30), R(21).
Actual				A(6)	Retrofit								A(30) Fleet Noise					
Operating: Estimated		P		R														P&R Not Issued to Date; P(36), R(30).
Actual																		
STOL		A		P				R										A,P&R Not Issued to Date; A(36), P(30), R(24).
Estimated																		
VTOL					A			P										A,P&R Not Issued to Date; A(27), P(21).
Estimated																		
SST Noise		A		P				R										P&R Not Issued to Date; P(33), R(27).
Estimated				A(6)														
SST Sonic Boom		P		R														R(26)
Estimated																		
Actual		P(3)																
Newly Produced Airplanes of Older Type Design																		Proposed Rule would go into effect July 1973. Rule not issued to date.
Actual																		

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KEY: A = Advance Notice of Proposed Rule making
 P = Notice of Proposed Rule making
 R = Rule (Amendment to Federal Aviation Regulations)

Numbers in parenthesis indicate approximate number of months FAA is behind its Estimated Rule making Schedule for the action indicated. Total delay for Final Rule Making, to date = 128 months (10.66 years).

Source of Estimated Schedule: FAA, Noise Abatement-Technology, Public Law & Rules, FAA Noise Abatement Programs (Feb 24, 1970).

Primary Mission Conflicts

It has been frequently argued that assignment of the noise regulatory function to agencies with a conflicting primary mission (e.g., to promote the expansion of the civil aviation system, or to maintain the financial stability of an airport authority) has resulted in the inability of agencies such as the FAA and airport operators from adequately exercising their legal powers and duties in the noise field.

Putting aside the question of what are the real or perceived missions of various agencies—whether the FAA sees its mission as air transport promotion or safety regulation²⁹²—do the hypothesized conflicts exist? Does noise regulation conflict with promotion of air commerce or operation of a fiscally sound airport?

On reflection, the alleged conflicts are chimeric. Not only is aircraft noise "the most explosive problem facing aviation today,"²⁹³ it has also become the greatest obstacle to air commerce expansion. Airport development and improvement has been embroiled in controversy, delayed and often defeated, because of public dissatisfaction with current noise levels. Until adequate noise control programs are instituted, such public opposition is likely to continue and perhaps become even more intense. Furthermore, measures to reduce noise and measures to increase performance and economy may often be congruent. Major examples are:

- The emergence of the fan engine and its high bypass ratio versions, which provide not only important increases in performance and economy but also significant reductions in noise.
- The improved financial situation of airlines operating under capacity limitation agreements which also have beneficial environmental effects: slight reduction of noise exposure, and significant reduction of total exhaust emissions and energy consumption, through reduced flight frequencies. In the long run noise control is in the best interest of, and not in conflict with promotion of air transport.

Whether all parts of the air transport industry perceive this compatibility, particularly in the short run, is debatable. Issues of cost, and who is to pay, for interim phases of noise control appear of most concern to air carriers, who have questioned the wisdom of proposed retrofit, type certificate, and other noise regulations. From a regulatory agency viewpoint, however, noise control in both the short and long term should appear wholly consistent with commitments to promote air commerce.

Failure Clearly to Define Responsibility

One of the most obvious problems created by the legal/institutional scheme is the failure clearly to define what agencies have responsibility for particular aspects of the aircraft/airport problem. This constraint is amply evidenced by the present relationships between the FAA, airport operators, and State and local governments.

The FAA claims jurisdiction over aircraft in flight in the navigable airspace (which includes airspace necessary for takeoff and landing), type certification, and aircraft noise emission standards. The FAA has taken the consistent position that it can only adopt noise regulations insofar as they "involve economically reasonable burdens on the aircraft industry and are technologically practicable."²⁹⁴ According to the FAA, responsibility for setting permissible levels of noise at an airport belongs to the airport operator, not the FAA.²⁹⁵

On the other hand, airport operators have argued that they do not have sufficient enforcement power or economic leverage to impose effective aircraft source noise standards at the local level, that the FAA and not the airports, has primary authority to control flight paths and operating procedures, and that local governments other than the airport operator have land use control powers for the noise impacted airport environs.

Local governments having jurisdiction over land around airports and States allege they are unable to control the entire land use within excessively large noise impacted zones so long as airport and Federal regulations on the source are inadequate, while at the same time airports, airlines and Federal authorities have thus far successfully blocked State and local efforts to impose standards on aircraft noise

levels. On the other hand, the FAA has disclaimed any authority to influence land use control, despite clear provisions of the Airport and Airway Development Act requiring adequate land use control as a condition to awarding airport development grants, and authorizing airport certification regulations including airport noise standards.

The underlying difficulty lies in the manner in which the legal system has judicially assigned present noise control responsibility and accountability therefor. The current allocation of regulatory powers is performed, not according to a legislative or administrative determination of what agencies or levels of government should have responsibility for part of a coordinated comprehensive national aircraft/airport noise control, but pursuant to constitutional principles of preemption and taking liability.

The debate over whether States and/or local governments can use their police power to set noise exposure limits to protect their citizens has been answered in the negative by the Supreme Court in the Burbank case on the ground that the Congress has preempted the entire area of aircraft noise regulation. Also Burbank continues for the present airport proprietors' responsibility for aircraft noise apparently based on interpretation of who should be liable under Griggs for property taking and damaging resulting from excessive noise. Such constitutional questions imply all-or-nothing answers, and not coordinated noise regulatory efforts, with each level of government doing that it can do best to implement agreed-upon goals. Reliance upon judicial allocation of such authority not only is awkward, but has resulted in unnecessary jurisdictional conflicts and acrimony between agencies and governments which should be cooperating toward a coordinated solution to a common problem.

Interagency Conflict

A related alleged deficiency in the present scheme is interagency conflict; that is, one agency effectively refusing to cooperate with another where such cooperation is necessary to implement a proposed regulatory program.

Upon investigation, the Task Group could only document one such instance of serious import. In July 1970, a study prepared for the FAA indicated that retrofit would be economically feasible with a modest fare increase.²⁹⁶ The FAA published its ANPRM for retrofit standards October 30, 1970. While such standards were under consideration, the CAB let it be known it would not authorize a fare increase to finance retrofit if the FAA adopted the proposed rule. Further, in Senate hearings held in July 1971, the CAB vigorously opposed legislation which would have compelled a fare increase to the extent of retrofit costs.²⁹⁷ Because any retrofit rule implementation will require a substantial investment by air carriers, which logically must be amortized and included in the charges to their users, the practical effect of the CAB announcement—all other things being equal—is to scuttle retrofit plans until either Congress establishes an alternative financing scheme, or CAB changes its mind.

Fear of Liability for Noise Damages

The fear of liability for noise created damages or taking of property has been a serious deterrent to adequate, rational noise regulatory decisions. Airport operators have argued consistently for the past several years that the Federal government has so preempted the aircraft field, that they should no longer be liable under the Griggs doctrine, but that such liability has, or should be, shifted to the Federal treasury. As a corollary, some have argued, most airport proprietors have refused to impose noise regulations for fear that such action would appear inconsistent with their present legal posture.

On the other hand, Congress, in the legislative history of the 1968 and 1972 Acts, made clear its desire not to open the Federal purse to noise damage claims by total preemption. As a result, a dichotomous doctrine was enunciated, imposing preemption as against the State and local governments acting pursuant to their police powers, but allowing imposition of aircraft noise standards by airport authorities acting in their proprietary capacity. Although some former and present FAA officials expressed

the belief that fear of noise damage liability has never hindered FAA noise regulatory action,²⁹⁸ nevertheless, the FAA has consistently argued that responsibility for establishing acceptable noise exposure limits around airports is a proprietor, not FAA, duty—a view which is the practical progeny of a legal doctrine conceived to avoid financial liability for inadequate regulatory action. As noted above, the result of such fear, or its resultant legal machination, is a wholly unsatisfactory definition and allocation of regulatory responsibility.

Inadequate Funding and Staff

Some have asserted the present deficiencies and delay of regulatory action in the noise field is a result of inadequate funding and staffing of responsible agencies. This is certainly true at the State and local government level. With the exception of California and possibly Illinois, no State or local planning or aviation agency has adequate funds or trained staff to fully assess noise problems, develop a comprehensive noise control program, draft regulations, and monitor and enforce such rules once adopted. In terms of fiscal constraints, airport operators are somewhat better situated to acquire needed staff, develop and enforce a noise control program, although only a few large airport operators, including Los Angeles International and the Port of New York and New Jersey Authority, have attempted on even a limited basis to do so.

At the Federal level, funding and staffing of regulatory agencies, such as the FAA, does not appear to be a major hindrance. The FAA's current and proposed regulatory actions do not require large financial commitments to prepare and enforce. On the other hand, research and development programs, exploring possible noise abatement techniques, could possibly be more effective and expeditious with additional funding. The fact remains, however, that current regulatory actions are behind, not ahead of, technological developments. Noise abatement equipment and procedures have been developed which have not yet been acted upon by the responsible regulatory agencies, in particular the FAA. Such delay cannot be attributed to funding and staff inadequacies.

Political Accountability

One of the most frequent criticisms of the present regulatory scheme is that many of the institutions responsible for portions of the problem are not politically accountable, either directly or indirectly, to all parties concerned with the problem.

Often, for example, airports are operated by a municipal government whose boundaries do not include the land around the airport, and thus it is not responsible to airport impacted neighborhoods. At the same time local governments having jurisdiction over land neighboring the airport and responsible for compatible land use control are not accountable to the larger group of airport users. A similar situation arises where airports are owned and operated by nongovernmental entities (such as Lockheed Air Terminal), or by independent authorities, which are by definition and design not politically responsible to anyone.

Where institutions responsible for airport noise regulations are not politically accountable, the only pressures to consider all sides and take adequate action lie in economic threats (for example, liability for noise damages), indirect "political" action, (such as opposition to airport expansion plans and grant applications), or legal duties imposed by statute, regulation or judicial decisions. Such pressures, however, are often weak and remote, and in certain cases may be legally nonviable as a result of constitutional preemption and similar doctrines.

On the Federal level the question is not one of fragmented constituencies, but of remoteness from the political process. Most regulatory decisions have been delegated to the FAA, which as an administrative agency is only indirectly accountable to elected representatives. Thus, the primary mechanisms for assuring accountability lie in Congressional and Executive oversight of agency action. The success of such oversight will depend on the priority Congress and the President assign to this problem, the time available to devote to overseeing the actions of such administrative actions, and the willingness of both the legislative and executive branches to impose sanctions if responsible agencies continue to fail in fulfilling their statutory obligations to control aircraft noise.

Concurrence of Liability and Authority: Sanctions for Inadequate Rule-Making

Presently, liability for inadequate aircraft noise control which results in the taking of or damages to property of neighboring land uses is borne entirely by the airport proprietors. This would not be necessarily inequitable if airport operators had sufficient real as well as legal power to take the necessary actions to avoid such liability.

Congress, in Section 611, and other sections of the Federal Aviation Act, assigned to the FAA the power to regulate noise at the source through, among other things, type certification, design and retrofit standards, arrival and departure path designation and operating procedures. The statute is clear. According to some observers, the FAA reaction to it has been "downright schizophrenic."²⁹⁹

In adopting and proposing Federal noise regulations pursuant to § 611, the FAA has often repeated the shibboleth that airport proprietors, in accordance with their Griggs responsibilities, can legally adopt noise limits affecting which aircraft may use the airport. For example, in proposing the original type certificate noise rule, the FAA stated:

"(T)he proposals in this notice should be placed in broad perspective. This notice does not promise the immediate achievement of socially acceptable noise levels in airport neighborhoods where the responsible State or local governments have not, or cannot, act to achieve land use compatibility for their existing or planned airports. Further, this notice does not promise a Federal substitute for actions that airport operators, as proprietors, can take and have traditionally and responsibly taken, to make their airports fit the particular needs of their locales, such as establishing the conditions under which their airports and airport facilities may be used, including the issuance of specific noise ceilings.

"...Just as an airport owner is responsible for deciding how long the runways will be, so is the owner responsible for obtaining noise easements necessary to permit the landing and takeoff of the aircraft. The Federal Government is in no position to require an airport to accept service by larger aircraft and, for that purpose, to obtain longer runways. Likewise, the Federal Government is in no position to require an airport to accept service by noisier aircraft, and for that purpose to obtain the service. In dealing with this issue, the Federal Government should not substitute its judgment for that of

the States or elements of local government who, for the most part, own and operate our Nation's airports."³⁰⁰

The FAA's official statements in § 611 rule notices regarding the airport proprietor's duties are clear: "Airport owners acting as proprietors can presently deny the use of their airports to aircraft on the basis of noise considerations so long as such exclusion is nondiscriminatory."³⁰¹ To solve the noise problem, an airport operator may, among other things, ban jets, limit their noise, or put curfews on aircraft operations. According to the FAA, it has authority to do any of these.

Yet, the FAA position vis-a-vis individual airports appears to have been, in a number of cases documented by the Task Group, entirely opposed to the above quoted policy pronouncements. In awarding grant funds to airport operators under the Airport and Airway Development Act, and previous acts, the FAA enters into grant agreements and sponsor assurances. Where such assurances are violated the Federal Government may among other things, sue for reversion of the airport property, and turn over control of the airport to another agency. By these agreements, or FAA interpretation thereof, and threats to take "drastic action," the FAA has routinely taken away by contract (or interpretation thereof) the airport operator's power to deny the use of the airport to noisy aircraft, or otherwise impose noise abatement strategies—powers which form the basis of the Griggs decision that the airport operator, and not the Federal government, is responsible for noise created property takings.

For example, the San Diego (California) Board of Airport Commissioners proposed the imposition of a curfew at Lindbergh Field in order to cut down on the nuisance inflicted on the neighboring property owners. Immediately upon publication of the Commissioners' request, the FAA informed them that any such restrictions would violate their commitments under their Federal Aid to Airports grant agreements, which required them, under the FAA interpretation, to operate the airport without restriction to hours. After many discussions with FAA officials, it was determined that the proposed regulation should not be implemented.

FAA district and regional officials have recently expressed "scepticism" as to the legality under a grant agreement of imposition by City of Torrance, California, as proprietor of Torrance Municipal Airport, of noise standards which are currently under study. Torrance officials were orally told that the matter would be turned over to the FAA regional counsel for review and appropriate action.³⁰²

It may be noted that Torrance Municipal Airport is not an air carrier airport and is only a few miles from Los Angeles International Airport on the north and Long Beach Municipal Airport on the south. The objective of the airport proprietor in setting noise limits is to exclude business jets, which are the only cause of the airport noise problem at Torrance.

The FAA has further taken the position that an airport which received Federal grant assistance could not deny access to business jet aircraft on the basis of noise. In 1967, the Fullerton (Calif.) Municipal Airport, which has always been a general aviation airport without jet operations, issued a Notice to Airmen (NOTAM) prohibiting pure jet aircraft from using the airport. The FAA (Los Angeles Area Office) initially objected to this exclusion, on the grounds that the NOTAM was an unlawful violation of Fullerton's sponsor's assurance agreement regarding "unfair discrimination against types or classes of aircraft." Fullerton Airport has also been advised by FAA that terms of its lease agreements with Golden West Airlines (which now operates DeHavilland Twin Otters into Fullerton) and other tenants, requiring the City Administrator approve aircraft used at the City's airport, were illegal. J. Bryan Douglass, airport manager, has stated that the City may be forced to return the Federal funds and close the airport if the now several year old controversy with FAA over Fullerton Airport's power to control noise is not resolved.³⁰³

However, the FAA has taken the position, in at least one case, that an airport owner which receives federal funds cannot choose to close the airport, for noise or other reasons. Santa Monica, proprietor of Santa Monica Municipal Airport, faced a serious noise problem from general aviation, as there exists no buffer between the airport and neighboring residences. Nearby homes are subjected to noise ranging

higher than 120 EPNdB. As a result of the City's assessment of these problems, the city fathers in 1971 considered shutting the airport down entirely. Before the city council could pass a resolution, however, the FAA intervened, stating in a letter to the City:

"We have been informed that the City of Santa Monica is considering alternative uses of the property presently used for the Santa Monica Airport. I respectfully suggest, at the outset, that retention of the Santa Monica Airport in our transportation system requires consideration of many factors other than direct economic returns, not the least of which is the fact that air transportation in Southern California is highly dependent upon the continued operation by multiple municipalities of all the existing airports serving our complex community. This is as true for Santa Monica as it is for the continued operation of Los Angeles International Airport. The Federal Aviation Administration has no intention of consenting to the use of this property for other than airport purposes and will insist on the City of Santa Monica complying with its contractual obligations to the Government. To do otherwise would seriously impair the national air transportation system and particularly would be detrimental to the residents of all of Southern California who are dependent in one way or another upon air transportation."³⁰⁴

It should be noted that Santa Monica Municipal Airport is a general aviation airport, without air carrier service, and is located only a few miles from Los Angeles International Airport on the south and Van Nuys Airport on the north.

Although the FAA has taken the view before Congress that Federal preemption of aircraft noise control under § 611 does not extend to the airport proprietor, it has recently argued, before the Federal District Court and Ninth Circuit Court of Appeals, that the 1968 Amendments and § 611 the 1970 Airport and Airway Development Act may extend that preemption even to the extent of prohibiting airport proprietor action.

Prior to passage of the 1968 Aviation Act Amendments, the City of Santa Monica, as owner of the Santa Monica Municipal Airport, imposed a night curfew on jet flights. The California Court of Appeal upheld the curfew's legality in the case of Stagg v. Municipal Court.³⁰⁵

In discussing the Stagg decision, in its amicus brief in the Burbank case,³⁰⁶ the FAA stated:

"The important 1968 Amendment to the Federal Aviation Act appears not to have been considered by the Court which upheld a jet curfew at the Santa Monica Municipal Airport. . . . The Stagg case was commenced in January 1968 before the amendment was enacted, and although the appellate decision was rendered after the amendment became law, perhaps the failure to consider the amendment was a consequence of the fact that there was no appearance in the appellate court by the party challenging the curfew. Moreover, the Court in Stagg had no opportunity to consider the further pre-emption resulting from the 1970 Airport and Airway Development Act."

Respecting this statement, one attorney familiar with the Stagg case noted before EPA hearings that "(T)here are several important points to be derived:

"First. While the Stagg opinion does not refer to the 1968 amendment, that legislation was considered. In fact, it was brought to the court's attention by the airport operator.

"Second. The FAA now feels that no one but the FAA may regulate in the field of aircraft noise.

"Third. The FAA is playing unfortunate games with the public interest; either it has all pervasive power—as it represented to the court in the Burbank airport case—or it has limited power—as it represented to the public when issuing noise standards for certification. It cannot have things both ways."³⁰⁷

If the FAA continues to insist, pursuant to the Airport Development grant sponsor agreements (AADA) and/or § 611, that airport proprietors are void of real power to limit use of their airport through noise limits, impose curfews, and avoid damage liability, then the Federal Government will be forced under the Griggs doctrine to assume full responsibility for the failure of FAA to adequately control noise, and the noise damages and property takings which result therefrom.

Even if the FAA alters its sub silentio policy of barring exercise by airport operators of their authority to control noise, in fact effectuation of that authority may be realistically impossible. To an extent, individual airports may be able to exclude

certain aircraft which produce excessive noise, but even a large airport operator does not have power and economic leverage to impose upon the aircraft industry strict noise standards applicable to design and retrofit. Design standards can be viably imposed only on a national scale; drastically different aircraft noise standards from airport to airport where airline service is involved would be a practical disaster. Furthermore, without FAA concurrence, airports cannot revise approach and departure flight paths or impose flight procedures.

Real ability to solve the airport noise problem does not lie exclusively with the FAA or airport operators, but is a joint responsibility of the Federal government, airport operator, airlines, and State and local authorities responsible for land use control around airports. Incomplete or ineffective regulation by any one responsible party will result in further noise damage, and the possibility of further litigation and monetary awards. Airports should not be liable if the FAA or any other responsible agency fails to exercise adequately its powers, or prevents airport proprietors from fully exercising theirs. A liability system, such as that currently in effect, which assigns liability to parties which cannot realistically solve the problem alone, only encourages irresponsibility among other concerned agencies and delays solution of the larger aircraft/airport noise problem.

CONTINUING REGULATORY PROCESS

The present regulatory scheme for aircraft/airport noise control, with the notable exception of California's CNEL standards, does not provide abatement goals or establish incentives for expeditious research, development, and implementation of new noise control strategies. As a result a continuing regulatory process in the field of aircraft noise control has never been established.

Current and proposed FAA regulations, for example, are tied to previously developed technology (see the discussion on Planning Guidelines and Incentives later in this section), not an assessment of what technology could be developed in the future. In part this is a result of the § 611 mandate that the FAA determine that a

particular rule is technologically practicable, a determination which can only be made with certainty after technology has been developed. Unfortunately, this has created a stalemate; for often it appears development and/or implementation of new noise technology is awaiting the stimulus of regulatory action, which is awaiting the development of new technology.

The Section 611 mandate, however, does not legally bar FAA announcement of goals for future regulations, or promulgation of stepped noise regulations for certain target years, subject to revision if predicted technological developments are not entirely forthcoming. In January 1969, the FAA, in fact, announced a "noise floor, or objective to be sought" of 80 EPNdB, and proposed that noise levels in new aircraft be required to be as close to that goal as consistent with economic and technological feasibility.³⁰⁸ This announced goal would have provided a target for future technological development and an incentive to further research, development and implementation of noise abatement equipment. However, after strenuous industry objections, the FAA withdrew the "noise floor" in final publication of the FAR Part 36 type certificate regulations.³⁰⁹

Thus, at this time there are no stated goals for the definition or solution of the aircraft noise problem. Yet such targets are desperately needed, not only as a guide to aircraft engineers and designers, but also to assist airport operators and State and local governments to fulfill their proper role. Without common goals, the best combination of possible strategies including retrofit, aircraft retirement, operational procedure, airport curfews, and land use conversion, cannot be identified or implemented in a coordinated fashion.

A corollary of this problem is that the present regulatory scheme has not tended to progress as the state-of-the-art has advanced. As previously noted, regulations still do not require installation on new aircraft of all available noise abatement equipment, even though such equipment is in actual production. Regulations have tended to be one-time efforts, and despite promises to the contrary, review and improvement of out-dated FAA standards has not been realized. Without predetermined goals,

there is no continuing incentive for the various responsible regulatory agencies continuously to scrutinize their current rules and adjust them where possible to move closer to achievement of the goal. If a continuing regulatory process is ever to be established in the aircraft noise field, such goals must be developed and agreed upon now by all concerned parties, and each must become committed to taking appropriate part in a coordinated effort to reach those goals.

DEFINITION OF COMPENSATION LIABILITY

Present case law holds that the airport operator is liable for constitutional takings of property and/or damages resulting from excessive aircraft/airport noise. However, the extent of such liability is less than clearly defined. In large part, the scope of liability depends on the State in which the airport is located, and the liability theory adopted in that jurisdiction. In some jurisdictions, the test of compensable damages is whether the land is overflowed by an aircraft; other parcels, equally impacted by noise from aircraft flybys may be excluded from compensation. Other areas have developed noise exposure (e.g. NEF) based criteria as a compensability test, and at least one State has sustained a damage suit on the basis of nuisance, e.g., unreasonable interference with use and enjoyment of property. Such drastic differences in the tests of when noise impacts require constitutional compensation or damage awards have only further complicated the fragmented problem of noise abatement.

An equally important problem is the present form of compensation awards. Current airport noise litigation, if successful, ends in a one-time, lump sum payment for purchase of a noise or aviation easement. Such an easement is essentially a license to pollute, and provides no financial incentive for future abatement of noise. Furthermore, there is no evidence that the present compensation system—except perhaps by way of a threat of yet unrealized financial liability—results in any amelioration of the noise problem. Damage awards are not tied to, and are rarely used, for either sound proofing impacted structures or relocation of incompatible land uses. They are, put bluntly, "hush" money, which does not assist in achieving an eventual solution to the airport noise problem.

Finally, the present judicially oriented airport noise compensation system has become a costly, repetitive, and wasteful process proving again and again what noise constitutes a taking, as well as what damages have been actually suffered by the individual litigants. Up to 50 percent of such compensation awards are absorbed in legal fees and judicial costs, and such costs do not include the expense of judicial time committed to the adjudication.

Constitutionally minimum requirements of just compensation for taking and/or damaging resulting from noise cannot be legislatively or administratively curtailed. Yet it must be recognized by all three branches of government that the boundaries of "taking" and the realities of "just compensation" require a thorough review to the end that equally noise damaged individuals receive at least similar treatment before the law, and that compensation be geared to amelioration and solution of the airport noise problem.

PRESENT ALLOCATION OF COSTS

The vast majority of costs, or damages, resulting from excessive levels of aircraft noise are presently being borne by the airport impacted neighbor. A substantial portion of that cost is not reflected in devaluation of airport environ property on the real estate market, which may be affected by other factors, such as increase in value of such property for commercial and industrial purposes. Rather, a substantial portion of such "cost" is reflected in the loss of pleasant use and enjoyment of property, particularly homes, around airports. Although taking awards to date have been relatively low—under \$4 million dollars—the amount of noise annoyance borne by airport neighbors, as estimated by various techniques including NEF analyses, is considerable. Thus, much of this annoyance loss is being absorbed by the victim, not by the beneficiary, of the air transport system.

To the extent that taking and damaging liability has been imposed on airport operators, it is somewhat unclear to whom such costs are finally to be allocated. Some airports have indemnification clauses in leases with airlines using the airport

facilities, requiring airline reimbursement for any damages awarded in airport noise litigations. Other leases provide such damages will be factored into landing fees and amortized over the given period. To the extent airports can invoke such pass-throughs, the cost will be allocated to air passengers and shippers via increased air fares, or absorbed by airline stockholders via reduced profits. Where the airport cannot achieve such reimbursement, airport bondholders, concession lessees and local taxpayers must pay the price of airport noise.

The cost of developing noise abatement technology and procedures has in part been underwritten by the Federal treasury supported by general tax revenues. Such past and current research programs were and are funded through appropriations to and grants from such agencies as NASA, DOD, DOT and the FAA.

On the other hand, allocation of the cost of implementing new noise abatement technology has not been settled by the legal system. Installation of the original fan engines, and purchase of the quieter wide body jets, was and is being financed through regular air fares. However, the CAB has announced it will not favor an increase in air fares to finance a retrofit program, implying the air transport user should not-- in CAB's opinion--absorb this cost. Because the implementation of any proposed retrofit or fleet noise rule would involve substantial sums, this long range allocation problem definitely must be solved.

While the foregoing subsection has dealt with the problem of long range allocation, a related problem of short term financing also exists. A comprehensive solution to the noise problem, involving retrofit, aircraft replacement, and some land use conversion, will require large funds not generally available in the private market. Although such sums can be financed in the long-term, a front-end load problem is created because of the need for funds now to start implementation of these solutions. Some government action, such as discussed later, will be necessary to assure the availability of such funds, and provide a financing scheme whereby these costs may ultimately be borne by those who directly benefit from air transportation.

ENFORCEMENT RESOURCES

The FAA

The Federal Aviation Act provides a number of enforcement mechanisms for compelling compliance with FAA certificate standards and flight rules. First, all Title VI certificates, including aircraft type certificates, individual aircraft airworthiness certificates, airman certificates, air carrier certificates and airport certificates, are subject to amendment, modification, suspension or revocation for noncompliance with FAA regulations and conditions applicable thereto. Section 611, of course, empowers the FAA to adopt noise standards in regulations, and to apply such regulations to any Title VI certificate. Thus, the FAA could, if it so desired, condition any or all of the certificates mentioned upon compliance with FAR's relating to noise. For example, if an airplane repeatedly violates operational noise standards, its airworthiness certificate could be suspended for a set period or until it complied. If a pilot violates an FAR without showing safety or emergency so required, the airman certificate could be suspended or revoked. An airport which fails to meet FAA standards for airport design and equipment (or noise abatement, if such standards were adopted) would be subject to partial or total decertification, thus barring certificated carriers from using the airport. The same airport certification process could, of course, be extended to cover all airports serving jet aircraft, not only those serving certificated air carriers.

The FAA certificate powers are potentially valuable tools for the enforcement of noise standards. The option of suspending a single aircraft's airworthiness certificate or a pilot certificate for a short time—even a day—because of failure to comply is a realistic tool. Such suspension penalties are strong enough to be heeded, and yet not so severe in their impact upon the whole transportation system (as opposed to suspension of an airport or type certificate) as to effectively preclude their use and make them meaningless. Unfortunately, the FAA has never used these enforcement powers in furtherance of its noise control mandate, and only a limited number of type certificates are even covered by noise standards.

A second enforcement tool available to the FAA is the civil penalty provision of Section 1016, which allows FAA imposition of up to a \$1000 civil penalty for violation of Federal aviation standards and rules. Here again, because there are no mandatory Federal noise standards, either with respect to aircraft emissions in actual day-to-day operation or with respect to flight path designations and approach/departure procedures, these civil penalty provisions are presently inapplicable in the noise control area.

The Airport Operator

Except where airport operators are also general power municipalities or State governments, the airport proprietor per se has no authority to invoke the police powers of the State to prosecute violations, either criminally or civilly, of airport noise rules. Few, if any, airport operators, acting alone, have been delegated the power to impose fines, such as was given to the FAA, nor can most proprietors issue administrative orders or sue for injunctions to stop violations.

Thus, most proprietors have been forced to rely on lease agreements. Under airport leases, enforcement tools as against the tenants are fairly limited. Either the airport can impose charges, if provided in the lease, or it can cancel the lease for breach of contract. The latter option is so drastic that it is doubtful whether airport operators would impose it. The former possibility exists only where the airport has the leverage to obtain such a clause in contract negotiations.

State and Local Governments

The California airport noise regulation, and several proposed laws of other States, provide that violation of an airport noise standard, adopted by the airport proprietor pursuant to a State required noise abatement plan, is unlawful and subject to certain civil fines and criminal penalties. In a sense, such provisions are attempts to add the State's police powers vis-a-vis enforcement mechanisms to the airport's proprietary power with regard to adoption of noise standards for aircraft using the airport. Since the Burbank decision, it is doubtful whether a particular State government can adopt penalties for noncompliance with proprietor-adopted rules.

Resources to Monitor Compliance and Prosecute Violations

The question of who has adequate enforcement resources involves two issues: what enforcement tools, in terms of penalties, are available (discussed above) and who has resources to monitor compliance and prosecute violations.

Some types of regulatory monitoring can be adequately effected by portions of the regulated industry. For example, type certification noise standard compliance can be easily satisfied by manufacturer or airline conducted tests, the results of which are submitted and certified to the FAA. Or the FAA can conduct its own tests using Federal (e.g. NASA or DOT) test facilities. The former alternative is currently used by FAA for monitoring compliance with existing safety and noise standards.

On the other hand, operational noise standards and flight procedure rules require a much more extensive, airport-by-airport, monitoring system. It is relatively clear that should either the Federal or State governments establish noise control programs which include such strategies as single event noise standards, curfews, and approach procedures, monitoring must be done on the airport level. It is also axiomatic that should the Federal and State, as well as airport authorities, establish noise limits requiring monitoring of actual operations, duplicate monitoring systems would be wasteful and unnecessary. Thus, the question arises, who should be assigned the task of monitoring compliance with such standards and prosecuting violations.

Some monitoring functions may also be accomplished through radar vectoring if the aircraft is certificated to meet the noise standard and approach and takeoff routes and procedures have been adopted to qualify for the airport noise certification. Thus, if a given aircraft is certificated to meet a specified noise standard using a particular procedure, the observance of the procedure and use of the prescribed noise abatement route may be observed, i.e. monitored, with radar, and thus the desired result achieved without blackbox noise monitoring. Such radar facilities now exist at all airports used by certificated air carriers.

At the present time, the California airport noise program requires airport operators to monitor compliance with regulations adopted pursuant to the airport implementation plan. Similar airport monitoring is being conducted by the Port Authority of New York and New Jersey at its airports. However, airport operators do not have prosecution power to take action once noncompliance is discovered. If an FAA noise standard, for example, is violated, currently only the FAA can prosecute the case. If a State law is violated, only a District Attorney, Attorney General, or other authorized official can bring action. This dichotomy is not especially logical, and the history of enforcement in this field would appear to indicate it is not particularly effective.

ADMINISTRABILITY AND ADMINISTRATIVE COSTS

The present system of administering noise regulatory authority on the Federal, State, and local level would appear to be excessively expensive in view of the benefits derived therefrom. This, however, is less related to the administrative structure than to the failure of responsible agencies to use their current authority.

The present legal scheme, as implemented, has had ironic results: Federal preemption where there is no Federal regulation and protection of public welfare; and abrogation of airport operators' constitutional duties to control noise by Federal grant agreements while the Federal government avoids legal liability by pointing to such airport powers. The effect of such a scheme has been to shift the airport noise issue from questions of regulation and solution, to compensation litigation—the most administratively expensive system which could be devised.

While the present administrative structure for regulating and abating noise could be operated at relatively low costs, the current compensation scheme incurs massive administrative costs compared to the results achieved. Legal fees and court costs are excessive compared to either compensation awards (which are relatively small) or the solution thereby achieved (none). Courts are simply not equipped to design a comprehensive noise control program, and even questions of what test should be used

to determine compensability or whether funds are best spent on relocation of land uses, soundproofing or other relief are expensive to litigate and difficult to decide in terms of traditional legal doctrines. Yet in the absence of an adequate, comprehensive aircraft/airport noise control and abatement program, the compensation system will continue to dominate the picture and waste monies better devoted to solution of the problem.

PLANNING GUIDELINES AND INCENTIVES

The Federal regulatory scheme, so far as it has been implemented, has been but a restatement of an historical state-of-the-art. With the exception of the 80 EPNdB noise floor, nothing has been proposed, much less adopted, which would set forth planning guidelines for noise abatement which can or should be achieved, for example in five, ten, or fifteen years within the to-be-expected state-of-the-art.

Unfortunately, the present approach to regulatory action has led to a circular process of inadequate action. The airline industry is waiting for regulatory mandates before implementing existing abatement technology and demanding more expeditious research activities to develop new technology. Regulatory agencies are awaiting the development of new technology before adopting noise standards. The manufacturing industry, aircraft engineers, and research teams, however, need regulatory goals and incentives to guide the development of new technology.

And, as noted before, without goals and guidelines commonly agreed upon, other responsible parties cannot plan their participation in solution of the problems. Airport operators cannot plan development and make operational decisions; State and local planners are unable to plan and zone noise impacted land; Federal, State, and local development officials are unable properly to plan and locate new housing, hospitals and other facilities.

The present legal/institutional scheme is even weaker in terms of its application of nonregulatory incentives to expeditious development and implementation of noise abatement technology. The low amount of compensation awarded thus far and the

lump-sum nature of such awards provides little incentive to spur rapid noise abatement. The threat of future litigation, though large in potential impact if realized, is lessened by the remoteness of full realization.

One of the very few and perhaps only incentive approaches tried to date is the dollars-for-decibels landing fee scheme imposed by Los Angeles International Airport. However, to have any real impact, such a scheme must be imposed at all or a substantial number of airports, and must provide significant landing fee differentials between relatively noisy and relatively quiet aircraft. However, such a common scheme does not presently exist.

NATIONAL PROGRAM/LOCAL CONDITIONS

Not only has the present legal/institutional scheme failed to identify national goals for a coordinated Federal, State and local noise abatement program, but the current scheme substantially hinders local flexibility in identifying special or unique local conditions and adopting additional regulations to meet those conditions. The current "Constitutional" method of allocating responsibility for noise protection and regulation on the basis of preemption, discrimination, and similar doctrines is a poor substitute for formulation of a method for cooperative action by Federal, State, and local governments and airport proprietors to meet common goals of noise abatement and solve the aircraft/airport noise problem.

INTERNATIONAL CONSTRAINTS

As noted previously, the international arenas for formulation of solutions to the aircraft noise problem consist of ICAO and bilateral air transport agreements between the United States and numerous foreign countries. To date ICAO has only accomplished adoption in 1969 of Annex 16 to the Chicago Convention which substantially mirrors the previously promulgated Part 36 of the Federal Aviation Regulations and sets forth international Standards and Recommended Practices for aircraft noise certification. Like Part 36, ICAO standards cover only new types of subsonic jet aircraft, and affect less than five percent of the existing fleet.

Although the ICAO Committee on Aircraft Noise is presently considering a noise reduction retrofit standard for existing aircraft, progress on such a rule cannot be viewed with optimism. Significant hostility was expressed in recent ICAO meetings to international retrofit standards as proposed by the United States. Several foreign governments representing flag carriers which use American airports expressed the position that they are not responsible for solving our noise problem.

Nothing in the Chicago Convention or bilateral air transport agreements precludes airport proprietors from acting to protect their proprietary rights on the basis of noise standards. On the contrary, such agreements bind foreign carriers to comply with the rules and standards applicable to the airports which they use. A caveat should be noted, however, that unilateral imposition of noise standards, and, more importantly, refusal to adopt international standards once they are agreed upon, could result in foreign retaliation. If the previous pattern of ICAO standard adoption continues, however, an international rule substantially similar to U.S. rules can be expected, shortly after U.S. adoption. International conflicts could be avoided, in such case, by United States acceptance of foreign aircraft which comply with the substantially equivalent ICAO standards.

SECTION 5

POTENTIAL OPTIONS FOR MODIFYING THE EXISTING LEGAL/ INSTITUTIONAL SYSTEM: ALTERNATIVES

Having discussed the problems encountered in the present legal/institutional framework for solving the aircraft/airport noise problem, this section analyzes the major alternatives both for actions pursuant to the current institutional arrangements and authority, and for modification of the legal/institutional arrangements. Each of the problems identified in Section 4 will be addressed and alternatives for its solution discussed. Some of these alternatives can be accomplished under existing legal authority while others would require new legislation on either the Federal, State or local level.

The advantages and disadvantages of each alternative, to the extent they can be identified, will be evaluated. Finally, in the next section, the Task Group Recommendations, chosen from among these alternatives, will be presented.

HOW TO ASSURE EXCHANGE OF AGENCY EXPERTISE, INFORMATION, AND VIEWPOINTS

It was noted above that a substantial number of Federal agencies—as well as State and local governments—have expertise, information, and important viewpoints which should be considered in solving the airport noise problem. There are a number of ways such expertise can be exchanged, and adequate balancing of information and opinion promoted.

1. Agencies can exchange reports through a clearinghouse, such as the EPA noise research coordination process under the Noise Control Act.
2. Agencies can be required to review and comment upon proposed regulatory actions, as under the Noise Control Act, NEPA, and the A-85 process.

3. Agencies having special expertise or authority can be required formally to present their findings and determinations to the regulatory body having jurisdiction over the final decision, as for example, EPA is required to propose to the FAA those regulations EPA determines are necessary to protect health and welfare.
4. An interagency body could be formed of concerned agencies to discuss all aspects of the problem and recommend appropriate actions to the responsible regulatory bodies.
5. An interagency body could be formed which would establish a coordinated program and exercise actual rulemaking authority binding on all the concerned agencies.

Both 1 and 2, report exchange and proposed action review, are passive measures. While these options promote interagency input of information, they do not address the need to hammer out a coordinated attack on the noise problem by all of the responsible authorities. Review and comment procedures, in particular, are reactive processes—only engaged when action is proposed. Yet much of the problem is not ill-thought action but inaction—an issue which is not amenable to solution by a review and comment requirement.

Option 3, the formulation of formal input requirements, is an alternative first suggested in Section 7 of the Noise Control Act. Under a formal input procedure, for example, EPA would be required to determine and report to the FAA those levels of noise found adverse to public health and welfare and recommend actions to avoid such adverse effects. Similarly, NASA could be required to determine and inform the FAA whenever it found a particular strategy was technically feasible, safe, and effective, together with its estimate of the cost of implementing the technology. And HUD could be required to report the land use problems incurred by both airport noise and alternative noise abatement strategies.

The advantage of the formal determination and report process is that it is dynamic and not reactive. Information and views which should stimulate new regulatory and abatement programs would be exchanged prior to formulation of regulatory actions, rather than in reaction to proposals. However, more exchange of information and determinations is ineffective unless the regulatory body to which they are addressed has a duty to review and respond to the information. In this respect, for example, the Noise Control Act contains provisions requiring FAA hearings and formal adoption or refutation of EPA proposals, guaranteeing that the information and views exchanged do not languish in files, but are actually acted upon.

Provisions extending formal input and response requirements to the determinations of NASA, HUD and/or HEW would require amendment of § 611 of the Federal Aviation Act, although probably the same process could be established via an executive order requiring the FAA to solicit the views of other agencies and action thereon within a specified time.

Although a formal determination exchange procedure may have salutary effects in promoting regulatory action in the noise area, there is some fear this scheme may result in a process of interagency "ping-pong" and regulatory impasse. There is a distinct need, not just to make appropriate findings, but to reconcile the information thus brought together and formulate a coordinated program for solving the problem. This cannot be done by an exchange of memos, but requires some method of bringing all the concerned agencies together in the policy-making and decision-making process.

A continuing interagency exchange and coordination process could be accomplished through formation of some type of Interagency Aircraft/Airport Noise Abatement Committee (IAANAC). Two types of interagency group are possible. The first, which could be established by executive order, would be formed of representatives from concerned agencies—such as FAA, DOT, NASA, EPA, HUD and HEW—and charged with developing coordinated approaches to the problem and recommending appropriate actions to the member agencies. Under this option, actual regulatory power and final decision authority would remain in the respective agencies. The

second type of group would be composed of similar representatives, but would have the power to make decisions binding upon the member agencies—that is, to exercise real regulatory authority. The latter type of authority could be conferred only by new legislation.

Both types of IAANAC would serve the function of providing a forum to work out a coordinated control and abatement program. The extent to which the first will succeed, however, is dependent on three conditions:

1. That the representatives are appointed from policy making levels in each agency, and are not merely technical advisors.
2. That each agency commit itself, to the maximum extent possible, to implementing the recommendations arrived at by the interagency group.
3. That the interagency committee determinations and recommendations are regularly made part of the public record through publication and promulgation in the Federal Register.

An interagency committee with final policy and regulatory powers would be free of the problem of obtaining voluntary compliance and cooperation by all concerned agencies. On the other hand, shifting of responsibility for land use, aircraft design, airport operations, research, and environmental effects decisions as to noise to one interagency group might raise the problem of coordinating those decisions with similar aircraft, airport, land use and environment programs remaining in the original agencies. The solution must be a mechanism which allows both coordination of the noise abatement program and coordination of the noise program elements with other regulatory, development and environmental programs. Further, the total noise environment is what must be reduced, and not just the contribution made to it by any single type of noise source, and therefore any process which tends to decouple the abatement planning for one source type from the overall exposure limitation goal is undesirable.

An available mechanism which might be considered is that of the Office of the Secretary of Transportation. The OST presently presides over a confederated

Department of Transportation, with most, if not all, of its modal agencies (i. e., FAA, FHWA, etc.) acting independently from direct DOT supervision. Yet many of these modal agencies have an interest in transportation noise abatement generally. Thus the OST, which at least in theory has direct control over the FAA, could be used as a home for an interagency committee with final policy and regulatory authority.

Alternatively, because of the need to coordinate noise abatement with respect to all sources in order to achieve limitation of cumulative noise exposure according to public health and welfare needs, the coordination of aircraft/airport noise abatement could be carried out by a subcommittee, which would be part of an interagency noise abatement committee chaired by EPA as a part of its coordination responsibilities under Section 4(e) of the 1972 Act.

HOW AND WHEN TO CONSIDER EACH OF THE RELEVANT FACTORS:
DEFINITION OF AGENCY ROLES

It has already been stated that a comprehensive noise control program must take into consideration a broad range of the factors listed in the Criteria Section. But how and when should each of those factors be brought into the process of regulation? Who should collect the information and conduct the balancing process?

Clearly, one option is to balance all of the factors on the Federal level, to collect the information on health and social effects of noise, technological solutions, costs, effects of abatement on housing and employment, and land use impacts, and adopt regulations setting national, uniform standards on the basis of an overall assessment of these factors. Under this option, the Federal government would balance the need for housing versus the noise impacts and health effects, the environmental considerations versus the economic costs of abatement, to arrive at one noise standard for the country. Unfortunately, the noise problem around airports is not amenable to national generalization. To be sure, the health effects of noise and assessment of technological and economic feasibility of new aircraft equipment can be made at the Federal level. But assessment of what combination of strategies, be they curfew or flight paths, airport runway realignment or relocation of housing, requires an analysis of

each local situation. In some cases, construction methods may make housing insulation very expensive or impossible; in other areas it may be quite easy. For some localities, the needs and desires for housing located in the noise impacted area may require a different balancing of social factors versus air transport service level needs than in regions where other housing is available. At some airports, a fast climbout may help; at others, a two-stage departure may be better.

Thus, an airport-by-airport analysis must be made to develop the best combination of solutions, including operational changes at the airport. Can or should this analysis be made on the Federal level? Certainly airport solutions must be coordinated with the national program, but much can be said for allowing as much local input and choice as possible in developing possible airport strategies. No Federal agency has the personnel, information, or inclination to study the problem and develop the best solutions for each area. The information and choices must be developed at the local level, and then reviewed at the Federal level and coordinated with the national goals and regulatory actions.

Several options exist to accomplish this process. Basically, they consist of a series of Federal regulations on aircraft design, operations and airport noise exposure; development of airport/community noise abatement implementation plans on the local or regional level; and Federal review and approval of implementation plans plus promulgation of Federal regulations to support the implementation of the approved local choices.

The first set of regulatory actions would deal with the noise levels of new aircraft designs, and modification of existing aircraft. Clearly the establishment of such regulations requires a national design standard based on an assessment of available technology, safety, costs, and effectiveness, and taking into account a national standard for limitation of noise exposure consistent with public health and welfare needs with respect to noise. These standards are closely related to other aircraft design requirements, such as are now contained in FAA airworthiness and aircraft type certificates. There seems general agreement that these standards should remain

part of the FAA regulatory system, with increased input by such other concerned agencies, as NASA, EPA, and HUD.

The second area of regulatory actions involves operational standards and procedures used at each airport to lower the noise impact of aircraft operations. Some of these regulations, such as flight path, approach and departure procedures, are ultimately within the purview of the FAA acting in its traffic control role. Others, for example, partial or total curfews or exclusion of certain aircraft because of excessive noise emissions, fall within the airport operator's proprietary powers, although they may, in some cases, have broader impact on air transportation. The combination of the aircraft design and airport regulatory actions, of course, will determine the scope of the other facet of the problem—how much incompatible land use will have to be converted or dwelling units insulated. The question is how to bring these decisions together for each airport.

One method suggested is to establish a Federal airport noise certification standard pursuant to Federal Aviation Act §§ 606 and 611, and to require development by each airport operation, in consultation with concerned industry and citizen groups, Federal, State, and local governments, of an airport noise abatement implementation plan. The Federal regulation might identify a series of local options—curfews, flight paths, families of approach/departure procedures, land use conversion and dwelling unit insulation, and single-event noise limits on particular runways—from which the proprietor could select the best combination to solve its problem.

The Federal airport certification standard would require the operator to develop a plan eventually to lower noise impacts on sensitive land uses to acceptable levels, or protect such land uses, by relocation and/or insulation, from adverse noise exposures. One of the advantages of the airport certification standard would be to allow consideration, on an airport-by-airport basis, of a number of factors which cannot be adequately assessed at the Federal level. For example, it may appear in some cases that overriding local needs for housing exists, despite the fact that such housing is in noise impacted areas; or that near-term relocation of incompatible land uses

may cause severe dislocation of viable economic and social communities. Where such problems exist, variances as to methods of solutions, timetables of implementation, or even application of standards could be considered. But identification and assessment of such problems must come from the community, and an implementation plan scheme would elicit such input and decision-making.

In turn, coordination of the implementation plans with national programs and needs would be accomplished by Federal review and approval of each plan upon submission by the airport. Each plan would be reviewed:

1. To assure that it would meet the cumulative airport noise exposure limits.
2. To assure that each element of the plan was consistent with national programs and needs.

Some elements of the plan, once approved, would require adoption as FAA rules, for example, establishing locally developed and recommended flight paths, approach/departure procedures, and flight frequency restrictions as part of the national air traffic rules. Unless found inadequate or unacceptable, other elements would be implemented directly by the airport, e.g., curfews, runway reorientation, residential insulation and conversion programs.

One further problem of coordination remains: how to assure that land use control decisions of municipalities neighboring airports are consistent with airport implementation plans and the national aircraft/airport noise program. It appears there are at least six potential methods of achieving such coordination.

The first is to eliminate the present uncertainty as to noise effects and noise exposures around airports. Planners in airport impacted jurisdictions need guidance and information. In particular, they need noise exposure contours which display the current and predicted problem in order to design appropriate land use control mechanisms and geographic patterns. To accomplish this, airports and the Federal agencies should cooperate as much as possible, by providing rather than withholding contour and other noise effect information to local governments.

The second possibility is to include representatives of neighboring municipalities in consultations during the formulation of the airport implementation plan. While this would promote a better exchange of information and understanding, actual coordination would rely on voluntary cooperation by all interested parties. Unfortunately, often other stimuli, such as the need to encourage short term tax base development, may mitigate against local government land use decisions which could assist in solving the noise problem. On the other hand, inclusion of representatives from airport neighboring jurisdictions can surely assist in promoting an understanding of the mutual needs, desires and responsibilities of airports and airport neighbors in solving the problem, and achieving commitments of all parties to implement an openly agreed upon course of action.

A third possibility would be to withhold Federal assistance, in terms of mortgage, grant or loan program, from any land use development, or airport-related surface transportation development which would stimulate nonconforming land uses, within contemplated areas of adverse noise levels or where such development is not in conformity with an implementation plan. One of the problems with the second method is that it essentially makes the airport and Federal government the land use planning and zoning agency in the airport environs.

Another alternative would require as part of the implementation plan certification that adequate local land use controls exist to avoid incompatible use development in impacted areas. Without such assurance, the plan would be inadequate and the airport could not be certified for certificated air carrier use. This may not be a viable choice, however, unless neighboring communities perceive that they will be adversely affected by airport decertification should they refuse to cooperate by adopting adequate land use controls. If neighboring communities conclude—analyzing only their own jurisdiction—that they would be better off without the airport, only an impasse would result—unless, of course, higher authorities such as the State stepped in to solve the dispute and override local land use decisions.

A fourth possibility is to establish special regional airport area land use control commissions, such as now exist in California, to approve development in the vicinity of airports. Such commissions, formed of representatives from all concerned local governments (both those owning the airport facilities and those having jurisdiction over affected land) — would provide a link between local land planning and airport planning processes.

The fifth option is to promote State and/or regional oversight, review, and approval of local planning decisions, particularly in airport areas. Under such a scheme, coordination between airport implementation plans and local land use plans might be achieved by requiring the State or regional planning authority to "sign off" the airport implementation plan and certify adequate land use controls are in effect to bar incompatible use development in noise impacted areas.

Lastly, the airport proprietor, via private market mechanisms could assure compatible land development, through, for example, the purchase of "non-residential-use" easements from property owners. This would be a much more expensive option than the imposition of adequate local, regional or State land use controls under police power authority. Furthermore, there is no assurance the airport could actually or amicably acquire or condemn sufficient restrictions on all the land it might need to control.

Assuming that some type of airport implementation plan scheme should be established, the question remains of which agency should be responsible for designating the airport noise exposure standard and/or for adopting the implementation plan regulation. At the present time these functions are shared. The FAA has the authority to adopt a § 611 noise standard applicable to airport certificates under § 606 of the Federal Aviation Act. At the same time, EPA has the duty to prescribe criteria regarding what levels of noise are adverse to public health and welfare—from all types of noise sources, including aircraft operations.

An airport implementation plan requirement could be set up two ways. The first is for the FAA under its existing powers to adopt such a provision as a part of the Federal airport certification program. This has several advantages. Many of the noise control options which may be selected by the airport require FAA approval, promulgation, and enforcement. For example, path designations and flight procedures for noise control are impossible to separate from other air traffic functions, which are solely within FAA purview. Furthermore, such a rule, if adopted by the FAA, would eliminate the issue of what limits, if any, exist vis-a-vis the airport proprietor's rights to control noise from aircraft which use the airport; as an implementation plan approved by the FAA would become a Federal rule as well and, thus, merge the airport operator's and Federal government authorities. Perhaps most important, an FAA airport noise rule would engage existing enforcement techniques available under the Federal Aviation Act of 1958 for the implementation of airport options, putting to rest the difficult problem of what tools are available to an airport operator, in its proprietary rather than police power role, to enforce airport noise rules.

One problem with FAA designation of an airport noise exposure standard and adoption of the airport implementation scheme is the possibility the FAA noise exposure standards for airports may vary from the noise exposure standards set for other noise sources established under EPA authority. It would be unfair, for example, for the EPA to require highway and railroad noise be limited to 25 NEF in residential communities and for the FAA only to set a 35 NEF standard for airport noise exposure in residential communities. With respect to the method of measuring cumulative noise, and to the limit set to protect public health and welfare, a common scheme must be adopted, and it makes sense that the EPA derived standards be adopted not just as to noise sources which it is charged with controlling directly, but as to aircraft/airport noise exposures as well. Furthermore, the public health and welfare with respect to noise exposure simply cannot be protected unless the same exposure standard is used to express the limitation goal without regard to noise source. If a dual standard is used, then legally the result will be a kind of first- and second-class citizenship and not equal protection under the law. In other words, the FAA and EPA

should adopt the same noise exposure standard in all decision-making relating to noise regulation.

The second alternative is for the Congress to adopt new legislation empowering EPA to establish an airport noise permit program, including promulgation of appropriate community noise exposure limits and regulations requiring development and submission of airport implementation plans of the type discussed above. This has the advantage of assuring that the airport noise program is coordinated with other noise abatement programs under EPA jurisdiction. To be successful, the EPA airport program would, however, still require FAA cooperation regarding such items as traffic rules and approach/departure procedures adoption and enforcement -- which are areas outside of the airport operator's powers to implement. New mechanisms, apart from the Federal Aviation Act, would also have to be established to enforce the EPA rule and to coordinate its impact with the requirements of the FAA airport certification regulations adopted under § 606 of the 1958 Aviation Act. Furthermore, the airport proprietor's powers to use "police-power" type of enforcement mechanisms to secure compliance with airport rules would have to be confirmed or clarified.

INTEREST GROUP INPUT

Throughout the decision-making process, at the Federal, State and local levels, various interest groups have valuable information, experience, expertise and viewpoints to contribute. These groups include not only industry, carriers, pilot and airport operator associations, but also concerned environmental and community groups, city planners and government officials. The process for eliciting the response and input from all these groups in the past has not proven satisfactory from the viewpoint of establishing mutual trust, understanding, and cooperative efforts at developing solutions to the noise problem.

Most of the previously utilized formal processes for interest group input have been reactive, allowing comments on proposed rules to be submitted to the public

docket or providing public presentation and hearings on proposed actions. While hearing and comment procedures may be useful in some cases, and often legally mandated, neither is very helpful in eliciting and refining suggestions for possible combinations of strategies or regulatory actions — where an exchange of ideas and viewpoints is necessary to develop a workable proposal. In this regard, the advisory task force approach may prove much more successful. Through the task force, representatives of various interests can bring expertise and ideas together, identify existing problems and potential answers, analyze the viability of possible strategies, and provide the decision-maker with a more dynamic and constructive method of developing solutions and balancing varying values. This is not a substitute for expeditious decision-making by responsible agencies, but does provide a better basis for their decisions.

The problem is to assure that the task force provides an input for all the viewpoints that should be considered. This is much more a matter of how invitations are extended, than design of the task group mechanism. While it may be impossible to include representatives of every interested group, representatives of every concerned view, be it industry, airline, pilot, airport, State and local government, environmental, or airport neighbor — should be invited to participate, and all deliberations should be on the public record. Comments from persons or groups not directly represented should be elicited in writing and considered by the task force. Such an open process of developing solutions, particularly with respect to the design of airport implementation plans and review of broad Federal policy and program approaches, can be a most valuable administrative tool if properly used.

DESIGN OF A CONTINUING REGULATORY PROCESS

Some of the alternatives discussed above bear directly on the problem of maintaining a continuing regulatory process in the field of aircraft/airport noise abatement.

Specifically, formal input mechanisms such as those established for EPA under the Noise Control Act, and suggested for NASA and HUD, could assist in assuring the review and implementation of new and more effective control strategies as they

are developed. An interagency coordinating panel may further assure a continuing review and update of regulatory actions by providing an active focus for developing better noise abatement programs.

The other part of this problem is establishing meaningful but attainable goals to guide future actions and provide incentives for the development of more effective noise abatement technologies. This, it would seem, could be accomplished via several regulatory and non-regulatory measures.

One method would be to announce approximate source noise goals for target years, perhaps as a preamble to type certificate, retrofit or fleet noise rules — putting airlines and manufacturers on notice as to the levels toward which they should be working. While certainly this is better than no goal at all, the informal goal setting scheme raises the unsettling specter of shifting goals over time — creating the problem of the moving target. Such goals should be reasonably fixed and clearly set forth for all to see, use, and rely on in planning, research and development. In this sense, a more formal regulatory alternative may be preferable.

A more formal alternative would entail the adoption of such goal levels in the regulations, e.g., for 1980, 1985, 1990 and beyond, subject to some revision later if and when it appears the scheduled attainment is technologically or economically unfeasible. This is analogous to the process adopted in the 1970 Clean Air Act Amendments with respect to auto emission standards.

Another possibility is to use a stepped implementation in an airport certification rule; that is, to require successive attainment of stricter cumulative noise exposure standards over an appropriate period (e.g., NEF 45 by 1978; NEF 40 by 1982; NEF 30 by 1990; etc.) until the program results in no incompatible land uses within the area subject to adverse noise levels. Such a goal is better to guide the overall program development than merely a source emission standard goal alone, as it provides for a method of coordinating the effects of new source technology, operational procedure modification, and land use options. This alone may not be a total answer, however. It does not really establish a target for aircraft engineers and airlines in

developing new technology. To these purposes, some assessment from the noise exposure goal should be made of that portion of the solution which must be accomplished by source reduction, and that analysis translated into targets or regulatory goals for aircraft source abatement. In other words, two sets of goals and implementation dates should be established in an optimum scheme: one for cumulative noise exposure around airports, and the second for aircraft design and source abatement.

It is essential that the "long range goal" for limiting airport cumulative noise exposure be stated at the outset and utilized thenceforth as the performance standard by which all new projects are evaluated, both new airport and airport expansion projects and new land use developments. Only in this way can new noise impact problems be prevented from arising in the future.

FINANCIAL RESOURCES — ALTERNATIVES FOR FINANCING IMPLEMENTATION OF NOISE ABATEMENT STRATEGIES

Development and implementation of noise control and abatement strategies will require application of substantial financial resources. While a few strategies, such as new operating procedures, would not incur large capital investment or significantly increased operating cost, a comprehensive noise abatement program--including expedited retirement of first-generation aircraft, research and development of engine noise control technology, retrofit, insulation of residential structures, and relocation of incompatible land use--will necessitate a major commitment of financial resources and the development of financing methods. Without adequate financing mechanisms, expeditious implementation of a comprehensive program to alleviate even the most severe airport noise impact problems (designated as adverse to public health) will be impossible.

AREAS OF EXPENDITURE AND FINANCE ALTERNATIVES

Development and implementation of a comprehensive noise control program will entail commitment of financial resources in a number of expenditure areas, in particular:

- Research and development of noise abatement technology.

- Production start-up for implementation of noise abatement technology.
- Retrofit of existing aircraft with nacelle treatments, refan engines or new "quiet" engines.
- Accelerated retirement of existing aircraft and replacement with new equipment.
- Increased operating costs (if any) resulting from implementation of noise abatement strategies.
- Insulation of residences and other selected types of noise-impacted structures.
- Relocation of incompatible land uses.

For each of these expenditures, the questions arise as to who should ultimately pay and how should it be financed.

The first question is answered generally in the Criteria Section: "The cost of noise abatement and noise damages should be ultimately internalized by the air transportation industry and passed on to the maximum extent possible to the air transportation user." (Section 3.) Among the beneficiaries of air transportation who must so internalize noise related costs are both aviation passengers and shippers, and those who indirectly enjoy the benefits of aviation — consumers of goods shipped by air, and airport attracted businesses. The scheme or schemes adopted to finance noise abatement must be so designed as to attempt an equitable distribution of the cost of noise abatement in accordance with the relative contributions of each of these beneficiary groups to the noise problem and with the benefits each group receives from aviation.

Of course to accomplish such an allocation, each beneficiary need not be charged directly for noise abatement costs. Where, for example, part of the noise costs are financed by a tax on air freight, consumers of goods shipped by air will pay indirectly through higher prices. Other beneficiaries, such as airport area businesses, may not be subject to such passthroughs, and allocation of noise costs may require some other, more general, revenue collecting system.

Recognizing the issue of ultimate allocation, the primary question here is how noise abatement expenditures should be financed. A variety of mechanisms have

been suggested to fund the costs of noise control and abatement. Among them, the most important are:

- A passenger head tax and freight tax, of a set amount (e.g. per person and per pound) imposed on all commercial air transport, either "at the gate," or as a surcharge on tickets and freight invoices.
- Head & freight tax imposed only at noise-impacted airports.
- Expanded use of the Airport and Airway Development Act Trust Fund, for use in grants to airports and airlines for noise abatement.
- A surcharge on the aircraft fuel tax.
- A "dollars for decibels" landing fee or landing fee impost.
- A general fare increase, either by a set amount (e.g. \$1 a ticket) or on a percentage basis (e.g. 1 percent a ticket).
- Grants to aircraft manufacturers, airlines and airports financed by general tax revenues.
- Increased airport concession (e.g. parking & restaurant) rentals or fees.
- Government-guaranteed loans to airlines and airports.

Different financing methods may be chosen to fund various noise abatement costs, and thus a matrix of possible expenditure/financing alternatives must be analyzed, and appropriate choices made therefrom. Such an expenditure/financial resource matrix is presented in Table 5-1.

To choose the best financing scheme, or combination of schemes, several questions should be addressed:

- Who has authority to adopt the scheme?
- How could the scheme be designed and administered?
- What would be the incidence of the scheme — that is, if the scheme were adopted, who would ultimately pay for the cost of the noise abatement expenditures so financed?

TABLE 5-1
EXPENDITURE ITEMS

	R&D	Production Start-up	Retrofit	Retirement New Equip.	Operating Costs	Housing Insulation	Incompatible Land Use Relocation
1. General Head & Freight Tax							
2. Impacted Airport Head & Freight Tax							
3. Airport Development Trust Fund							
4. Fuel Tax Surcharge							
5. \$-for-dB Landing Fee or impost							
6. Fare Increase -Set \$ amount -% Increase							
7. General Tax Revenues							
8. Airport concession rentals & fees							
9. Government Guaranteed Loans							

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- How efficient would the scheme be in expeditiously developing sufficient funds to finance the noise abatement expenditures for which its use is intended?
- How appropriate is the scheme for financing the various expenditures listed above?

Unfortunately, this task group lacks the full knowledge and expertise necessary to definitively answer all of these issues. We are able to address the first two questions. As to the remaining issues, only a set of concerns and factors can be suggested here, for further exploration and analysis by those better versed in the economic details of the design and effect of such revenue measures.

ADOPTION, DESIGN AND ADMINISTRATION

National Head and Freight Tax or Surcharge

This alternative would contemplate set charges per passenger and per pound of freight to be levied on all air travel and shipping in the United States (e.g. a \$1 head tax and 1 percent freight tax). The revenue from such charges could be collected, either "at the gate" - through airline or airport personnel - or more likely as a surcharge on the passenger ticket and cargo way bill.

Once collected, such revenue would be turned over to a national fund, from which grants could be made to airlines, manufacturers, and/or airport operators for the purposes of financing research, production and installation of abatement equipment for retrofitting, early retirement of noisy aircraft, soundproofing of homes and certain other buildings, or relocation of families in the most severe noise impact zones.

Implementation of this alternative would require Federal legislation—establishing the fund, prescribing its uses, designating the agency responsible for approving grant applications, setting the amount of the charge and its method of collection and prescribing the time period the charges are to remain in effect. In addition, depending on how soon what amount of money must be raised by this scheme to finance the expenditures contemplated, Congress may be required to appropriate an initial sum

to the Abatement Grant Fund, to be recovered and repayed to the general treasury out of future receipts from the head and freight tax.

Noise-Impacted-Airport Head & Freight Tax

This alternative would entail imposition of a set head and freight tax only at noise impacted airports, and really involves two possibilities:

1. Imposition by the Federal government at all airports found to have a noise problem, in accordance with a standard test thereof.
2. Imposition by the airport proprietor directly to finance airport abatement activities.

Federal imposition of such a tax would be more awkward than airport adoption of this scheme. To do so, the Congress would have to authorize the tax, establish a test of "noise problem," and delegate to an agency the task of comparing each airport situation to the tax test. Such a plan would probably involve enormous energies to achieve rather arbitrary decisions of who should be taxed and who should be exempt.

If an airport head & freight tax were imposed by the airport operator on all departing passengers and cargo, the tax could be collected "at the gate," in the fashion many foreign countries and several U.S. terminals collect airport charges. This would require airline collection of cash at the departure point, and accounting and payment of such funds to the airport, on a daily, weekly, or monthly basis. Such funds could be used two ways, to directly finance noise abatement at the airport - e.g. monitoring systems, purchase of new guidance equipment, construction of better aligned runways, insulation of nearby residences, and/or relocation of incompatible land uses. In the alternative, such funds could be applied to pay back Federal or private market loans given to the airport to finance previous noise abatement actions.

This method of finance, however, would be difficult to use in financing retrofit, R&D, and operating costs incurred by airlines and aircraft manufacturers - as such

would require a transfer of monies from the airports to the airlines, as transfer which would necessitate a pooling of such airport collected funds from all affected airports, and a system for distribution to carriers and manufacturers out of the central fund. This, of course, would work equitably only if all noise impacted airports imposed the same head & freight tax - which raises the same problems as discussed previously regarding Federal imposition of a head & freight tax only at noise impacted terminals.

Use of Airport & Airway Development Trust Funds

This alternative would require Congressional authorization to expand use of the AADA trust funds, derived from the aircraft fuel tax and Federal aviation freight and passenger taxes, to include grants to airports for the relocation of incompatible land uses, insulation of structures, and perhaps even grants to airlines and manufacturers for retrofitting, R&D and related costs. The airport noise abatement grants could be administered in precisely the same manner as other airport development grant applications are handled under the AADA, using existing agencies and mechanisms for the collection of the revenue (from fuel taxes and charges on freight and passenger tickets) and the distribution of the funds. If airline and manufacturer related items were added to the list of eligible items, revised but similar distribution mechanisms could be used.

Aircraft Fuel Tax Surcharge

Another alternative is to form a separate fund derived from a surcharge on the current 3¢/gallon Federal aviation fuel tax. Such revenue would be collected with the Federal fuel tax by the fuel distributors, segregated when it reaches the Federal treasury, and distributed by a grant scheme similar to that hypothesized for the national head and freight tax fund.

Dollars-for-Decibels Landing Fee or Landing Fee Impost

A noise-related landing charge could be set up in two ways. Under the first, the aircraft would be charged in accordance with the noise produced on each approach or takeoff as monitored by a "black box" at the airport. This monitoring scheme would provide the most sophisticated method of internalizing noise costs to noise production, but may prove overly complicated and expensive in comparison to the refinement it makes possible.

A second possibility would be to set up categories of landing fees based on the type of aircraft flown and the type certificate noise levels established, for example, under FAR 36 standard measurements. For example, one fee would be set for 727-200 aircraft based on the 727-200's type certificate noise levels, and another charge set for 707 aircraft. This could further be refined by having a scale of fees for each aircraft type varying by the plane's takeoff or arrival weight, e.g. one fee for a fully loaded 707, and another for a half loaded 707, related to the noise each makes at those weights.

This second type of system requires some calculation to achieve an aircraft-by-aircraft fee schedule, but once that schedule is set, the actual calculation of a fee for a particular operation can be read off the chart with relative ease. Los Angeles International Airport has recently instituted such a scheme, and indicated that this system is administerable.

A major problem of this system is the problem of imposing a noise related fee where landing fees are set by current long term leases between airports and airlines. In some of these cases, renegotiation of landing fees is called for in the lease. However, a similar result could be achieved by Federal law -- establishing an airport loan program to finance airport abatement programs and authorizing any airport borrowing such federal funds to impose a "dollars-for-decibels" landing tax to repay all or part of the Federal loan.

One disadvantage of the dollars-for-decibels landing fee or impost scheme, however, is its uncertainty over time. As noisy aircraft are retired and retrofitted, the revenue from the fees will decrease unless they are adjusted upwards every year. On the other hand, upward adjustment of the charge per decibel, in order to maintain revenue levels would defeat one of the major advantages of the fee system, economically to encourage noise control by rewarding abatement with lower landing charges.

General Fare Increase

A general fare increase for noise abatement purposes, covering both passenger and freight rates, could be granted by the CAB under current legislative authority. Such an increase could take the form of a set amount (e.g. \$1.00) added to present ticket prices, or a percentage (e.g. 1 percent) rate increase. The latter type of increase was recently granted by the CAB to fund airport security programs mandated by Federal law.

Using the fare increase alternative, revenues would flow directly to the airlines to finance, for example, purchase of retrofit equipment or retirement of noisy aircraft. Similarly, part of the fare increase could be distributed to airports to assist in land use conversion and insulation projects through increased airport rental fees, landing fees, or other airport charges imposed on the airlines. One possible difficulty with this scheme is that some airlines, which have a quieter fleet already, may end up with surplus revenue, while other carriers having a greater problem may not have enough money expeditiously to implement abatement programs. On the one hand, this would reward the airlines which had previously made wise decisions (consciously or otherwise) from a noise viewpoint. Yet the fare increase may have to be higher than the equivalent head tax charge to assure airlines having a major problem will have sufficient sums in their respective treasuries to carry out the legally mandated abatement programs. If, after further analysis, it is found this might be a major problem, one alternative would be for such airlines to borrow funds for the deficits in the private market or from Federally established loan accounts, to be repaid out of future receipts from the fare increase.

In order for this alternative to be implemented, however, the CAB must agree to the fare increase. Unfortunately, prior to passage of the Noise Control Act of 1972, the CAB expressed its firm opposition to any such increase to fund retrofitting expenditures, based on the CAB evaluation of the wisdom of retrofitting. Perhaps, in view of the data evaluated pursuant to Congress's mandate in this study, the CAB will revise its position. In lieu thereof, the Congress would have to legislatively override the CAB decision and mandate a fare increase for noise abatement purposes.

Grants to Manufacturers, Airlines and Airports out of General Funds

One alternative to the special revenue measures listed above would be for the Federal Government to appropriate general tax funds for a grant program, to finance R&D, retrofitting, aircraft retirement, increased operating costs (if any), and land use protection projects. To a limited extent, such general funds are used now in the noise abatement field, to underwrite basic and applied research in noise abatement technology.

However, with the possible exception of advanced research programs, use of general tax revenues for the purposes of financing noise pollution control - especially to pay for the installation of noise control equipment and resulting operating cost increases, if any - is contrary to one of the Administration's fundamental tenets in the environmental area: that the user, and not the general taxpayer, should pay for pollution control. Under this policy, reflected in Criterion 5, B in Section 3 adopted by the Task Group, costs of pollution control, like the costs of fuel, personnel, and movies, should be borne by the air transportation consumer and beneficiary. Only with such internalization of pollution costs, will rational decisions as to the commitment of transport and other economic resources be made by the private enterprise system.

Airport Concession Rentals and User Fees

Another suggested revenue source would be increased rental charges for airline terminal facilities, concession rentals and royalties, and airport charges for such services as parking and ground transit. Such charges or rentals could be collected by the airport and used in the manners discussed above with regard to other airport operator collected charges, e.g. for land use changes and other airport operator implemented abatement projects.

One problem with this approach may be the inability of airports in the near term to modify lease and concession arrangements to raise rentals or impose charges needed to finance noise abatement programs. Most terminal leases with airlines are long-term, while concession royalty agreements may last for shorter, though still substantial, terms. Only directly imposed user fees, such as automobile parking rates (parking, however, is often run as a leased concession) are amenable to rapid change; although there is some question as to how viable such fees are in generating the necessary revenue for noise programs.

Government Insured Loans to Manufacturers, Airlines and Airports

Unlike the other financing alternatives, this option does not provide for a source of additional revenue with which airlines, manufacturers and airports can fund noise abatement activities. Rather, government guaranteed loans serve the sole purpose of assuring funds will be available in the private market for noise reduction investments which must be made in the near future and amortized over the longer term. The financing of repayments of such loans would be the responsibility of airlines (through present or increased tariffs), manufacturers (through receipts from the eventual sale of noise abatement equipment) and airport operators (through increased landing fees, rentals, etc.).

Government insured loan provisions might be coupled with a fare increase or landing fee revenue scheme to assure adequate funds are available for expeditious implementation of available noise reduction technologies and strategies. However,

such loan provisions, unlike the fare increase or landing fee decisions, must be adopted by new Federal legislation and coordinated with the non-legislative decisions of the CAB and airport operators.

Government insured loans may be a particularly useful solution in the area of production start-up costs incurred by manufacturers developing retrofit equipment. In this expense area, like other aviation manufacturing fields, recovery of initial investment depends on the number of units sold, which cannot be guaranteed in advance. As a result, and in view of the present state of the economy, private capital may not be available in the quantities needed to assure fast tool-up for abatement equipment production without some government underwriting.

Guaranteed loans may also be a useful tool in stimulating applied research and development of noise abatement technology. At the present time, the government's only fiscal stimulus in this area is grant-contract research through various agency programs. Such grant-contract subsidies are beneficial in assisting basic research, and certainly must continue. However, the progress of applied R&D may be better served by encouraging private enterprise investment — by keeping the profit motive alive. Although advanced R&D in the noise area is somewhat speculative, if usable technology results are achieved, initial research investment can be recovered, and, thus, total government grant subsidization of research would be inadvisable.

However, if private investment in noise research is to continue at substantial levels as more sophisticated applied research is undertaken, some government backing for loans to manufacturers may be required. This course may, in the end, be found less expensive and more efficient than merely increasing grant-contract programs, and should be more thoroughly considered in the design of Federal aviation research.

OTHER CONCERNS

The financial scheme or schemes adopted must be capable of addressing two sets of solutions. The first is the retrofit/operational limit/land use protection program

necessary to solve the most urgent public health and welfare (noise) problem, as determined by Task Group 3. A target date of 1978 or earlier for this solution will require substantial investments in the near future - during the early years of whatever revenue-producing system is adopted. The second, and less immediate problem, is posed by the long term abatement goals - of gradually reducing noise impacts on noise sensitive land uses to levels below those found adverse to public health and welfare, as determined by Task Group 3. In the latter regard, the financial schemes adopted must be capable of producing a continued flow of revenue to fund ongoing land use protection programs at airports, and phased implementation of more advanced retrofit or fleet retirement programs by airlines.

An indication of the approximate magnitudes of funding, for which financing may be required, is of interest. Achieving progressively lower levels of cumulative noise exposure near airports, of course, involves varying funding levels. In approximate terms, achievement of the urgent protection limit ($L_{dn} 80$) recommended by Task Group 3 could be obtained by 1978 for \$0.5 to \$1.0 billion, almost entirely by source noise abatement in selected portions of the existing air carrier and business jet fleets. In order to eventually (circa 1980) achieve the long range goal ($L_{dn} 60$) recommended by Task Group 3, an additional \$1 to \$2 billion for source abatement and \$7 to \$8 billion for land use programs (control, conversion and/or insulation) would be required. Further information on the potential funding amounts involved are given in the report of Task Group 4.

Another element to be considered in analyzing these alternatives is the propriety of establishing grant programs to fund airline investment in noise equipment and early retirement of noisy aircraft. If these abatement approaches are funded by fare increases, flowing directly to the airlines, carriers will have an economic interest in making the most economically efficient decisions on what combination of retrofit/retirement to adopt in achieving the desired noise reduction. Under the fare increase approach, if an airline can accomplish noise abatement at a lower cost, it could pocket the difference in increased profits. Under a grant program, such as would be required under a head and freight tax scheme, however, airlines would have to apply to a Federal agency for funds, setting out the retrofit/retirement combination to be funded. Because funds would be granted only for the cost of whatever strategy

combination was proposed, airlines could not profit from making least-cost decisions, and the government granting agency would be required to review each application on the issue of economic efficiency and noise exposure reduction effectiveness as well as eligibility. The price of limiting revenues for noise abatement to actual expenditures is the necessity of bureaucratic oversight of economic decisions, a process that has not proved successful in the past.

A similar question may arise under a grant program to airports to support land use conversion programs. Here, the economic efficiency problem may arise where grant funds are used to purchase residences and other impacted incompatible uses near airports. Often such land, once cleared and consolidated into larger parcels, is valuable for noise compatible commercial and industrial development. Such re-development should be economically encouraged. In this regard, a loan program or limited grant program to airports would provide greater stimulus for more efficient economic land use conversion decisions by airport operators and concerned local governments.

Lastly, in evaluating these funding techniques, a close analysis must be made of the incidence of the schemes. Although there is general agreement that the costs of noise abatement should be borne by the users and beneficiaries of air transportation, the policy question remains as to how closely the charge to each user or beneficiary can or should be related to the noise to which he or she contributes. Some financing schemes, such as the dollars-for-decibels landing fee, have close relation to the noise levels created. Other plans, such as the percentage increase in air fares and fuel taxes, which would charge greater amounts for longer trips, would be related to such factors as aircraft weight and type, which are partial determinants of noise levels among the present fleets, whose cumulative noise is dominated by the older, noisier aircraft. Head and freight taxes, on the other hand, correlate to the frequency of landing and takeoff operations, which is another factor in determining cumulative noise exposures. Some of the above options, for example, terminal rentals and concession royalties, have no correlation, direct or indirect, to noise levels produced by the revenue producer.

Further, the total scheme adopted should not (inequitably) omit charges to any major sector of noise producers. For example, a scheme based purely on passenger and freight charges would omit the business jet aircraft. Several of these aircraft have noise characteristics equivalent to the 2- and 3-engine airline transport aircraft. Hence, in terms of transport environmental efficiency (e.g., passenger mile per unit noise exposure impact or any other measure of efficiency related to environmental impact or resource consumption) the business jets show very low scores. Further, their numbers are increasing at a significantly greater rate than the number of aircraft in the commercial fleet (see Figure 5-29 in EPA NTID 73.5), and may exceed them in the late 1970's and become twice as numerous in the mid-1980's. In that event, the noise of business jet aircraft may dominate the noise exposure at many airports, even some air-carrier airports, as the air carrier fleet is gradually quieted.

Comparing the options, it should be recognized that noise-correlated charges may be more appropriate for some abatement expenditures — such as retrofitting and land use protection — and inappropriate for other areas. But in deciding such appropriateness, a central question must be answered which we are unable to adequately address here: Does the cost of administering noise-correlated schemes of various sophistication and accuracy outweigh the advantages of such charges in encouraging wiser uses of aviation resources?

THE COMPENSATION PROBLEM—LIABILITY AND AMELIORATION OF NOISE IMPACT

No aspect of the airport noise problem has received more attention, nor created more consternation, than the problem of compensation. Who should be liable for personal and property damages caused by noise; to what extent should those damages be compensated; what measure of damages or relief should be adopted? Cumulative noise standards and goals have been proposed and withdrawn — not because they were poor measures of the problem and inadequate guidelines for developing a solution — but because of concern the standards and goals would be used in several airport noise compensation cases. More debate has been expended over the question of

whether the Federal government, airlines or airports should be liable for damages, than how each would contribute to a solution of the basic problem. This is not to say compensation questions have necessarily determined basic policy and approaches - and the actions of responsible regulatory agencies. But liability issues have, it would seem, often resulted in illogical definitions of that responsibility and induced strains among institutions which must cooperate if the aircraft/airport noise problem is to be adequately addressed.

One option is to leave the compensation question to the courts, that is, defer to the judicial system until the Supreme Court eventually decides, in light of Burbank, and the Noise Control Act, and 1970 Airport and Airways Development Act, whether Griggs has been reversed and liability shifted from the airport proprietors to the Federal government. This would mean, however, essentially putting the compensation question - and the airport noise problem - aside for several more years, to shift the crises of decision as to how to solve the problem to a future day. For the courts, through the Constitution, cannot solve the problem. They cannot assign roles among institutions, or even guarantee the compensation awarded will be used to help ameliorate the problem. That can only be done by a comprehensive legislative and regulatory program. Furthermore, the present judicial system of awarding compensation gives no one an incentive to abate the problem. Once an airport pays off an award, it gets a noise avigation easement to continue the pollution in perpetuity. Because of some lease arrangements, and the small amounts of actual awards, furthermore, costs of noise damages may not be completely passed on to the airlines - so they, too, have little incentive to abate the noise. The compensation problem should be addressed now in a forthright manner, and solved in a manner consistent with the overall noise abatement plan, so that we can get on with the work at hand.

An alternative often suggested by airport operators, State and local governments, is Federal government assumption of noise damage liability. One of the arguments put forward for this alternative is that, if the Federal government sets a health and welfare standard for noise levels and requires airports or airlines to take steps to

meet those standards, the United States should hold them harmless from any noise damages awarded during the implementation period. The problem is that the regulatory standard may be adopted by courts as useful in defining a cause of action or providing a measure of damages. This argument in essence suggests that the regulatory agency, by reason of defining the noise problem and assigning responsibility for its solution, should become liable for the pollution thus regulated, and the polluters should get off free.

A second argument for Federal liability is the actual allocation of power to solve the problem. Authority over many of the potential solutions lies with the Federal government, not the airport operators. Airport operators cannot directly regulate flight paths, approach and departure procedures, aircraft design or retrofit. The FAA even argues that airports cannot curfew or close entirely without Federal approval. The airport owner's options to avoid liability are notably limited in comparison to the broad powers of the United States. Thus, using the rationale that liability should follow regulatory responsibility and power, the Federal government should bear the Griggs duty of compensation.

The problem with Federal assumption of liability is how and to whom the noise costs will ultimately be allocated. If damage awards are paid out of general revenues, the costs of noise will be shifted to the general taxpayer. Airlines and airports will be free from the fear, although yet unrealized, of massive compensation litigation, and also free of any incentive to solve the problem. On the other hand, Federal agencies would be under greater pressure to adopt adequate regulations to protect the public fisc through expeditious solution of the problem. Yet, in the interim, the compensation scheme still will not be assisting in amelioration of the problem—particularly if persons awarded damages are merely paid off for the inverse condemnation of aviation or noise easements. Liability may be transferred, but the compensation problem has not been addressed.

A third possibility is suggested by the recent United States Supreme Court decision in Askew v. American Waterways Operators, Inc., and might be seriously considered

by the States in the absence of Federal solution of the compensation problem. In the Askew case, Florida had adopted legislation imposing strict liability on owners and operators terminal facilities and ships for damages incurred by the State or private persons resulting from any oil spill. The Court distinguished, for preemption purposes, between the State's power to regulate the activity and the power to impose liability on polluters for the damages they cause. A close reading of the Askew decision indicates that although Burbank may have precluded State police power regulation of aircraft/airport noise, States retain their power to enact legislation imposing absolute liability on airlines and/or airports for damages caused by aircraft noise.

Indeed, a comparison of the noise pollution and oil pollution laws indicates that the Askew result is easier to reach with respect to State laws on aircraft noise damage, for in the noise area, there are no Federal laws governing compensation. Adoption of an absolute liability scheme would surely provide a sharp stimulus to solving the noise problem, and could well be the next legislative step by State and local governments faced with inadequate progress toward abatement of aircraft/airport noise.

None of the aforementioned alternatives, however, provide an adequate answer to the compensation question, for mere assignment of responsibility to pay those impacted by noise does not mean the money thus transferred will be invested toward amelioration of the problem. For that, attention must turn from the issue of who is liable, to how the money is awarded and how it is used.

Real amelioration of the airport noise problem through neighboring land owners can only be accomplished if the money is used to insulate dwelling units (or other noise sensitive structures) or relocate incompatible land uses. The present compensation system—based on comparisons of property value and inverse condemnation of permanent aviation easements - is unable to direct the use of monies awarded. Courts are not in a position to condition relief on reasonable use of the funds paid toward solution of the original complaint. The only alternative that can address this

problem is a legislatively created and administratively directed compensation scheme tied closely with the overall abatement program. Such a scheme might provide, for example, that any person living within the area subject to an NEF of 45 or greater could apply for and receive funds to cover the full value of his or her land and the costs of relocating. In essence, such land would be purchased, could be cleared, and resold for development of compatible land uses - such as industrial or commercial activities. The compensation scheme might further provide persons in the next level of impact (NEF 40 to 45) the option of applying for relocation funds or money to insulate their dwelling units, proper use of the money being assumed through appropriate conditions in the grant agreement. For less severely impacted areas (NEF 25 to 30 to NEF 40), the scheme could allow payment for structural insulation as needed to bring interior noise levels down to levels consistent with health and welfare requirements.

Legislation establishing such an administrative scheme must contain an adequate funding method - alternatives for which are discussed in the next section. However, once the financing method and standards are set in the legislation, it matters little whether the actual awards are made at the Federal or local level. Since the task that is left is one of appraising land values (in the case of relocation) and validating insulation costs, it probably would make most sense to handle applications for and awards of actual funds at the airport level.

Because of the Constitutional nature of present taking law, no administrative scheme for compensation could replace or preempt judicial remedies for noise damages, in the sense that workman's compensation systems have supplanted other legal remedies. But the same effect may be accomplished de facto by a properly designed and operated administrative remedy. An examination of individual compensation awards made by courts to date reveals that amounts substantially larger than those associated with insulation or relocation costs are not available from the courts. In other words, litigants have little to gain by pursuing a judicial remedy if an administrative remedy is available. In addition, judicial remedies are slow

and very expensive. A fast, relatively simple administrative procedure, whose results are predictable, would be an attractive alternative to cumbersome, uncertain compensative litigation. Furthermore, there is nothing to indicate that litigants in noise suits are motivated otherwise than by a desire to solve the problem; a compensation system which offers a viable solution is likely to elicit citizen cooperation rather than resistance.

ENFORCEMENT OF AIRCRAFT/AIRPORT NOISE REGULATIONS

Numerous potential enforcement mechanisms exist on the Federal, State and local levels to assure compliance with aircraft/airport noise regulations. Postulating the adoption of the Federal retrofit and operational rule/airport implementation plan scheme suggested previously, current Federal law provides the following enforcement tools:

- Civil penalties of \$1,000 for each violation of FAA rules (including approved elements of the implementation plan).
- Suspension of Title VI certificates for noncompliance with appropriate planning, maintenance, or operational conditions.
- Initiation and filing of complaints before the FAA by airports, State and local governments and citizens.
- Citizen suits to restrain violations of any § 611 standard.
- Sanctions contained in airport-air carrier lease agreements.

Thus, even under existing law, a noise program which links airport operator planning and Federal regulatory power can now bring substantial enforcement resources to solution of the airport noise problem.

Several alternative or additional enforcement methods have also been suggested. One would be the enactment of Federal legislation empowering States to adopt laws incorporating noise rules and standards identical to those of the Federal aircraft

regulations. This would permit States to monitor and enforce compliance with operational noise limits and other regulations affecting airport noise exposures. This in turn, would enable States to lend their police power enforcement mechanisms to airport operators who wish to take actions to restrain or punish noncompliance with rules adopted in the airport implementation plan. The advantages of this option are:

- It would not limit enforcement, other than injunctive actions, to the capabilities of available FAA staff, but would allow the commitment of additional enforcement resources funded by State and local governments.
- It would permit the development of less cumbersome and drastic enforcement tools - such as an air traffic ticket - with moderate fines for non-serious violations which do not merit high FAA priority.

A potential disadvantage of this option is that State and local enforcement mechanisms might result in differing interpretations of what should be identical and evenly enforced noise standards.

Another alternative would be to allow State and local governments and/or airport operators to prosecute cases before the FAA for violation of the FAA noise rules applicable in their jurisdiction. This would solve the potential problem stated above, to wit, that separate enforcement mechanisms may result in differing interpretations. On the other hand, non-FAA prosecution of violations could result in forcing the FAA to adopt some else's enforcement priorities as to which cases it will hear over its own. This issue can only be resolved if the FAA and only the FAA prosecutes cases, although this in no way abrogates the present right of any airport, State or local government, or citizen to file a formal complaint before the FAA and, thus, initiate enforcement activities.

INTERNATIONAL CONSTRAINTS

Finally, the issue of international constraints in solving the aircraft/airport noise problem must be addressed.

No noise control program in the United States can be completely effective if noise from international aircraft operations remains unregulated while domestic aircraft noise is controlled. At some airports, international flights make sufficient contribution to the cumulative noise exposure to make regulation of domestic traffic alone a futile exercise. The question is how such regulation of international air transportation noise can be accomplished.

One option is to exempt international aviation from United States regulatory actions and continue to press ICAO for meaningful international standards for new designs, SST's, and retrofit. An assessment of the present status of ICAO's debates on this subject, however, does not indicate this alternative will result in realistic progress.

A second possibility is to adopt Federal regulations, applicable equally to U.S. aircraft and all foreign aircraft operating into or out of U.S. airports. Some have argued that this raises the possibility of foreign retaliation against American aircraft and/or other U.S. trade and that it would certainly cause such reaction if the United States rejected aircraft complying with an international standard essentially similar to the Federal regulation. This retaliation argument is suspect, however, because many major foreign airports such as those serving London, Tokyo, and Paris and Zurich already have noise abatement rules (including noise limits, night curfews, etc.) to protect their citizens. Paris has recently adopted an airport tax based on noise emission. Thus, were the U.S. to require noise abatement at its international airports, it is difficult to comprehend how there could be more "retaliation" than already exists.

A third alternative is to announce the United States intent to adopt noise standards applicable to all aircraft, foreign and domestic, operating from American airports, but provide for application of any subsequently agreed upon international standard having substantially the same effect to any foreign owned aircraft in lieu of the Federal standard. The policy should be made clear that this country wishes fully to cooperate in the development of international standards but is unwilling to delay solution of a serious problem affecting the health and welfare of U.S. citizens. Too, as stated at the recent ICAO conference, the noise problem around U.S. airports is our problem. The United States must assume leadership in solving it.

SECTION 6

RECOMMENDATIONS*

The resolution of the aircraft/airport noise problem requires a comprehensive program involving coordinated action on several fronts. The interrelation among the various actions may best be seen by viewing the aircraft/airport noise problem as a classical source - path - receiver system typical of all noise abatement problems.

From one point of view, the "source" is the individual aircraft, including its design and the power settings it utilizes in operation, which affect its noise emission characteristics. The "path" from this source to the "receivers" (persons on the ground who receive the noise) affects the amount of noise received in communities and is affected by the choice of flight paths and those aspects of flight procedures that together, control the distance between the aircraft and any given point in the community.

From the vantage point of the public, whose health and welfare is to be protected from noise effects, the source, as far as aircraft noise is concerned, is the total noise environment emanating from operations at the airport. The exposure to noise experienced by an individual is made up of the total cumulative effect of many noise events, from many individual noise sources throughout the day and night. Protection of the public health and welfare with respect to noise requires that the result of all significant noise sources be included in the exposure limitation efforts. Where human activities associated with a given land use are noise-sensitive (as is the case for residential and school activities), and where these uses exist within airport noise impact zones, the cumulative contribution of the aircraft noise

*The recommendations presented herein represent the consensus of the task group members, arrived at in the May 18-19 meeting, and further detailed by the chairperson following the guidance of the group. Two provisos were adopted by the group: (1) that it be made clear that not every participant supports every recommendation (i.e., unanimity was not required), and (2) the organizations represented in the task group may present their formal recommendations separately, in Appendix B.

The chairperson would add (as noted in the Preface) that the task group did not, and could not in the time available, discuss the final wording of this section or of other sections of the report, and some new detail was added after the May 18-19 meeting.

to the human exposure must be limited, in order to limit the total cumulative exposure consistent with health and welfare needs.

Because it is the cumulative exposure that counts, rather than merely the noise level from any single noise event, a logical way in which the exposure limitation goal with respect to aircraft-generated noise can be expressed is in terms of the cumulative noise received at various ground locations. Techniques for expressing, predicting and measuring such cumulative noise exposures have been developed. One such technique, which is meaningful for protection against noise in general, has been recommended by Task Group 3. Available or required legal mechanisms for the adoption and implementation of programs to achieve and maintain specific cumulative noise limits around airports has been one of the questions addressed by Task Group 1, acting in its consultative role to the other task groups.

It should be realized that achievement and maintenance of cumulative noise exposure limits around airports will require actions:

1. To make aircraft inherently quieter and to have them flown as quietly as possible.
2. To modify the total operating plan of the airport so as to minimize the extent of the airport noise impact zone and tailor its shape to avoid existing noise-sensitive land uses.
3. To prevent construction of new housing or other noise-sensitive land uses in present and anticipated future noise impact zones and, where necessary, resolve by land use measures (soundproofing or conversion) those few impacted areas where the noise exposure cannot be adequately decreased by other means.

With this preamble as background to indicate the general orientation of the task group acting as an integral member of the total task force, the recommendations of Task Group 1 are presented below.

RECOMMENDATION #1:

That the Federal government promulgate, administer and enforce an airport noise regulation, designed to limit the cumulative noise exposure received in residential communities.

The timely adoption and implementation of such a regulation will provide (1) the statement of a goal based on public health and welfare needs regarding noise and (2) a quantitative framework within which all levels of government and all affected parties can work together effectively to reduce existing and prevent further airport noise problems.

- A. The FAA airport certification process is a proper mechanism for administering the airport noise regulation. No new legislation is required.
- B. It is recommended that the airport noise certification regulation promulgated by the FAA contain the following elements:
 1. A statement of the purpose of the regulation:

"To provide present and future relief and protection to the public health and welfare from aircraft noise."
 2. The cumulative noise exposure health and welfare (goal) limits, to be determined by EPA for application to noise exposure from all sources.
 3. The timetable for compliance, recommended by EPA, applicable nationwide to all existing airports.
 4. A definition of compatible and incompatible land uses within specified values of cumulative noise exposure, to be developed by FAA based on the formal recommendations of EPA and HUD.
 5. The requirement that all new airports, airport expansions or other airport actions tending to increase cumulative noise exposure be conditioned upon continual compliance with the published goal values for limiting noise exposure based on public health and welfare needs.

6. The requirement that each airport proprietor, in consultation with local governments and other concerned persons, develop an implementation plan for achieving compliance with the promulgated exposure limits in accordance with the promulgated timetable; procedures for applying for FAA approval of the implementation plan.
7. A list of airport operation options from which airport proprietors may select in formulating their implementation plans, subject to final FAA approval of the plan.

It is recommended that the list of airport operation options include at least the following:

- (a) Approach and departure paths applicable to specific runways and, if desired, to specific parts of the 24-hour day.
- (b) A list of FAA-approved takeoff, approach and landing noise abatement procedures, available for use in airport implementation plans, subject to final FAA approval of the submitted plan.
- (c) Single-event noise limits applicable to specific runways and, if desired, to specific parts of the 24-hour day; or, if desired, applicable to the entire airport and/or to the entire 24-hour day.
- (d) Reduction of flight frequency on specific runways, during specific hours, or for the entire airport and/or the entire 24-hour day.
- (e) Rules limiting the times and places, on the airport property, where engine ground runups are allowed, particularly for maintenance purposes; performance requirements for ground runup suppressors and/or, resulting airport boundary noise levels.
- (f) Complete closure of specified runways, temporarily or permanently, either to all aircraft, or to aircraft with noise characteristics above a specified value.

- (g) Construction of new runway(s) designed to place approach and departure paths over areas of compatible land use and remove them from areas of noise-sensitive land use.

The foregoing list of options are items that can be implemented by the airport proprietor with FAA approval and cooperation once the implementation plan is approved. The list of available options should also include those which can be implemented by the airport proprietor with local government cooperation, e. g., development of a compatible land use within the airport noise impact zone. The regulation should require that preference be given to actions which prevent or reduce noise impact upon existing communities, and that land use conversion involving existing communities be considered the least desirable action for achieving compliance with the regulation.

- 8. Requirements for a showing by the airport proprietor, in submitting its implementation plan:
 - (a) That the proprietor's plan does not contain elements which cannot be fulfilled; i. e., that all necessary legal and financial commitments necessary to implement the plan have been obtained or assurance that they are obtainable;
 - (b) That the implementation plan being proposed has been developed by a consultive and participatory process involving local governments, representatives of affected and potentially noise-affected persons and other concerned persons; and
 - (c) That quantitative predictions of noise exposure values, population counts within noise exposure zones (both for the present case and for the implemented plan) and other relevant decisional data have been made a part of the consultive local process of developing the proposed implementation plan.

9. Provision for airport proprietors, in consultation with local and State government and other concerned persons, to adopt implementation plans which achieve the welfare standard at an accelerated rate compared to the Federal timetable, which is a minimum standard.
10. Provision for airport noise monitoring, according to the cumulative noise exposure scale in the regulation and according to specified procedures and measurement system performance standards,
 - (a) For airports generating cumulative noise exposures such that the published goal values (public health and welfare standards) are exceeded for a number of population greater than a specified number;
 - (b) For any airport operating with a variance.
11. A variance procedure, applicable only to cumulative noise exposures below a specified level, by which a temporary variance (not exceeding one year) can be granted to airport proprietors in achieving compliance with the national timetable. To be included in the regulation are the conditions to be met before a variance can be granted. A formal published determination by FAA is required, that the public interest would be satisfied by such a variance, based on at least the following considerations.
 - (a) The impact of the resulting noise exposure upon the public health and welfare should the variance be granted;
 - (b) The value to the public of the air transport services which could not be obtained unless the variance were granted;
 - (c) A showing that the airport proprietor is taking good faith measures to the best of its ability to achieve the noise standards set by the regulation.
 - (d) The results of a public hearing on the variance, held in the vicinity of the airport, administered by the FAA with EPA cooperation.

(e) A commitment by the airport proprietor to place a moratorium on increases in flight operations, or any other actions tending to increase the cumulative noise exposure in any inhabited area exposed to levels above the regulatory limit, for the duration of the variance; and to confirm these results by monitoring cumulative noise exposure.

12. The airport noise regulation should set forth the enforcement powers of the FAA to achieve compliance by others (e.g., air carriers, airmen, etc.) with the airport proprietor's FAA-approved implementation plan. These powers include suspension, partial suspension or revocation of any certificate issued by it, as well as civil penalties. Compliance with the Federal airport noise regulation should also be made a condition for award of Federal grants to the airport, excepting grants for construction of new runways or other projects which are part of an approved implementation plan.

To summarize, the process contemplated is as follows: After the promulgation of the Federal airport noise regulation, the existing airports with jet operations would be reviewed, and those not in compliance with the regulation identified. Priority attention would be given to those air carrier airports with significant noise problems (i.e., whose noise impact zones presently encompass large populated areas). The certification process, though presently applied (regarding safety) to air carrier airports only, could be extended to include all airports with jet aircraft operations.

Proprietors of airports so identified would be given a specified amount of time to develop, and submit to the FAA, their implementation plans. Development of implementation plans for each airport would be done by a consultive local process, involving all local governments and concerned persons in the airport vicinity.

Testing of the effectiveness of various alternative operational modes for the airport should be carried out as part of the local development of the implementation plan, using a computerized cumulative noise exposure prediction and population-counting program. Federal government assistance is required in making such a standardized computer program available, together with valid input data on noise characteristics of various aircraft types.

The agreed upon implementation plan for the airport would then be submitted to the FAA for approval. Any final adjustments of the plan required during the approval process would be incorporated, and the implementation plan adopted as a Federal regulation for the airport. Specific elements of the plan would be promulgated as FAA regulations (e.g., air traffic rules) and thus become subject to FAA enforcement. Airport proprietors which fail to propose an implementation plan by the specified deadline would have implementation plans imposed upon them at the Federal level, following FAA development of a plan, including participation by all concerned persons. Progress in implementing approved plans would be reviewed on a periodic basis.

RECOMMENDATION #1a:

That the California airport noise regulation, particularly the CNEL portion, be adopted as a Federal (FAA) regulation, applicable in California only, until a nationwide Federal airport noise regulation goes into effect.

Whereas the proposed cumulative noise exposure Federal airport regulation is the cornerstone of a comprehensive program to resolve the airport noise problem in the United States, and because there is presently only one such operating system in the country (the California CNEL standard), and whereas the California statute may be in danger of discontinuation because of the Burbank decision, Task Group 1 makes the above recommendation.

The utility of having one State serve as a testing ground in environmental matters has already been recognized by the Federal government, both in statutes and in regulations in several instances. The United States has an interest in studying how a cumulative noise standard for airports works in operation. The California statutes now include three essential and complementary elements:

1. An airport noise standard.
2. Regional airport land use commissions.
3. Requirement of a noise element in all city and county general plans, with which all zoning must then be consistent.

The opportunity is also afforded, therefore, to test a complete legal system for controlling both airport noise and land uses.

RECOMMENDATION # 1b:

The FAA should, with EPA participation, establish a national resource to provide assistance to airport proprietors and state and local agencies in developing skills (within their own staffs) necessary to implement the Federal airport noise regulation.

Such assistance would include:

1. Developing and making available a standardized computer program for calculating cumulative noise exposure values and associated population counts, as well as contours of cumulative noise exposure for use in geographic land use decisions.
2. Guidance in development of noise monitoring or alternative equivalent monitoring programs, plans and systems.
3. Assistance in training of airport, planning agency and other staffs necessary to implement the cooperative airport and land use controls required to achieve and continue compliance with the cumulative exposure limit regulation.

RECOMMENDATION # 1c:

Whereas the timely adoption and implementation of an airport noise regulation is the keystone of a comprehensive program to diminish aircraft noise in communities and whereas there is no statutory time limit applicable to the promulgation of this or any other aircraft noise regulation, it is recommended that an adequate time for FAA promulgation of the airport noise regulation is no later than one year from the date of its proposal to the FAA by the EPA. The attention of the Congress should be focused upon the timely performance of both EPA and FAA in promulgation and implementation of the airport noise regulation.

RECOMMENDATION #2:

Whereas, the control of land use is as necessary in solving and preventing airport noise problems as control of airport operations, and whereas the traditional local government zoning mechanisms, operating alone, have failed to prevent encroachment of incompatible land uses around airports,

1. It is recommended that all States, by statute, require the formation of airport land use commissions or alternative mechanisms, at the regional level or above, to incorporate the interests of both local governments and airport proprietors into effective land use controls around airports.

The geographic reach of the land use commission powers should to the maximum extent of the airport impact zone during its history, as determined by the location of the cumulative noise exposure contour corresponding to the public health and welfare standard in the Federal airport noise regulation.

The airport land use commission should participate heavily in the development and implementation of the airport proprietor's implementation plan, and in decisions involving the siting of new airports and airport expansions.

The airport land use commission should be operated with full public participation. However, its decisions, once reached, should override those of local governments within the airport impact zone, which should be required to implement the decisions of the commission by their own planning and zoning actions.

2. It is recommended that the Congress encourage States to establish adequate mechanisms for positive land use control within airport impact zones, by enactment of appropriate Federal land use legislation.

Such statutory controls should be structured so as to achieve the following:

- (a) Prevent the siting of new airports in populated areas where their projected noise impact zones would bring them into conflict with the levels of noise exposure, to be published pursuant to PL 92-574, Section 5(a)2.

- (b) Prohibit the granting of federal funds to localities for which no adequate plans have been made to assure protection of the airport environs against encroachment by incompatible land uses.
- (c) Discourage the construction of structures that cannot be (or will not be) sufficiently insulated against externally generated aircraft noise.
- (d) Provide land uses and physical buffers for the protection and preservation of existing established residential neighborhoods.

RECOMMENDATION #3:

Whereas the attainment and maintenance of cumulative noise exposure levels consistent with public health and welfare needs (as envisioned in Recommendation #1 above) is heavily dependent upon rapid realization of quieter aircraft—both jet air carrier fleets and business jets—the task group further recommends an accelerated program of Federal regulation of aircraft noise, incorporating the following elements:

1. Noise certification standards and regulations for all aircraft categories for which standards do not now exist. No further type certificates should be issued until noise standards applicable thereto have been promulgated.
2. To avoid prolonging the time before the airport noise problem can be resolved, new aircraft types permitted to enter service should be consistently quieter than (or at least as quiet as) similar aircraft types of the same generation. That is, no regressive standards or special exemptions should be allowed for (noisier) aircraft based on technology arguments. The members of Task Group 1 discussed the current supersonic transports (Concorde and TU 144) and specifically recommended that these aircraft not be permitted to enter service in the U.S. unless standards equivalent to the present FAR 36 values are met, the existence of an airport noise regulation notwithstanding.
3. A regulation to be promulgated establishing requirements for the purchase of currently provided noise attenuation hardware for production installation in new units of existing types, for any aircraft units which will be operated into U.S. airports.

4. A retrofit rule or equivalent incentive rule offering greater flexibility such as (an improved version of) the Fleet Noise Level (FNL) concept.
5. Noise regulations applicable to aircraft in service, covering both air carrier and private jet aircraft, and providing a selection of safe noise abatement takeoff, approach and landing procedures, from which airport proprietors may select (with FAA approval) according to local patterns of noise-sensitive land uses.
6. Incorporation of quantitative goals and timetables in all noise regulations affecting aircraft design and production indicating intended stepwise reductions, providing advance notice to designers, manufacturers and purchasers of aircraft as to the government's intent. Such stepwise goals are expected to motivate more rapid development of quieter technology and to aid purchasing decisions by airlines.

RECOMMENDATION #4:

Whereas a program to resolve the aircraft/airport noise problem around U.S. airports cannot be considered apart from financial resource considerations, and the absence of decisions regarding financing mechanisms may become a greater impediment to solution than technological or other considerations. Task Group 1 strongly recommends that the Congress and the Executive Branch agencies give high priority to evaluation of alternative financing schemes to allow feasible, desirable solutions to be expeditiously adopted and applied.

Attention is invited to Section 5 of this report, in which alternatives for financing implementation of noise abatement strategies are presented and discussed. The task group lacks the full knowledge and expertise to answer definitively all issues involved and thus design and recommend the best complete financing scheme. However, the task group recommends that the scheme adopted should have the following general characteristics:

1. Place ultimate allocation of the cost upon the users and beneficiaries of air transportation.

2. Provide for an initial fund, subject to payback from revenues later collected, so as not to delay implementation of adopted noise abatement strategies.
3. Incorporate revenue collection methods which are administerable without excessive administration costs.

The potential role of the Civil Aeronautics Board, and the need for its cooperation in implementing portions of any financing plan, was emphasized by the task group.

RECOMMENDATION #5:

Whereas it is the responsibility of the U.S. Government (in cooperation with lower levels of government under the Federal system) to protect the health and welfare of U.S. residents and whereas the achievement and maintenance of levels of cumulative noise exposure around airports requires control of aircraft noise regardless of national origin, it is recommended that all U.S. regulations regarding aircraft noise be applied equally to all aircraft operating into U.S. airports. This includes rules of airport proprietors adopted pursuant to achievement of their implementation plans under the proposed airport noise regulation.

Regarding the design of aircraft hardware, when adequate international standards are established (e.g., for retrofit, fleet noise level or type certification) which are similar to or which have substantially equivalent effect to U.S. regulations, it is recommended that the United States waive compliance with its rule to the extent foreign-owned aircraft comply with the international standard. This is provided foreign governments similarly waive compliance with their noise standards for U.S. owned aircraft that comply with an equivalent American regulation. The purpose is to provide for the substitution of equivalent measurement procedures, in which the result is substantially unchanged thereby.

RECOMMENDATION #6:

Whereas the development and implementation of a national plan to resolve the airport noise problem requires continuing, creative participation by several Federal agencies, and cannot be adequately served by ad hoc, intermittent or merely reactive arrangements, it is recommended that the affected Executive agencies form a continuing, cooperative interagency group to assist FAA in implementation of the proposed airport noise regulation. Further, this interagency group should participate in the development of necessary financing schemes, in the evaluation of emerging noise abatement technology and in other efforts related to the implementation of a comprehensive national aircraft/airport noise abatement program.

This interagency group should not operate independently of the national program to limit human exposure to noise from all sources. Because of this, and because of the EPA mandate to protect the public health and welfare with respect to general noise exposure and to coordinate the noise control programs of all Federal agencies, it is logical that EPA should accept the responsibility for establishing and chairing such a group.

FOOTNOTES

1. 42 U.S.C.A. § 4901 et seq. (Pub. L. 92-574, 86 Stat. 1234).
2. Noise Control Act of 1972 § 7(a), 42 U.S.C.A. § 4906.
3. U.S. Const., art. I, § 8, cl. 3.
4. U.S. Const., art. VI, cl. 2.
5. Rice v. Santa Fe Elevator Corp., 331 U.S. 218 (1947), City of Burbank v. Lockheed Air Terminal, Inc. 93 Sup. Ct. 1854 (1973).
6. City of Burbank v. Lockheed Air Terminal, Inc. 93 Sup. Ct. 1854 (1973), at footnote 14.
7. 49 U.S.C. § 1301 et seq. (Used interchangeably in this text as the 1958 Act).
8. 25 Fed. Reg. 8538 (Sept. 3, 1960), 25 Fed. Reg. 10343 (Oct. 28, 1960).
9. 32 Fed. Reg. 15422 (Nov. 4, 1967).
10. 35 Fed. Reg. 5264 (March 28, 1970).
11. 49 U.S.C.A. § 1431 (Pub. L. 90-411, 82 Stat. 395) (Used interchangeably in this text as the 1968 Act).
12. "Air navigation facility" means any facility used in, available for use in, or designed for use in, aid of air navigation, including landing areas, lights, any apparatus or equipment for disseminating weather information, for signaling, for radio - directional finding, or for radio or other electrical communication, and any other structure or mechanism having a similar purpose for guiding or controlling flight in air or the landing and take-off of aircraft. 49 U.S.C. § 1301(8). "Airport" means a landing area used regularly by aircraft for receiving or discharging passengers or cargo. 49 U.S.C. 1301(9). (emphasis added).
13. 49 U.S.C. § 1426.
14. 49 U.S.C.A. § 1651 et seq.

15. 49 U.S.C.A. § 1653(a).
16. 49 U.S.C.A. § 1653(d).
17. 49 U.S.C.A. § 1701 et seq. (Pub. L. 91-258, 84 Stat. 219).
18. Airport and Airway Development Act § 51(b) (1) (84 Stat. 234), now 49 U.S.C.A. § 1432.
19. Noise Control Act of 1972 § 7(b) (86 Stat. 1239), now 49 U.S.C.A. § 1431.
20. 14 C.F.R. § 139.3.
21. 42 U.S.C.A. § 4321 et seq. (Pub. L. 91-190, 83 Stat. 852).
22. 42 U.S.C.A. § 4332(2)(c).
23. 42 U.S.C.A. § 4342.
24. 35 Fed. Reg. 4247 (March 7, 1970).
25. 36 Fed. Reg. 7724 (April 23, 1971).
26. DOT Order 5610. 1A, 36 Fed. Reg. 23699 (Dec. 11, 1971).
27. 49 U.S.C.A. § 1712(a).
28. 49 U.S.C.A. § 1712(b).
29. 49 U.S.C.A. § 1712(f).
30. 49 U.S.C.A. § 1712(h).
31. Report of the Aviation Advisory Commission, "The Long Range Needs of Aviation," Jan. 1, 1973.
32. 49 U.S.C.A. § 1716(c)(4).
33. Id.
34. Id.
35. Lake, "Noise: Emerging Federal Controls," 415-16. This article, presently in draft form, is part of a NSF study to be published by the Environmental Law Institute in the fall of 1973.

36. 49 U.S.C.A. § 1716(a).
37. 49 U.S.C. § 1101 et seq. (Act May 13, 1946, 60 Stat. 170).
38. Pub. L. 88-280 § 10 (78 Stat. 161), 49 U.S.C.A. § 1110(4), repealed by Airport and Airway Development Act of 1970 § 52(a) (Pub. L. 91-258, 84 Stat. 235). The provisions of 49 U.S.C.A. 1110(4) were carried forward, however, by Airport and Airway Development Act of 1970 § 18, and are now 49 U.S.C.A. § 1718(4).
39. FAA grant procedures are printed in 14 C.F.R. Part 151.
40. The Airport and Airway Development Act of 1970 was Title I of Pub. L. 91-258; the Airport and Airway Revenue Act was Title II of the same public law. The Airport and Airway Trust Fund was created by a provision of Title II, now 49 U.S.C.A. § 1762.
41. 49 U.S.C.A. § 1716(c)(3).
42. 42 U.S.C.A. § 4901 et seq. (Pub. L. 92-574, 86 Stat. 1234).
43. 42 U.S.C.A. § 4901(a)(3).
44. 42 U.S.C.A. § 4901(b).
45. Id.
46. 42 U.S.C.A. § 4903(c)(2).
47. Id.
48. 49 U.S.C.A. § 1431(b)(1).
49. 49 U.S.C.A. § 1431(c)(1).
50. Id.
51. 49 U.S.C.A. § 1431(c)(2).
52. FAA Order 6900.4 (June 30, 1970).
53. FAA Order 5050.2, "Interim Instructions for Processing Airport Development Actions Affecting the Environment" (Dec. 7, 1970), 36 Fed. Reg. 23686 (Dec. 11, 1970).

54. 14 C.F.R. § 399.110, 35 Fed. Reg. 10582 (June 30, 1970), as amended 36 Fed. Reg. 12514 (July 1, 1971).
55. 42 U.S.C.A. § 4231-3.
56. 49 U.S.C. § 1348(c).
57. 49 U.S.C. § 1470; 14 C.F.R. §§13.15, 13.17 and 13.19.
58. 14 C.F.R. § 93.121-31; See 33 Fed. Reg. 17896 (Dec. 3, 1968) and 34 Fed. Reg. 2603 (Feb. 26, 1969). The high density rules have been extended at La Guardia, Kennedy, Newark, O'Hare, and Washington National airports, 37 Fed. Reg. 22793 (Oct. 25, 1972).
59. 49 U.S.C. § 1382; see also n. 60 infra.
60. See, for example, CAB Order 72-1-86.
61. 38 Fed. Reg. 2711 (Jan. 20, 1973).
62. 49 U.S.C. § 1431 (Pub. L. 90-411, 82 Stat. 395).
63. 14 C.F.R. Part 36.
64. A type certificate is required for a new aircraft type or an existing type on which an "acoustical change" is to be made. An acoustical change is "any voluntary change in type design ... that may increase the noise level created by an airplane," 14 C.F.R. § 21.93(b).
65. 34 Fed. Reg. 18357 (Nov. 18, 1969).
66. 34 Fed. Reg. 458 (Jan. 11, 1969).
67. 14 C.F.R. Part 36, Appendix C, section 36.5(b), 34 Fed. Reg. 18379 (Nov. 18, 1969).
68. 14 C.F.R. § 36.201(b)(1), 34 Fed. Reg. 18364 (Nov. 18, 1969).
69. 14 C.F.R. § 36.201(d).
70. 14 C.F.R. § 21.93(b).
71. Lake, supra, n. 31, at 376.
72. 34 Fed. Reg. 18815 (Nov. 25, 1969).

73. 36 Fed. Reg. 18584 (Sept. 17, 1971).
74. 18 Cong. Rec. S. 16455, S. 16457 (Oct. 2, 1972).
75. 37 Fed Reg. 14814 (July 25, 1972).
76. 34 Fed. Reg. 18357 (Nov. 18, 1969).
77. 35 Fed. Reg. 16980 (Nov. 4, 1970).
78. 35 Fed. Reg. 16981 (Nov. 4, 1970).
79. N.A.S.A. Acoustically Treated Nacelle Program, NASA Sp. - 220 at 52 and 99 (Oct. 15, 1969).
80. Hearings on H.R. 5275 Before the Subcomm. on Public Health and the Environment of the House Comm. on Interstate and Foreign Commerce, 92nd Cong., 1st Sess., at 381-382 (June 23, 1971).
81. 38 Fed. Reg. 2769 (Jan. 30, 1973).
82. 14 C.F.R. § 121.801 et seq.
83. 38 Fed. Reg. 2770 (Jan. 30, 1973).
84. 35 Fed. Reg. 12555 (Aug. 6, 1970).
85. 35 Fed. Reg. 6189 (April 16, 1970).
86. 38 Fed. Reg. 8051 (March 28, 1973), 14 C.F.R. § 91.55.
87. 14 C.F.R. Part 91.
88. 14 C.F.R. § 91.55, Appendix B, § 1(c)(2).
89. Id. at § 1(c)(1)
90. Id. at § 3(a).
91. 38 Fed. Reg. 8051 (March 28, 1973).
92. EPA, Report to the President and Congress on Noise, S.Doc. No. 92-63, 92d Cong., 2d. Sess., 3-7, (1972).
93. Id.

94. Id.
95. Id.
96. Id.
97. Id.
98. 34 Fed. Reg. 457 (Jan. 11, 1969).
99. 34 Fed. Reg. 18363 (Nov. 18, 1969).
100. 42 U.S.C. § 2451 et seq.; see 14 C.F.R. Part 1201 et seq.
101. 42 U.S.C. § 2457(b); 14 C.F.R. § 1201.101.
102. 42 U.S.C. § 2551(c); 14 C.F.R. § 1201.102.
103. See n. 79, supra; FAA has undertaken a subsequent program of nacelle treatment. The results of the research were demonstrated at Dulles International Airport in Washington, D. C. on May 7, 1973.
104. Aircraft Noise Reduction Technology, a Preliminary NASA Report to the Environmental Protection Agency for Aircraft/Airport Noise Study (February 28, 1973) (hereinafter referred to as NASA Preliminary Report), p. 45-55.
105. 35 Fed. Reg. 6190 (April 16, 1972).
106. NASA preliminary report, n. 104, supra.
107. Id. at 7.
108. Id. at 11.
109. Id. at 13.
110. Id. at 15.
111. Id.
112. Id. at 45.
113. Id. at 46.
114. Id. at 61.

115. Id. at 64.
116. Id. at 74.
117. Id. at 81-97.
118. Id. at 98-104.
119. Id. at 105-127.
120. Id. at 128-137.
121. Id. at 138-164.
122. Id. at 165-173.
123. Id. at 174-193.
124. Civil Aviation Act of 1938, 52 Stat. 973.
125. 49 U.S.C. § 1301 et seq.
126. 49 U.S.C. § 1371.
127. 49 U.S.C. § 1378(b).
128. 49 U.S.C. § 1373-1376.
129. 49 U.S.C. § 1302
130. 420 F. 2d 188 (D.C. Cir. 1969).
131. See n. 21, supra.
132. See n. 54, supra.
133. Id., § (c); see also p. 3-2 of "Environmental Considerations in Civil Aeronautics Board Proceedings," R. Tenney Johnson, General Counsel, CAB.
134. Id., § a(3).
135. Dec. 20, 1971, letter from CAB Chairman to Chairman of the Council on Environmental Quality.

136. "Environmental Considerations in Civil Aeronautics Board Proceedings," R. Tenney Johnson, General Counsel, CAB.
137. Oct. 2, 1970 letter from Chairman, CAB to Russell Train, Chairman, Council on Environmental Quality.
138. See, for example, CAB Order 72-1-86.
139. 49 U.S.C. §§ 1371(d)(1), 1371(e)(1).
140. City of Dallas v. CAB, 221 F. 2d 501 (C.A.D.C. 1954), cert. denied, 348 U.S. 914.
141. Domestic Passenger Fare Investigative Phase 6-B, Load Factors, Docket No. 21866-6B, Order 71-4-54 at 6, 13, 24; Lake, supra n. 35, at 407-408.
142. 42 U.S.C. § 3521 et seq.
143. National Environmental Policy Act § 101(b)(2), 42 U.S.C. § 4331(b)(2).
144. Department of Housing and Urban Development Act § 2 (Pub. L. 89-174, 79 Stat. 667), 42 U.S.C. § 3531.
145. Department of Housing and Urban Development Act § 9(e).
146. 42 U.S.C. 4332(2)(b).
147. HUD Circular 1390.2 § 1.
148. O'Hare International Airport, Chicago, Illinois; John F. Kennedy International Airport, New York, N.Y.; Bradley International Airport, Hartford, Conn.; Cape Kennedy Regional Airport, Melbourne, Florida.
149. Metropolitan Aircraft Noise Abatement Policy Study, O'Hare International Airport, p. iv.
150. Id. at 107.
151. Housing Act of 1964 § 312 as amended, 42 U.S.C. § 1452(b).
152. 12 U.S.C. § 1701 et seq.
153. 40 U.S.C. § 461.
154. "Aircraft Noise Impact: Planning Guidelines for Local Agencies," Department of Housing and Urban Development, Nov., 1972.

155. See, for example: Military Construction Authorization Act (Pub. L. 92-545, 86 Stat. 1135); Military Construction Appropriation Act (Pub. L. 92-547, 86 Stat. 1156); Department of Defense Appropriation Act (Pub. L. 92-570, 86 Stat. 1184).
156. Pub. L. 92-545, 86 Stat. 1143.
157. DOD Directive 6050.1, Par. IVc (Aug. 9, 1971); see also Par. 4-3 "Land Use Restrictions for Runway Clearances and Noise Abatement," DOD Construction Manual, DOD 4270.1-M (Oct. 1, 1972).
158. See pp. 6, 16, 49, 59, 62-65, "DOD Environment Quality Program," Status Report (Jan. 1, 1972).
159. DOD Directive 4165.XX, Subject: "Air Installations Compatible Use Zones."
160. AFM 86-5; TM 5-265; Nav Fac P-98 (Oct. 1, 1964).
161. Air Force Regulation 55-34, par. 3 (Feb. 14, 1972).
162. Id., par. 3d.
163. Id., pars. 4, 7. For Naval regulations to similar end re aircraft noise, supersonic flight, and sonic boom reporting, see OPNAV INSTRUCTIONS 3710.33, Feb. 24, 1971 and 3710.7F, May 27, 1971 (Pars. 434 and 820); For Army regulations re aircraft noise abatement, see TM5-803-4 (Draft).
164. DOD Directive 5100.50, June 23, 1970, Subject: "Protection and Enhancement of Environmental Quality;" AF Reg. 19-1, same subject, dated Feb. 18, 1972.
165. AF Reg. 19-2, Jan. 20, 1972.
166. 29 U.S.C. § 651 et seq. (Pub. L. 91-596, 84 Stat. 1590).
167. 29 U.S.C. § 651.
168. 29 U.S.C. § 652(5).
169. 29 U.S.C. § 652(6).
170. 29 U.S.C. § 653(a).
171. 29 U.S.C. § 654(a).
172. 29 U.S.C. § 655(b).

173. 29 C.F.R. § 1910.95.
174. 29 C.F.R. § 1910.11 et seq. (Subpart B).
175. 29 C.F.R. § 1910.261 et seq. (Subpart R)
176. 42 U.S.C.A. § 4901 et seq. (Pub. L. 92-574, 86 Stat. 1234).
177. 42 U.S.C.A. § 4906(a).
178. 49 U.S.C.A. § 4331(c)(1).
179. 49 U.S.C.A. § 4331(c)(2).
180. 42 U.S.C.A. § 4904(a)(1).
181. 42 U.S.C.A. § 4904(a)(2).
182. 42 U.S.C.A. § 4903(c)(1).
183. 61 Stat. 1180, Treaties and International Agreements Series, No. 1591.
184. Convention on Damage Caused by Foreign Aircraft to 3rd Parties on the Surface, signed at Rome on Oct. 7, 1952, ICAO Doc. No. 7364.
185. U.S. - French Air Transport Services Agreement, signed at Paris on March 27, 1946, 61 Stat. 3345, Treaties and International Agreements Series, No. 1679.
186. Ch 1111, 1969 Minn. Sess. Laws.
187. Title 4, Cal. Bus. Reg. § 5000 et seq.
188. Title 4, Cal. Bus. Reg. § 5011.
189. Wyle Laboratories, Supporting Information for the Adopted Noise Regulations for California Airports, Final Report to the California Department of Aeronautics, Report No. WCR 70-3(R), January 29, 1971.
190. Illinois, Pennsylvania and New York.
191. Council of State Governments, Suggested State Noise Control Legislation, A Report of the Workshop on Noise Control, 2nd Annual Symposium on Environmental Legislation, April 9-12, 1973. (See also "Suggested State Noise Control Legislation," in "1974 Suggested State Legislation," Council of State Governments.)
192. 331 U.S. 218, 230.

193. 322 U.S. 292, 303.
194. 238 F. 2d 812 (2d Cir. 1956).
195. 407 F. 2d 1306 (6th Cir. 1969).
196. 272 F. Supp. 266 (E.D.N.Y. 1967), 398 F. 2d 369 (2d Cir. 1968), cert. denied, 393 U.S. 1017 (1969).
197. 328 U.S. 256 (1946).
198. 369 U.S. 84 (1962).
199. Anderson, American Law of Zoning, § 2.22.
200. Listed chronologically these twelve cases are: Mutual Chemical Co. v. Mayor and City Council of Baltimore, 1 Avi. 804 (Cir. Ct. Baltimore City, Md. 1939); Yara Engineering Corp. v. Newark, 132 N.J.L. 370, 40 A. 2d 559 (1945); Dutton v. Mendocino County & City of Ukiah, 1949 U.S. Aviation Reports 1 (Super. Ct., Mendocino Co., Cal. 1948); Banks v. Fayette County Board of Airport Zoning Appeals, 313 S.W. 2d 416 (Ky. Ct. App. 1958); Kissinger v. City of Los Angeles, 161 Cal. App. 2d 454, 327 P. 2d 10 (1958); Sneed v. Riverside County, 218 Cal. App. 2d 205, 32 Cal. Rptr. 318 (1963); Indiana Toll Road Commission v. Jankovich, 244 Ind. 574, 193 N.E. 2d 237 (1963), cert. denied 379 U.S. 487 (1965); Roark v. Caldwell, 87 Idaho 557, 394 P. 2d 641 (1964); Jackson Municipal Airport Authority v. Evans, 191 So. 2d 126 (Miss. Sup. Ct. 1966); Shipp v. Louisville and Jefferson County Air Board, 431 S.W. 2d 867 (Ky. Ct. App. 1968), cert. den. 393 U.S. 1088 (1969); Hageman v. Wayne Township Board of Trustees, 20 Ohio App. 2d 12, 251 N.E. 2d 507 (1969); Peacock v. County of Sacramento, 271 Cal. App. 2d 845, 77 Cal. Rptr. 391 (1969).
201. Harrell's Candy Kitchen v. Sarasota-Manatee Airport Authority, 111 So. 2d 439 (Fla. Sup. Ct. 1959); Waring v. Peterson, 137 So. 2d 268 (Fla. Dist. Ct. App. 1962); Baggett v. Montgomery, 276 Ala. 166, 160 So. 2d 6 (1963); Smith v. County of Santa Barbara, 243 Cal. App. 2d 126, 52 Cal. Rptr. 292 (1966); Morse v. County of San Luis Obispo, 247 Cal. App. 2d 600, 55 Cal. Rptr. 710 (1967); Township of Hickory v. Chadderton, 43 Pa. D. & C. 2d 319 (Common Pleas, Mercer Co. 1967); Willoughby Hills v. Corrigan, 29 Ohio St. 2d 39, 278 N.E. 2d 658 (1972), cert. denied, sub nom. Chongris v. Corrigan, ___ U.S. ___, 34 L. Ed. 2d 181 (1972).
202. 1 Avi. 804 (Cir. Ct. Baltimore City, Md. 1939).
203. Id. at 806.

204. U.S. v. Cauby, 328 U.S. 256 (1946).
205. Griggs v. Allegheny County, 369 U.S. 84 (1962).
206. Roark v. Caldwell, 87 Idaho 557, 394 P. 2d 641 (1964).
207. 272 U.S. 365 (1926).
208. 111 S. 2d. 439 (Fla. Sup. Ct. 1959).
209. Id. at 443.
210. Id. at 445.
211. Id. at 444.
212. Id. at 445.
213. Id.
214. 29 Ohio St. 2d 39, 278 N. E. 2d 658 (1972), cert. denied, sub. nom. Chongris v. Corrigan, ____ U.S. ____, 34 L. Ed. 2d 181 (1972).
215. Id. at 45, 278 N. E. 2d at 662.
216. 243 Cal. App. 2d 126, 52 Cal Rptr, 292 (1966).
217. 247 Cal. App. 2d 600, 55 Cal. Rptr. 710 (1967)
218. 43 Pa. D. & C. 2d 319 (Common Pleas, Mercer Co. 1967).
219. Id. at 321.
220. 21 N.Y. 2d 463 (1968).
221. 307 N.Y. 493 (1954).
222. Id. at 498. The same point was made by the New Jersey Supreme Court when it invalidated a zoning ordinance requiring the maintenance of certain distances between the conduct of quarrying operations and residences. The court said "we have a situation in which some property owners are required for the special benefit of another proprietor to absorb part of the burden of an industrial use of acknowledged capacity to harm." Kozenik v. Montgomery Township, 24 N.J. 154, 176 (1957).

223. 218 Cal. App. 2d 205, 32 Cal. Rptr. 318 (1963).
224. 304 N. Y. 105, 107 (1952).
225. Cleary, Gottlieb, Steen and Hamilton, "Legal Aspects of Required Soundproofing in High Noise Areas Near John F. Kennedy International Airport," Feb. 1970.
226. See also, Department of Transportation, Measures of Benefits, Aviation Cost Allocation Study Working Paper 9.
227. Hearings on Aircraft Noise before Subcommittees of the House Committee on Interstate and Foreign Commerce, 86th and 87th Cong. (1959-62), at 657.
228. Id.
229. 259 F. Supp. 745 (E.D.N.Y. 1966).
230. Griggs v. Allegheny County, 369 U.S. 84 (1962).
231. 38 Fed. Reg. 2712.
232. 2 Cal. App. 3d 318, 82 Cal. Rptr. 578 (1969).
233. Bresnahan, R. J., Letter to Orange County Board of Supervisors, Subject: Report on Implementation of the Adopted Noise Regulations for California (District 5), County of Orange, Jan 26, 1973.
234. Resolution 7467, Board of Commissioners, Los Angeles International Airport (Dec. 20, 1972).
235. Id.
236. See, e.g., Greater Westchester Homeowners Association, Inc. v. City of Los Angeles, 13 C.A.3d 523, 91 Cal. Rptr. 720, 11 Av. Cas. 17,923 (2d Dist. 1970); Inglewood Residents' Protective Association v. City of Los Angeles, 11 Av. Cas. 17,696 (Cal. Super. Ct. 1970).
237. See, e.g., City of Inglewood v. City of Los Angeles, 451 F.2d 948, 11 Av. Cas. 18,413 (9th Cir. 1971).
238. State of New York v. Port of New York Authority, et al. (pending N.Y. Sup. Ct., Nassau County).

239. Township of Hanover v. Town of Morristown, Av. Cas. 17,436 (N.J. Super Ct., Morris County, 1969).
240. S. Rep. No. 1353, 90th Cong. 2d Sess. (1968), U.S. Code Cong. and Admin. News, 90th Cong., ad. Sess. (1968) at 2693-4.
241. Id.
242. See, e.g., Swetland v. Curtiss Airport Corp., 55 F.2d 201 (6th Cir. 1932); Atkinson v. City of Dallas, 353 S.W. 2d 275 (Tex. Civ. App. 1961), cert. denied 370 U.S. 939 (1962).
243. See, e.g., United States v. City of New Haven, 447 F.2d 972, 11 Av. Cas. 18,324 (2d Cir. 1971).
244. Supra n. 239.
245. See, e.g., Batten v. United States, 306 F.2d 580 (10th Cir. 1962), cert. denied, 371 U.S. 955 (1963); Leavell v. United States, 234 F. Supp. 734 (E.D.S.C. 1964). In Town of East Haven v. Eastern Airlines, Inc., 331 F. Supp. 16 (D. Conn. 1971), aff'd 479 F.2d 148 (2d Cir. 1972), petition for cert. filed, 41 U.S.L.W. 3464 (Feb. 16, 1973), the Court permitted recovery for flights which, though they may not have been directly over plaintiff's properties, were very nearly so.
246. See e.g., Thornburg v. Port of Portland, 233 Ore. 178, 376 P. 2d 100, 8 Av. Cas. 17, 281 (1962); City of Jacksonville v. Schumann, 167 So. 2d 95 (Dist. Ct. App. Fla. 1964).
247. 11 Av. Cas. 17, 642 (Cal. Super. Ct., Los Angeles County, 1970).
248. Id. at 652.
249. 6 Cal. 3d 920 (1972).
250. The Nestle case is presently pending.
251. A 1973 report of the President's Aviation Advisory Commission, after a two-year study of the problems of civil aviation in the United States, concluded that aircraft noise is "the most explosive problem facing aviation today" and stated that attempts by government agencies and the aviation industry to reduce aircraft noise "are insufficient to win public acceptance." Noise Control Reports, Vol. 2, No. 1, page 4 (January 8, 1973).
252. Pub. L. 92-574, § 7(b), 86 U.S. Stat. 1241, amending 49 U.S.C.A. § 4331.

253. Compare Pub. L. 90-411, § 1[§611(b)] with Pub. L. 92-574, § 7(b) (§611(d)).
254. Pub. L. 90-411[§ 611(a)] (emphasis added).
255. Pub. L. 92-574, § 7(b) 611(b) (emphasis added). In addition to the substitution of "public health and welfare" for "unnecessary noise" in the new 611(b) (1), the old 611(c) language regarding National Transportation Safety Board modification and reversal of FAA noise enforcement actions was amended. Under the 1968 Act, the Board was required to find that control and abatement of aircraft noise and the "public interest" did not require affirmation before it could alter the FAA order [old 611(c)]. In the 1972 Act, "public interest" was changed to "public health and welfare" [new 611(e)] underscoring the amendments made in the new 611(b) (1).
256. Hearings on S. 1016, S. 3342 and H. R. 11021 before the Subcommittee on Air and Water Pollution of the Senate Committee on Public Works, 92d. Cong., 2d Sess., at 419 (April 12, 1972) [hereinafter cited as Senate Hearings].
257. Pub. L. 90-411, § 1[611(b) (4)].
258. See, e.g., 34 Fed. Reg. 18355-68 (Adoption of Noise Type Certification & Procedures).
259. Operations Research Analysis of Aircraft Noise Abatement; Phase I; Development of Methodology, "Final Report, IITRI Project No. J 8083 (June 1968) (jointly funded by ATA and AIA). The report included computer software for analyzing the cost-effectiveness of various solution combinations, verified by application of the methodology to situations at several existing airports.
260. Three task group members, involved in developing the study, verified the FAA's rejection of the ATA-AIA offer.
261. Bolt Beranek & Newman, Procedures for Developing Noise Exposure Forecast Areas for Aircraft Flight Operations, Rep. No. AD 660 705 (1967).
262. See, Galloway & Bishop, Noise Exposure Forecasts: Evolution Evaluation, Extensions, and Land Use Interpretations, Rep. No. 70-9 (1970).
263. The NEF procedure is not definitively accurate for all purposes, but does provide the best description of noise exposure and impact yet known.
264. A description of the ASDS method can be found in the report of Task Group 5.
265. Memorandum from Henning Von Gierke, Director, Biodynamics and Bionics Division, U.S.A.F., 6570th Aerospace Medical Research Lab.

266. See, e.g., FAA Docket No. 10664, Civil Airplane Noise Reduction Retrofit Requirements, R. M. Marrazzo, EPA, Aug. 30, 1972; R. W. Simpson and A. P. Hays, A Proposed System for Aviation Noise Measurement and Control, FTL Report No. R73-2 (Jan. 1973); Letter from Alvin F. Meyer, Director, EPA ONAC to Richard P. Skully, Director, FAA Office of Environmental Quality, Sept. 13, 1972.
267. Hearings on H. R. 5275, H. R. 923, H. R. 3364, H. R. 6002, H. R. 9686, and H. R. 6988 before the Subcommittee on Public Health and Environment of the House Committee on Interstate and Foreign Commerce, 92d Cong., 1st Sess., at 485 (June 24, 1971).
268. Pub. L. 92-574, § 7 (b) (§611).
269. Pub. L. 92-574, § 7 (b) (§611)(c)(1), 86 Stat. 1240.
270. Pub. L. 92-574, § 7 (b) (§611)(c)(2), 86 Stat. 1240.
271. The Federal Department of Transportation operates an office of Noise Abatement separate from and in addition to the FAA's noise control staff.
272. The following is a detailed breakdown for Fiscal Year 1972 of the budget resources and personnel of the various agencies committed to noise control research and regulatory efforts:

Agency	Program	Budget	Personnel
National Aeronautics & Space Administration	Research in aircraft noise source reduction, noise propagation, effects on receptors, mitigation & approach procedures	Contract Research: \$12.8 million In House Research Equipment: \$5.4 million Research Personnel & Management: \$7 million (\$25,600,000)	(564)
Department of Defense*	Research in biomedical effects of noise & noise exposure forecasting	\$254,000	
	Research in aircraft noise abatement technology	\$602,000	
Department of Transportation	Measurement & Simulation of Community Noise Levels (Aircraft & Highways)	\$900,000	(9)
Federal Aviation Administration	Aircraft Noise Suppression & Sonic Boom Control Research	\$3,150,000 (\$3,747,000)	(9) in Aircraft Noise Abatement (9) in Office of Env. Quality
Health, Education, & Welfare	Occupational Health & Safety Research	\$400,000	
	National Institute of Health (physiological and speech interference effects of noise)	\$1,000,000	
Housing & Urban Development	Urban noise surveys, site exposure measurement techniques	\$500,000	

*Other than hearing conservation programs of U. S. Army and Airforce, and Army Weapons Systems Research, Source: U. S. Environmental Protection Agency, Office of Noise Abatement and Control, Summary of Noise Programs in the Federal Government, RTID 300-10 (Dec. 31, 1971).

Numbers in parentheses indicate funding and personnel for fiscal year 72-74, Source: EPA Interagency Survey, Winter 1972-73.

273. IANAP was formed by Executive Order, and included representatives of DOD, DOT, FAA, HUD, HEW, EPA and private industry.
274. 42 U.S.C. § 1857h-6 (§309 of the Clean Air Act Amendments of 1970).
275. 42 U.S.C. § 1858 (§402(c) of the Clean Air Act Amendments of 1970).
276. Pub. L. 92-574, § 4, 86 U.S. Stat.
277. U.S.C. §§551 et seq.
278. Environmental Defense Fund, Inc., Petition Under the Federal Aviation Act Requesting the Immediate Promulgation of the Environmental Standards that will Govern the Certification of the Supersonic Transport, FAA Docket No. 10357 (May 25, 1970). The petition argued that the FAA was obliged to issue such standards in accordance with the National Environmental Policy Act, 42 U.S.C.A. §§4331 et seq. (1970 Supp.) and the Federal Aviation Act, 49 U.S.C. § 1431 (Supp. IV, 1969) [1968 version of § 611].
279. 35 Fed. Reg. 12555 (Aug. 6, 1970).
280. See, Washington/Baltimore Helicopter Service Investigation, CAB Order 68-11-71 (Nov. 18, 1968) aff'd sub nom. Palisades Citizens Association v. CAB, 420 F.2d 188 (D.C. Cir. 1969).
281. 35 Fed. Reg. 16980 (1970).
282. N. Y. Times, Oct. 12, 1971, § 1, at 1, Col. 6, and 85, Col. 5.
283. Pub. L. 92-574, § 4, 86 Stat. 1235.
284. The Massachusetts Port Authority, Proprietor of Logan Int'l Airport, Boston, Massachusetts.
285. 35. Fed. Reg. 16980 (1970)
286. N. Y. Times, Oct. 12, 1971, § 1, at 1, col. 6, and 85, col. 5.
287. N. Y. Times, Oct. 14, 1971, § 1, at 89, col. 5.
288. 38 Fed. Reg. 2769 (Jan. 30, 1973).
289. See Text at n. 278, supra.
290. 35 Fed. Reg. 12555 (Aug. 6, 1970).

291. Estimated Schedule of Rulemaking" in FAA, Noise Abatement-Technology, Public Law & Rules, FAA Noise Abatement Program (1970).
292. How the FAA perceives its mission and role is a subjective question we are unable to answer. The Federal Aviation Act, Pub. L. 85-726, assigns the FAA both primary responsibility for air transport safety regulation and a more general charge for "the promotion, encouragement and development of civil aeronautics," one of the more revealing statements on this subject was made by the FAA's Assistant General Counsel: "The Federal Role, furthermore, is oriented toward growth, even at some environmental cost." R. Danforth, Mercury's Children in the Urban Trap: Community Planning and Federal Regulations of the Jet Noise Source, 3 Urban Lawyer 206, 237 (1971).
293. Aviation Advisory Commission, The long Range Needs of Aviation (advance copy), at 37-38. Accord, FAA, National Aviation System Plan, 1971-1980, at 28 (March 1970).
294. Notice of Proposed Rulemaking, Noise Standards: Aircraft Type Certification, 34 Fed. Reg. 453, (January 11, 1969).
295. This position has been taken despite the duty imposed by the 1968 Act, Pub. L. 90-411, that the FAA establish noise standards for all Title VI certificates, which includes the airport certificate added by the 1970 Airport Airways Development Act.
296. Rohr Corp., Economic Impact of Implementing Acoustically Treated Nacelle and Duct Configurations Applicable to Low Bypass Turbofan Engines, prepared for the FAA Office of Noise Abatement (July 1970).
297. Statement of Honorable Secor D. Brown, Chairman, Civil Aeronautics Board, Hearings on Noise Control Act of 1971 and Amendment before the Subcommittee on Aviation of the Senate Committee on Commerce, 92nd Cong., 1st Sess. 800 (July 13, 1971), at pp. 800-802.
298. Letter from George V. Carneal, former FAA General Counsel to Elizabeth Cuadra, EPA Office of Noise Abatement & Control, May 3, 1973.
299. Public Hearing on Noise Abatement and Control, Vol IV - Standards & Measurement Methods legislation and Enforcement Problems, before the Environmental Protection Agency, 104 (Sept. 27-29, 1971) (Statement of Michael Berger, Attorney) (hereinafter cited as "EPA Hearing")
300. 34 Fed. Reg. 453,457 (Jan. 11, 1969).

301. Richard Danforth, *Mercury's Children In the Urban Trap: Community Planning and Federal Regulation of the Jet Noise Source*, 3 *Urban Lawyer* 206,215 (1971)
302. Telephone Interview with William Critchfield, Acting Airport Manager, Torrance, Calif., Municipal Airport by E. Cuadra, R. Randall, and R. T. Weston, May 13, 1973.
303. Telephone Interview with J. Brian Douglass, Airport Manager, Fullerton, Calif., Municipal Airport, by E. Cuadra, R. Randall and R. T. Weston, May 13, 1973.
304. Letter from Arvin O. Basnight, Director of FAA Western Regional Office, to Anthony Stiori, Mayor of Santa Monica, June 16, 1971.
305. 2 Cal. App. 3d 318 (1969).
306. Brief for FAA as Amicus Curiae at 2, 8, Burbank v. Lockheed Air Terminal, 318 F. Supp. 914 (1971), quoted in E.P.A. Hearings, 107.
307. EPA Hearings, at 107.
308. 34 Fed. Reg. 456, 458.
309. For a detailed discussion of the "noise floor" and FAA's reasons for abandoning this goal, see Lake, supra note 35 at 377-382.

Appendix A
MEMBERSHIP OF TASK GROUP 1

APPENDIX A

MEMBERSHIP OF TASK GROUP 1

<u>I. Members</u>	<u>Representing</u>
Ms. Elizabeth Cuadra (Chairperson)	Environmental Protection Agency
Mr. George Alderson	Friends of the Earth
Mr. David Bach	Environmental Protection Agency
Ms. Judy Campbell Bird	National Association of Counties
Mr. Wallace E. Brown	Department of Commerce
Mr. John E. Bryson	Natural Resources Defense Council, Inc.
Mr. Dick Danforth	Federal Aviation Administration
Mr. Clifford A. Deeds	Town-Village Aircraft Safety and Noise Abatement Committee (TVASNAC)
Mr. Dick Denney	Environmental Protection Agency
Mr. Charles H. Dudley	Department of State
Mr. Dick Dyer	National Association of State Aviation Officials
Dr. Marjorie W. Evans	Sierra Club
Ms. Ellen S. D. Flynn	Council of State Governments
Ms. Joan S. Gravatt	Department of State
Mr. Stanley J. Green	General Aviation Manufacturers Association
Mr. George Grumbach	Air Transport Association of America
Ms. Janet Gray Hayes	City of San Jose, California
Mr. John Hellegers	Environmental Defense Fund
Mr. Lloyd Hinton	National Organization to Insure a Sound-Controlled Environment (NOISE)
Mr. Steven Heineman	The Boeing Company
Mr. Steven Horowitz	Department of Housing & Urban Development
Mr. Dan Katz	Air Line Pilots Association
Mr. Craig W. Johnson	Natural Resources Defense Council, Inc.

I. Members

Mr. Daniel Joseph
Mr. George Lapham
Ms. Catherine Lerza
Mr. Joseph Lesser

Mr. Neil G. McBride
Mr. Ivars V. Mellups
Brig. Gen. Martin Menter
Mr. Charles Miller
Ms. Isobel Muirhead

Mr. John Namnack

Ms. Elizabeth Parker

Mr. Robert H. Rollins II

Mr. Seth Rosen
Mr. William Sanjour
Ms. Gail Schultz
Mr. George P. Smith
Mr. Larry Snowwhite

Mr. Robert J. Stowell
Mr. Lyman Tondel
Mr. Robert L. Tully
Mr. John M. Tyler

Mr. John E. Varnum
Mr. Geoffrey Vitt
Mr. R. Timothy Weston

Representing

Department of Transportation
Air Transport Association of America
Environmental Action, Inc.
Airport Operators Council
International
Aviation Consumer Action Project
Civil Aeronautics Board

Aircraft Owners & Pilots Association
Airport Operators Council
International
National Association of State
Aviation Officials
National League of Cities and U. S.
Conference of Mayors
National Aeronautics and Space
Administration
Air Line Pilots Association
Environmental Protection Agency
American Institute of Planners
Environmental Protection Agency
National League of Cities and U. S.
Conference of Mayors
The Boeing Company
Air Transport Association of America
Air Line Pilots Association
National Organization to Insure a
Sound-Controlled Environment
(N. O. I. S. E.)
Department of Justice
Environmental Defense Fund
Council of State Governments

II. Other Participants (EPA Consultants and Contractors)

Ms. Betsy Amin-Arsala	George Washington University
Mr. Peter P. Back	Consultant in Economics
Mr. James M. Brown	George Washington University
Ms. Joan Gelber	George Washington University
Mr. Dorn McGrath	George Washington University
Mr. Louis B. Mayo	George Washington University
Mr. Robert E. O'Brien	Environmental Protection Agency
Mr. Robert L. Randall	Legal Consultant
Mr. Edward Studholme	George Washington University
Mr. Ernest Weiss	George Washington University

Note: The membership list includes all persons who attended one or more meetings as a member of the task group but does not include individuals serving as occasional alternate of their organization's usual representative.

Appendix B

FORMAL RECOMMENDATIONS BY
TASK GROUP MEMBER ORGANIZATIONS

APPENDIX B

FORMAL POSITIONS OF TASK GROUP
MEMBER ORGANIZATIONS

The following documents are the collected recommendations* of the Task Group 1 member organizations which responded to EPA's invitation to submit final position papers, for the record, following their review of the June 1 draft reports of all six task groups.

The following member organizations submitted final position papers or indicated that their previous position papers were to be inserted in this final report:

- Aviation Consumers Action Project
- American Institute of Planners
- Air Line Pilots Association
- Airport Operators Council International
- Aircraft Owners and Pilots Association
- Air Transport Association
- City of San Jose (California)
- Council of State Governments
- Environmental Action
- Environmental Defense Fund
- Friends of the Earth
- General Aviation Manufacturers Association
- National Association of State Aviation Officials
- National Organization to Insure a Sound-Controlled Environment (N. O. I. S. E.)
- National League of Cities/U. S. Conference of Mayors
- Natural Resources Defense Council, Inc.

*Preliminary recommendations of member organizations were invited prior to the development of the June 1 draft report, and are available for review in the EPA master file for this study.

- Sierra Club
- Town-Village Aircraft Safety and Noise Abatement Committee (TVASNAC)
- U. S. Department of Housing and Urban Development
- U. S. Department of State

In addition to the position papers submitted by task group members, a number of other entities which reviewed the draft reports of the task group offered their recommendations for the record; they are included at the end of this appendix:

- City of Audubon Park, Kentucky
- City of Newport Beach, California
- City of South San Francisco
- Los Angeles Department of Airports
- Save Our Valley Action Committee (San Jose, California)
- City of Minneapolis
- Illinois Environmental Protection Agency
- City of College Park, Georgia
- City of Inglewood, California
- City of Alameda, California

All member organizations were instructed to make their position papers self-explanatory and to avoid reference to specific page numbers in the draft report, which would be superseded by this final report. In the few instances where this request was not complied with, the reader must refer to the June 1 draft, which is maintained in the EPA master file on the Aircraft/Airport Noise Study.

AMERICAN
INSTITUTE
OF PLANNERS

1776 Massachusetts Ave., NW
Washington, DC 20036
202/872-0611

27 June 1973

Mrs. Elizabeth Cuadra
11436 Waterview Cluster
Reston, Virginia 22090

Dear Liz:

In accordance with our telephone conversation of this morning, I am pleased to confirm that the following was the language I suggested in my presentation to the panel on last Thursday afternoon in the interest of sharpening Recommendation #2.2:

Community development legislation must be adjusted to:

- (1) Prohibit the granting of federal funds to localities for which no adequate plans have been made to assure protection of the airport environs against encroachment by incompatible land uses.
- (2) Discourage the construction of structures that cannot be sufficiently insulated against externally generated aircraft noise.
- (3) Provide land uses and physical buffers for the protection and preservation of existing established residential neighborhoods.

It is recognized that a combination of federal and state legislation will be necessary to accomplish the objectives of controlling the proliferation of incompatible land uses in noise exposure zones near airports. At the same time, it will be necessary to provide complementary constraints on aircraft operations, fleet mix, etc., to prevent expansion of noise exposure zones beyond airport boundaries into areas where noise-sensitive land usage obtains. Thus, the following additional language is recommended as a specific amendment to the Airport and Airway Development Act of 1970:

- (1) Federal approval of development plans and projects undertaken to increase air traffic capacity at existing airports, including runway extension, reinforcement and improvement projects, should be made contingent upon:

TG 1/183

Executive Director:
John R. Joyner

President:
Dorn C. McGrath, Jr.
1st Vice President:
Robert C. Einswailur
2nd Vice President:
Robert D. Brown

Governors:
James A. Barnes
William S. Donmur
Paul Davidoff
Diana C. Dunald

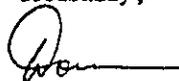
Leon S. Eplan
Victor Fischer
Maxine Kurtz
Constance Lieder
R. Joyce Whitley

- a. findings by local or area-wide planning agencies that the effect of each plan or project will not result in the enlargement of current noise exposure forecast zones of 30 NEF or greater that may extend beyond the airport boundaries.
 - b. establishment by state and local government of appropriate controls to prevent, for a specified period of time related to quiet-engine program efforts, the use of land within the zone of NEF 30 associated with each airport for housing and related noise sensitive purposes.
- (2) Provision of assistance to neighboring jurisdictions which may not fall within the definition of an airport development sponsor (see: Airport and Airway Development Act of 1970, sec. 1b(c)(1)) so that coordination may be achieved with programs, such as open-space acquisition, which may permit a more rapid achievement of the land conversion objective.

Also enclosed is a copy of the "bare bones" outline of my presentation before your task force meeting. I will be glad to straighten out any questions that may arise as the contents of the tapes taken at the meeting are transcribed. As I am sure you are aware, I elaborated considerably on the basic outline which was prepared for my presentation.

As I indicated to you, I am sure that AIP will be following through in support of appropriate legislation to secure effective noise abatement controls through the medium of land use planning and related development controls. I am looking forward to the final report of your task force.

Cordially,



Dorn C. McGrath, Jr.

DCM/ls

Enclosure

CC: John Joyner



June 21, 1973

AMERICAN
INSTITUTE
OF PLANNERS

1776 Massachusetts Ave., NW
Washington, DC 20036
202/872-0611

Recommendations

on

Legal and Institutional Analysis of Aircraft and Airport
Noise and Apportionment of Authority Between Federal, State
and Local Governments

for

Environmental Protection Agency
Aircraft/Airport Noise Report Study

by the

American Institute of Planners

1. Comprehensive Planning and Noise Abatement

The abatement of noise must be an integral part of the comprehensive planning/decision making process at all levels of government. Physical/environmental, social and economic factors, which affect the quality of life, must be placed in a comprehensive planning context to insure equal consideration in making trade-offs and achieving balance/unified development.

2. Government's Responsibility for Comprehensive Planning

Comprehensive planning must be a function of units of general purpose governments in contrast to single purpose or functional agencies or commissions.

Comprehensive planning related to airport environs should be the responsibility of the highest level of general purpose government which has governmental authority over the geographic impact area of the airport. This may be at the city, county, state or federal level.

3. Federal Responsibility

- A. The Federal Government Must Accept Full Responsibility for Major Airport Development including identifying a network of airports essential to the national system and assuming responsibility for their functions, including responsibility for developing and preserving adequate buffer zones against aircraft noise in exist-

T61/183

ing communities.

- B. Federal approval of development plans and projects undertaken to increase air traffic capacity at existing airports, including runway extension, reinforcement, and improvement projects, should be made contingent upon:
 - (1) findings by local or areawide planning agencies that the effect of each plan or project will not result in the enlargement of current noise exposure forecast zones or 30 NEF or greater that may extend beyond the airport boundaries.
 - (2) establishment by state and local government of appropriate controls to prevent, for a specified period or time related to quiet-engine program efforts, the use of land within the zone of NEF 30 associated with each airport for housing and related noise sensitive purposes.
- C. Provision of assistance to neighboring jurisdictions which may not fall within the definition of an airport development sponsor (see: Airport and Airway Development Act of 1970, Sec. 10(c)(1) so that coordination may be achieved with programs, such as open-space acquisition, which may permit a more rapid achievement of the land conversion objective.
- D. Community development legislation must be adjusted to:
 - (1) Prohibit the granting of federal funds to localities for which no adequate plans have been made to assure protection of the airport environs against encroachment by incompatible land uses.
 - (2) Discourage the construction of structures that cannot be sufficiently insulated against externally generated aircraft noise.
 - (3) Provide land uses and physical buffers for the protection and preservation of existing established residential neighborhoods.

4. Local Responsibility

- A. In addition to establishing a system of planning coordination and development control for government agency reviewing of airport environs planning, it is considered necessary to raise the level of public understanding of risks inherent in developing residential properties in noise-exposed areas.

- (1) Localities must be required through application of the A-95 review process, the Comprehensive Planning Assistance Program (Sec. 701 Housing Act of 1954) and the Environmental Policy Act of 1969 to publish noise exposure information.
- (2) Noise-exposure information should be made a matter of public record each time a building permit is granted for an activity with noise-sensitive characteristics and upon approval of each change in zoning or subdivision request that would permit the development of housing or other noise-sensitive use in airport environs. Such information should be made available both by mapping periodically noise-exposure contours for each airport in question and by issuing to purchasers of property in zones affected a statement of the noise-exposure of the property purchased or leased.

B. New community development, especially for housing and schools, in areas of projected noise exposure should be deferred until current research on engines gives real promise of quieter planes. It is always easier to rezone to increase population density, and to build schools, hospitals and houses after the noise climate has been tested, than to remove people who object to noise, to pay them damages, or to insulate their homes to remedy the problem.

c. Noise Abatement - Technology vs. Comprehensive Planning

Technological change providing for elimination of noise at the source has been an elusive hope for airport operators frustrated by years of aggravating local land use decisions and adverse publicity about noise. In fact, it seems doubtful that technological innovation can be relied upon to eliminate the noise impact of aircraft. It is certain that advancing technology is producing quieter aircraft, but considering a national system of airports and growing freight and passenger traffic volumes, elimination of noise impact on residential or noise sensitive areas is almost certainly far in the future. Regulations which place deadlines for the retirement of noisy aircraft will challenge the survival of businesses which depend on the use of second-hand aircraft. Military use of very noisy aircraft has yet to be seriously questioned. Quiet engine research by NASA is unlikely to lead soon to the production of new engines and the crescendo of complaints about noise is rising geometrically year after year.

To wait for technological advances to resolve the problem of airport noise impact is to accept an illusory solution. The proponents of the SST continue to press for a chance to produce and use the aircraft which is entirely unacceptable

on the basis of sub-sonic noise, and if these pressures prevail, it will be hard to imagine elimination of noise impact in the near future. Airport operators will have to press for other means of obtaining relief, and, fortunately they exist.

Therefore, AIP recommends that comprehensive planning which includes land use considerations be a principal tool for environmental noise abatement and control. The insulating effect of sheer distance from sources of high noise output is the most reliable protection for the majority of people in urban areas against the intrusion of noise from powerful sources such as jet aircraft and vehicles moving at high speeds on expressways.



AIR LINE PILOTS ASSOCIATION

1625 MASSACHUSETTS AVENUE, N.W. □ WASHINGTON, D.C. 20036 □ (202) 797-4000

July 2, 1973

Ms. Elizabeth Cuadra, Chairwoman
Task Group I, Aircraft/Airport Noise Study
Environmental Protection Agency
1921 Jefferson Davis Highway
Arlington, Virginia

Dear Ms. Cuadra:

This letter constitutes the Association's formal comments upon the final draft of the report of Task Group I. We trust that it will be appended to the report of the Task Group as a statement of ALPA's position.

Since this will be our last chance to comment on the record, we would like, first, publicly to commend our Chairwoman for her hard work, conscientiousness, and professionalism. We would also like to express our gratitude for the opportunity to participate in this study. The ideal of full participation in governmental decision-making by all interested persons is an eminently worthy one. And, the closer we come to realizing this ideal, the better government will work for everyone. In the area of aircraft noise abatement, especially, it is quite easy for those without special technical expertise to offer easy solutions to complex and difficult problems. We congratulate the Task Group for largely avoiding this pitfall, and for substantially avoiding the technical dilemmas which lay beyond the legal and institutional focus of the problems we have been studying.

An example of the Task Group's realization of its appropriate functions is the action taken as a result of meetings held on May 18 and 19, 1973 regarding methods of enforcing noise abatement procedures. The draft proposal under discussion at that time gave the impression to some that airport proprietors would be free to formulate and enforce noise abatement regulations largely on their own. The resulting confusion, particularly for pilots, in attempting to comply with the variety of regulations and enforcement techniques which would have proliferated under such a decentralized plan would have been drastic. When the real dangers of a fragmented enforcement policy came to light at the May 18 and 19 discussion sessions, uniform federal-level enforcement was recommended by the overwhelming majority of those present for inclusion in the final report of Task Group I.

To a limited extent, however, the final report remains burdened with the same difficulty. The report suggests, for example, at pages 1-5-34 to 1-5-35, a potential alternative of turning

July 2, 1973

the federal government's enforcement authority over to state and local officials for concurrent implementation. This approach was vigorously rejected by all, or nearly all, of those in attendance at the May 18 and 19th sessions.

In the same way, the proposal in the final printed draft that airport operators be empowered to select from among many takeoff, approach and landing procedures, even with FAA approval, may produce such confusion as to constitute a threat both to the effectiveness of this nation's noise abatement program and to the continuing safety of flight operations. These recommendations, set out at page 1-6-4 and page 1-6-11, must be reconsidered. The flight crew members represented by ALPA are already on record in support of an effective noise abatement program. Much of the present reduction in the level of noise pollution has been achieved by our efforts. But, at this point, turning an important part of the national noise abatement program over to airport owners is hardly the answer. If noise abatement procedures are to be effective, they must be established at a national level and enforced at a national level. Criteria 1 and 2 of the report recognize the importance of these considerations. It is patently inconsistent with these goals to provide the local airport proprietors with any final say in determining appropriate noise abatement procedures and then to arm the local operator with enforcement powers.

Most importantly, a fragmented, decentralized approach, such as that recommended in the Task Group I Report, would have a grave effect upon safety. As Captain Rockwell observed at the final public Task Group meeting on June 21, "Safety requires a high degree of standardization and this cannot be accomplished by an endless number of different procedures." If a takeoff or landing procedure is both safe and effective, ALPA urges its uniform application throughout the country. We do not wish to sacrifice the effectiveness of a noise abatement program merely to the whim of some local airport owner.

Sincerely,



J. J. O'Donnell, President

JJO'D:es



July 2, 1973

Mr. John C. Schettino, Director
Aircraft/Airport Noise Report Study
Environmental Protection Agency
Room 1107
1921 Jefferson Davis Highway
Crystal Mall Building, No. 2
Arlington, Virginia

Dear Mr. Schettino:

In accordance with your instructions, by letter dated June 25, 1973, the Airport Operators Council International (AOCI) hereby submits its position paper on the Aircraft/Airport Noise Report Study conducted by the Environmental Protection Agency pursuant to the Noise Control Act of 1972.

We appreciate the opportunity to comment on the Study and wish to advise you that AOCI's General Board of Director's concur in the views set forth in the position paper.

It is requested that the contents of the AOCI position be included in Appendix B, Report of Task Group I, in place of material submitted on May 3, 1973.

Sincerely,

J. Donald Reilly
Executive Vice President

6 JUL 1973

INTRODUCTION

The thrust of Task Group 1's recommendations for resolution of the aircraft noise problem centers on the certification of airports for noise. Recommendation 1 urges:

That the Federal government promulgate, administer and enforce an airport noise regulation, designed to limit the cumulative noise exposure received in residential communities.

This recommendation of Task Group 1 is virtually identical with proposed legislation rejected by the Senate Committee on Public Works in the course of considering the 1972 Noise Control legislation. (See Committee print No. 6, of S. 3342, Noise Pollution Control Act of 1972, Title V, copy of which is attached hereto as Exhibit A and Sen. Rep. No. 92-1160 92nd Cong. 2d Sess. pp. 10 1972).

The recommendation presumes that §611 of the Federal Aviation Act of 1958 as amended by the Noise Control Act of 1972 empowers the Administrator of the FAA to determine the level of noise permissible in residential areas based upon standards recommended by the EPA to protect the public health and welfare, and to mandate compliance with that level on the part of the aviation community (airlines and airports) even though compliance therewith is not achievable through technology. Thus, Task Group 1 acknowledges that achievement and maintenance of cumulative

noise exposure levels around airports will not only require action "to make aircraft inherently quieter and to have them fly as quietly as possible" but also action

"to modify the total operating plan of the airport so as to minimize the extent of the airport noise impacted zone and tailor it to the shape of existing noise sensitive land uses" and

"to prevent construction of new housing or noise sensitive land uses in present and future noise impacted zones and, where necessary, resolve by land use conversion those few impacted areas where the noise exposure cannot be adequately decreased by other means."

Modification of the airport operating plan includes restricting air commerce. The proposed airport noise regulation is to be administered through the FAA's certification power under §611 of the Federal Aviation Act of 1958. The Report further recommends that compliance with the airport noise regulation be made a condition for award of Federal grants to the airport.

We respectfully submit that the proposed airport noise regulation is (1) unauthorized, (2) contrary to existing Federal policy concerning the achievement of compatible land use around airports to aid in the solution of the noise problem, (3) unresponsive to the Congressional requirements contained in § 7 (a) (3) of the Noise Control Act of 1972 which mandates EPA

"to conduct a study of the implications of identifying and achieving levels of cumulative noise exposure around

airports"

and (4) a blatant attempt to accomplish by administrative fiat a scheme specifically rejected by the Senate when it considered that very same Noise Control Act.

1. The Noise Control Act of 1972

The 1972 amendment to §611 cannot be construed as authorization for the FAA to solve the noise problem through regulatory action which would include a mandate to airport operators to achieve compatible land use around airports as a price for maintaining the degree of air commerce necessary to meet the needs of the area served by that facility. The language of §611 demonstrates that the FAA regulations promulgated pursuant to the authority of that section are limited to (1) noise emission standards achievable within the limits of technology and (2) if §307 of the Federal Aviation Act is to be read into §611, additional measures available to the FAA in managing the nation's navigable airspace.

The standards set forth in §611(d)(4) relating to the issuance and amendment of certificates fortify this conclusion. Thus, in prescribing and amending standards under §611, the FAA is required to:

"consider whether any proposed standard or regulation is economically reasonable, technologically practicable and appropriate for the particular type of aircraft, aircraft engine, appliance or certificate to which it would apply." (§611(d)(4)).

The limited scope of the standards set forth above - technology and the economics of technology - indicates that Congress never intended to give the FAA the power to set noise emission standards, the achievement of which would involve decisions on important policy matters. Obviously, decisions to compel land use conversion under penalty of loss of air traffic are major policy determinations which Congress has not delegated to the FAA but has reserved to itself. Indeed the difficulty in drafting legislation which would contain satisfactory standards for the FAA to follow, in the event Congress decided to delegate these important matters to the FAA, is illustrated by the fact that the Senate Committee on Public Works was unable to determine "the precise regulatory mechanism to accomplish the cumulative noise exposure concept" and therefore included in the Senate Bill, in the place of any regulatory scheme dealing with community noise around airports, a one year study by the EPA of the implications of identifying and achieving levels of cumulative noise exposure around airports. See Section 7(a)(3)

of the Noise Control Act.

This interpretation of §611 is completely in accord with the plain language of the companion sections (§17(a)(1) and §18(a)(1)) of the Noise Control Act of 1972 which authorize the EPA to promulgate standards for noise emissions for the operation of rail and motor carriers. Those sections specifically limit EPA action in this field to the promulgation of standards:

"which reflect the degree of noise reduction achievable through the application of the best available technology taking into account the cost of compliance." §17(a)(1), §18(a)(1)).

This limited Federal involvement in noise control is based in part upon the reluctance of the Federal Government to regulate land use, an area traditionally reserved for State and local concern. The House Committee on Interstate and Foreign Commerce so indicated in explaining why it rejected a proposal to include an ambient noise standard in the 1972 Noise Control Act:

"Establishment of a Federal ambient noise standard would in effect, put the Federal government in the position of establishing land use zoning requirements on the basis of noise -- i.e., noise levels to be permitted in residential areas, in business areas for different times of the day or night. It is the Committee's view that this function is one more properly that of the States and their political subdivisions, and that the Federal Government should provide guidance and leadership to the States in undertaking this effort. (H. Rep.No. 92-342, 92nd Cong. 2d Sess. p. 9 (1972))."

The adoption of an aircraft cumulative noise exposure limit in residential communities would likewise put the FAA in the "position of establishing land use zoning requirements on the basis of noise" and, we submit, the 1972 amendment to §611 should not be interpreted as authorizing the FAA to take regulatory action which has the effect of superseding State and local police power over land use zoning in the vicinity of airports. The 1972 amendment certainly cannot be interpreted as authorizing the FAA to take regulatory action for the purpose of accomplishing an objective which a Congressional Committee has deemed inappropriate.1/

2. The Federal Policy on Compatible Land Use Around Airports.

The proposed airport noise regulation designed to limit the cumulative noise exposure received in residential areas is to be administered through the FAA's certification power. The Task Group's so-called "laundry list" of options to achieve the noise exposure limits are in the last analysis to be selected by the FAA with the airport operator being given only an advisory role. This is clear from the fact that if an airport proprietor fails to propose an implementation plan, an implementation plan will be

imposed at the federal level. We submit that any federally imposed implementation plan cannot contain a requirement that the noise level be achieved through the development of compatible land use within the airport noise impact zone either through zoning or land use conversion. Such a requirement would be completely contrary to existing federal policy concerning the achievement of compatible land use around existing airports.

The Federal policy limiting the role of the FAA in achieving compatible land use around airports for noise purposes is set forth in the Airport and Airways Development Act of 1970. That Act requires an airport as a condition for receipt of Federal aid to do nothing more than give assurances that

"appropriate activities, including the adoption of zoning laws, has been or will be taken, to the extent reasonable, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft..." (49 U.S.C. § 1718(4)).

The above section of the 1970 act was taken from a 1964 amendment to the Federal Airport Act of 1946. The Report of the Committee on Interstate and Foreign Commerce of the House of Representatives on that 1964 legislation explained that this amendment should not be construed to require airport operators to

purchase land. It stated:

"The committee realizes that all sponsors of airport projects do not have zoning authority and this provision is not intended to require that airport sponsors undertake action which is neither possible nor practical, such as requiring a sponsor to purchase land adjacent to an airport where the sponsor cannot control its use by zoning." H.R. Rep. No. 1002, 88 Cong. 1st Sess. 6 (1963).

The Report further points out that:

"The committee does recognize, however, that airport sponsors are public agencies with a voice in the affairs of the community in which the airport development is undertaken and should be required to use such influence as they might have in a reasonable manner to assure proper zoning of land near the airport, to assure that schools are not built in the flight path of aircraft taking off or landing at the airport, and to discourage the development of residential housing (including apartments) in areas where noise levels would make such development unwise. The committee feels that such use of the influence of a sponsor would constitute "appropriate action" within the meaning of this amendment and that the Federal Government should insist upon an acknowledgment that the compatible use of land near airports is a responsibility which must be assumed by local agencies." Id.

The Report of the Senate Committee on Commerce on this legislation also addressed itself to the zoning provision. It stated that a major reason for the adoption of the amendment was "the growing seriousness of the aircraft noise problem." The Senate Committee went to the trouble of spelling out in its

Report the factors that the Agency was to consider in administering this provision. It stated:

***the Committee wishes to impress upon the Agency that the policy underlying this provision is to encourage and, equally important, assist the local communities in their efforts to achieve effective zoning and land use." S. Rep. No. 446, 88 Cong. 1st Sess. 23 (1963).

The Report went on to point out that

***The Federal Government has a legitimate interest in encouraging appropriate land use in order to protect its investment in airports through the Federal airport program."

The Committee cautioned however, that

"...primary initiative should rest with the local governments, and the Federal Government's approach should be one of cooperation and assistance and not one of preemption or dictation." (Emphasis added Id.)

The section of the Senate Report on the zoning amendment concluded by advising that

"In interpreting the language 'appropriate action***to the extent reasonable,' the Agency should take into consideration all relevant factors including those involving economic, social, safety, and multiple jurisdiction considerations." Id.

The legislative history of the 1964 zoning amendment clarifies beyond doubt that any airport noise regulation cannot contain a requirement that the requisite noise levels be achieved through either zoning or land use conversion.

The 1964 amendment to the Federal Airport Act of 1946 became a part of the Airport and Airways Act of 1970. That Act contains other provisions dealing with environmental quality, especially where major airport expansion is concerned. The legislative history of that Act also makes it clear that there must be an accommodation between the need for essential aviation facilities and the preservation of the environment. Thus, the Report of the House Committee on Interstate and Foreign Commerce states:

"In the expansion and improvement of the Nation's airport and airway system, a special effort must be made to achieve compatibility with the quality of the environment. The development of essential aviation facilities is vitally important, but so, too, is the preservation of the Nation's natural resources. Some conflicts are inevitable, but with suitable care a sound balance can be achieved."

Finally, the Noise Control Act of 1972 cannot be construed as empowering the FAA to adopt an airport noise regulation totally at odds with the policy of the United States to provide

"a system of public airports adequate to anticipate and meet the needs of civil aeronautics, to meet the requirements in support of the national defense as determined by the Secretary of Defense, and to meet the special needs of the postal service." (49 U.S.C. §1712(a)).

It follows, therefore, that any airport noise regulation which would permit the FAA to achieve cumulative noise exposure levels around airports through the

"reduction of flight frequency on specific runways, during specific hours, or for an entire airport and/or the entire 24-hour day"

would be invalid.

The suggested regulation is not only invalid but is a typical mission-oriented measure which utterly fails to consider the havoc which would result from its enforcement at major noise-impacted airports. As the Senate Report on the Land Use Policy and Planning Assistance Act points out:2/

"--The land use planning, management, and regulation encouraged by S.268 should not be viewed as mission-oriented either in the narrow sense of fostering a specific set of activities or in the larger sense of pursuing exclusively the goal of economic development, the goal of environmental protection, or the goal of improving social services. Rather, land use decisionmaking should be considered as a means of weighing and balancing competing environmental, economic, and social requirements and values." (Senate Report 93-197, p. 44).

3. The Request for an EPA Study on the Implications of Identifying and Achieving Levels of Cumulative Noise Exposure Around Airports

AOCI's objection to the proposed airport noise regulation is based not only on the opinion that it is

unauthorized but also upon the belief that the recommendation is not responsive to Congress' request for information on the subject of cumulative noise levels around airports. A directive to conduct a one year study on the "implications of identifying and achieving levels of cumulative noise exposure around airports" appears in §7 of the Noise Control Act. The Senate Committee on Public Works advised that it needed such a study because it "had insufficient knowledge as to the precise regulatory mechanism for cumulative aircraft noise exposure." The purpose of the study was to provide the basis for possible legislation on this subject. The Committee Report stated:

****The Committee considered approaches to controlling aircraft noise based on a concept of cumulative noise exposure, involving the level of noise from aircraft to which individuals in the areas surrounding airports are exposed and the effects of such exposure on public health and welfare. While methods other than noise emission standards can be effectively utilized to reduce aircraft noise, the Committee felt that it had insufficient knowledge as to the precise regulatory mechanism for cumulative aircraft noise exposure. Therefore, the Committee included in the bill, in place of any regulatory scheme dealing with community noise around airports, a one year study by the EPA of the implications of identifying and achieving levels of cumulative noise exposures around airports. The results of this study, submitted to the Committees on Public Works and Commerce of the Senate and the Committee on Interstate and Foreign Commerce of the House with legislative recommendations, will form the basis for any legislation on aircraft noise in the next Congress."

(Senate Report No. 92-1160 p. 10)

However, instead of attempting to comply with Congress' request for information and legislative recommendations, the Report of Task Group 1 recommends that the FAA adopt a regulation which identifies and requires compliance with levels of cumulative noise exposure around airports. Indeed, the recommended regulation is virtually identical with proposed legislation (See Exhibit A attached hereto) rejected by the Senate Committee on Public Works in the course of considering the 1972 noise control legislation. AOCI cannot support such a blatant attempt to accomplish by administrative fiat, a scheme specifically rejected by Congress.

AOCI's failure to endorse the recommendation for an airport noise regulation should not and cannot be construed as an attempt to obstruct a meaningful solution to the aircraft noise problem. We view the suggested regulation as nothing more than a slick answer to a most pressing problem, an answer which amounts to nothing more than an ultimatum to our cities - move people away from airports or suffer the consequent loss of air service.

As Joseph Lesser said in oral remarks before the EPA meeting on June 22, 1973 (copy attached as Exhibit B), AOCI is

convinced that the ultimate solution, indeed the only solution is
noise reduction at the source.

1/Indeed, any attempt by the Federal government to zone for noise or for any other purpose may well be deemed unconstitutional. As was pointed out in the Report of the Senate Committees on Interior and Insular Affairs to accompany S. 268, the Land Use Policy and Planning Assistance Act, recently passed by the Senate:

"(1) The police power of the respective States is an inherent power of government to take such actions as are necessary and Constitutionally permissible to protect public health, safety and welfare.

(2) The power to plan for and to regulate land use derives from the police powers of the individual States.

(3) The Federal government has no police power to regulate lands within a State which are privately owned or owned by the State. Only the State has constitutional authority to control and regulate these lands." (Report No. 92-197, 93d Cong. 1st Sess. p. 60, (1973)).

2/S. 268 was recently passed by the Senate but has not yet been passed by the House.

EXHIBIT A

[COMMITTEE PRINT NO. 6]

June 14, 1972

NOISE POLLUTION CONTROL ACT
OF 1972
(S. 3342)

Printed for the Use of the Senate Committee on Public Works

1 out the provisions of, this section, \$1,000,000 for the fiscal
2 year ending June 30, 1972, and \$2,000,000 for each of the
3 two succeeding fiscal years.

4 “(h) The Administrator shall promulgate the procedures
5 required to implement this section within one hundred and
6 eighty days after the date of enactment of this section.

7 “AUTHORIZATION OF APPROPRIATIONS

8 “SEC. 420. There are authorized to be appropriated to
9 carry out this Act (other than sections 418 and 419) and
10 to carry out section 611 of the Federal Aviation Act, as
11 amended (49 U.S.C. 1431), \$6,000,000 for the fiscal year
12 ending June 30, 1973; \$12,000,000 for the fiscal year end-
13 ing June 30, 1974; and \$16,000,000 for the fiscal year end-
14 ing June 30, 1975.”

15 SEC. 3. The Clean Air Act is amended to add a new
16 title V as follows:

17 “TITLE V—INTERSTATE CARRIERS

18 “PART A—CONTROL AND ABATEMENT OF AIRCRAFT

19 NOISE AND SONIC BOOM

20 “SEC. 501. (a) In order to afford present and future re-
21 lief and provide protection to public health and welfare from
22 aircraft noise and sonic boom—

23 “(1) the Administrator of the Environmental Pro-
24 tection Agency shall prescribe such rules and regula-
25 tions as he may find necessary, based on criteria pub-

1 lished pursuant to section 407 of this Act, to establish
2 ambient levels of noise in the environment of airports
3 and surrounding areas affected by noise from aircraft
4 which are adequate to protect the public health and
5 welfare with an adequate margin of safety;

6 “(2) the Administrator of the Environmental Pro-
7 tection Agency, after consultation with the Secretary
8 of Transportation, shall prescribe and amend standards
9 for the measurement of aircraft noise and sonic boom;
10 and

11 “(3) the Administrator of the Environmental Pro-
12 tection Agency, after consultation with the Secretary
13 of Transportation, shall prescribe and amend regulations
14 with respect to noise emissions from aircraft and air-
15 craft engines in accordance with subsection (b) of this
16 section.

17 “(b) (1) Any regulations under this section, or amend-
18 ments thereto, with respect to noise emissions from types of
19 aircraft, shall reflect the degree of noise reduction achievable
20 through the application of the best available demonstrated
21 technology, taking into account the cost of compliance, and
22 shall be prescribed only after the determination of the Sec-
23 retary of Transportation as to whether, consistent with the
24 highest degree of safety in air commerce, any proposed stand-
25 ard, rule, or regulation has been demonstrated to be tech-

1 nologically available for application to types of aircraft,
2 aircraft engine, appliance, or certificate to which it will
3 apply.

4 “(2) Any regulation prescribed under this section (and
5 any revision thereof) shall take effect no later than one year
6 after the enactment of this title, or, in the case of standards
7 respecting the noise emissions from any type of existing
8 aircraft after such period as the Administrator finds neces-
9 sary (after consultation with the Secretary of Transporta-
10 tion) to permit the application of the requisite technology.

11 “(3) All standards, rules, and regulations prescribed
12 pursuant to section 611 of the Federal Aviation Act, as
13 amended, prior to the date of enactment of the Noise Pollution
14 Control Act of 1972 shall remain in effect until amended or
15 revoked by subsequent standards, rules, or regulations pre-
16 scribed and approved pursuant to this part.

17 “(c) Each Federal agency with regulatory authority
18 over air commerce, aircraft or airport operations, or aircraft
19 noise emissions, including the Civil Aeronautics Board, the
20 Secretary of Transportation, and the Environmental Protec-
21 tion Agency, shall exercise such regulatory authority so as
22 to attain the levels of noise for airport environments and sur-
23 rounding areas established under subsection (a) (1) of this
24 section.

25 “SEC. 502. (a) In order to attain and maintain the

1 ambient levels of noise for airport environments and sur-
2 rounding areas established under section 501 (a) (1) of this
3 Act, the operator of any airport where such ambient levels
4 are not presently attained shall develop and adopt a plan for
5 the achievement and maintenance of such ambient levels,
6 after public hearings and consultation with the Secretary
7 of Transportation and any affected State or political subdi-
8 vision thereof. Such plan may consider reductions in noise
9 emissions due to standards applicable to particular types of
10 aircraft, controls on the granting or acceptance of air serv-
11 ice, controls on the frequency and scheduling of flights, mod-
12 ifications of hours of airport operation, changes in operational
13 and flight procedures, and land use regulation. The operator
14 of any other airport, or any State or political subdivision
15 thereof affected by aircraft noise, may develop and adopt
16 such a plan with respect to an airport not covered by a
17 plan developed under the first sentence of this subsection.

18 “(b) (1) Any plan required by subsection (a) of this
19 section, shall be submitted to the Administrator of the
20 Environmental Protection Agency and the Secretary of
21 Transportation, within one hundred and eighty days after
22 the promulgation of regulations establishing ambient levels
23 of noise for airport environments and surrounding areas pur-
24 suant to section 501 (a) (1) of this Act.

25 “(2) Within ninety days after such submission, the
26 Secretary of Transportation shall transmit to the Adminis-

1 trator his determination as to the consistency of such plan
2 with air safety and air commerce, together with his recom-
3 mendation for approval or modification of such plan.

4 The Administrator shall review such plan to assure
5 attainment of maintenance of such ambient levels of noise
6 established under section 501 (a) (1) of this Act and, in
7 accordance with the recommendation of the Secretary of
8 Transportation, shall approve or modify such plan within
9 sixty days after such transmittal.

10 "(c) Where the implementation of an approved plan
11 under this section requires the promulgation or modification
12 of any regulations under the authority of the Secretary of
13 Transportation or the Civil Aeronautics Board, such regula-
14 tions shall be promulgated or modified within ninety days
15 after the approval of such plan under subsection (b) of this
16 section.

17 "SEC. 503. (a) The Secretary of Transportation, after
18 consultation with the Administrator, shall prescribe regula-
19 tions to insure compliance with all standards prescribed by
20 the Administrator under section 501 of this Act. The regu-
21 lations of the Secretary of Transportation shall include provi-
22 sions making such standards respecting noise emissions from
23 any type of aircraft applicable in the issuance, amendment,
24 modification, suspension, or revocation of any certificate au-
25 thorized by the Federal Aviation Act, as amended, or the
26 Department of Transportation Act, as amended. Such Secre-

1 tary shall insure that all necessary inspections are accom-
2 plished, and may execute any power or duty vested in him by
3 any other provision of law in the execution of all powers and
4 duties vested in him under this section.

5 " (b) In any action to amend, modify, suspend, or re-
6 voke a certificate in which violation of aircraft noise or sonic
7 boom standards, rules, or regulations applied to aircraft or
8 aircraft engines existing on the date of enactment of the
9 Noise Pollution Control Act of 1972, is at issue, the cer-
10 tificate holder shall have the same notice and appeal rights
11 as are contained in section 609 of the Federal Aviation Act,
12 as amended, except that in any appeal to the National
13 Transportation Safety Board, the Board may amend, modify,
14 or revoke the order of the Secretary of Transportation only
15 if it finds no violation of such standards, rules, or regulations,
16 and that such amendment, modification, or revocation by
17 the Board is consistent with safety in air transportation.

18 "SEC. 504. The Administrator of the Federal Aviation
19 Administration shall not issue a type certificate under section
20 603 (a) of the Federal Aviation Act, as amended, for any
21 aircraft, or for any aircraft engine, propeller, or appliance
22 that affects significantly the noise or sonic boom character-
23 istics of any aircraft, after July 1, 1973, unless standards,
24 rules, and regulations under this part which apply to such
25 aircraft, aircraft engine, propeller, or appliance have been
26 prescribed.

1 “SEC. 505. The Administrator of the Environmental
2 Protection Agency, within nine months of the date of enact-
3 ment of this Act, shall review all standards, rules, or regula-
4 tions (or any proposed standard, rule, or regulation in effect
5 under section 611 of the Federal Aviation Act, as amended,
6 prior to the date of enactment of this title. If he determines
7 after public hearings, that such standards, rules, or regula-
8 tions do not comply with section 501 (b) (1) of this Act,
9 within twelve months of the date of enactment of this title
10 he shall revise such standard, rule, or regulation in accord-
11 ance with his authority under this part.

12 “SEC. 506. No State or political subdivision thereof may
13 adopt or attempt to enforce any standard respecting noise
14 emissions from any aircraft or engine thereof unless such
15 standard is identical to a standard applicable to such aircraft
16 under this part.

17 “SEC. 507. Terms used in this part (other than Ad-
18 ministrator) shall have the same meaning as such terms have
19 under section 101 of the Federal Aviation Act of 1958, as
20 amended.

21 “CIVIL AIRCRAFT SONIC BOOM

22 “SEC. 508. (a) No person may operate a civil aircraft
23 over the territory of the United States, the territorial sea of
24 the United States, or the waters of the contiguous zone (as
25 defined under Article 24 of the Conservation of the Terri-

EXHIBIT B

I. The ultimate solution - in fact the only acceptable solution - is noise reduction at the source and rapid implementation of technological advances in the existing fleets of the commercial airlines. This was certainly Congress' objective in enacting the 1968 Noise Certification Amendment to the Federal Aviation Act of 1958. That objective still remains un-fulfilled.

But reduction at the source has not come because no realistic method of funding has been suggested. Task Group I merely states that Congress and the Executive Branch should give "high priority" to financing schemes. This is insufficient. Financing must be the sine qua non of a realistic approach to noise reduction at the source and such reduction is the only avenue by which the problem will be solved.

In fact a complete consensus was reached in Task Group I that the financing problem should be settled first before any solution can be implemented.

This should be said clearly at the outset.

II. Once noise is reduced at the source as far as it will go, we then come to the question of land use planning and on that Task Group I's report should be clear and explicit on the legal and institutional constraints that apply to land use planning.

Zoning: Nowhere does Task Group I state that zoning as a toll to achieve compatible land use in existing noise impacted

areas cannot realistically be implemented if for no other reason than the well-established non-conforming use doctrine. The present Chief Judge of the highest court of New York stated the almost universal rule as follows:

"Nonconforming uses of structures, in existence when a zoning ordinance is enacted, are, as a general rule, constitutionally protected and will be permitted to continue, notwithstanding the contrary provisions of the ordinance." People v. Miller, 304 N.Y. 105, 107 (1952)

The non-conforming use doctrine is in addition to the other reasons why AOCI advised Task Force Group I, in writing, that compatible land use zoning is no answer to the existing problem.

An additional basic difficulty with zoning is emphasized by a leading New Jersey Supreme Court decision invalidating a zoning ordinance which required the maintenance of specified distances between residences, on the one hand, and the conduct of quarrying operations on the other. The court said "we have a situation in which some property owners are required for the special benefit of another proprietor to absorb part of the burden of an industrial use of acknowledged capacity to harm." Kozenik v. Montgomery Township, 24 N.J. 154, 176 (1957). Of particular relevance is the court's further statement that:

"when a zoning ordinance is being prepared, and as here the potential nuisance is recognized unless the operation be isolated, the ordinance should require the quarry operator (substitute the words "airport operator") to provide the necessary buffer and not cast the burden on the neighboring owner." Ibid.

At best zoning might prove useful in the case of new airports if the airport zoning provisions fit into the comprehensive zoning plan for the particular political subdivision concerned. But for the existing noise problem, AOCI has felt that the chimera of zoning has long stood in the way of a realistic analysis of the aircraft noise problem. Task Group I should end the illusion here and now. As a recent Senate Report noted:

"* * *it is largely myth that State courts are all becoming more permissive concerning the imposition of even stricter zoning ordinances and other police power techniques to control land use. In fact, in recent years, many State courts have begun to construe more narrowly the threshold beyond which control over land under the rubric of the police power cannot go. Zoning and other land use controls are being subjected to close scrutiny and, recently being declared unconstitutional, over not only the question of whether they effectuate a 'taking' requiring compensation but also the question of whether they are exclusionary in violation of equal protection and due process rights." (p. 58, Sen. Rep. No. 93-197) LAND USE POLICY AND PLANNING ASSISTANCE ACT - REPORT OF THE COMMITTEE ON INTERIOR AND INSULAR AFFAIRS - UNITED STATES SENATE.

With zoning no answer to the existing problem, compatible land use in the vicinity of airports can mean nothing less than the acquisition of property, by purchase or condemnation, in noise impacted areas and the possible removal of people and/or soundproofing.

With this we come to the ultimate options:

1. restrict air commerce under Burbank neither the States, nor local government nor the airport proprietor

can restrict air commerce under the police power, that is, in the interests of the public health and welfare - thus the "laundry" list of options, set forth for the airport operator is in fact illusory under Burbank. If EPA decides that airport proprietors should possess this "laundry" list of options, then EPA will have to recommend and the Congress will have to adopt new legislation to overcome the restrictions laid down in Burbank. The airport proprietor's powers to abate noise are purely defensive - to avoid liability under Griggs.

Thus, under existing law if air commerce is to be restricted the Federal Government has to mandate it - or if the Federal Government chooses not to restrict air commerce, then

2. remove people and face up to the housing shortage.

"If we add the needs of the new households that will form in the Region over the coming decades, the needs for replacing hopelessly bad housing that cannot be rehabilitated, the need to replace housing lost by fire or demolition, and the need to have a less tight vacancy rate, we find that we should be building over 200,000 housing units in the Region each year. Independent studies by the Tri-State Regional Planning Commission, the official planning agency in the Region, and by Regional Plan Association, an unofficial group, agree on this figure. Compared to this need for the construction of 200,000 houses and apartments annually, our actual production has averaged slightly over 80,000 units a year over a recent six-year period, less than half of what is needed." (Emphasis in original). William A. Caldwell (Ed.), How to Save Urban America, (Signet Books (March, 1973), p. 16.)

As for removal -- even aside from the housing shortage, it is common knowledge that in recent years people have objected strenuously to being relocated for almost every conceivable public project, including even housing projects. There is no reason to assume that they would object less vehemently to being relocated for noise abatement purposes. Indeed, there is every reason to assume that they would object just as vehemently. For example, Congressman Roman C. Pucinski from the Chicago area, stated at hearing conducted by the Office of Noise Abatement and Control of the U.S. Environmental Protection Agency that:

"The second approach - moving the people away from the noise - is totally unacceptable." Public Hearings on Noise Abatement and Control, Vol. 2, p. 201 (July 28-29, 1971).

Similarly, the Director of the Minnesota Environmental Control Citizens Association stated the following at the same hearings:

"One solution that has been proposed at Los Angeles and which seems totally unacceptable as a means of alleviating noise is that of buying the homes and clearing out neighborhoods adjacent to the airport. What a total and utter waste of resources to spend millions of dollars on a plan that compounds rather than ameliorates the situation.

"In this case the homeowner in essence is being punished -- it is like asking the victim to pay for the crime.

"And even after spending vast sums to remove the most severely affected neighborhoods the problem will still be present in other [sic] surrounding the airport." Id. at 244.

Finally, the practically insurmountable political problems of moving people out of noise impacted areas can best be

illustrated by remarks made at the above hearings by Dr. Alvin F. Meyer, Jr., Deputy Assistant Administrator for Noise Programs, Environmental Protection Agency. Dr. Meyer had received the following telegram from the alderman in Des Plaines, Illinois:

"Deeply shocked at your public suggestion to destroy homes in the O'Hare areas; dismayed that you would urge action prior to conclusion of present hearings seeking solutions to aircraft noise. You should be protecting environment for people, not aircraft. Relocate aircraft rather than people.

"Please clarify your position prior to conclusion of Chicago hearings today." Id. at 202.

Dr. Meyer responded by stating:

"Reference your telegram as to O'Hare Airport, I am deeply shocked as you regarding any misrepresentation of my position on aircraft noise control.

"My view is that there are many possible solutions to the complex questions of control of the environmental problem. Among the possibilities are control of noise at the source, relocation of the source, placing more distance between sources and receivers, control of time of operation, reduction of number of operations and occurrences.

"In each case, what is ultimately done must be based on a judgment of economics, social need, and technological capability and progress for control expected."

Thus judgment, I submit, should be made, as a matter of policy by Congress and/or The State Legislatures. It should not be done on a matter of administrative fiat - even if it could be so accomplished which AOCI denies.

EPA is statutorily obligated to study and thereafter inform Congress concerning the "implication of identifying and

achieving levels of cumulative noise exposure around airports." Certainly, acquisition of property in, and the removal of people from, airport environs in order to avoid airport decertification and the consequent catastrophe that would follow the loss of air service for the region served by the decertified airport is a most important "implication" which the legislative branch of government should consider.

In addition under current federal law - the so-called Mushkie bill - in all federally aided projects people cannot be removed from their residences until adequate substitute dwellings are provided.

Has anyone considered whether adequate substitute housing is available or can be made available and if so, how will it be funded?

To recommend compatible land use - removing people - without determining whether substitute housing is available or how it will be financed borders on the irresponsible.

Finally, and perhaps most important of all, Congress and EPA should be advised clearly of the other legal constraints and other legal implications which will flow from any recommendations which might be made. These include:

1. Adoption of cumulative noise exposure levels under an airport certification regulation might well result in the reversal of the Griggs decision which placed financial responsibility for aircraft noise upon the airport proprietor

rather than the United States.

The Congress should be informed and informed frankly that this might well be a consequence of the adoption of a cumulative noise exposure level and airport certification.

From conversations with EPA attorneys this is their belief. Candor requires that Congress should be told that this consequence might well flow because it clearly did not want to overrule Griggs in adopting the Noise Certification Amendment in 1968.

That is why Congress affirmed the airport proprietor's rule-making power to abate aircraft noise in adopting the Noise Certification Amendment in 1968.

Furthermore, a cumulative noise exposure level could well result in innumerable property owners suits under the Griggs theory. If this occurs, airport proprietors might be forced to resort to their proprietary powers to curtail air commerce and this would certainly disrupt air commerce.

If airport proprietors do not take this action and the Griggs doctrine is not overruled, then airport proprietors and ultimately the aviation community will face the prospect of multi-million dollar damage suits to acquire inherently worthless aviation easements.

This would, in effect, defeat the purpose of the proposed noise certification program even before it gets started.

4. The report of Task Group I should contain an in-depth discussion of Burbank and its relevancy to the recommendations contained in the reports of the Task Group. For example, Task Group V recommends an airport certification scheme in which "the airport operator shall be required to begin to restrict the aircraft operations by all regulatory means at its disposal (curfews, quotas, weight and type limitations, etc.)" and goes on to say that "The restriction shall be in effect until all land areas within specified contours have noise compatible use" (V, 54).

While the introduction to the report of Task Group I indicates that the scheme suggested by Task Group V may well be valid (1-2-2), Task Group I's recommendations give the airport operator and the surrounding communities in essence nothing but an advisory role in implementing the noise certification limits. This change we believe followed the decision in the Burbank case. This ambiguity must be cleared up.

Task Group I was charged with

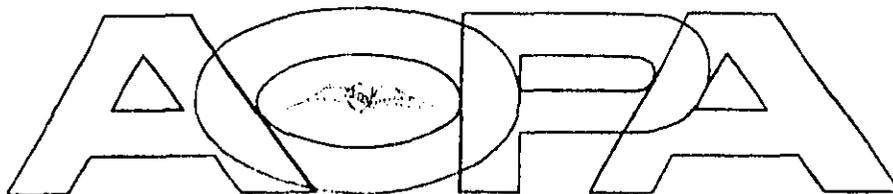
"identifying constraints and shortcomings of the existing legal/institutional system that may be impeding the implementation of available solutions."

We submit that certainly one of the legal constraints in the implementation of an airport noise certification scheme, assuming arguendo that it is valid, is the requirement that the FAA, in prescribing and amending standards under Sect. 611 shall

"consider whether any proposed standard or regulation is economically reasonable, technologically practicable and

appropriate for the particular type of aircraft, aircraft engine, appliance or certificate to which it would apply."

After a full review of the legislative history of the 1972 Act amending Sect. 611, the Supreme Court in Burbank made it crystal clear that by amending that Act to require the FAA to act to protect the public health and welfare, Congress did not write out of the act the specific constraints listed above. Indeed the Supreme Court took the trouble, quoting these constraints in full.



AIRCRAFT OWNERS AND PILOTS ASSOCIATION/WASHINGTON, D.C. 20014/Tel: (301) 654-0500/cable address: AOPA, Washington, D.C.



July 2, 1973

Mr. John C. Schettino
Task Force Director
Aircraft/Airport Noise Study
Environmental Protection Agency
Washington, DC 20480

Dear Mr. Schettino:

Enclosed are two papers we are submitting for the final record.

One is a revision, AOPA Views On Aircraft/Airport Noise Abatement, appearing on page 1-A-11 in Task Group 1's Appendix B.

The other paper, AOPA Comments on Airport Noise Certification Proposal, is new.

It has been a pleasure working with your Task Force.

Cordially,

Charles P. Miller
Charles P. Miller
Consultant

TG 1/187



AIRCRAFT OWNERS AND PILOTS ASSOCIATION
Washington, D. C. 20014 Cable address: AOPA, Washington, D. C.

July 2, 1973

AOPA COMMENTS ON AIRPORT NOISE CERTIFICATION PROPOSAL

AOPA is concerned over the implications of the Environmental Protection Agency's proposed recommendation for a Federal airport noise regulation (EPA Task Group 1 Recommendation No. 1). It is our belief that promulgation and enforcement of a regulation, such as is proposed, would adversely affect the nation's air transportation system, particularly that portion which is dependent mainly on medium-sized and small airports.

Recommendation No. 1, which would provide for noise certification of all airports, obviously was written with air carrier traffic in mind. Unless a distinction is made, the term "all airports" used in the text would embrace all 12,000 U.S. airports, ranging in size from those in busy metropolitan areas to rural sod landing strips. Unless the scope of the recommendation is reduced to realistic terms, a chaotic situation will result. A spokesman for the National Business Aircraft Association, at EPA's June 21 and 22 session on the Task Force study, expressed concern over the fact that 5,000 airports used by Association members would be affected if the proposed Federal airport noise recommendations were promulgated and enforced. AOPA not only is interested in the 5,000 airports mentioned, but also in the other 7,000.

We concur with the objective of the recommendation, "to limit the cumulative noise exposure received in residential communities", but we disagree with the proposed means of reaching that objective. We do not agree that "the airport certification process is the proper mechanism for administering the airport noise regulation". In fact, we do not believe that FAA noise certification of all airports in the United States either is necessary or workable.

Part 3 of Section B of the Recommendation makes it clear all 12,000 U.S. airports are included: "The timetable for compliance, determined by EPA, applicable nationwide to all existing airports." This is one of the elements that EPA recommended to FAA for inclusion in the airport noise regulation.

While most airports would have little difficulty in meeting the EPA standard, the noise certification of 12,000 airports by FAA would present a problem of mammoth proportions. An army of Federal employees--inspectors, specialists and clerks--would be required to administer and enforce a regulation such as proposed if noise certification of all airports is undertaken.

It would appear that if airport noise regulations were regarded as being necessary, it should be included in the Federal Aviation Act and appropriate Federal Air Rules. It would contain the maximum noise exposure limit, as established by EPA, and would be enforced uniformly in accordance with enforcement procedures for other FARs.

The burden placed upon all airport proprietors by the proposed recommendation would be enormous. They would be required individually to set up implementation plans for meeting noise standards established by EPA and FAA in a minimum amount of time. If unable to make the necessary arrangements within the allotted time, an airport might obtain a variance for a period of

one year by meeting certain requirements specified by FAA and EPA after a public hearing held in the vicinity of the airport.

Provisions of Part 11 of Section B of the proposal would present a field day to the opponents of an established airport, whether or not their health and welfare were affected by the airport's noise. Hearings could be prolonged by a series of objections, many of which could be without merit. Firmly established airports could be phased out of existence by such a maneuver, to the detriment of the national air transport system. This situation could better be met by making compliance a matter between the airport and FAA, except in situations where a change in land use necessarily require the participation of local governments and communities.

Noise monitoring could be a full time, 24-hour job for a large number of airports, many of which could not afford the expensive equipment needed for cumulative noise exposure recordings, and the cost of its operation. Unless this data is accumulated, enforcement of noise exposure limits could not be attained.

It must be remembered that thousands of the nation's airports must operate with small staffs, often one man, in order to break even, or show a small profit. The average small airport, although valuable and necessary to a complete national air transportation system, is not an elaborate installation. AOPA has, for many years, urged small cities and towns to provide airport facilities, in order that communities may serve their own interest. They were urged, at the same time, not to build facilities they could not afford. Most of the medium-size and small airports have followed this course. Few of them present a noise problem to their communities.

Meeting the requirements of Recommendation No. 1--which provides no ex-

ceptions for small airports--could result in the demise of many currently operating airports. It also would inhibit the development of additional airports sorely needed to assist in the dispersion of heavy concentrations of people and industry around the over-crowded metropolitan areas.

Population growth and an airport noise regulation would seem to have little in common, but they have. Added cost accompanying an airport noise regulation, could prevent an airport from being built where it might serve a useful purpose.

J. B. Hartranft, Jr., AOPA President, in a presentation at the recent Federal Aviation Administration Planning Review Conference, explained how general aviation would play an important role in taking people and industry out of cities and restoring a better balance to urban and nonurban population.

He said in part:

"Today, 93% of the people in the United States live on just 7% of the land area.

"Such an imbalance breeds many social and economical problems. Large concentrations of populations generate traffic congestions, pollution problems, and require a high per capita public expenditure. They are also more vulnerable to social disorders.

"Speaking to a meeting of the Aircraft Owners and Pilots Association, Senator Howard Cannon said: 'For some years, it has been obvious that farmers leave their farms, young people leave rural communities, because they can no longer make a living there. Too many of these Americans opportunity seems to have fled to major centers of population and from all over rural America, the young, the unemployed, the disadvantaged have poured into the cities to create only worse problems than those from which they fled'."

"In most cases of those who moved, it was not a desire to migrate to a big city but a necessity to look for employment.

"If the small towns can be helped to develop jobs locally, the young people and the non-urban unemployed can find rewarding work and stay in their home areas and enjoy the benefits of productive lives. If we can achieve this, major metropolitan areas will then no longer be the tarnished mecca for these displaced persons, and the big cities can begin to correct their problems and assimilate population growth in manageable degrees.

"If as a nation we are to correct the imbalance of population, a necessary first step is to bring the non-urban areas into the mainstream of commerce through the National Aviation System. And this is the role of the general aviation plane.

"As great as the scheduled airlines are, their service tends to perpetuate the growth of big cities. Because of the size of aircraft operated and the economics of service, scheduled flights of the airlines must be concentrated between big centers of population. The certificated airlines serve 479 points of the contiguous 48 states. Twenty percent of all scheduled airline departures occur at only five service points. These flights carry one-third of all passengers who ride the airlines. Nearly two-thirds of all scheduled flights of the certificated airlines depart from just sixty of the points served. Big planes connect big cities with other big cities.

"The privately operated airplane, the air taxi, the commuter airline serve 12,000 airports carrying at least half as many people inter city as all the scheduled airlines combined.

"With the convenience and flexibility of the general aviation airplane, business is already proving it can help to provide jobs in smaller towns."

One of the major problems we have with proposed Recommendation No. 1 is Part 7 of Section B which allows airport proprietors certain options in developing their implementation plans.

While "curfews" on flight of aircraft into and out of airports are not mentioned, Part 7 would pave the way for local "curfews" throughout the country. In a previous position paper submitted to EPA Task Group 1, AOPA expressed its opposition to curfews, particularly local curfews.

Part 7 of the recommendation would allow airport proprietors certain options in development of the implementation plans for "achieving compliance with promulgated exposure limits in accordance with the promulgated timetable".

The options would allow closure of certain approach and departure paths during "specific parts of the 24-hour day", "reduction of flight frequency on specific runways during specific hours", and "complete closure of specified runways, temporarily or permanently, either to all aircraft, or to aircraft with noise characteristics above a specified value".

Any one of the above options would give ample leeway to the proprietor to set up any curfews he might desire, if FAA approved. Since the FAA operates an airport where there is a "voluntary" curfew in effect--Washington National Airport--other local curfews would be proposed. If there has to be a curfew in this country, it should be on a national scale. Local curfews, and the closing and opening of approach and departure paths and runways, can only result in confusion which could result in safety hazards as well.

Section 7 would result in different airports having different takeoff and landing procedures, according to land-use patterns near their airports. For many years, it has been recognized that standardization of procedures is an effective means of enhancing safety. This portion of the recommendation would have the opposite effect.

AOPA VIEWS ON AIRCRAFT/AIRPORT NOISE ABATEMENT

Elimination of unnecessary aircraft noise and reduction of necessary sound emission in the vicinity of airports to the lowest practicable minimums are objectives the Aircraft Owners and Pilots Association share with the Environmental Protection Agency. Working out means for achieving these goals must be done with care in order to avoid doing great harm to this country's vital air transportation system.

There is general agreement that aircraft/airport noise is civil aviation's Number One problem today--a problem that must be solved if air transportation is to reach its full potential. This is primarily a problem of air carriers at airports in congested population areas. But it also is of concern to general aviation, particularly to most of its business-type jet aircraft. Propeller-driven airplanes, which make up most of the general aviation fleet, of about 140,000 aircraft, are not considered as presenting a noise problem at most airports. The occasional noise complaint comes from a community where a small airport is located which does have jet operations.

The more than 171,000 members of the Aircraft Owners and Pilots Association (AOPA) own or lease over 84,000 airplanes, about 60% of the general aviation fleet. "General aviation" in this country is commonly defined as all civil aviation except airline operations. It's aircraft fly about 37% (92 million) of the passengers in intercity air travel; provide practically all of the industrial-aid flying and all aerial application for agriculture and forestry; provides air transportation on demand to 43% of the 1,000 largest business enterprises in the nation. General aviation planes operate at practically all of the 12,000 airports and landing places, including the approximately 531 airports served by the certificated airlines.

AOPA surveys show that the average member uses his airplane for both business and recreational flying, very much as he uses his automobile. The role of the lighter general aviation airplane will become even greater in the nations' economy if the trend toward decentralization and dispersion of economic enterprises from congested urban areas to suburban and poverty-stricken rural areas accelerates.

Military and airline noise, air pollution and congestion have antagonized the public with consequent impact on general aviation, although the light airplanes' contributions to the cause of the antagonism are small. Alleviating aircraft/airport noise, the greatest irritant, must come about quickly if the people on the ground are to be appeased.

Priority attention, in our opinion, must be given to the primary cause of the noise problem--the jet engine. Once attenuation has been achieved, other proposed moves such as institutional changes and complicated operations at the airport will recede in importance. Unified research must be stepped up to develop engines with noise levels 15-20 EPNdB below FAR 36 in time for the next generation of air-carrier jet aircraft. At the same time, research should continue on retrofitting present-day jets so that meaningful reduction in noise levels may be achieved before the next generation arrives, without degradation of performance of the engine or at excessive cost.

The National Aeronautics and Space Administration has made strides in quieting the jet engine and should continue on this course with ample funds to accomplish its goals. The Federal Aviation Administration's research in this field should be absorbed by NASA.

Who will bear the cost? The Federal Government should provide funds for the development of technology for quieting the jet, but private industry should pay the costs for retrofitting. It is realized that the air carriers are

burdened with near and longterm debts accumulated mainly for the purpose of acquiring jet airliners now in use, but retrofitting costs should be handled as a business expense. Other industries are required to bear the expense of meeting costs related to environmental requirements. It might be necessary for the Federal Government to make available long-term loans to the air carriers at low interest rates in order to bring quicker relief to people on the ground.

While the major problem in aircraft noise abatement is related to air carrier and business jet operations, AOPA recognizes the need for quieter propeller-driven aircraft. In a statement prepared for hearings by the Congressional Committee on Aeronautical and Space Sciences regarding the NASA authorization for Fiscal Year 1974, AOPA said in part:

"We need small aircraft that are quieter both internally and externally. External noise must be reduced to satisfy the public on the ground and ameliorate its resistance to airport development and aircraft operations. Noise attracts attention which is undesirable. Internal noise must be reduced to eliminate loss of hearing by those in the aircraft. Few pilots have flown very much without sustaining a loss in hearing capacity. Noise reduction will make flight more pleasant and enable pilots to hear radio communications more clearly. Conversation should be possible at normal voice levels.

"We think primary efforts should be directed at eliminating noise at the source rather than creating land buffers around airports which is an unsatisfactory solution for only a part of the problem. Thus we urge attention to aircraft construction techniques that give a smooth flow of air and reduce metal 'canning', quiet piston engine development and engine muffling and silencing, propeller design for noise reduction, and soundproofing techniques to minimize whatever noise remains."

General aviation propeller-driven aircraft being built today are much quieter, on the whole, both internally and externally, than those produced 10 or 15 years ago. Powerplants have been improved and airframe manufacturers are more conscious of the need of reducing fuselage noise where possible. It is hoped that current NASA research will permit the production of even quieter propeller-driven aircraft planes in the future.

Technology exists for dampening the noise of single-engine propeller-driven aircraft. An experimental "quiet" light airplane was successfully flown in May 1947 at Langley, Virginia, by the National Advisory Committee for Aeronautics (predecessor of the National Aeronautics and Space Administration), but manufacturers were unable to convert the experimental design into a commercially feasible airplane. NASA resumed research on the propeller-type aircraft noise problem in 1972. AOPA's statement on NASA funding was made in an effort to get Congressional support for the continuance of this research. Using techniques developed by NACA in the 1940s and other noise suppression means, a manufacturer made a quiet plane for use by the U.S. Army in night time reconnaissance in Vietnam with startling results. Flying 100 to 200 feet above the ground, the Q-Star-type planes could not be heard above the ambient noise level. Further research in this area by NASA should be productive.

While quieting the jet engine is by far the major goal in aircraft/airport noise abatement, in AOPA's opinion, there are other problems which also must receive attention:

1. Compatible land use in the vicinity of airports. Unless the land is properly zoned, the building of a new airport is a signal for the acquisition of land nearby for the building of residences, small business and other non-aviation uses, mainly because the cost of land is cheaper there than in other

parts of the community. It is not long until residents surrounding the airport and its approaches are faced with an acute noise situation for which there is no easy solution. Zoning after the fact presents a difficult task and is expensive if the necessary property is to be obtained for clear areas. Unfortunately, planning for the future appears to be the immediate solution to this problem. This should be done by the states and local areas. The Federal Government can help by stipulating, in Sponsors Agreements, that adequate zoning for clear areas be made before a Federal airport-aid grant is approved.

2. Noise level standards. The airplane itself should carry the major portion of the burden of bringing down noise levels on approaches and at airports. FAR 36 sets standards for airline and business-type jets and high performance propeller-driven transports. Reasonable standards on a national basis also should be set for general aviation propeller planes. This would enable each pilot to know the limits that his aircraft could reach. Compliance with standards now being set up for ICAO member-countries would facilitate transit abroad. It also would afford a guideline for manufacturers producing aircraft for export.

3. Curfews. AOPA is basically opposed to curfews on aircraft operations, believing that widespread stoppage of night flights would have a staggering effect on the nations' economy and the convenience of air transportation. In the event curfews are determined necessary, they should be invoked on a national, rather than local, scale. Having each community establish its own curfew could spell chaos for the general aviation pilot on an interstate flight.

4. Preemption. Ample precedent for Federal preemption of the navigable airspace has been established in the courts. The Supreme Court of the United States now has before it a case (Lockheed v. Burbank) which also involves

preemption. It is our hope that preemption by the Federal Government be sustained. Operating a national transportation system under state and local laws would be extremely difficult, to say the least.

These are but a few of the facets of the aircraft noise problem. The kind of noise environment we all desire can be achieved. But to do it we must all cooperate. It is a time for sound and rational decisions.

Air Transport Association



OF AMERICA

1709 New York Avenue, N.W.
Washington, D. C. 20006
Phone (202) 872-4000

June 6, 1973

Ms. Elizabeth Cuadra, Chairman,
Task Group I,
(Legal/Institutional Framework)
Aircraft/Airport Noise Study
Environmental Protection Agency
1921 Jefferson Davis Highway
Crystal Mall Building No. 2
Room 1101
Arlington, Virginia

Re: Proposed "Recommendations"
Section of the Draft of the Report
Task Group I

Dear Ms. Cuadra:

This is written in response to your memorandum dated May 31, 1973. Since your May 4 Schedule, which has been so well kept, calls for the EPA Staff by June 8 to "complete EPA's 'Executive Summary Report' (intended for submittal to Congress...)", the designees of ATA are herewith, in advance of the mid-June meeting, presenting the attached recommendations for inclusion in Appendix B. We understand we could still submit revisions or additions up to the date of the meeting.

For your convenience we point out that paragraphs 1-10 under "A" in the attached "Revised Recommendations" are in substance almost identical to paragraphs 1-4 and 6-11 of those transmitted by Messrs. Tondel and Grumbach on May 8, 1973, except that paragraphs "1" and "2" of the May 8 memorandum have been changed to reflect the May 14 decision of the United States Supreme Court in the Burbank case, and the order of paragraphs 5 and 6 has been reversed. The substance of paragraph 5 in the May 8 submission is now in Recommendation B(3).

We also wish noted, with specific respect to the May 31 "Final Draft" of Section 5, that it is not correct to say that Task Group I has "adopted" Recommendation #1a "unanimously". We also note that the



Ms. Elizabeth Cuadra

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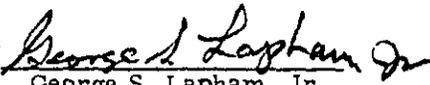
June 6, 1973

use of the word "consensus" (see Introductory Note to Recommendation on p. 224) gives an impression of general support by those present at the Task Group I meeting on May 18-19. Since no votes were taken on squarely put issues, "consensus" can only mean the author's impression as to the attitude shown by those present, who expressed themselves, in the course of oral discussion. Written recommendations such as those attached, should be given at least as much weight.

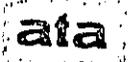
We request, and assume, that the attached Recommendations, together with this covering letter, will not only be published in Appendix B but also be considered by the EPA Staff in connection with the completion of the "Executive Summary Report".

Respectfully submitted,

George S. Lapham, Jr.
Lyman M. Tondel, Jr.
George J. Grumbach, Jr.

BY 
George S. Lapham, Jr.

Attachments

Air Transport Association  OF AMERICA

1709 New York Avenue, N.W.
Washington, D. C. 20006
Phone (202) 872-4060

June 6, 1973

Task Group I

(Legal/Institutional Framework)

EPA AIRCRAFT AND AIRPORT NOISE STUDY UNDER SECTION 7(a)

Revised Recommendations For Consideration
by the EPA Staff in the drafting of Section V
of the Task Group I Report and for inclusion
in Appendix B Thereto.

A. The Legal/Institutional Framework and Comments

Thereon. The primary purpose of Task Group I was to draft the portion of the EPA report on the legal/institutional framework, so that the Congress might be advised as to its structure, and as to any legal constraints, and so that any recommendations from Task Group 1 or other Task Groups might be viewed in the light thereof. While much of the Report of Task Group 1 is devoted to a detailed description of that framework these recommendations should focus attention on the following principal conclusions that result from the detailed review:

1. Unified Federal Regulation of Air Commerce is

Necessary. The Federal Constitution requires that the Federal Government control all aspects of the national system of air transportation and the use of the navigable airspace, because they are "phases of the national

commerce which, because of the need of national uniformity, demand that their regulation, if any, be prescribed by a single authority" (Southern Pacific Company v. Arizona, 325 U.S. 761(1945)). As quoted from Cooley v. Board of Wardens, 53 U.S. (12 How.) 299, at 319 (1851), in the Burbank case, decided by the United States Supreme Court on May 14, 1973, they may "justly be said to be of such a nature as to require exclusive legislation by Congress." (Emphasis added) Any new Federal legislation for the regulation of aircraft noise should expressly so assert and reaffirm.

2. Scope of Federal preemption of State and Local Police Power. As ruled by the Supreme Court in the Burbank case, neither a state nor any political subdivision thereof, can use its "police power" to protect its citizens from aircraft noise.

3. Rights of Airport Proprietors. The extent of airport proprietors' rights to regulate in an effort to reduce airport noise depends on the terms of the leases and the law of the particular state where the airport is located and therefore may vary from airport to airport. The extent to which any such rights have been federally preempted, limited by the Commerce Clause or are in conflict with federal law, has not been authoritatively adjudicated.

4. The Need for Federal Agency Authority to Protect Air Commerce From Fragmented State and Local Regulations. In view of the foregoing, to the extent, if any, that Congress, or law apart from Acts of Congress, may permit state and local governments or airport

proprietors to exercise their powers or rights in ways that would affect the national system of air transportation or the use of the navigable airspace, there should be expressly placed by Congress in the appropriate agency of the Federal Government the power to assure that the national system of air transportation, including the national system of interrelated airports, is not fragmented by restrictions imposed at the state, local or airport level.

5. The Need for Exclusive Federal Standards of Aircraft Noise Measurement and Permissible Noise Levels. Likewise, the setting of standards of noise measurement, aircraft noise standards, and aircraft noise levels should continue to be within the exclusive province of the Federal Government, and aircraft noise levels should continue to be fixed, amended, and enforced by the FAA so as to prevent any increase in such levels and to reduce them, from time to time, in the light of considerations of safety, technological feasibility and economic reasonableness.

6. The Need for Federally Funded Noise Restriction Efforts. Sufficient funds should be appropriated by Congress to finance the Government's share of an intensified and unified research and development effort by the Federal Government to reduce the noise at the source.

7. The Need for International Coordination in Reducing Aircraft Noise. United States airlines and aircraft and engine manufacturers should not be put at a disadvantage vis-a-vis competitors from other countries because of the imposition, either by the United States or foreign countries, of

noise level, operational or other restrictions or charges. Any specific proposal regarding foreign aircraft should be cleared with the State Department and submitted to United States international carriers for their comments as to both legality and practicality.

8. The Need for Increased FAA Responsiveness to Noise Abatement Suggestions of Others, and for Increased Public Participation.

The FAA should exercise, and be adequately financed and staffed to exercise, its existing authority over aircraft operations and the use of the navigable airspace more fully in the interest of noise reduction: for example, by encouraging the initiation, with public review by it, of noise reducing proposals, and by prescribing procedures to be followed by any applicant who desires to have operational restrictions imposed by the FAA at a particular airport which affect service at other airports as well (i.e., restrictions on night operations, or traffic flow, or types of aircraft that may be utilized) by providing adequate notice and opportunity for all interested persons, including EPA and other agencies of government, to be heard on the merits of such an application; and by ruling on such proposals promptly.

9. The Need for Better Airport Planning Guidance. DOT and FAA should utilize their existing authority to facilitate and expedite the development of airports consistent with both transportation and environmental requirements. To this end these agencies should be required to prepare and issue detailed guidelines and timetables for applicants on behalf of airport development projects so that the applications may be

more quickly processed in line with the aforesaid requirements. These guidelines should also include requirements for the submission of data required for the Secretary of Transportation to write his mandatory statement with respect to the effect of the airport development project on "the natural resources and the quality of environment of the Nation", and data showing compliance with standards for site location and airport design. These guidelines should be prepared in cooperation with EPA in order to expedite the preparation of satisfactory environmental impact statements under Section 102(2)(c) of NEPA when required with respect to airport development projects.

10. The Need for Effective Zoning and Other Compatible

Land Use Measures. The States should be encouraged to adopt laws of statewide applicability along the lines of Attachment A and Attachment B so as to facilitate appropriate zoning against incompatible uses around airports -- particularly, but not exclusively, with respect to new airports, and existing airports which still have not been totally impacted. The report should further recommend that immediate, pragmatic efforts be taken by airport proprietors and state and local governments to preserve and increase compatible land use in the most noise-affected areas -- the flight paths near airport boundaries.

Although a comprehensive and complete effort to solve the airport noise problem by compatible land use would be far too costly in the case of existing airports impacted by incompatible land use, it should be recognized that even after all measures involving reduction of noise at

the source have been taken, there will remain a need for compatible land use planning. This need will be the greatest under the near reaches of the flight paths commencing at the airport boundaries. Even at existing, impacted airports, there are from time to time substantial opportunities to achieve compatible land use in such areas at a reasonable cost; but delay diminishes these opportunities. Therefore, state and local governments and airport proprietors should act as promptly as possible, in a pragmatic manner, to preserve and encourage compatible land use in the limited areas where the need is greatest and where opportunities exist.

B. The Cumulative Noise Exposure Method of Regulation.

Whatever the theoretical merits of this approach to the airport noise problem, and of the utilization of the FAA airport certification process to implement it, as to which we take no position, there are some fundamental considerations, including the following, which, if ignored, might well make the method unworkable:

(1) Every airport and every airport location, as well as its neighborhood, is unique. Each airport's operations, each airport's surroundings, and each airport's role in its community is different; and the differences should be taken into account by different timetables for compliance if cumulative noise exposure limits were prescribed and any timetables for compliance with cumulative noise limits should be fixed on an airport-by-airport basis, not nationally. However attractive in theory to compel compliance by every airport with a maximum cumulative noise exposure level, based on a national timetable, the human, social and economic costs involved in decertifying such major airports as JFK, Los Angeles, Washington National, O'Hare, Logan, etc., etc., should give rise to pause.

(2) Cumulative Noise Exposure Limits for Airports Are Not Based Only on Health and Welfare Factors and Must be Reviewed by the FAA. Under Section 611(c) (2) of the Federal Aviation Act of 1958, as amended by Section 7(b) of

the Noise Control Act of 1972, Congress expressly said that FAA actions with respect to regulations proposed by the EPA for the protection of public health and welfare are to be consistent with the other considerations listed in Section 611(d), which include, inter alia, technological practicability in aviation, consultation with other agencies and levels of government, the highest degree of safety, and economic reasonableness. Accordingly criteria and noise levels reported by the EPA with respect to noise sources in general under Section 5 of the Noise Control Act of 1972, cannot automatically be converted into airport cumulative noise exposure limits; other factors are required by Congress to come into play and the FAA clearly has the final word. In addition, there should be a clear distinction between scientifically proven physiological effects of various levels and durations of noise exposure, under varying circumstances, on health or hearing, on the one hand, and unproven effects of annoyance, on the other; and, in any regulation of airport noise "public welfare" should take into account not only the effect of noise annoyance on public welfare but also such factors as the effect on the air transport system and the social benefits derived therefrom on the public welfare, including the preservation of such indirect social benefits as availability of housing, employment opportunities and the well-being of the economy, both in the vicinity of the airport and on a national level.

(3) To the Extent that Effects of Noise on "Health" are Reflected in Cumulative Noise Exposure Limits for Airports, they Should be Scientifically Supportable, Arrived at Only after Public Hearings and Formal Findings, and Unmistakably Defined and Identified. Any authoritative pronouncement as to what level of noise may be expected to damage health will have significant legal and economic consequences; to the extent that the protection of health is necessary, these consequences must be accepted and borne, whatever the noise source involved. The main effort however, should be to prevent physiological effects of aircraft noise on health and hearing, and any noise exposure limits should be fixed with this in mind. However, the significance of the consequences makes it important to proceed with great care and fairness to all concerned.

The May draft of the Task Group 3 "Recommendations" suggests the establishment of "health" contour lines as the basis for composite noise levels around airports, using a line more or less equivalent to a 45 NEF line. It also estimates that about 200,000 persons live within such lines. Once it is publicized that persons so located are exposed to a "health" hazard, it can be expected that a vast number of suits, both for personal injury and for taking of property, would be brought against sources of such noise -- the Federal Government as well as

airport proprietors and airlines -- using the "health" standard as a basis of their claims. These would result in great litigation expense and perhaps enormous liability judgments. The threat of such suits may cause drastic action by prospective defendants not contemplated or desired by the Federal Government. For example, airport operators might well terminate or drastically curtail operations to protect themselves from such liability claims.

The same cause and effect may occur in the cases of owners of railroads, highways, and subways (i.e., cities and states) and trucks, buses, and other noise sources; and the Task Group 3 draft "conservatively" estimated that another 400,000 persons live within such "health" contour lines near noise sources other than aircraft.

Accordingly, before either the publication of information under Section 5(a) regarding noise sources generally, or the submission of proposed regulations to the FAA under Section 7(b), care must be taken to assure that any noise limit that is set based on considerations of "health" is based only on validated scientific facts relevant to the effect of noise on health. (Although the Task Group 3 draft, for example, says that only effects on hearing are demonstrable, the standard suggested irrelevantly includes a weighting factor for noise depending on time of day.)

In order to exercise such care it would be desirable for any proposed "health" noise factor, at least if to be applied to airports, to be the subject of formal public hearings or at least formal Rule-Making procedure. It may be expected that defendants in such suits as those mentioned above would raise a constitutional issue of lack of due process if the standard were not fixed by proper procedures and on the basis of solid evidence.

In order to afford health protection where clearly needed without the risk of premature announcement of an unvalidated "health" noise limit, it may even be that at first a sufficiently high standard should be proposed that it would have a clear chance of validation; tightening of the standard, if supportable, could come later.

With the risk of literally tens of thousands of lawsuits in mind, it is important when a "health" noise limit is publicized to make it clear, if true, that the limit is based on statistical probabilities, rather than on individual health effects, and that the existence of the limit, particularly if it includes a margin of safety, is no evidence of whether any particular individual's health is affected by the noise.

In California there is a law forbidding the use of the composite noise limit in private suits [Calif. Public Util. Code §21669.5(a) & Calif. Dept. of Aeronautics Reg. §5004].

In dealing with this subject, continuing thought should be given to whether the general welfare is served best by any action which enlarges the possibility that persons living near airports may have increased rights or compensation from airport noise in situations where its levels do not affect their health or hearing or at least do not realistically make it impossible or intolerable for persons to continue to live or work in those areas. It should also be considered whether, in carrying forward the costly task of noise reduction, available national resources are better used by direct application to that effort than by compensating large numbers of airport neighbors, both near and far, on an ad hoc basis, in situations not required by the Fifth and Fourteenth Amendments.

Contrary to the suggestion that has been made, the California Regulation scheme should not be used by the FAA as a test of the cumulative noise standard method because its complex methods and procedures have not been implemented or enforced; they have not been analyzed or approved by any branch of the Federal Government or even reviewed in the light of the factors required to be considered by the above-mentioned Section 611(d) of the Federal Aviation Act; and their noise standards differ from those already adopted by the FAA, and indeed from those in the last draft report of Task Group 3. Time spent by the FAA in reviewing the California scheme with

an eye to whether it meets Congressional requirements and intent would be better spent on the national problem.

(4) Welfare cannot be quantified, and welfare vis-a-vis noise cannot be isolated from other factors affecting the public welfare as indicated above. Contour lines based on mathematical calculations of annoyance as determined by questionnaires, complaints and the like have only a misleading semblance of exactitude and should not be used as a basis for airport certification procedures.



JANET GRAY HAYES
COUNCILWOMAN

CITY OF SAN JOSE
CALIFORNIA

CITY HALL

TELEPHONE 297-4000
EXT. 4241

June 15, 1973

TO: Elizabeth Cuadra, Chairman &
Members of Task Group I - Aircraft/Airport Noise Study

FROM: Janet Gray Hayes, Member of Task Group &
San Jose, California Council Member

SUBJ.: "Recommendations" dated May 31, 1973 from the Final Draft of
Task Group I Report

This is to advise I will be unable to attend personally the final followup meetings of our Task Group on June 21st and 22d due to City Council Budget Hearings. I have read carefully and concur generally with the recommendations as mailed to me dated May 31st. As a locally elected legislator who is acutely aware of the increasing intolerance of many of my constituents to the devastating effects of aircraft noise, I am very happy to have participated in the Study in which some definitive control mechanisms have been outlined and consideration has been given to health and welfare.

In earlier communications from me I recommended that airport certification be on the basis of noise as well as on the basis of safety factors for those in aircraft as well as for those on the ground exposed to flight patterns. Recognizing that California legislation has been in the forefront of the more advanced dealing with the problem, I am especially concerned that Recommendation No. 1A on Page 234 be implemented. I feel that this recommendation that the California Airport Noise Regulation be adopted as a federal regulation--applicable in California only--until a nationwide federal airport noise regulation goes into effect, is an extremely valid one. We need to have such interim regulations until national standards can be set that would supersede them. I feel we can view this as a "test case" or "demonstration project" and that the California statutes as they now exist are extremely good.

Further, I believe a recommendation should be made to Congress that new legislation will be necessary to assure implementation of all the recommendations in this report except No. 1. Documentation as brought out in the Task Group Study and our experience has shown that the FAA has not exhibited the proper incentive to follow through on the necessary implementation of the recommendations.

I would ask that these comments be made a part of Appendix B in the written report. Again, I am very sorry not to be with you at this final decision-making Committee meeting, but hope that my written comments will suffice.

JGH:ak



THE COUNCIL OF STATE GOVERNMENTS

WASHINGTON OFFICE

1150 Seventeenth Street, N.W., Washington, D.C. 20036 • (202) 785-5610

July 5, 1973

Ms. Elizabeth Cuadra
Chairman, Task Group I
EPA Airport/Aircraft Noise Study
Office of Noise Abatement and Control
Environmental Protection Agency
Washington, D.C. 20460

Dear Ms. Cuadra:

Enclosed for your consideration are the final recommendations of the Council of State Governments on the Aircraft/Airport Noise Study conducted by the Environmental Protection Agency.

In preparing this statement, comments from several States have been incorporated into the final recommendations. We trust, therefore, that they will be given appropriate attention.

We greatly appreciate the opportunity to participate in this most significant effort. If you have any questions, please let us know.

Sincerely,

R. Deane Conrad
Special Assistant

RDC/moz
Enclosures

TCG 1/192

COUNCIL OF STATE GOVERNMENTS
FINDINGS AND RECOMMENDATIONS FOR THE
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AIRPORT/AIRCRAFT NOISE STUDY

The following preliminary findings and recommendations are respectfully submitted for the consideration of the United States Environmental Protection Agency's Aircraft/Airport Noise Study Task Force. Preceding each recommendation or set of recommendations is a general finding which suggests the reasons for the proposed recommendations and the purpose of the proposed actions. Several recommendations are stated in the alternative, and propose what the Council believes are equally valid solutions to the problems posed in the findings.

A preliminary draft of the attached findings and recommendations was circulated among concerned states for review and comment. These final recommendations include and reflect the comments received by the Council from its member states.

Finding A.

The most cost-effective approach to aircraft noise abatement consists of (1) implementing noise reduction technology at the source as fast as possible coupled with (2) operational limitations or procedures to reduce noise and (3) land use control and incompatible use conversion or protection. A national program of

cooperative regulatory and planning efforts by federal, state and local governments and airport proprietors must be developed and implemented. The goal of such a program should be to eventually eliminate incompatible land uses from areas of severe noise impact--that is, from areas subject to noise levels considered adverse to public health and welfare.

Adequate control of noise around airports, and future reduction of noise to reasonable levels, requires expeditious implementation of aircraft and engine design modifications (retrofit) and continued incentives to technology development and design improvements. Regulations regarding retrofit and future aircraft design, which are intended to be implemented by the manufacturer or operator via physical modification of the aircraft, must be imposed on a national, uniform basis.

In the past, responsibility for adopting and implementing such regulations under §611 of the Federal Aviation Act has been assigned to the FAA. FAA's promulgation of such regulations has neither been expeditious nor effective. If adequate regulations are to be adopted pursuant to the 1972 Noise Control Act Amendments to §611, provision must be made for adequate input to FAA regarding both the noise level restraints necessary to protect public health and welfare and the technical practicality and economic reasonableness of various proposals. In these regards, EPA and NASA have important expertise and information which must be included

in the regulatory decision-making. Such inputs should be formalized and guaranteed by §611.

Further, the present federal regulatory structure lacks sufficient continuing mechanisms for interagency coordination of regulatory actions affecting aircraft noise. All concerned agencies--the FAA, DOT, HUD, EPA, HEW, DOD, and the Department of Interior¹ should be involved in developing a coordinated national aircraft noise abatement program, in order to assure necessary perspectives, ideas, expertise and information are brought to bear on the problem.

Recommendations: Adoption of Fleet Noise and Design Regulations

1. The Federal Aviation Administration should continue to be responsible as the lead agency for development and implementation of design and retrofit regulations.

2. An interagency Aircraft Noise Task Force (IANTF) should be established, composed of representatives of DOT, FAA, DOD, EPA, HUD, HEW, and Interior, and assigned the specific functions of (1) developing an on going national program for aircraft/airport noise abatement and (2) advising the FAA and DOT on what regulatory actions are most appropriate to carry out that program. IANTF's charge should be to continue, on a regularized basis, the develop-

1. The Department of Interior would have a major role in coordinating land-use aspects of noise control and abatement pursuant to the National Land Use Policy Act proposals now pending before the Congress.

ment and review process initiated in the current EPA study pursuant to §7(a) of the 1972 Noise Control Act. IANTF should be a subcommittee of a more general inter-agency noise control panel, formed under §4 of the Noise Control Act, to coordinate the research and regulatory actions of concerned federal agencies in all fields of noise control and abatement.

3. Actual regulatory authority--formal adoption powers for such rules--should be transferred to the Secretary of the Department of Transportation, in order to be consistent with the purposes of the Department of Transportation Act and assure aircraft/airport rules are consistent with overall transportation and environmental policies. The Secretary of DOT should adopt such rules upon the recommendation of the FAA and IANTF, taking into consideration the comments of other concerned federal agencies, the states and local governments, citizens, airport operators, manufacturers, carriers, et cetera.

4. The National Aeronautics and Space Administration should continue to coordinate and conduct research efforts in developing new aircraft noise control and abatement technology. NASA should be responsible for developing new aircraft noise control technologies to flight capability. Basic and applied research in this field should not be arbitrarily fragmented among various federal agencies--in particular, NASA and the FAA.

5. Section 611 should be amended to place upon NASA the responsibility--analogous to that now conferred upon EPA with

respect to health and welfare determinations--formally to determine and report to FAA whenever NASA finds a particular noise control strategy or abatement technology is safe, effective and technologically practicable. NASA should similarly be required to report its findings of the cost of implementing such strategies. Following receipt of such reports and certifications from NASA and EPA, the FAA, in consultation with IANTF, should be responsible for (i) determining whether the strategy is economically reasonable, consistent with safety considerations, and capable of furthering the purposes of §611, that is, to effectively reduce aircraft/airport noise; (ii) drafting and recommending appropriate regulations to the Secretary of DOT; and (iii) implementing such regulations once adopted.

6. Regulations for retrofitting older aircraft or noise limits affecting new aircraft design should contain step reductions, announced in advance, for various target dates in the future, in order to allow manufacturers and carriers to plan, design, and develop necessary technologies for a phased reduction of aircraft noise at the source.

7. In order to allow maximum choice by air carriers as to the abatement techniques used to meet source standards, including various engine retrofit options, aircraft retirement and engine replacement, a Fleet Noise Limit, rather than a specific Retrofit rule, should be adopted. Such a rule should

apply to the entire fleet of each American air carrier, and that portion of foreign-owned fleets which operates into or out of United States' airports.

8. The FAA should immediately adopt airworthiness certificate noise regulations for all previously type certified aircraft still in production, to require that new editions of such aircraft types include all available noise abatement technology. For example, further sales of 727-200 and 737-300 aircraft without noise abatement packages should be immediately prohibited.

Finding B.

The noise footprint of the airport can be substantially reduced through such strategies as retrofitting, refanning, and better aircraft design. See Finding A, supra. At a certain point, however, aircraft design modification to reduce noise becomes cost-ineffective. On the other hand, the core area of severely noise-impacted land left after implementation of source abatement technology may be amendable to further reduction via operational regulations at the airport level--e.g., designation of approach and takeoff paths and procedures, noise limits on aircraft using the airport, restriction on the number or time of flights (including total curfews and selective partial curfews). Furthermore, where the noise footprint has been reduced via retrofit and other source abatement strategies, land use control and conversion strategies are much less expensive

and may become feasible where they otherwise might have entailed prohibitive acquisition and dislocation costs. The selection of what strategy or strategies to implement at the airport, in order to eliminate incompatible land uses from noise impacted areas, is best made at the local level, and could be most easily coordinated by the airport operator.

In order to assure such decisions are made and implemented pursuant to a national aircraft/airport noise program, federal regulations must be adopted to (1) set standards for airport noise exposure and (2) require development of an airport implementation plan to eventually separate incompatible uses from noise exposure levels found to adversely affect public health and welfare. For these purposes, EPA's determinations of what levels of noise are necessary to protect public health and welfare should be used in designating the airport noise exposure standards to be finally achieved through a phased airport noise abatement program.

Recommendations: Airport Certification Standards

9. The FAA should adopt an airport certification noise regulation, requiring the airport proprietor in consultation with concerned state and federal agencies, aircraft operators, pilots, local communities and other interested parties, to develop and implement a noise impact abatement plan to reduce

noise in sensitive land use areas to levels deemed acceptable for health and welfare purposes.

a. This regulation should mandate a phased reduction of noise in incompatible land use areas and eventual complete separation of incompatible land uses within areas subject to noise based on the levels found adverse to public health and welfare. For the purposes of this rule, the FAA should adopt as a performance standard the noise levels requisite to protect public health and welfare as determined by the Environmental Protection Agency pursuant to the 1972 Noise Control Act. Such performance standards should not be modified pursuant to the FAA's balance of economic and technical feasibility factors; rather such factors should be used solely in determining the timetable for achieving noise levels which adequately protect public health and welfare.

b. In developing the implementation plan, the airport operator should consider the following methods for the control or reduction of airport noise:

(1) Encouraging use of the airport by aircraft classes or types with lower noise level characteristics, and discouraging such use by aircraft classes or types with higher noise level characteristics (e.g., by imposing a noise-related landing fee surcharge, or a single event noise limit).

(2) Developing and recommending to FAA approach and departure flight paths and procedures to minimize the noise in residential and other sensitive areas. (see Recommendation 11, infra).

(3) Planning runway alignment and utilization schedules to take into account adjacent noise-sensitive land uses, noise characteristics of aircraft and noise sensitive time periods.

(4) Reducing flight frequency through, inter alia, hourly operation limits, encouragement of flight consolidation, imposition of total or categorical curfews.

(5) Relocation or regulation of maintenance activities.

(6) Procedures for ground operations, including turning, taxiing and warmups.

(7) Use of shielding, including natural terrain, buildings, sound baffles, et cetera.

(8) Restrictions on future development of incompatible land uses within actual or predicted noise impact zones, through local, regional or state land use regulation (See Recommendations 13-15, infra), or through the purchase or condemnation of development rights or no-residential-use restrictive easements.

(9) Conversion of existing incompatible land uses within the hard-core severe noise impact zone (as reduced via retrofitting, fleet noise, and type certification regulations) to compatible uses. Such conversion might include (i) modifying residential structures with additional insulation, double-paned windows, and ventilation equipment, (ii) airport purchase or condemnation

of incompatible uses for later airport development or private redevelopment, or (iii) encouraging zoning decisions which encourage private market purchase of impacted residential properties and redevelopment to commercial warehouse, or industrial uses.

10. A national consulting staff and service should be established by appropriate federal agencies, under the lead of the FAA, to assist airport proprietors in developing implementation plans. Such service might aid the airport operator and those working with it in the testing of various strategies or combinations and analyzing their probable effect on overall noise reduction. Such a service would provide airports with much needed technical resources while allowing greater freedom for local decision-making based on knowledgeable choices.

11. The FAA in cooperation with NASA and other concerned parties, should establish a set of alternative approach and departure procedures which are technically feasible and safe (e.g. two-step approach and climbout, full-thrust takeoff). Pursuant to its airport implementation plans, the airport operator should select those procedures for each of its runways which are most effective in reducing noise, and such selection should be made a federal air regulation by FAA. Such regulation should be mandatory and enforced against all aircraft using the airport. The regulation, however, should allow as a valid

defense to an action for noncompliance proof by the aircraft operator that the operation in question was a direct result of the pilot's exercise of his responsibility for the safety of his passengers, crew, cargo and aircraft or his emergency authority.

Finding C.

Control of major air transport aircraft in flight--including designation of standard routes, approach paths, runway assignments, and flight procedures--must be exercised and coordinated by one agency acting as Traffic Controller. Only one person can or should direct the pilot at a time. On the other hand, development and adoption of standard routes and approach/takeoff procedures may be a joint venture, allowing local and airport proprietor input and choice in order to best alleviate noise problems.

Regarding approach/takeoff procedures in particular, a single procedure may not be beneficial as a noise control strategy at all airports. For example, a full thrust takeoff may be helpful when few people live immediately adjacent to the airport, while a lower power initial departure will be best when aircraft can implement a sharper climbout over water or areas of nonsensitive land uses a relatively short distance from the airport. An entirely different type of approach and takeoff procedure at each airport, however, would be unnecessarily confusing and burdensome. Thus, some limitation of procedures must be imposed, while allowing local

option as to what procedures are most effective in reducing noise.

Recommendations: Adoption of Route/Path and Approach/Takeoff Regulations

12. As part of its noise control implementation plan, (see Recommendation 8, supra) the airport proprietor should study, in conjunction with air carriers, pilots, and airport neighbors, the design and use of various flight paths, including corridor and dispersed approach and departure systems. Following such study, the proprietor should recommend such path or paths be adopted by the FAA as a standard path designation, air traffic rule. Compliance with the paths thus established should be mandatory, unless the aircraft operator can establish as a defense that the operation in question was a direct result of the pilot's exercise of his responsibility for safety or of his emergency authority.

Finding D.

In some areas, complete separation of existing incompatible land uses from adverse noise impacts, as required by the airport noise certification rule, may be impossible because of countervailing social or economic needs; for example, where the elimination of housing near airports would result in deslocation residents in an area with an existing serious housing shortage.

Where relocation is not a viable option, conversion may not be advisable or may have to be delayed.

Recommendations: Variance Procedure

13. Where severe countervailing social or economic problems make total compliance with the airport certification rule impossible, the airport should be required to adopt a plan which, as much as possible, complies with the purposes of the regulation. A variance procedure should be contained in the airport certification rule to allow longer periods for phasing-out incompatible land uses or reducing noise impacts on such uses, or to waive certain requirements of the rule, provided the plan guarantees implementation of all feasible strategies available to ameliorate the problem.

Finding E.

At the present time, state and local land use planning and control practices are inadequate to prevent the development of noise sensitive land uses within areas subject to incompatible noise levels. Land use decisions are rarely, if ever, coordinated with airport siting design and operational decisions. Much of the problem rests with fragmentation of land use control and airport operational authority. Often the local government or authority which owns and operates the airport does not have jurisdiction over the land around the airport, which may lie within the boundaries of one or more other municipalities. Similarly the municipalities who have the power to plan land use do not have the power or responsibility to regulate airport operations--and thus, control airport noise impacts. Some-

times this fragmentation is aggravated and reenforced by state constitutional provisions barring state imposition of land use regulations. But even where such legal obstacles do not exist, coordination of land use and airport decision is rarely provided by present institutional structures.

Recommendation: Coordination of Land Use Controls

14. Land use planning and control in the vicinity of airports must be coordinated with the adoption of other airport noise control strategies at the airport level (e.g., curfews, runway utilization regulations, and single event noise standards), as well as with airport siting and development decisions. Where local general government jurisdictions have zoning powers over land around the airport, land use planning and zoning decisions should be coordinated with airport operational decisions by a higher level of government on a state or regional basis.

15. All states should be strongly urged to seriously evaluate the adequacy of their present land use planning and control structures. Where such institutions are found inadequate, states should be strongly encouraged to enact legislation to provide coordination and supervision of land use planning and zoning around airports, or to adopt such other legislation as will provide sufficient means of assuring (1) that incompatible land uses will not be further developed in noise impacted airport environs and (2) that existing incompatible uses, to the maximum extent possible, will be phased-out or protected. Alternative types of such legislation might:

(a) Establish a state or regional airport environs planning agency, responsible for determining incompatible land use areas and adopting land use regulations to bar development of incompatible uses and encourage growth of and conversion to compatible uses in such areas. Such state regulations would be in addition to local zoning ordinances. To the extent local zoning is found inconsistent with the state impact zone regulations, the state rules would supersede local zoning controls. N.B. This is the approach adopted in the Minnesota airport zoning statute. Analogous legislative structures are found in a few state flood plain management laws.

(b) Require localities around airports to develop and adopt airport noise impact zone management plans subject to submission to and approval by a state or regional planning or environmental agency. Such legislation should further require that the locality adopt adequate zoning or other controls to implement the plan. Where local governments fail to develop or implement such plans within a designated period, the law should allow the state or regional agency to develop, adopt, and implement a plan in lieu of local action. N.B. This approach is used in several state flood plain management laws, and may be preferable from a policy standpoint to alternative (a). It allows local government a first crack at the problem, and does not impose state intervention unless local planning and zoning fails to adequately address the problem.

(c) Authorization of state or regional agencies to acquire by purchase or condemnation residential development rights or no-residential-use easements for land located in airport noise impacted areas.

Because airport environs land use control is part of the much larger land use planning problem, comprehensive state land use legislation may be the best overall solution, and should be supported in lieu of special single purpose land use controls, such as airport environs as flood plain legislation.

16. Congress should adopt federal legislation to encourage state and/or regional government coordination and oversight of land use decisions involving airport siting and airport environment development. Such legislation might be contained in the provisions of a broader law, such as various proposals for a national land use policy act, covering all land use planning matters.

17. The federal government, through the FAA and EPA, should provide technical assistance to state and local planners regarding airport environment compatible use control. In particular, the FAA should reinstitute the practice of providing state and local planning agencies with Noise Exposure Forecast studies or equivalent noise exposure contour analyses.

Finding F.

States and local governments are in a special position to assess particular needs and sensitivities to aircraft noise levels which may vary from the national norm regarding levels

which adversely affect public health and welfare. On the other hand, decisions regarding acceptable noise levels and requisite noise abatement may be ill-conceived and uncoordinated if undertaken by a number of relatively small, local government units each having responsibility for only a part of the airport environs.

No governmental unit should be allowed to set exposure limits unless it is able to adequately balance air transportation needs and health and welfare effects. For such purposes, the unit should be large enough to include within its constituency both the noise affected residents and the air transportation users of the region.

The Supreme Court decision in Burbank v. Lockheed Air Terminal fails to recognize the proper role of state and regional governments in balancing the need for air transport with the concern to adequately protect public health and welfare. While air transportation operated on a national level, its polluttional impact is largely a localized matter. The solution to this problem is a matter of grave state and regional, as well as federal, concern. Indeed much of the solution must rely on uniquely state and local powers to control land use as well as state and local governmental responsibility to make wise siting and operational decisions as airport proprietors.

Allowing state and regional governments to set noise exposure standards more stringent than adopted by the federal government would not mean, as some have argued, that the

national air transport system would collapse. It might require more residences be insulated or that a larger number of incompatible land uses be relocated or converted. As a result the cost of air transportation to and from a particular area may increase. Yet this implies no more, and perhaps far less, than the power which the states clearly retain to modify the standards of compensation and tort liability for noise damages -even to the extent of making aircraft operators absolutely liable for damages caused by noise. See Askew v. American Waterways Operators, Inc., 41 U.S.L.W. 4507 (S. Ct. April 18, 1973).

Solution to the airport noise exposure problem must rely on a partnership of federal, state and local government. The federal agencies have no exclusive claim to wisdom in determining, ameliorating and eliminating intolerable noise impacts around airports, and the law should recognize the necessity of participation by all affected governmental units.

Recommendation: State and Regional Noise Impact Standards

18. Congress should amend §611 of the Federal Aviation Act to give state and regional councils of governments (including governments which have jurisdiction over the area containing the airport and airport affected environs) the power to identify unacceptable airport noise exposure levels more stringent than those identified by EPA and set in the airport certification

regulation, (see Recommendation 8, supra), and to require implementation by the airport operator and local governments of noise abatement and land use strategies to comply with those limits.

Finding G.

Two of the most substantial obstacles to expeditious control and abatement of aircraft noise at the source, and protection or relocation of incompatible land uses, are the question of who should bear the cost and the problem of how the necessary large outlays of capital funds can be financed.

In order to retrofit the existing fleet of first-generation, narrow-body jet aircraft and business jets aircraft and business jets, air carriers and private aircraft owners will be forced to invest substantial sums. Acquisition of needed funds the private market, over the relatively short period contemplated for implementing retrofit, will be difficult and possibly infeasible, particularly in view of the airlines recent large capital outlays debt commitments, and equivocal profit-loss history.

A similar problem exists in financing land use conversion, or improvements to homes and other buildings. Local governments and airport proprietors, with few exceptions, do not have the substantial initial resources to begin such a program.

Solution of the aircraft noise problem should not be delayed for the long period required for airlines and airport operators to accumulate the resources necessary to implement various noise

control strategies. It is, thus, extremely important that Congress consider and adopt some federally assisted or funded financing scheme for noise abatement.

The cost of retrofitting, and the increased cost of new aircraft incorporating noise control devices, should be ultimately borne by the air transport consumer: the air passenger and air freight shipper. Such costs should be passed through to the consumer either through increased fares (if the cost is financed privately by the airlines) or through a head-tax, surcharge or impost (if the cost is financed by a government fund).

The cost of land use conversion, including the purchase of land or restrictive easements and improvement of certain structures through increased insulation and mechanical ventilation, should be ultimately borne by all air transportation beneficiaries, including air passengers, shippers, and ground businesses which benefit from air travel. Such cost could be passed through to such beneficiaries through noise-related landing fees or landing fee imposts, a passenger head tax and freight tax, increased lease rentals to airport concessions, increased airport parking fees, or airport assessment district property taxes.

Recommendation: Funding of Retrofit, Residential Insulation, and Land Use Conversion

19. Congress should adopt legislation establishing a financing scheme to allow implementation of presently available

source noise abatement technology as soon as possible and assist in conversion of incompatible land uses located within areas which are predicted to remain severely impacted after all feasible operational and aircraft source abatement techniques have been implemented. Such legislation could take the following forms:

a. To finance retrofit:

(1) The Federal Government could establish a noise abatement trust fund, repaid by a head tax or surcharge on the present air transport excise taxes, from which airlines would receive grants to install noise abatement equipment.

(2) The Federal Government could set up a loan fund to assist airlines in the installation of noise abatement equipment, to be repaid by the airlines through higher fares or a noise abatement surcharge on air travel tickets and freight shipments.

(3) The Federal Government could guarantee loans made to airlines by private lenders for the purpose of purchasing and installing noise abatement equipment.

For ease of administration, the most feasible funding source would be a passenger head charge and freight surcharge, collected on every ticket and shipment. In order to most expeditiously implement available retrofitting technology, Congress should appropriate initial "seed money" to a trust or loan fund. Without such appropriation, it is possible an adequate retrofitting program could not be financed until the aircraft affected are too old to make such an additional investment reasonable.

b. To finance land-use conversion, structural insulation improvements, and the purchase or condemnation of facilities and/or restrictive easements to control future incompatible land use development, pursuant to an airport noise abatement implementation plan (see Recommendation 8, supra), either Congress should establish and initially fund an airport noise abatement fund, against which an airport proprietor could borrow the sums needed to convert or insulate existing incompatible land uses and acquire such interests or Congress should adopt legislation allowed such use of existing Airport and Airway Development Trust Funds. Such sum should be repaid by the airport operator overtime through funds received from increased landing fees, a landing fee impost, a passenger head tax, increased concession rentals, or general or special tax revenues.

Because landing fees are often established in long-term leases, and may be otherwise unavailable for prepaying such land use conversion loans, Congress should consider authorizing airports so desiring to impose a landing fee impost (a dollars-for-decibels landing fee surcharge) to finance repayment of monies borrowed from the fund. Furthermore, Congress should clearly authorize airport operators to impose an air travel head and freight tax, if they so choose, for the purpose of financing land use conversion.

Finding H.

The present system for the compensation of property taking, personal and nuisance damages resulting from aircraft noise is irrational, inequitable, and too costly to administer compared to the benefits resulting therefrom.

The "overflight" test of compensability developed by the federal and some state courts is an unjust legal fiction. Damage or substantial taking of property use by noise should be compensable regardless of whether the flight path falls across the property in question. Drastic variance of compensability tests applied from state to state makes little sense, and some uniformity should be encouraged both as to the test of compensable damage or taking and the measure of such damage.

The present compensation system does not assist in solving the airport noise problem. Lump sum payments for "permanent" property devaluation do not provide incentives to the air transport industry to implement noise abatement technology, and, thus, terminate their liability. Such lump sum payments become a permanent license to pollute, and are inimical to a national program of noise abatement.

Furthermore, payment for property value diminution does not guarantee either use of such funds to soundproof the impacted structures or to convert incompatible land uses. Although the latter solutions to the airport noise problem are not always viable, they should be encouraged to the maximum

extent possible by the compensation system. State and Federal Constitutional requirements for just compensation cannot be changed legislatively. However, a legislative or regulatory scheme of compensation can be devised to supplement such constitutional mandates, in order to provide alternative measures of compensation--including payment for soundproofing and relocation. Such a scheme could also be made more attractive than constitutional damage claim litigation by (1) establishing a clear line of compensability and (2) providing a relatively simple, inexpensive administrative procedure to assert claims and receive payment for soundproofing costs, relocation, or other appropriate relief.

Recommendation: Compensation System

20. Congress and/or the states should adopt legislation to establish an airport compensation system. Such legislation should establish a clear line of compensable damage, based on those levels of noise exposure detrimental to public health and welfare. The law should provide for an administrative procedure whereby noise impacted claimants could apply for and receive funds for either (1) structural modifications--such as insulation and ventilation--to soundproof their residences or other buildings or (2) relocation expenses, including the value of the property which must be abandoned and moving expenses.

The compensation scheme should be coordinated with and made part of the airport noise abatement implementation plan,

(see Recommendation 8, supra), and financed through airport proprietor loan fund (See Recommendation 18, supra).

Finding I.

Adequate enforcement mechanisms must be established to assure that the national program for aircraft/airport noise abatement and its federal, state and local regulatory components are fully implemented. Some current enforcement mechanisms should be adopted and used for this purpose--for example, enforcement tools under the Federal Aviation Act and Airport and Airway Development Act.

Some regulations, adopted by the federal and state government, may best be monitored and enforced on the local, or airport operator, level. Thus, federal legislation may be required to authorize airport proprietor, state and local government enforcement of federal standards and sanctions. State legislation may similarly be needed to authorize airport operator and local enforcement of state standards or sanctions.

Recommendations: Enforcement Mechanisms

21. In adopting the Airport Certification Rule, the FAA should provide that any violation of a regulation adopted pursuant to an airport implementation plan approved under the certification rule, is a violation of Federal Air Regulations (FAR's), and all applicable sanctions available under the Federal Aviation Act should be used to enforce such noise rules.

22. Where an airport fails to develop an adequate airport implementation plan, the FAA rule should provide for either (1) federal imposition of such a plan, or (2) partial or total decertification of the airport until such a plan is submitted.

23. Congress should adopt appropriate amendments to the Federal Aviation Act to allow state and local governments and airport operators (1) to institute and prosecute complaints before the FAA for civil penalties as provided under the Act or for suspension or revocation of appropriate Title VI certificates, and (2) to adopt local enforcement procedures and penalties for violation of airport implementation plan rules, standards, and procedures.

Finding J.

To the maximum extent possible, aircraft source noise abatement should be accomplished with international cooperation to the extent such regulations affect international fleets. The International Civil Organization (ICAO), however, has appeared reluctant to act in this field, and continued United States leadership is vital. Deference to international cooperation should not be allowed to deprive the federal, state and local governments of their powers to protect their citizens from noise levels which are adverse to public health and welfare.

Recommendation: International Relations

24. Until adequate international standards are established all United States aircraft noise regulations should apply equally to any aircraft using American airports. No aircraft, regardless of ownership or route, should be exempt from retrofit, fleet noise rules, or type certificate rules.

25. When adequate international standards are established for retrofit, fleet noise, or type certification, which are similar to or which have substantially equivalent effect of United States regulations, the United States should waive compliance with its rule to the extent foreign-owned aircraft comply with the international standard, provided foreign governments similarly waive compliance with their noise standards for United States owned aircraft which comply with an equivalent American regulation.

Finding K.

At the present time, only the State of California has developed and adopted a comprehensive program to solve the airport noise problem through a regulatory scheme which coordinates land use and airport operational regulations. California's program, which is based on a community noise exposure standard (CNEL), is similar to that now being discussed by the EPA and FAA for adoption of the federal level. California's scheme is now becoming operational, and could provide valuable information

and experience in the coming months as to the efficacy and problems of such a noise control program. This data would be most helpful in deciding whether such a program should be enacted on a nationwide basis and, if so, how it might be refined. However, as a result of the Burbank decision, there is a serious threat that such invaluable experience could be lost at precisely the time when it is most needed to guide decisions of national importance.

The California experiment should be continued, and in accord with California's request² the community noise exposure level regulations previously adopted by the California Department of Aeronautics [Title 4, California, Admin. Code §55000 et seq.] should be adopted by the FAA under §611 of the Federal Aviation Act for application in the State of California on an interim basis until more general noise exposure standards of national applicability can be developed and promulgated.

Recommendation: Interim Noise Standards

26. The Federal Aviation Administrator should immediately adopt interim airport certification standards for application in the State of California based on the current California CNEI standards. Such a rule should be used as an experimental

2. Petition of the State of California before the U.S. Environmental Protection Agency and the Federal Aviation Administration. In re Airport and Aircraft Noise standards to be applicable in California (filed June 1973).

interim regulation to study the effectiveness and viability of such regulations for adoption on a national basis. This rule should remain in effect until national airport noise exposure standards can be developed and adopted.

ENVIRONMENTAL
DEFENSE
FUND



1712
KING STREET, N.W., WASHINGTON, D.C. 20036/202 833-1485

June 18, 1973

Ms. Elizabeth Cuadra
Office of Noise Abatement
Environmental Protection Agency
Room 1107, Crystal Mall Bldg. #2
1921 Jefferson Davis Highway
Arlington, Virginia 20460

Re: Recommendations from Final
Draft of Task Group I Report

Dear Ms. Cuadra:

The undersigned environmental and consumer organizations would like to express their strong support for the Recommendations from the Final Draft of the Task Group I Report, circulated on May 31, 1973.

Our only major reservation with respect to these Recommendations is that we feel that they overestimate the willingness -- and perhaps the capacity -- of the Federal Aviation Administration to implement even reforms as obvious and clearly needed as the ones in the Task Group I Recommendations.

For this reason we think the Recommendations should include a "fall back" section on steps the Congress might wish to consider in the all too likely event that suggesting reforms to the FAA turns out to be ineffective.

Some of these legislative steps might include divesting the FAA entirely of certain functions and giving them to other agencies. A prime example is that applied research into the technology of aircraft noise suppression at the source, and the authority to promulgate federal regulations on this subject, would much better be concentrated in the National Aeronautics and Space Administration than in the FAA. NASA not only has superior technical expertise in this area; it also lacks the crippling conflicts of interest that have prevented the FAA from taking effective action. As long as the FAA perceives its principal mandate to be the promotion of air transportation, it is unlikely to take steps to ensure

that the air transportation system pays its full social costs, no matter how persuasively or authoritatively a Task Force such as this one recommends that this be done.

We also believe that more attention should have been paid to problems created by military aircraft, especially where these share the use of civilian airports.

Turning now to the specific Recommendations of Task Group I:

Recommendation #1: That the Federal Government promulgate, administer and enforce an airport noise regulation, designed to limit the cumulative noise exposure received in residential communities.

We concur, and agree that the airport certification process is the obvious vehicle for administering this regulation, and that the FAA has all the authority it needs to do this. We would add the observation, however, that the FAA itself has virtually no expertise with respect to land use around airports, or the noise levels that can be tolerated for such land uses, so that the substantive content of regulations on this subject will clearly have to come from EPA, pursuant to Sec. 5 of the Noise Control Act, in consultation with the Department of Housing and Urban Development and other interested agencies.

Recommendation #1a: That the California airport noise regulation, particularly the CNFL portion, be adopted as a Federal (FAA) regulation, applicable in California only, until a nationwide Federal airport noise regulation goes into effect.

Again, we concur, for the reasons stated in your discussion of the Recommendation.

Recommendation #1b: The FAA should, with EPA participation, establish a national resource to provide assistance to airport proprietors and state and local agencies in developing skills (within their own staffs) necessary to implement the Federal airport noise regulation.

We concur, and suggest NASA and HUD participation in this resource as well. Again, it should be remembered that FAA interest and expertise in land use problems are thin, at best, so that the main substantive contributions will have to come from other agencies. With respect to developing techniques for noise monitoring, NASA participation would be in order.

Recommendation #1c: It is recommended that an adequate time for FAA promulgation of the proposed airport noise regulation is no later than one year from the date of this report, or July 1974.

We concur, especially in the comment that "the attention of Congress is invited to focus upon the timely performance of both EPA and FAA in promulgation and implementation of the airport noise regulation."

Recommendation #2: (a) It is recommended that all States, by statute, require the formation of airport land use commissions, at the regional level or above, to incorporate the interests of both local governments and airport proprietors into effective land use controls around airports; (b) it is recommended that Congress encourage States to establish adequate mechanisms for positive land use control within airport impact zones, by enactment of appropriate Federal land use legislation having wider but inclusive purposes.

We concur, and suggest that Congress make State legislation of this type a condition of eligibility for Federal airport funds. We suggest that Congress ask EPA, HUD, HEW, DOI and other interested agencies to submit specific recommendations for legislation to this effect, setting forth proposed specifications for such State legislation.

Recommendation #3: The task group recommends an accelerated program of Federal regulation of aircraft noise, incorporating [various specified] elements.

We concur, subject only to the caveat that Congressional action may be needed, along the lines suggested above, if the FAA continues to procrastinate. To pick just one example of many, the FAA has been dragging its feet for nearly three years on the matter of promulgating certification standards for SST noise emissions, despite periodic unfulfilled assurances to Members of Congress and others that issuance of such standards is "imminent." It seems unlikely that FAA performance in this regard will improve unless very substantial pressure is applied from outside the FAA, either by Congress or through the courts.

Recommendation #4: It is recommended that the Congress and the Executive Branch agencies give high priority to evaluation of alternative financing schemes to allow feasible, desirable solutions to be expeditiously adopted and applied.

We concur. We agree that the most important thing is providing for immediate availability of funds to defray major capital costs, subject to later payback from funds collected from the users and beneficiaries of air transportation.

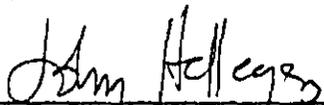
Recommendation #5: It is recommended that all U.S. regulations regarding aircraft noise be applied equally to all aircraft operating into U.S. airports It is recommended that the United States waive compliance with its rule to the extent foreign-owned aircraft comply with [an international standard substantially equivalent to the U.S. standard.]

We concur.

Recommendation #6: It is recommended that the affected Executive agencies form a continuing, cooperative task force to assist FAA [in the formulation and execution of programs to control aircraft and airport noise.]

We concur. We believe that the situation would be materially improved if aircraft and airport noise were considered the regular province of the whole range of affected agencies, having at least some diversity of interests and constituencies, rather than being left solely to the FAA.

Very truly yours,



John Hellegers
Environmental Defense Fund



Lloyd Hinton
National Organization to Insure
a Sound-controlled Environment

Neil McBride (mb)
Neil McBride
Aviation Consumer Action Project

Catherine Lerza (mb)
Catherine Lerza
Environmental Action

George Alderson (mb)
George Alderson
Friends of the Earth



**General Aviation
Manufacturers Association**

Suite 1215
1025 Connecticut Ave., N.W.
Washington, D. C. 20036
(202) 286-8848

GENERAL AVIATION MANUFACTURERS ASSOCIATION
COMMENTS ON THE
DRAFT REPORT
ON
LEGAL AND INSTITUTIONAL ANALYSIS OF AIRCRAFT
AND AIRPORT NOISE AND APPORTIONMENT OF
AUTHORITY BETWEEN FEDERAL, STATE,
AND LOCAL GOVERNMENTS
FOR
ENVIRONMENTAL PROTECTION AGENCY
AIRCRAFT/AIRPORT NOISE REPORT STUDY

TASK GROUP 1

June 20, 1973



The General Aviation Manufacturers Association has been pleased to contribute to the work of Task Group 1. Specific comments on the report are as follows:

1. The recommendation that noise certification standards be developed for all aircraft categories for which standards do not now exist and that no further type certificate be issued until applicable standards have been promulgated is already incorporated into the Federal Aviation Act by the Noise Control Act of 1972. This requirement is not expected to create an economic hardship for the manufacturers who wish to certify new (and quieter) aircraft types by causing delays in certification if the FAA can expeditiously adopt the ICAO noise standard and test techniques. However, an interim standard will have to be adopted to accommodate aircraft that are in development and that are expected to receive their type certificates before the operative date (January 1, 1975) of the ICAO standard. The issues of acceptance and adoption of the ICAO standard and the adoption of an interim standard are not adequately covered in this report. While it is recognized that turbojet aircraft are the main source of aircraft noise, the manufacturers of general aviation propeller driven aircraft are making diligent efforts to reduce the relatively low noise levels of propeller driven aircraft to meet the ICAO standard. Appropriate recognition of this fact and recognition of the international status of the U.S. as the supplier of aircraft to the world would dictate a much stronger emphasis in this report on the need to incorporate the ICAO standard, without modification, into the U.S. regulations.
2. In accordance with the request of the Task Force Chairman to point out minor errors in the report, it should be noted that under the title "National Head Aid Freight Tax or Surcharge", the current aircraft fuel tax is 7 cents per gallon, not 3 cents.



NATIONAL ASSOCIATION OF STATE AVIATION OFFICIALS

SERVING THE AVIATION AGENCIES OF THE STATES

SUITE 802 • 1000 VERMONT AVENUE, N.W., WASHINGTON, D.C. 20005 • 202-783-0588

President
CHARLES MURPHY, Director
Aeronautics Commission
State of Texas

July 2, 1973

Executive Vice President
JOHN A. HAMMACK

1st Vice President
GROVER JONES
State of Florida

TO: Ms. Elizabeth Caudra
Office of Noise Abatement and Control
Environmental Protection Agency

2nd Vice President
ALLAN F. LANDOLT
State of Illinois

FROM: Mr. Richard Dwyer
California Division of Aeronautics
Department of Transportation

Treasurer
K. A. ROWE
State of Virginia

RE: EPA Task Force I Comments

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KEITH W. LUTZ
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JOHN H. BENNETT
Georgia

The National Association of State Aviation Officials desires that efforts to regulate aircraft noise by the Environmental Protection Agency and the Federal Aviation Administration provide a reasonable mechanism by which the nation's airports and their communities can be made compatible with each other. NASAO members recognize that regulation and control of aircraft noise are necessary to insure that available noise reduction measures are in fact employed.

Any regulation in this field must be carefully designed so as to achieve the desired noise reductions without causing an unacceptable reduction in the capabilities of the national air transportation system. While recognizing the need to eliminate unnecessary aircraft noise, we also recognize that the demand for air transportation is growing, and is forecast to continue its rapid growth.

Your difficult task of balancing both factors in charting the proper course for future noise regulations is appreciated. We believe that the desired reductions in noise can be achieved through the enactment of reasonable airport and aircraft noise regulations, proper land use planning around airports and by the availability of funding or loan programs needed to implement noise reduction programs. We also believe that your proposed regulations will be reasonable, achievable, and considerate of national air transportation needs. Proposals which would prevent the air transportation system from meeting the demands placed upon it would be unacceptable to NASAO.

The following positions are offered by NASAO for your use in conjunction with Task Group I, the report to Congress, and in the drafting of proposed regulations to be forwarded to FAA for

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its action.

1. Noise methodology and limitation should be standardized by Federal regulation throughout the U.S., with one temporary exception. The California noise standards should be adopted as Federal regulations for immediate and continued implementation within California until such time as a Federal regulation becomes effective nationwide. This has been requested by the California Attorney General's Office and the California Department of Aeronautics.
2. New aircraft certification should continue to be done by FAA. The maximum allowable noise levels for certification should be reduced to the lowest reasonable level shown by research to be technologically feasible commensurate with the applicable time period.
3. An appropriate source of funding for conversion of existing aircraft to incorporate available state of the art noise reduction technology must be developed. The economic feasibility problem must be solved prior to requiring that existing aircraft be modified.
4. An appropriate source of funding should be developed for converting incompatible land uses in the vicinity of an airport to compatible uses where no other means of correcting the noise problem is practical.
5. After economic feasibility is established, existing aircraft should be modified to operate within the noise levels of aircraft of the same type which incorporate the most practical state of the art noise reduction technology. These modifications should be accomplished as rapidly as is reasonable once financing is assured.
6. The noise regulation to be adopted by FAA should:
 - a) provide identification of the noise environment which affects human health and welfare.
 - b) require development of contour maps showing the specified health and welfare contours, the airport layout, and the community land use within the contours for airports with noise problems.
 - c) require noise reduction measures and land use conversions where necessary so that people do not reside inside the noise contour designated to be injurious to human health. Necessary funding or loans should be made available immediately for this purpose.
 - d) require compatible land use within the contour defining the limit of effect upon human welfare. Satisfying this requirement will require a funding program and a long term scheduling of compliance in order to be reasonable.
 - e) require that noise abatement flight procedures compatible with safety requirements be used as standard procedure.
 - f) provide a means of preventing the use in civil courts of the Federal noise regulations or the contours identifying health

or welfare effects to show proof of damage or a taking of property. The sole use of the contour definitions and locations must be for the solution and prevention of noise problems and not for legal actions.

7. Strengthening of land use control around airports is necessary. Legislation by Federal, State and local governments should be coordinated to discourage the movement of residential land uses into areas which are or may become adversely affected by aircraft noise. This "encroachment" problem continues to occur and is difficult to prevent unless strong measures are enacted.

Immediate solutions to noise problems cannot be attained without committing substantial sources of money to the task, or without reducing or curtailing flight operations at many airports. We recommend a gradual solution to the problem accommodating the economic and technological capabilities of the owners of the nation's airports and aircraft to comply.

The full implications and costs of imposing compatible land use requirements within certain specific contour lines are difficult to assess. Since there is no way of knowing whether or not such a requirement will ever be achievable, there must be a "reasonability valve." Our suggestion is that there be provision for variances to the regulation where compliance is impossible.



25 KNOB HILL ROAD, GLASTONBURY, CONNECTICUT 06033

203 - 633-2835

National Organization to Insure a Sound-controlled Environment

June 30, 1973

Ms. Elizabeth Cuadra
Chairman, Task Group 1
Aircraft/Airport Noise Study Task Force
U. S. Environmental Protection Agency
Building 2, Crystal Mall
Arlington, Virginia 20460

Dear Ms. Cuadra:

We have participated in each of the Task Groups of this Aircraft/Airport Noise Study Task Force and have reviewed each of the Task Group Draft Final Reports. We find that the recommendations of all Task Groups, particularly with regard to action to be taken as a result of this/^{study} must be coordinated and delineated in the report of Task Group 1.

We find from an analysis of the state of the art in the fields dealt with in Task Groups:

- #2-aircraft operating procedures to abate noise,
- #3-setting standards for noise,
- #4-the technology of aircraft noise abatement, and
- #5-the development of a pattern of regulations to limit aircraft noise

that important progress has been available in each of these areas for several years which has not been utilized.

We find the reason for this situation to be the legal/institutional structure which was established to

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control aircraft noise but which is incapable of performing its intended function. We are therefore presenting:

- a. A description of the present legal/institutional structure for controlling aircraft noise with an explanation of the reasons why it does not function to control aircraft noise, and
- b. a description of a revised legal/institutional structure which would overcome the difficulties in the present structure.

PART I

Present Legal/Institutional Structure

In the early days of the air transport system in the U. S., the Congress provided considerable assistance to this infant industry. The aircraft used by the airlines benefited to a major extent from the development of military versions of both engines and airframes and the airlines benefited from direct government subsidy.

The federal agency assigned to regulate the air transport system, the FAA, as with its predecessor agencies, was assigned the role of supporting and assisting in the development of a strong and growing transport industry. Any factor which seemed to have the potential for interfering with airline growth, such as a reduction of airline profits by imposition of extra costs, was perceived by both the airlines and the FAA as highly undesirable.

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When noise suppressors were developed for the first turbo-jet powered airline transports, severe penalties were incurred including a high loss of aircraft performance per dB reduction in noise, as heard by people on the ground under takeoff and landing operations. Also, the aircraft were in need of extra takeoff thrust which could be obtained by operating the engines at higher exhaust velocity and therefore, at higher noise levels.⁴ Thus, the airlines and the FAA conceptualized high aircraft noise levels as a factor associated with good aircraft performance. Good aircraft performance was also associated with safety.

Other solutions were available, such as using larger engines at lower exhaust velocity and lower noise, but these solutions would have been less efficient and would have produced less profit at the same airline ticket cost and therefore, were not seriously considered.

The FAA thus found itself in the position of having as its primary role the support of programs which would result in a healthy vigorous air transport system and with a secondary role of protecting airport neighbors from aircraft noise. The FAA quickly concluded that to perform well in its primary role it must protect the airlines from any organization which would try to perform its secondary role. Therefore it clung to its secondary role

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and claimed federal preemption whenever the airlines were threatened by airport neighbors. Thus the normal channels such as the courts, police powers and federal legislation have been blocked by the coordinated efforts of a powerful government agency and a powerful industry which the agency was supposed to regulate.

The position of the aircraft manufacturers was one of going along with the airlines. As vendors they were in competition for the favor of the airlines--their customers. At Congressional hearings they tried to please the airlines by contriving an implication that everything was being done to reduce aircraft noise that could be done and that anything more would reduce safety. The Boeing Company stepped out of line in presenting a paper in June of 1971, showing how significant noise reductions could be achieved in the operations of Boeing Aircraft. This paper has produced angry reactions and threats of boycotting Boeing products from the airlines and no support from the FAA.

It should be noted that the airlines are not all alike in their resistance to taking steps which would reduce aircraft noise near takeoff and approach flight paths. For example, Northwest Airlines flight operations instituted effective noise abatement procedures for takeoff and proposed others requesting FAA approval which was never

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received for approach. Other airlines, especially Pacific Southwest Airlines and Air California, have instituted and are still using effective if not optimized noise abatement flight procedures.

In 1968, the Congress passed, with the approval of the airlines and the FAA, an act requiring the FAA to establish noise limits for aircraft and to certify aircraft for noise using these limits. The act called for noise limits which would be "economically reasonable, technologically practical, appropriate to the aircraft type" and safe. The more efficient high bypass ratio engine cycle was being introduced at that time. The dominant noise sources in high bypass engines are internal instead of external and they can be abated by inlet and discharge duct treatment.

NASA arranged for the demonstration of acoustically treated engine inlet and discharge ducts. The FAA noise certification limits then called for noise levels which resulted from the use of these two features, the high bypass engine and treated ducts. However, the FAA established a certification procedure to be used by the aircraft manufacturers which could not and was not intended to be used by the airlines in routine operation and no noise abatement procedures of any kind were imposed on airline use of the aircraft. In view of the fact that noise on the ground is a function of both powerplant

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design and aircraft operating procedures, this action by the FAA insulated the airlines from any requirement for noise abatement actions. The significant fallout benefit to the airport neighbors was that the more efficient engine cycle was basically quieter and could benefit from duct treatment.

Aircraft Noise Exposure and Land Use

During the 1950's the relationship between aircraft operations (including aircraft noise, number of operations and time of day of the operations) and the impact of these operations on people living under aircraft takeoff and approach flight paths was fairly well understood. A cumulative noise exposure unit called composite noise rating, or CNR, was developed for use in planning land use in areas of high aircraft noise exposure near airports. An FAA contractors report "Land Use Planning Relating to Aircraft Noise", published October, 1964, describing the use of CNR to indicate areas which should not be used for residential purposes created a strong protest from the aircraft industry. The FIA started to withhold approval of FIA mortgages in areas where the CNR rating indicated that the aircraft noise impact would be too high for residential use. Because of the airlines demand that this information not be made available regarding areas not suitable for residential use, the FAA withdrew its CNR information. The FAA thus indicated

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its willingness to accommodate the airlines desires and sacrifice community planning, which could have protected millions of people from excessive aircraft noise exposure.

An Updated version of CNR called Noise Exposure Forecast or NEF, was developed in 1967. Although the calculation of NEF was much more refined and more accurate data were available than for CNR, when it was proposed that NEF be given FAA approval, it was denied and other units were proposed which could not be used to indicate whether the aircraft noise would be acceptable for residential use.

This incredible dedication of the FAA in the support of programs which benefit the airlines is highly laudable in all areas except where the investment of many billions of dollars in residences and the lives of millions of people are being damaged. This situation is being emphasized here not to condemn any particular FAA administrator, since all administrators have followed the same policies. We are not trying to indicate incompetence in the FAA staff since much good work including the development of CNR and NEF were accomplished by the FAA staff. The crux of the matter is that the Congress has given the FAA an impossible task, a secondary role which interferes with its primary role.

To illustrate the FAA's predicament, in 1966-67, during

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the aircraft noise 'Program Evaluation and Development Committee' activity directed by the Presidents' Office of Science and Technology, when the FAA was being pressured to set limits on aircraft noise, it took the position that it did not have authority to control aircraft noise (even though the Attorney General's Office said it did have such authority). The intention was to protect the airlines from being subjected to noise limits which the FAA might be forced to set. At the same time an FAA lawyer was telling the judge in a law suit, where the FAA joined the airlines and the airport (John F. Kennedy) to prevent the town of Hempstead from enforcing an aircraft noise ordinance, that the FAA was in fact controlling the noise of the aircraft on takeoff and approach at John F. Kennedy Airport (even though the FAA does not yet have an operating rule for either takeoff or approach). This was to establish preemption by the federal government in order to protect the airlines from noise limits set by some other authority.

Conclusions

The above description of the manner in which the present legal/institutional structure functions to prevent any action which would benefit the airport neighbors even with capable FAA Administrators and FAA staff identifies the problem as being in the legal/institutional structure itself. For further substantiation note the record of lack of FAA action on aircraft noise in Section V-6, first

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paragraph. There it is stated that "since the advent of FAR-36 there are two regulations, two NPRMs, three ANPRMs and three project reports". This was a follow through of two out of ten where the two regulations were FAR-36 which was specifically required by Congress and the Sonic Boom regulation, which still does not limit supersonic aircraft noises on takeoff and approach.

It is also emphasized that the FAA cooperates with the airlines not only in refusing to limit aircraft noise itself but also in preventing any other agency to do so.

All of this takes place in a situation where aircraft noise could be reduced by several orders of magnitude without substantially affecting the economics of airline operation.

PART II

Recommended Legal/Institutional Structure

The Noise Control Act of 1972, P. L. 92-574, gave EPA the responsibility for establishing criteria for all kinds of noise and for setting limits on all kinds of noise except aircraft noise. The reason for aircraft noise being exempted from the EPA authority was that aircraft noise had been the most serious community noise problem in the past and it had already been assigned to the FAA. The FAA requested that control of aircraft noise

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remain with FAA. The airlines vigorously supported the retention of control by the FAA. (The airlines wished to continue the non control which the FAA had been able to provide.)

Looking one layer below the surface we find that because aircraft noise was a major problem the aircraft industry had a strong lobby in Congress and presented a mass of material at Congressional hearings to insure that aircraft noise would remain with FAA. A correct reading of this operation shows that the FAA is the only government agency shielding an industry from the necessity for noise reduction. It shows that of all kinds of noise, it is most important that aircraft noise be handled by an agency which can be objective with respect to both the operator of the noise source and the receiver of the noise.

The Noise Control Act of 1972 gives EPA the responsibility for establishing noise abatement programs for major non-aircraft noise sources. We would not suggest that aircraft noise abatement be included with these other sources. Instead, we would recommend that this assignment be given to NASA.

We recommend the following assignments be given to the following government agencies. Some of these assignments will require new legislation, others do not. However, because some government agencies do not carry out their assigned responsibilities unless specifically required to

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do so by law, it is recommended that a legislative package be passed by Congress spelling out all of the government agency responsibilities.

Aircraft Noise Regulations--FAA

We recommend that the FAA, which is responsible for the operation of the government facilities of the air transport system and for certifying and licensing all aircraft equipment and personnel used or working in the system, be responsible for developing, implementing and enforcing all aircraft noise regulations. It is deemed highly important that there be no divided responsibility regarding regulations which involve both noise and safety. The claim that noise abatement procedures would reduce safety has been used for years to avoid the use of procedures which would improve safety. However, even though the problem might be only psychological, the FAA which is responsible for safety should be in charge.

The FAA has all of the legal authority needed to carry out the program outlined here. However, since the FAA has refused to act in this area in the past, it is recommended that a legislative package spell out the FAA responsibilities and a schedule for action.

Noise Criteria/Noise Standards vs Land Use--EPA

The Noise Control Act of 1972, P. L. 92-574, section 5.(a)(2) states that the EPA shall within 12 months ... "publish information on the levels of environmental noise the attainment and maintenance of which in defined areas

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under various conditions are requisite to protect the public health and welfare with an adequate margin of safety".

These noise standards are a basic building block in the structure required to establish control of aircraft noise. The standards will apply to noise from all sources and will identify noise levels considered acceptable from a public health and welfare standpoint. Acceptable levels will be established for residential areas outside and inside of houses, in commercial areas and in industrial and other areas.

It should be noted that these standards specify noise levels that are requisite to protect the public health and welfare. They say nothing about how these levels are attained or the schedule on which they are to be attained.

No new legislation is required to give EPA this authority. However, the legislative package should identify EPA's role particularly in establishing a schedule for achieving noise levels which meet the public health and welfare criteria.

Determination of What Is ERTPS--NASA

ERTPS is the criteria used in setting certification noise limits for aircraft. It means that in setting the limits due consideration should be given to whether the regulation is "economically reasonable, technologically practical, and appropriate for the particular type of aircraft..."

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and "consistent with the highest degree of safety".

NASA has the highest degree of expertise, experience and facilities of all government agencies for conducting research and development in the field of aircraft noise abatement, noise abatement operating procedures, safety of operations and cost of aircraft or aircraft retrofits. As in the current situation involving high bypass engines with low noise fans and duct treatment and in the development of two segment approach procedures, NASA is expected to provide leadership and guidance for future aircraft designs with still lower noise levels.

NASA has also determined cost benefit information for various approaches to the aircraft noise problem. It would therefore be both more effective and more efficient to have NASA specify noise certification levels which are LNTPS for new or retrofit aircraft.

In addition to having the LNTPS expertise, NASA does not have the responsibility for supporting airline growth and can, therefore, be objective in its determinations.

The assignment of this responsibility to NASA requires new legislation and should be a part of this proposed legislative package.

Control of Land Use in Airport Environ--States

The Constitutional separation of powers gives the federal

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government control of interstate and foreign commerce and the states control of land use within the states. This means that the federal government can limit aircraft noise to certain areas in the environs of airports. It is necessary that these areas be identified and that land use planning within the states be coordinated with airport operations so that the requirements for public health and welfare of citizens within the states can be met.

Since airports operating within a state are subject to the laws of the state, as well as being subject to federal laws relating to the operation of the air transport system, the airport operator is in the position of dealing with both the state and federal governments. From this position he can therefore deal with the state regarding land use and with the federal government regarding aircraft operation at his airport. The plan developed in this study involves the use of airport certification for noise by the FAA to coordinate land use planning in areas of high aircraft noise exposure levels near the airport with aircraft operations.

Noise certification of airports by the FAA is now required by law. However, the FAA has taken no action in this area and it is recommended that the legislative package spell out the airport noise certification requirements and the schedule for certification. This airport

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certification will require that a land use plan for the high aircraft noise exposure areas be developed by the state, or some agent of the state, which will result in land use which is compatible with the aircraft noise according to the EPA standards established for public health and welfare. It will be the responsibility of the airport operator negotiating with the state land use planning agency to achieve compatibility by means of limitations on the types and numbers of aircraft operating at his airport, time of day of operations, operating procedures used, preferential runway limits on crosswind, tailwind, etc., and/or limitations on land use and implementing strategies for land use change.

Funding of Aircraft Noise Abatement/Land Use Change--FAA and States

In order to achieve effective noise abatement within the next generation; i.e., 20 years, or so, it will be necessary to make relatively large investments in aircraft and airport changes. (Aircraft models normally continue in production for 10 years or more, and then some of these aircraft normally are used in the air transport fleet for another 10 years or more.) Therefore, funds will be required beyond those contemplated by the airlines and airports for normal operations. These Funds would be used for:

- a. retrofit of aircraft to improve aircraft control during noise abatement approach and takeoff procedures.

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- b. Retrofits to aircraft to reduce noise emanating from the engines and/or to install quieter engines.
- c. Changes in the design of aircraft now in production to achieve noise levels lower than the original design.
- d. Changes in airport equipment to provide for noise abatement approaches and takeoffs.
- e. Changes in airport design to change locations of noise impacted areas.
- f. Changes in aircraft and airport runways to permit greater use of preferential runways.

The funds for this work should be provided by charges to the air transport system users. The federal government guarantee of loans may be needed. These funds could be assembled from a variety of sources.

One logical source is the AADA trust fund. Before additional aircraft operations and noise are imposed on airport environs, some of the damage already done should be rectified.

The head tax and an equivalent tax on freight and express, on the basis of a fixed fee for each flight, is logical since the noise impact is a function of the number of takeoffs and landings rather than distance travelled.

A noise surcharge landing fee is also a logical source of funds since charges can be assessed in proportion to the cost to the Airport Operator for land use change required as a result of the excessive aircraft noise. It

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also places pressure on the aircraft operator to either phase out or retrofit noisy aircraft.

The channels for funds to airlines and airports can be established by the FAA. However, the channels for funds for land use change will necessarily be at the local level, i.e., between the Airport Operator and the office of land use control established by the state.

Enforcement of Airport Noise Certification Requirements--FAA

The enforcement for aircraft and airport procedures can be handled by the FAA in its usual manner. Certificates can be revoked where continued violations occur. The requirements for land use control and land use change can be handled by the FAA through its certification of the airport for noise. A series of enforcement procedures could be applied starting with loss of funds for airport improvements and operations and ending with the loss of all federal services for the operation.

The enforcement of noise abatement procedures must be applied to all aircraft including foreign aircraft. Otherwise the whole plan is ineffective. Since it will take time to implement the plan, foreign airlines will have time to promote an international agreement through ICAC, similar to the U.S. plan, or to arrange to use aircraft in their U. S. operations which meet U. S. requirements.

June 30, 1973

Part III

Additional Items To Be Included In the Legislative Package

Continuance of State Programs

A considerable amount of effort has already gone into aircraft noise abatement programs within the states in the absence of a federal program. The federal government is now taking its first steps in this area and finds that due to the constitutional separation of powers there must be state control of land use coordinated with federal control of air transport operations to achieve noise levels in residential areas meeting public health and welfare standards.

It is therefore highly desirable that the necessary local governmental structures not be destroyed as the federal government moves in but that they be encouraged to continue and expand so that they may be integrated into the system of control needed to implement the federal plan.

The law requires that airports be certified for noise. The FAA can require that the airport operator limit aircraft operations so as to limit aircraft noise exposures to specified areas. To achieve noise exposure levels meeting public health and welfare standards there must then be a local (state or agent of the state) planning agency capable of coordinating local planning with airport operators noise exposure pattern. This agent must be authorized to enter into contracts which will be legally binding on the airport

June 30, 1973

operator as the agent in control of aircraft noise and the regional planning authority as the agent in control of land use in the airport environs.

There are at least two states, California and Minnesota, which are in the process of implementing state laws for the control of noise. The California law covers aircraft noise specifically and the Minnesota law covers all man made noise.

It is recommended that federal legislation authorize the continuance of state activities where:

1. State noise standards have been adopted.
2. Regional land use planning agencies have been established.
3. An authority exists which can negotiate with the airport operator and contract to zone for specific land uses in the airport environs.

The experience of these pioneer programs will be of immense value in implementing a nationwide noise abatement program.

Establishment of NASA as an Air Transport System R&D
Organization for Noise Abatement.

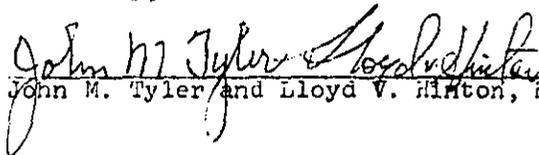
As mentioned earlier in this position paper it is recommended that NASA be designated as the federal agency to determine what is ERTPS, i.e., economically reasonable, technologically practical and safe in noise abatement designs and operating procedures. We are recommending at this point that NASA be given the broader assignment of developing means for reducing aircraft noise to lower levels in a continuing research

Ms. Elizabeth Cuadra
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program. It is known for example, that a large fraction of the major hub airports are situated such that with realigned runways and aircraft operable at higher crosswind and tailwind components the high noise exposure areas could be shifted from locations where land use change would be expensive to locations where land use change would be inexpensive. This and other studies which require a systems approach have a high potential for benefit to the aircraft noise abatement problem.

Sincerely,


John M. Tyler and Lloyd V. Hinton, Executive Directors



NATIONAL LEAGUE OF CITIES



UNITED STATES CONFERENCE OF MAYORS

May 4, 1973

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MAY 4 1973

TGI/122

MEMORANDUM

TO: Elizabeth Cuadra, Office of Noise Abatement, EPA

FROM: Larry Snowhite

SUBJECT: Recommendations for Chapter 1, Aircraft/Airport Noise Report

The following are recommendations based upon the National Municipal Policy of the National League of Cities and the Resolutions adopted by the United States Conference of Mayors. These two organizations jointly represent over 15,000 municipalities throughout the United States.

A. Intergovernmental Responsibilities

1. The Environmental Protection Agency should be responsible for aircraft noise standards, and should be the lead Federal agency for aircraft noise abatement efforts.
2. The Federal government and aircraft operators should accept full responsibility for the payment of damage claims resulting from aircraft pollution. The Federal government should provide assistance for relocation, redevelopment, and soundproofing near airports.
3. The Department of Transportation must develop safe, uniform aircraft operating procedures at airports which minimize noise annoyance to nearby communities. Airport certification should be on the basis of noise as well as on safety factors.
4. The Federal government should support advance acquisition of land or acquisition of land or other property interests in and around airports.
5. The siting and development of airports must be controlled by general purpose local governments and the state. Local decision-making for airport siting and development should be based on federal and state standards and criteria. Land use controls could be delegated to airport operators, special districts, or regional entities, subject to ultimate responsibility and accountability to general purpose local governments.
6. Local governments and airport operators must have authority to impose more stringent or additional requirements on aircraft or airport operations.

B. Source Noise Reduction

1. Emission controls on aircraft must be established by January 1, 1977, including retrofit or retirement of existing aircraft.
2. Engines on existing aircraft should be retrofitted if necessary, to make them at least as quiet as the levels specified in Part 36, Federal Aviation Regulations.
3. The maximum allowable noise levels specified in Part 36, Federal Aviation Regulations must be lowered approximately to 10 EPndB for aircraft certified after January 1, 1980.
4. Any supersonic transport operating to or from U.S. airports must meet maximum noise limits no greater than the levels specified in Part 36 of the Federal Aviation Regulations for subsonic aircraft. Overflights creating sonic booms over populated land areas should be prohibited.

C. Reduction of Noise Through Operation Controls

1. FAA should establish airport/community noise exposure standards accounting not only for the noise level of individual flights, but the cumulative noise from successive flights during the day, and particularly nighttime flights.
2. Flight procedure requirements to reduce noise must be adopted by EPA and FAA, including steep landing approaches, reduced thrust takeoffs, increased load factor on commercial airlines and regulations on flight patterns, number, routing and scheduling.
3. The Federal, state, and local governments must be able to impose curfews on noisy airports.
4. Local governments and airport operators should have the authority to levy differential fees based on aircraft noise, and/or fines for violation of state and local noise standards.

Natural Resources Defense Council, Inc.

664 Hamilton Avenue
Palo Alto, Calif. 94301
415 327-1080

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Executive Director

May 4, 1973

Washington Office
1710 N. Street, N.W.
Washington, D.C. 20036
202 783 5710

New York Office
15 West 44th Street
New York, N.Y. 10036
212 869 0150

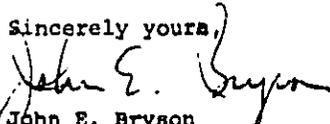
Ms. Elizabeth Cuadra
Office of Noise Abatement and Control
Environmental Protection Agency
1835 K Street, N.W.
Washington, D.C. 20460

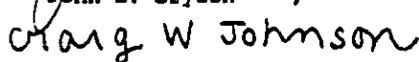
Dear Ms. Cuadra:

Attached are our final recommendations, with a brief discussion of the considerations which led us to make them. You will see that they are substantially an enlargement on our preliminary ones.

We have received useful comments from several members of the Task Group on our section draft. We plan to send you our final version special delivery this week-end.

Sincerely yours,


John E. Bryson


Craig W. Johnson

Craig W. Johnson

JEB:gen
Enclosure

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MAY 8 1973
TG 1/133

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FINAL PROPOSED RECOMMENDATIONS
FOR TASK GROUP REPORT

We have divided our recommendations for reducing airport and aircraft noise into two parts: those which can be accomplished now under existing laws and those which require additional legislation by the Congress. While we consider both sets of recommendations to be necessary to solve the problems which are presently preventing effective action against the aircraft noise problem, we feel that delay in passing new legislation should not be used as an excuse for failure to take all steps available now to reduce aircraft and airport noise. People living near airport runways continue to be exposed to noise levels which jeopardize their health and interfere with the use and enjoyment of their property. Relief for these people should be delayed no longer than absolutely necessary.

With each recommendation we have included a brief discussion of the considerations which led us to make it. We hope this elaboration will place our suggestions for specific action in a broader context, and make clear what we have in mind and why.

WHAT ACTIONS SHOULD BE TAKEN NOW TO REDUCE NOISE

1) The FAA Should Promulgate Final Noise Emission Standards for all Aircraft Presently in Commercial and Private Use as Soon as Possible.

At present, more than four years after passage of § 611 directing the FAA to set noise emission standards for new and existing types of aircraft, almost 95% of aircraft currently in commercial use^{1/} and most private business jets are not covered by such standards. Aircraft types certified before the effective date of the present type-certification regulations (such as Boeing 707, 727, 737, DC 8 and 9) are not covered. This is the great majority of planes, including the noisiest aircraft, and new aircraft of some of these types are still being produced today. In addition, general aviation aircraft remain unregulated. These business jets and helicopters represent a serious and rapidly growing noise problem at many urban airports. While we recognize the expense and technical difficulties involved in retro-fitting older aircraft or reducing total fleet noise levels, we feel final adoption of such standards would provide guidance

^{1/} Preliminary figures supplied by Task Group V. In October 1972, only 111 of 2135 aircraft in commercial operation in the U.S. were covered by FAR 36 type certification noise standards.

of compatible land use around airports over a 15-year period.

A problem with this approach is the money inevitably required to buy up property around airports to achieve the desired compatible use "buffer" zone. This figure is not as large as some sources have estimated, since the cost of full fee acquisition can be largely recovered through conversion of the property to profitable compatible uses. Los Angeles International Airport, for example, is purchasing full fee interests in property around its runways and expects substantial revenue from the compatible uses it intends to install (remote air terminals, air freight depots, parking facilities and a golf course are presently planned).^{4/} But the initial cost of such an approach may still create difficulties for many airport operators.

One equitable and economically sound solution might be for Congress to establish a trust fund for such initial land acquisition funded by an air user "head" tax on all air passengers and freight shippers.^{5/} Money collected from the "head" tax would be used (1) to pay the interest and other carrying costs on long term low- or no-interest loans made by the government to airport operators to buy up and

^{4/} Telephone conversation with Mr. Bert Lockwood, Assistant Manager Los Angeles International Airport, April 30, 1973.

^{5/} This proposal is discussed more fully in recommendation 5.

convert surrounding residential and other land determined by the FAA to be incompatible with existing noise levels, and (2) to compensate people living within or without the incompatible areas for any noise damage they may have suffered. This trust fund would place the ultimate costs of elimination of incompatible land use on the persons who most benefit from air commerce, the air user. Federal money from general tax revenues might be added to this trust fund to the degree Congress feels the general public, as distinguished from actual air users, benefit from air commerce. This benefit, although substantial, is relatively small when compared with the immediate and tangible benefits derived from air passengers and shippers.

With the exception of the establishment of the airport noise trust fund, all our recommendations for elimination of incompatible land use around airports (developing a system for measuring cumulative community noise impact and setting stepwise noise reduction standards for all major airports) can be accomplished now by the FAA. Unfortunately, we have little confidence that the FAA will take these actions in the near future. The FAA did develop an index for community noise impact (the Noise Exposure Forecast technique) and at one time intended to promulgate land use guidelines for all major airports, but abandoned these plans when it became clear that the courts might use such standards as evidence of noise damage in

inverse condemnation and nuisance suits.

As will be discussed later, we feel that the EPA would be better qualified to develop and set such standards around airports for cumulative noise exposure.^{6/}

WHAT ACTIONS SHOULD BE TAKEN WHICH REQUIRE

CONGRESSIONAL ACTION

3) To Eliminate Uncertainty Over the Scope of Federal Preemption and Much Costly Litigation, We Suggest An Amendment to the Federal Aviation Act of 1958 Clarifying Congressional Intent on the Preemption Question, i.e., What Powers are Given Exclusively to the FAA Under the Act and What Powers are Left for State and Local Governments to Control Aircraft and Airport Noise?

At present there is much uncertainty about the scope of regulatory powers of local and state governments. These governments are in most cases reluctant to do anything about airport noise problems in their jurisdictions because any regulations will be challenged by the airlines which contend that state and local regulation in this area

^{6/} The EPA's Office of Noise Abatement and Control has been given primary responsibility for development of noise standards for other forms of transportation and products in interstate commerce under the Noise Control Act of 1972 and thus already has or is developing expertise for what levels are necessary to protect public health and welfare. The FAA's expertise, in contrast, is concentrated primarily in the area of aviation safety.

has been preempted by federal legislation. Lawsuits now in the courts challenging a local curfew ordinance and the California airport noise reduction system are examples. Such lawsuits are expensive and time-consuming for all parties involved. Every time a new ordinance is enacted and challenged, many of the same issues are likely to be relitigated.^{7/}

The uncertainty over the scope of federal preemption has also contributed to the FAA's failure to take effective action. The FAA has sought to avoid upsetting the present Supreme Court rule that airport operators, and not the federal government, are financially responsible for noise damage around airports. The Court's rationale was that airport operators have some power to control aircraft operations, and must thus bear responsibility for resulting noise. The FAA has refrained from more comprehensive noise regulation lest the courts conclude that local noise control efforts are preempted and shift financial liability for noise damage to the federal government.

Much of the present confusion could be eliminated by an amendment to the Federal Aviation Act clarifying Congressional intent on the preemption question. The

^{7/} The Burbank case now pending before the Supreme Court may settle some of these questions. But we feel a legislative clarification of intent on this question would still be desirable.

courts have been placed in the position of having to infer Congressional intent from a mass of often contradictory evidence, which results in expensive and repetitive litigation. To eliminate this problem, Congress should expressly state which powers it intended to give exclusively to the FAA, and which powers could be exercised concurrently by the FAA and state and local governments.

The question of which powers should be given to the FAA exclusively and which may be shared by state and local governments is a difficult one. It is probably preferable to leave regulation where uniformity is not required to local governments. Although for safety reasons many operating rules (such as flight path location) will have to continue to be determined exclusively by the FAA (since such rules require coordination among many airports and uniformity), local communities might, for example, retain power to set restrictions on the number of flights per day using certain flight-paths over noise-impacted neighborhoods, and states should have the authority to set land use compatibility requirements more stringent than those established by the federal government. Such a policy would leave much power to control noise in the hands of the people most affected by the problem, while ensuring that those aircraft operations requiring uniform rules and coordination will not be in conflict.

4) To Ensure Development of Guidelines for Elimination of Incompatible Land Use Around Airports Which Adequately Protect Public Health and Welfare, The Noise Control Act of 1972 Should Be Amended to Require the Office of Noise Abatement and Control of the Environmental Protection Agency to Develop and Adopt a System for Measuring and Reducing Cumulative Noise Impact Around Airports and to Use the System to Obtain Quantitative Data for All Major Airports in the United States.

As stated in Recommendation 2, the FAA already has the power to develop such guidelines for elimination of incompatible land use but has failed to do so. We feel that the EPA is better qualified to develop such standards and regulations because of its mandate under the Noise Control Act to set such quantitative standards adequate to protect public health and welfare in many other fields, including ground transportation. In addition, the EPA is not faced with the institutional conflict between promotion of cheap, efficient air transportation and expensive noise control measures which confronts the FAA.^{8/}

We have in mind a system similar to that now in use in California, where a cumulative noise index (CNEL) was adopted and a timetable established for a stepwise reduction

^{8/} This is not to suggest that the EPA or any other public agency should set noise standards without consideration of cost. Rather it stems from the recognition (more fully discussed in our draft of Part 3) that the FAA has, in pursuing its authorization to promote cheap air transportation so fully identified itself with the airlines that it has been incapable as an institution of acting on behalf of other interests, such as the noise-impacted public, where such action is strongly opposed by the airlines.

in airport noise levels or incompatible land area. We feel the EPA should promulgate and enforce such a system for all major airports across the country. Such airport noise reduction and elimination of incompatible land use conflicts in no way with the FAA mandate to preserve air transportation safety. The EPA would not, for example, be given the power to set design noise criteria for new and existing aircraft, such as are now contained in the type certification regulations. The cumulative noise limit regulations adopted by EPA would be directed at land use, and would be set to protect public health and welfare. Such regulations would be a significant step toward internalizing noise costs and eliminating the inequitable situation of leaving the costs of noise on the people who happen to live near airports. The internalization of costs, as more fully explained in numerous economic analyses, would encourage a more optimal allocation of transportation resources.

We feel full fee land acquisition and conversion of incompatible to compatible uses is the best solution to the problem of noise-impacted areas around airports. To accomplish this goal of compatible land "buffer" zones around airports without putting an impossible financial burden on airport operators, airlines or local taxpayers, we suggest an air user "head" tax partially subsidized out of general taxpayer revenues, discussed more fully in Recommendation 5.

5) To Help Finance the Cost of Eliminating Incompatible Land Uses Around Airports While Placing the Costs of Noise Reduction Primarily on the Air User, the Congress Should Pass Legislation Establishing an Airport Noise Trust Fund to Be Funded by a Head Tax on Air Passengers and Freight Shippers and Used to Provide Low-or No-Interest Loans to Airport Operators for Purchase of Full Fee Interests in Residential and Other Property Determined by the EPA to Be Incompatible with Existing Airport Noise Levels and to Compensate People Living Within and Without the EPA-Determined Areas for Any Noise Damage They May Have Suffered.^{9/}

This proposal is somewhat similar to the head tax recently imposed on air passengers at airports near Paris, France, but it differs in that the money collected would be used to pay interest on long term government loans to airport operators for acquisition of property within EPA-determined zones of incompatible land use around airports rather than exclusively for remedial measures such as soundproofing homes.

^{9/} We have not attempted to work out the details of the trust fund mechanism, and recognize that more work and refinements are required. For example, it would be useful to know how much the average head tax per passenger would be, given different assumptions. We do not have the expertise or information to make such calculations to test the practicability of the proposal, so it must necessarily be regarded as tentative.

The trust fund would also be used to compensate those who have suffered demonstrable noise damage. To ignore such past damage would be unfair to the people who have been injured. The costs should be borne by those who benefit rather than allowing them to lie on those who chance to live or work in noise-impacted areas. Since the aircraft operator is less able to pass the costs of damage compensation on to aircraft users, we would impose that liability on the federal government which could set the proposed head tax accordingly and better administer and distribute the funds collected.

It is our feeling that acquisition of full fee property interests is preferable to acquisition of noise or airspace easements and to payment of noise damages. With easements and damages the airport operator is unable to take advantage of the economic benefits the location of the airport has created for nearby property owners, and may end up paying much of the market price of the property over a period of time without acquiring permanent title to the property. By full fee acquisition the airport operator in a real sense has taken a constructive step towards reducing the noise problem by placing a buffer strip between the airport and residential neighborhoods. He may also derive substantial revenue from converting the acquired property to more compatible uses, such as terminals and parking areas.

The costs of land acquisition initially will be substantial, although much of the cost may eventually be recovered through revenue from the more compatible uses just discussed. For this reason we feel it would be inequitable and economically unsound to expect that airport operators, airlines or even local taxpayers should be required to bear this initial expense. Accepted economic theory states that beneficiaries of an activity such as air commerce should bear its true costs, in order that the market may accurately decide the desirability of that activity as compared to other competing ones. Thus the air users (the air passengers, general aviation users and air freight shippers), who are the primary beneficiaries of air commerce, should be the ones to pay the majority of the costs of eliminating incompatible land uses around airports.

The mechanisms we propose for this placement of costs on the air user is a passenger and shipper "head" tax, which would fund a trust for land acquisition and conversion around airports. We recognize that there are other beneficiaries of air commerce besides air passengers and shippers. Everyone who uses the mails to some degree benefits from air commerce. But we feel on balance that these secondary benefits are small when compared to the more direct and substantial benefits passengers and shippers derive. To compensate for these secondary benefits, we feel the trust fund could in part be supplemented by funds taken from general tax revenues.

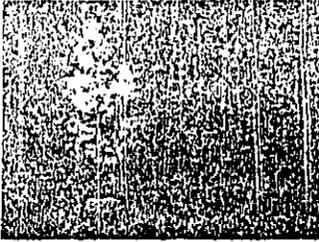
But we stress that the percentage of such a contribution should be relatively small, so that the more important beneficiaries pay most of the costs.

Money from the head tax would be used in part to pay interest and other carrying costs on long-term, low- or no-interest loans by the federal government to airport operators to finance full fee purchase of land determined to be incompatible with existing noise levels. The airport operators would repay the loans over specified periods of time from revenues from compatible uses such as parking areas, air terminals, and hotels which they establish in the areas purchased. Interest payments on the loans would be paid for by a small increase in passenger fares and freight rates while incompatible areas were converted to compatible uses. At the end of the period the trust fund would be discontinued.

A second use for trust fund money would be to compensate those who have suffered and can prove noise damage. The law establishing the trust fund could set a period of limitations for such claims to be filed. No claims after the cutoff date would be allowed. It might be best to establish a special compensation board which would have expertise in the types of damage suffered and would contribute equitable uniformity to compensation awards.

Because of the large amount of money initially required to convert incompatible uses to compatible ones, it would probably be desirable to plan a stepwise elimination of incompatible uses over a ten- to twenty-year period,

following the example of California's airport noise law. EPA areas of incompatible use might be divided into several belts around airports. Airport operators would receive federal loans to purchase and convert land in the innermost belt first, and then purchase and convert outer belts at required time intervals. Property prices for condemnation purposes could be determined as of establishment of the trust fund. An alternative plan might be to condemn all land considered incompatible by the EPA at one time, but allow present uses to continue and in effect pay rent until they were finally displaced, thus reducing the final cash price paid for the property. These schemes are intended to spread acquisition costs out over a period of years and reduce the size of the loan initially needed to airport operators for such a conversion.



By Ansel Adams in *This is the American Earth*

SIERRA CLUB Mills Tower, San Francisco 94104

June 15, 1973

RECOMMENDATIONS PROPOSED BY THE SIERRA CLUB TO
TASK GROUP I OF THE EPA AIRCRAFT/AIRPORT NOISE STUDY

The Sierra Club is in general agreement with the draft Recommendations prepared by Task Group I and dated May 31, 1973. The Club wishes, however, to reinforce and specifically endorse two of the recommendations and to add three further ones.

1. The Sierra Club supports draft Recommendation No. 1 that the federal government promulgate, administer and enforce an airport noise regulation designed to limit the cumulative noise exposure received in residential communities.

While maximum allowable levels for single noise events should be set, such single event noise limitations are insufficient as quantifications of the adverse effect of an airport's noise upon a neighboring residential community. The impact upon the health and welfare of citizens exposed to airport noise is significantly related not only to a peak amplitude, but also to the number of noisy events per unit time, the total duration of noise, and the time of day during which the noisy events occur. It is imperative that all these factors be recognized in regulating noise emission from airports.

It is equally imperative that airports have relatively simple guidelines which determine whether they are complying with applicable federal and state laws and regulations. The CNEL and LDN systems would provide such protection both to the citizens assaulted by the noise, since they take into account the variables listed above, and to the airports which must decide whether they are operating within acceptable standards, since the systems are relatively simple in measurement and computation scheme.

2. The Sierra Club supports Recommendation No. 1(a) that the California Airport Noise Regulation, which provides for the CNEL method of determining cumulative noise, be adopted as a federal FAA regulation for implementation in California.

The CNEL method is a simple one which permits computation of the noise exposure limit from measurements which are readily made with

standard instruments, without the necessity of going through excessively complicated equations and analysis to determine the index of cumulative noise. It is also compatible, with minor changes, with the LDN method proposed by the Environmental Protection Agency.

The permitted use in California of the CNEL method will therefore provide a test, within one state, of the proposed federal LDN method. One of the values of our federal constitutional system is that it permits experimentation by the individual states to the ultimate benefit of all states. To deny California the right to continue to enforce its regulations, already being implemented, will penalize the citizens of the State of California who have taken the lead in devising methods of controlling airport noise in a way which is fair both to the residential citizens who are impacted by the noise, and to the airport operators who must live within the communities. It will also penalize the citizens of the other forty-nine states, who would otherwise have the benefit of an advance testing of the proposed cumulative noise measurement method.

3. The Sierra Club recommends that Congress direct the National Aeronautics and Space Administration (NASA) to make a public announcement in the Federal Register each time that agency, through its ongoing research into aircraft technology and operations, determines that a particular noise abatement strategy, if embodied in a statute or regulation, would be (a) safe; (b) effective; and (c) practical, in providing relief from aircraft noise, and that NASA, in such announcements, shall give its estimate of the cost of implementing such a strategy.

4. The Sierra Club recommends that Recommendation No. 3 of the draft be modified so as to include general aviation aircraft within the scope of federal noise regulation. This may be accomplished by altering the first paragraph to read "whereas the attainment and maintenance of cumulative noise exposure levels consistent with public health and welfare needs is heavily dependent upon rapid realization of quieter aircraft - including jet air carrier fleets, business jets, and general aviation aircraft - the Task Group recommends an accelerated program of Federal regulation of aircraft noise, ..."

5. The Sierra Club recommends that draft Recommendation No. 1 bring military airports within the scope of airport noise regulation. Thus Recommendation 1.B.3. should be modified to read: "The timetable for compliance, determined by EPA, applicable nationwide to all existing airports, including military airports..."

Recommendations prepared by

MARJORIE W. EVANS
Danaher, Gunn & Klynn
2600 El Camino Real
Palo Alto, California

Marjorie W. Evans
6/18/73

TVASNAC

TOWN-VILLAGE AIRCRAFT SAFETY & NOISE ABATEMENT COMMITTEE

186 CENTRAL AVENUE • LAWRENCE, NEW YORK 11559
(516) 371-2330



CLIFFORD A. DEEDS
Director

TOWN OF HEMPSTEAD

Villages of

ATLANTIC BEACH

CEDARHURST

EAST ROCKAWAY

FLORAL PARK

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NEW HYDE PARK

RUSSELL GARDENS

STEWART MANOR

VALLEY STREAM

WOODSBURGH

City of
LONG BEACH

May 24th, 1973

TVASNAC RECOMMENDATIONS FOR THE ABATEMENT
OF JET AIRCRAFT NOISE POLLUTION

TVASNAC substantially agrees with the recommendations, developed by the Task Force studying airport/aircraft noise, insofar as they go. We regret that greater consideration was not given to the subject of airport curfews and that little or no consideration was given to the matter of capacity agreements as a means of noise attenuation.

Many of the matters considered should result over a period of time in an abatement of jet noise pollution. However, at the best we foresee a period of five to eight years before such limited relief can be effective. In the meantime millions of people who have been harassed for years by this form of pollution must continue to be harassed in an unbearable manner unless other action is taken.

The medical profession, through many studies, has proven the absolute necessity of a proper night's sleep for man to retain his equanimity and to live the life of well being to which he is entitled. It is not necessary

to waken a person from his sleep, it is only necessary to interrupt his dreams, to inflict serious physiological and psychological damage.

We have made a study of the many claims by the airline industry of economic chaos if airport curfews are instituted. We have found, almost without exception, that such claims are either fallacious or are not viable. The results of our studies are available for anyone desiring to check them.

TVASNAC strongly recommends the institution of an airport curfew from midnight to 6 a.m. the following morning.

Capacity agreement trials have proven that the participant airlines can reduce operating costs by multi-millions of dollars, can increase percentage of occupancy to the point where the lines are operating at a profit, and can result in a savings of fuel by the billion gallons annually without loss of service to airline passengers.

In our estimation, what is equally important is the fact that controlled industry-wide capacity agreements would also result in 25% or more fewer jet aircraft overhead.

TVASNAC strongly recommends the institution of industry-wide airline capacity agreements.

In addition to the foregoing TVASNAC recommends the following actions as necessary, along with other actions, to achieve a degree of abatement of jet aircraft noise pollution that would help bring such noise down to a humanly tolerable level.

Control of aircraft noise over residential areas contiguous to airports. The establishment of maximum noise operating levels for aircraft would be very helpful towards attaining such control. Retrofitting of both engines and nacelles would make such control possible and feasible.

Airport ground noise regulations to contain the extraordinary noise emanations from airports should be required. Such regulations should take into consideration the muffling of engines at warm-ups, the performance of such warm-up with aircraft in best location and facing direction most likely to avoid annoying residents in contiguous area to airport, and similar attention to any high level noise emanating from ground operations of an airport.

A joint industry-government retrofit program. For many years the airline industry turned a deaf ear to our pleas for abatement of the noise pollution for which they were responsible. They were aided and abetted in this attitude by the government in the form of the FAA by consistent refusal to take any action until recent years. TVASNAC considers that the present pollution results largely from this attitude and that therefore the government should immediately join with the airline industry in a nacelle and engine retrofit program.

A retrofit program should be paid for out of special taxes or charges to the airline industry and its users, and not out of general taxes.

A joint industry-government R&D program for new aircraft. All of the foregoing will assist greatly in reducing jet aircraft noise pollution but the ultimate answer to the problem is a fleet of low noise emission aircraft. We feel that the immensity of this noise pollution problem requires urgent and intensive action, probably best headed by a federal office dedicated to the solution of the problem. This is such a long range program at the best that action on such a joint program cannot begin soon enough.

Millions of Americans live under intolerable conditions resulting from jet aircraft noise pollution. TVASNAC urges the adoption of an integrated program that will bring relief to these people, starting immediately.



DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, D.C. 20410

ASSISTANT SECRETARY FOR
COMMUNITY PLANNING AND MANAGEMENT

JUN 29 1973

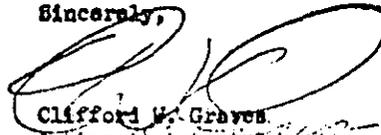
Mr. John C. Schettino
Director, Aircraft/Airport Noise Study
Office of Noise Abatement and Control
Environmental Protection Agency
Washington, D. C. 20460

Dear Mr. Schettino:

We would like to take this opportunity to express our general satisfaction with the work of EPA Task Force which was organized to provide recommendations for dealing with the aircraft/airport noise problems. Unfortunately, we were able to provide only limited assistance to three of the Task Groups due to staff shortages and other pressing assignments; however, I am enclosing our general observations and position on many of the preliminary recommendations of the Task Force.

We will continue to support the activities of the Environmental Protection Agency in the aircraft/airport noise program, and will be happy to provide whatever assistance we can to the EPA in this effort.

Sincerely,



Clifford W. Graves
Acting Assistant Secretary

Enclosure

TG 1/182

Department of Housing and Urban Development

Comments on

RECOMMENDATIONS ON THE EPA TASK FORCE ON AIRCRAFT/AIRPORT NOISE PROBLEMS

A. HUD'S ROLE IN NOISE ABATEMENT

It has long been HUD's policy to encourage the creation and maintenance of a quiet environment. To further this goal, HUD issued, on August 4, 1971, a policy Circular on "Noise Abatement and Control: Departmental Policy, Implementation Responsibilities and Standards." This policy was promulgated after several years of development, in an effort to fulfill the Department's mandate to "provide a decent home and a suitable living environment for every American family". With the issuance of this policy, HUD stated its conviction that "noise is a major source of environmental pollution which represents a threat to the serenity and quality of life in population centers." The policy formalized and expanded existing FHA noise regulations which had been in effect for many years, and drew upon the work of several other agencies and groups and on a long standing and developing body of knowledge in the area.

The policy establishes noise exposure policies and standards to be observed in the approval or disapproval of all HUD projects; it supersedes those portions of existing program regulations and guidance documents which have less demanding noise exposure requirements. Further, it is HUD's general policy to foster the creation of controls and standards for community noise abatement and control by general purpose agencies of State and local governments. HUD also requires that noise exposures and sources of noise be given adequate consideration as an integral part of urban environments in connection with all HUD programs which provide financial support to planning. The policy emphasizes the importance of compatible land use planning in relation to airports, other general modes of transportation, and other sources of high noise, and supports the use of planning funds to explore ways of reducing environmental noise to acceptable exposures by use of appropriate methods. Reconnaissance studies, and, where justifiable, studies in depth for noise control and abatement will be considered allowable costs.

Because HUD's noise standards are technically specific in nature, the Department has published "Noise Assessment Guidelines", a manual to provide HUD's personnel and the general public with a practical methodology for preliminary evaluation of noise levels at given project sites. An important facet of the Department's noise control activities is a continuing program of sponsored research into various aspects of the cause and effects of environmental noise. Typical of these is a series of Metropolitan Aircraft Noise Abatement Policy Studies, funded jointly by HUD and the Department of Transportation. This work was summarized and

extended in the form of a guideline manual, to help localities plan community growth in the vicinity of airports. The manual discusses the costs, benefits and limitations of alternative methods of noise alleviation such as compatible land use development, zoning, and noise attenuation measures in building construction. Applicable to all type of airports, it will be used to develop procedures for dealing with a variety of local airport noise situations. It also contains relevant information on Federal and State programs to assist in achieving compatible airport-community development. The manual entitled "Aircraft Noise Impact: Planning Guidelines for Local Agencies," is now in printing by the Government Printing Office and will be given wide distribution.

B. HUD'S POSITION ON ISSUES RELATED TO THE WORK OF THE TASK FORCE

1. Cumulative Noise Exposure

We believe that there is an urgent need to standardize a measure of noise exposure as a prerequisite to promulgating a national set of noise exposure standards and implementing procedures. We, therefore, strongly support the activities of Task Group 3. The lack of what might be called a "perfect" index of measure is no excuse for inaction on the growing problems of noise abatement and control. Our major concern is that any proposed aircraft noise assessment method be compatible with those now in use by this Department in implementing the HUD noise policy, i.e., Composite Noise Rating (CNR) or Noise Exposure Forecast (NEF).

We are in agreement with the long term goal of Ldn of 60 (NEF 25) recommended in the Task Group report, though we feel that further clarification is needed. Current HUD policy is to discourage residential development beyond 30 NEF (though some discretion is applied in certain cases where noise exposures lie between NEF 30 and 40). The NEF 30 value corresponds roughly to an Ldn of 65. Thus, the current allowable noise exposure for HUD assisted new residential construction is marginally higher than the long term goal recommended by the Task Group. However, we fully hope and anticipate that the EPA, with the cooperation of other Federal agencies and industry groups, will be successful in reducing noise through source and operational controls, so that noise reduction from these activities will bring current residential construction satisfying existing HUD criteria well within the long term objective (Ldn of 60). It is important to emphasize that since new construction represents the long term establishment of a given land use to a particular area, implementation of long term goals requires immediate action of the type HUD has been actively pursuing in the last two years.

We assume that the immediate goal of Ldn (45 NEF) of 80 is to be implemented through source and operations controls, building modifications, and where necessary, condemnation and relocation, and is to be applied to existing residential units. We fully support such a recommendation providing adequate relocation resources are available at a price the displacees can afford (pursuant to provisions of the Uniform Relocation Act).

We are concerned, however, that noise levels less than Ldn 80 may also constitute risks to health resulting from sleep interference, unless airports have stringent restrictions on night-time operations. The problem is exacerbated with windows open, as they must be in the summer months in many areas when adequate alternative ventilation is not available.

We support recommendation concerning a standardized computer program for calculating cumulative noise exposure. Further, there should be a standardized definition of data input requirements and a central data center which can generate contours of cumulative noise exposure for use by Federal, State and local agencies in making land use decisions.

2. Airport Noise Regulation

We would endorse the recommendations that airport operators exercise their authority to regulate aircraft operations to reduce noise in residential areas. The requirement that airport operators predict operations and noise exposure to determine compatibility of airport operations with the adjacent land uses and then take actions to achieve a larger measure of compatibility through reduction in the noise effective size of the airport is an important element in the total program to reduce airport-community conflicts. Decisions on runway alignment, airport expansion and volume and type of aircraft use are as essential to ameliorating and preventing noise conflicts as are the control of noise at the source and the control and guidance of land use development in the airport environs.

It is understood that the FAA has the authority for requiring airport certification under existing legislation. That agency should therefore be encouraged to take the necessary action to meet the EPA compliance schedule.

3. Continuing Program for Noise Abatement

We would concur in the need for a continuing Federal Program to assist in implementing a comprehensive national aircraft/airport noise abatement program. We would be happy to participate in those aspects of the program which are of interest and concern to the Department.

C. OTHER RELATED ISSUES

There are other problems that need to be addressed to further goals of the aircraft/airport noise abatement program; some of these are:

1. National Airport System Planning

A National Airport System Plan appears to offer a key to the problem of location and expansion of airports in the Nation, and a meaningful document can lessen the potentially adverse impacts of such development. The long range plan could identify the projected kinds and volume of operations at specific classes of airports so that there would not continue to be the many surprises which appear to develop fairly regularly following the creation of an airport or changes in operations at existing airports. Communities in the airport environs would then have an explicit idea of the kinds of airport development expected and could plan accordingly. The National Airports System Plan should have a rational national focus and not be only a compilation of airport projects conceived solely by state and local authorities.

2. Modification of Airport and Airway Development Act (AADA)

We believe that the AADA can be strengthened to insure a greater measure of compatibility between airports and their surrounding areas, as follows:

- a) Aircraft noise is not specifically addressed in the law. In view of the growing concern with environmental quality and the impact of the airport development program, noise merits specific recognition. The law does not now support the acquisition of land to be exposed to severe levels of noise; consideration should therefore be given to modifying the statute to allow the acquisition of such land, by easement or fee simple, as part of the airport development project costs. Inclusion of such a provision to cover areas of very severe noise exposure is both desirable and necessary to any meaningful solution to the noise problem.
- b) The rules promulgated by the FAA for implementing the Planning Grant Program under the AADA are not consistent with Section II of the Act. Airport systems planning should be an integral part of multi-modal transportation planning for the metropolitan area, and should be handled by the appropriate public comprehensive planning agency. Environmental considerations and airport location should be a significant part of the systems planning process rather than a token after-the-fact issue in airport master planning.

MCE
6/21/73

UNITED STATES GOVERNMENT

Memorandum

TO : Mrs. Elizabeth Cuadra
Office of Noise Abatement and Control
Environmental Protection Agency

DATE: May 4, 1973

FROM : Joan S. Gravatt
Aviation Programs and Policy Division
Department of State

SUBJECT: Recommendation for Inclusion in Section V of Task Group I's
Report

Recommendation

The United States should continue to cooperate in the work the International Civil Aviation Organization (ICAO) is doing on aircraft noise.

Discussion

As the major producer of transport aircraft and source of international air passengers, the United States has a large stake in ensuring that there are internationally recognized noise standards. Thus, U.S. ability to sell aircraft and U.S. air passengers to travel without hampering noise restrictions in all parts of the world can be assured. We have no reason to believe that ICAO Standards on aircraft noise would not be satisfactory. Other countries just like the United States are concerned with the problem of aircraft noise. The work done by ICAO so far in its Annex 16 on aircraft noise demonstrates that it can produce adequate international standards in this area. If there are variations between U.S. noise standards and the international standards, the U.S. has the right to file "differences" with ICAO.

RECEIVED

MAY 4 1973

TG 1/116

jo



Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

City Of Audubon Park, Kentucky

3119 Oriole Drive
Louisville, Kentucky 40213

June 30, 1973

Ms. Elizabeth Cuadra
Chairman, Task Group 1
Aircraft/Airport Noise Report Study
U. S. Environmental Protection Agency
1971 Jefferson Davis Highway
Arlington, Virginia 22202

Subj: Comments on Task Group 1 Report
Submittal of Section V, "Recommendations"

Dear Ms. Cuadra,

This letter is to provide our group's opinions on the final draft of the Task Group 1 report which I understand will be made to Congress in compliance with Public Law 92-574 (Noise Control Act of 1972). I respectfully request that you include this letter in Appendix B when the final version of the Task Group 1 report is printed.

Louisville's Neighborhood Organizations in Support of the Environment (N.O.I.S.E.) began in December 1971. About 19,300 Louisvillians who either reside in neighborhoods where the associations belong; to N.O.I.S.E., live in one of the member cities, or belong to the Irquois Civic Club all constitute our membership base. The political and association groups which belong are the 5th class City of Lynnview and the 6th class City of Audubon Park, Kentucky; Tyler Park-Castlewood Neighborhood Association; Cherokee Triangle Association; Bonnycastle Homestead Association; Highland Douglas Association; Edgewood Neighborhood. The residents of these cities and neighborhoods live in the more heavily populated north, east and west corridors extending from Louisville Standiford Field's main runways.

The Task Group is to be commended on the thoroughness shown in the final draft. While our organization strongly concurs with most of the Task Force's recommendations we will suggest differences in effectively accomplishing our common goals.

In the spirit of emulating what we can of those who have achieved success in aircraft noise control I read with interest of Japan's feats. Your Task Group may well have considered the Japanese success story. It appears to offer us a fine example of what can be achieved when a country establishes a national environmental priority and then marshalls the resources necessary to meet the goal. The effect of jet aircraft noise has been reduced significantly in many residential areas through a combination of measures employed to prevent jet noise nuisance. An aggressive partnership of the Japan Shipping Promotion Organization, Japan Broadcasting Corporation and the air carriers working in cooperation with an effective regulatory arm of the Japanese government was formed August 1, 1968. This body is known as the Foundational Juridical Person "Aircraft Nuisance Prevention Association". It is meeting annual environmental protection goals in the following

areas of responsibility and activity:

- 1) To investigate actual conditions of aircraft nuisance.
- 2) To carry out preventative measures to reduce the effect of aircraft noise.
- 3) To maintain and operate aircraft nuisance investigation facilities.
- 4) To propagate aircraft nuisance prevention ideas.

A more complete description of Japan's efforts to curb aircraft noise nuisance can be obtained from Mr. Takatomo Maruyama, Chief Director, Aircraft Nuisance Prevention Association (Foundational Juridical Person), Fifth Floor, Japan Gas Association Building, 38 Shiba-Kotohira-cho, Minato-ku, TOKYO 105 JAPAN.

The thrust of my general comment is that based on our local experience, the Federal Aviation Administration is not enforcing existing legislation now on the books to protect environments surrounding airports. There is no reason to believe that the FAA's primary emphasis -- promotion of air commerce and the protection of safety -- will change. A prime example of how the FAA modified the law to suit its first objectives has just occurred in this community. A \$4.7 million strengthening and rebuilding of the North/South runway at Louisville's Standiford Field began April 2, 1973. The FAA bent the National Environmental Policy Act of 1969 to its own version, DOT Order 5100.17 Paragraph 89 Section b(2). This FAA adaptation of NEPA of 1969 allowed the project sponsor, the Louisville and Jefferson County Air Board, to be granted FAA approval of a "negative environmental impact statement" on the project which was totally lacking in any assessment of long range effects on the environment. A copy of this "negative impact statement" is enclosed and is dated June 12, 1972. The statement concerns itself primarily with the six month construction period and shows no empirical evidence of the project's impact on the environment or proof of the absence of that impact. The \$4.7 million cost involves substantial runway strengthening for a sum far in excess of the \$500,000 estimated by the Executive Director of the Air Board, Mr. James Gagnon, as the price to resurface only this same runway. It is considerably more than the \$163,000 spent to resurface the 550 foot shorter East/West runway in August 1971.

Enclosed is a typical FAA reply to our inquiries which have been both direct and through members of Congress. In his letter to Senator Marlow Cook, Mr. William Vitale writes that our group thinks the preparation of an impact statement will somehow solve our community noise problems. Our request for a proper impact statement is based on compliance with NEPA of 1969. The accepted procedure in solving any problem is to first define it. NEPA of 1969 provides the structure for this analysis when the construction is a major Federal project as the FAA has admitted in this case.

We urge that the authority and responsibility for controlling aircraft noise be reassigned as follows:

- 1) EPA establish standards with public health and welfare as the guiding criteria.

Ms. Elizabeth Cuadra
June 30, 1973

3

- 2) NASA should develop noise control technology at the source.
- 3) HUD and sister agencies like HEW should establish mandatory requirements for noise compatible land use categories which determine financing availability for housing and other construction development programs.
- 4) FAA should act solely as an enforcing agency.

COMMENT ON RECOMMENDATION #1 - That the Federal government promulgate, administer and enforce an airport noise regulation, designed to limit the cumulative noise exposure received in residential communities.

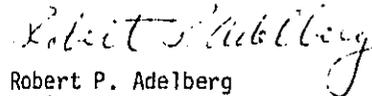
Our feeling is that continued Federal funding of airport development should be tied to the FAA certifying the airport for noise as well as for safety. It should be EPA's role to consult with HUD and determine noise standards for land uses and other purposes. We agree with all other aspects of the Task Force recommendation.

COMMENT ON RECOMMENDATION #1b - The FAA should, with EPA participation, establish a national resource to provide assistance to airport proprietors and state and local agencies in developing skills necessary to implement the Federal airport noise regulation.

Because the FAA track record has shown little stomach for human protection "guidelines", we strongly recommend that EPA in conjunction with HUD have the responsibility for the development of programs to control airport noise impact.

Louisville N.O.I.S.E. enthusiastically endorses all other recommendations contained in the subject report.

Yours truly,



Robert P. Adelberg
Chairman
Louisville N.O.I.S.E.
425 S. Fifth Street
Louisville, Kentucky 40202

Enclosures 2

Copies to Senator Marlow W. Cook
Senator John Tunney
Congressman Sam H. Young
The Honorable Russell E. Train
Mr. John Schettino
Mr. Lloyd Hinton - N.O.I.S.E.
Mr. John Hellegers - Environmental Defense Fund

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
DRAFT ENVIRONMENTAL IMPACT STATEMENT
PURSUANT TO SECTION 102 (2) (c), P. L. 91-190
JUNE 12, 1972

The Louisville and Jefferson County Air Board has submitted a revised request for Federal financial assistance under the Airport Development Aid Program, as authorized by the Airport and Airway Development Act of 1970, for a project to strengthen Runway 1-19 and Taxiway "A", at Standiford Field, Louisville, Kentucky.

1. Description and Purpose of the Project:

- A. Description: The proposed project contemplates strengthening Runway 1-19; strengthening Taxiway "A"; enlarging fillets at Runway 19 and Runway 11 to Taxiway "A"; installing centerline, touchdown and runway edge lights; grooving Runway 1-19; and installation of a Field lighting stand-by generator.
- B. Purpose: There are four main objectives to this project which are:
- (1) The strengthening of Runway 1-19 and Taxiway "A" to provide for new generation of aircraft and increased schedules.
 - (2) The improved drainage and lighting will improve safety.
 - (3) The grooving of Runway 1-19 will improve safety.
 - (4) Stand-by generator will supply emergency power during periods of black out.

2. Probable Impact of the Project on Both Human and Natural Environment:

- A. There are presently approximately 200 large plane landings and takeoffs at Standiford Field. Approximately 30% of these use Runway 11-29, and 70% of these use Runway 1-19. This means that during the time of construction the people in the approach to Runway 11-29 will be subjected to increased noise frequency. This is not new to them since certain wind directions require this to happen. The difference is, it will last for a longer period. On the other hand, the people in the approaches to Runway 1-19 will be relatively noise free and their situation will be much enhanced.
- B. There will be some dust created during construction, but since the work will be well within the confines of the Airport, it is felt that this will not be a significant factor to surrounding residents.
- C. The same is true for erosion of soil.

- D. There has been no objection to this project. No public hearing has been held since the proposed work does not concern itself with a new airport, realignment of a runway, new runway, or acquisition of land for airport purposes.
- E. The proposed project will not require the displacement of any person or persons since all work is within present airport confines.
- F. The project will not affect the natural environment which include those considerations set forth in Section 4(f) of the DOT Act are:
 - (1) The proposed project will not alter, destroy, or derogate from any recreational areas or public parks.
 - (2) The proposed project will not alter the pattern or behavior of any wildlife species.
 - (3) The proposed project will not derogate any aesthetic or visual effect.
 - (4) The proposed project will not increase ambient air or water pollution, since there will be no increase in volume or runoff. There will be no change in quality of runoff substance nor change in location of existing outfall drainage system as a result of this project. The excavation required for this project will be used to fill low areas within the airport.
 - (5) The proposed project will have no effect on the water table of the area which varies from 5 to 15 feet below ground level.

3. Probable Adverse Environmental Effects which Cannot Be Resolved:

The only identifiable adverse environmental effect of the proposed project will be the slightly increased noise levels imposed on those residences under the approach ends to Runway 11-29. Even though increased noise levels are imminent, they are only temporary until Runway 1-19 can be resurfaced.

4. Alternatives: All alternatives considered are unacceptable. Those considered are:

A. Do nothing: This is unacceptable since our pavement consultant has determined that the existing pavements will fail rapidly under existing loads and will not carry increased weights or frequencies.

B. Development of a new airport: The Air Board is planning a

new airport. However, it will be at least ten years before it becomes operational. This project must be undertaken to provide an adequate and safe facility during this period.

- C. Close airport during construction: Although this might satisfy a few people directly affected, it is unacceptable since the results would have a disastrous impact on the economic and financial conditions of Louisville and Jefferson County as well as the adjacent counties.

5. Irreversible or Irrecoverable Commitments of Resources: There will be no irreversible or irretrievable commitments of resources to result from this project should it be undertaken.


James Gagnon, General Manager

After careful and thorough consideration and review of the facts contained in the negative environmental declaration of the Louisville and Jefferson County Air Board (Sponsor), it is the finding of the undersigned that pursuit of the requested Federal action is consistent with existing national environmental policies and objectives as set forth in Section 101(a) of the National Environmental Policy Act of 1969 (P.L. 91-190), and that the action will not have a significant effect or impact on the human or natural environment. Accordingly, this evaluation of said negative declaration endorses the finding of the Sponsor.

Phillip M. Swatek, Director (date)
Southern Region
Federal Aviation Administration

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

WASHINGTON, D.C. 20591



MAY 21 1973

Honorable Marlow W. Cook
United States Senate
Washington, D. C. 20510

Dear Senator Cook:

This is in response to your May 1, 1973, inquiry concerning the need for an environmental statement as a condition for approving Federal assistance for a runway reconstruction project at Standiford Field, Louisville, Kentucky. You include correspondence from Mr. Robert Adelberg, Chairman of a committee called N.O.I.S.E. and a letter from me to Mayor Dutschke concerning Standiford Field.

We are not aware of any court decisions that indicate a need for preparation of an environmental statement for runway reconstruction projects. We have considered this matter carefully and find no public law requirement for an environmental statement. Environmental statements are required when approval of a project is a major Federal action producing a significant impact upon the human environment. Reconstruction of the north-south runway is a major Federal action, but the action will not produce a significant effect on the human environment.

The controversy at Standiford Field results because the most noisy aircraft used by air carriers already operate from this airport. Military aircraft that produce a great amount of noise also use the airport. An environmental statement as a condition for approving Federal assistance for reconstruction of the north-south runway at Standiford Field would not solve the existing noise problem at this airport.

Long-range solutions to airport noise problems are being undertaken through development and use of a new generation of aircraft that do not make so much noise. The L-1011 and the DC-10 aircraft that will be permitted to use the reconstructed runway represent this newest generation of aircraft. Use of these new aircraft types will alleviate unsatisfactory noise problems at Standiford Field to the extent that aircraft operators replace existing noisy aircraft with these new designs. Residents in the areas north of Standiford Field should support the runway reconstruction action as part of a program to develop more compatible noise environments in their community.

Difficulties associated with solution of air transportation problems in the Louisville area have been recognized and are the subject of studies that are underway with assistance from the Federal Government under the Federal Aviation Administration's (FAA) Planning Grant Program. These studies must

consider all feasible and prudent alternatives, including development of an entirely new airport. The environmental statement required in connection with these studies is the appropriate basis for definition, review, and approval of airport development actions needed to solve noise problems in the communities near Standiford Field.

Mr. Adelberg met with me and other members of my staff on May 2, 1973. The existing noise problems at Standiford Field were discussed, and information was presented which supports FAA's determination that the noise problem results because of existing circumstances and that an environmental statement for the reconstruction project is not required. Although Mr. Adelberg was not satisfied with FAA's determinations, the meeting may have been of assistance in developing a better appreciation of the problems associated with developing a more acceptable noise environment in the areas he represents.

In the meeting in my office, Mr. Adelberg and Mr. Lloyd Hinton, a consultant to the group called N.O.I.S.E., reaffirmed the opinions expressed in their letter to you. Apparently, they incorrectly believe that the preparation and processing of an environmental impact statement in connection with the runway reconstruction project would improve the rate at which the noise problems in their community would be solved. They also expressed dissatisfaction with noise abatement procedures. Operational procedures for noise abatement are a matter of continued concern to the FAA, and changes are being made when such changes are found to be feasible and prudent. The peculiar problems existing at Standiford Field will be reexamined by the FAA to determine if noise environments can be improved by any practical change in procedure at Standiford Field.

Sincerely,

William V. Vitale

CLYDE W. PACE, JR.

Director, Airports Service, AAS-1

Enclosure:
Constituent's correspondence





CITY OF NEWPORT BEACH

CALIFORNIA

92466

City Hall
3300 Newport Blvd.
(714) 873-2110

July 3, 1973

Ms. Elizabeth Cuadra
Office of Noise Abatement and Control
Environmental Protection Agency
1835 K Street, NW
Washington, D.C. 20460

TC 1/194

Dear Ms. Cuadra:

The City of Newport Beach is currently reviewing the Draft Reports of the various Task Groups of the Environmental Protection Agency Aircraft/Airport Noise Report Study in detail.

The City intends to participate in the public hearings which, it is understood, will be held by Committees of the United States Congress and by the Federal Aviation Administration later this year.

In the meanwhile, however, the City of Newport Beach wishes to express its concurrence with the proposal of the EPA Task Group 1, contained in Recommendation No. 1, Page I-6-2 et seq., of its Draft Report, according to which the FAA is to include certain noise-related elements in its airport-certification regulations.

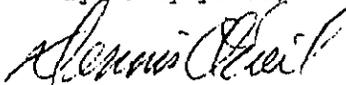
More especially, the City of Newport Beach wishes to emphasize the need for establishing a uniform and scientifically competent validation procedure for assessing the noise-impact areas and areas needing land-use controls, both for current airport operations and for the quantitatively predicted future airport operations.

The City of Newport Beach is perhaps the City most directly affected by overflight noise from the Orange County Airport. In addition to past and current efforts by the Airport Administration and the airlines, this City believes that a FAA noise-certification procedure, comprising consultative and hearing proceedings based on nationally adopted objective

Office of Noise Abatement and Control
Page Two
July 3, 1973

criteria would do much to remedy possible deficiencies and point the way for adopting measures for implementation by local and regional government bodies and by the Federal Aviation Administration that could bring about a substantial alleviation of the existing noise problem.

Very truly yours,

A handwritten signature in cursive script, appearing to read "Dennis O'Neil".

DENNIS O'NEIL
City Attorney

DON:ep



OFFICE OF THE
CITY ATTORNEY

TG 1/195

July 2, 1973

Ms. Elizabeth Cuadra
Office of Noise Abatement and Control
Environmental Protection Agency
1835 K Street, NW
Washington, D.C. 20460

Dear Ms. Cuadra:

The City of South San Francisco is currently reviewing the Draft Reports of the various Task Groups of the Environmental Protection Agency Aircraft/Airport Noise Report Study in detail.

The City intends to participate in the public hearings which, it is understood, will be held by Committees of the United States Congress and by the Federal Aviation Administration later this year.

Meanwhile, however, the City of South San Francisco wishes to express its concurrence with the proposal of the EPA Task Group 1, contained in Recommendation No. 1, Page I-6-2 et seq., of its Draft Report, according to which the FAA is to include certain noise-related elements in its airport certification regulations.

More especially, the City of South San Francisco wishes to emphasize the need for establishing a uniform and scientifically competent validation procedure for assessing the noise-impact areas and areas needing land-use controls, both for current airport operations and for the quantitatively predicted future airport operations.

The City of South San Francisco is perhaps the City most directly affected by overflight noise from the San Francisco International Airport. While the Airport, the airlines, and the air-traffic-control systems have cooperated to reduce the noise impact on the City over the past sixteen years, there are numerous decisions regarding land use, zoning, and other planning in which noise-impact determinations, noise-impact predictions, and additional noise-abatement measures must be based on nationally adopted, objective criteria rather than on subjective opinion statements.

The City believes that the above-cited Recommendation No. 1 of

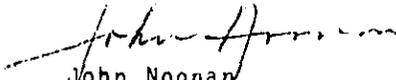
Ms. Elizabeth Cuadra

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July 2, 1973

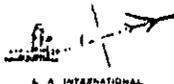
Task Force 1 would do much to improve the process of minimization of the noise impact on the City, without imposing any hardship or loss in operational efficiency on the Airport or the aircraft operators.

Very truly yours,



John Noonan
City Attorney

JN:dh



CITY OF LOS ANGELES
DEPARTMENT OF AIRPORTS

81 WORLD WAY • LOS ANGELES, CALIFORNIA 90009

TELEPHONE (213) 648-5252 • TELETYPE 65-3413

June 26, 1973

CLIFTON A. MOORE
GENERAL MANAGER

MEMORANDUM

TO: Dr. Alvin F. Meyer, Jr.
Deputy Assistant Administrator
for Noise Control Programs
Environmental Protection Agency

FROM: Clifton A. Moore
General Manager

SUBJECT: Comments -- Draft Reports, Task Groups -- Airport Noise

We have carefully reviewed the draft chapters of the task group reports on airport noise. These reports are to be used as inputs into EPA to aid in the preparation of the report to Congress required by Public Law 92-574.

In general, I do not have major problems with the recommendations as a whole; however, great care must be taken in the wording for feasibility, safety, timing and financing to be sure that the requirements of the Public Law for maximum safety and economic and technical feasibility are met. When consideration is given to L_{DN} limits for health and the L_{DN} limits as long range goals for health and welfare, great care must be taken in the language of the report that interprets the standard so as not to draw definite conclusions on health and welfare effects until many more studies are completed and more definitive data is compiled. The Environmental Acoustics--HEW study at LAX, as well as other studies around the country, cast considerable doubt as to the recommendations in the Draft No. 3 report of an L_{DN} 80 limit for health and the L_{DN} 60 limit for health and welfare. The Dubrovnik meeting papers for 1973 further support the need for more data.



Sam Yarty, Mayor

BOARD OF AIRPORT COMMISSIONERS

Stephen C. Bilheimer, PRESIDENT • Robert M. Brunson, VICE PRESIDENT • C. Lemmon Blanchard • Melvin J. Erickson • William F. Quinn, M.D.

Recommendation No. 1a of Task Group No. 1 (Legal) that the FAA would make the California State Standards of CNEL effective in California only is patently unfair to this state, is unacceptable, and in our opinion probably illegal. As with the L_{DN} numbers mentioned in the previous paragraph, more supporting data is needed for the impact numbers used in the California Standards. As you know, these standards are under attack in the courts with the ATA lawsuit and from all indications will probably be overturned. In lieu of this recommendation, I would like to suggest the following alternative: The LAX sound monitoring system is capable of being programmed to compute CNEL or L_{DN} measurements. As an experiment and in order to establish the effects of proposed national regulations on a major airport and the country, we would supply the data to EPA from the monitors in either impact system that is desired. This would give a comparison of the measured versus the calculated impacts and would permit an evaluation to be made of the overall land areas within the various impact contours. This would give valuable data that could be used along with other data in the selection of final numbers for health and welfare.

We strongly support a retrofit program for all non-Part 36 types of aircraft operating into our airport both foreign and domestic. The program must be programmed to be completed by the year 1980 or before. The Fleet Noise Rule (FNL) staging of the program is acceptable for managing the program and setting the timing of compliance. In this manner, all aircraft will meet or better the Part 36 noise limits by 1980.

Financing of the retrofit program must become a part of the rule-making procedure. We have long advocated a one to two dollar charge per airline ticket and a small percentage to be added to each airfreight waybill as a means of financing the program. The charge is the least expensive way (insofar as the user is concerned) of paying the cost and should be dropped when retrofit is complete. This grant to the airlines should not be taken into the airline accounting system and should not be capitalized.

In line with financing noise costs, the ADAP funding to airports should be changed to permit the acquisition of land and/or easements for noise purposes under the program. Land acquired for noise is just as important to the airport as land acquired for approach lights or other facilities.

We strongly support changes in flight procedures that reduce flight sound levels provided there is no reduction in safety or operational minimums for the airport. The two segment approach, the flap managed approach, and the development of two departure profiles seems to be approaching acceptability under this criteria as a result of flight tests. When proven they should be mandated. However, such regulations must be issued by the FAA.

Dr. Alvin F. Meyer, Jr.

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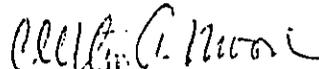
June 26, 1973

In the matter of flight procedures, it should be made very clear that this is an area where the airport owner cannot dictate policy. There are safety, liability and expertise reasons why the airport cannot become involved in the flight techniques of aircraft. While we obviously will coordinate completely with the FAA and the airlines in developing flight procedures and pointing out problem areas around our airports, the procedures must be flight tested and specified by the FAA.

The Task No. 3 effort to develop a single event measurement system and a cumulative noise exposure impact methodology is generally acceptable. Obviously, more detailed study is needed. We would suggest that there be only one health and welfare number and that this number be selected only on a preliminary basis subject to evaluation and confirmation pending definitive field studies around noise sources to determine areas involved and additional scientific studies of the effects of various cumulative levels.

Airport certification for noise would be a problem with present procedures. Noise certification can only be contingent upon the full completion of the retrofit program to Part 36 or better standards. A staged approach to certification could be acceptable if full compliance is not required until after the tools are available to meet certification requirements such as retrofit, flight procedures, funding of programs, and also rights and obligations of both FAA, as well as proprietor are more clearly defined.

I trust that these comments will be helpful to you. If I can be of further assistance, please call me.


Clifton A. Moore
General Manager

CAM:BJL:sm

SOVAC
Save Our Valley Action Committee
P.O. Box 4775 Station C
San Jose, CA. 95159

13 June 1973

Mrs. Elizabeth Quadra, Chairman
Task Group 1
Environmental Protection Agency
Washington, D.C.

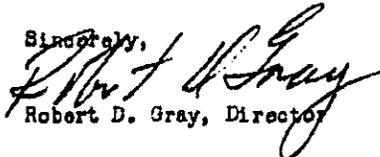
Dear Mrs. Quadra:

We have reviewed the Task Group 1 Report, "Recommendations," dated 31 May 1973. We fully concur that the recommendations are sound, realizable, and well over due for implementation. We whole heartedly endorse and support Recommendation 1a: "That the California airport noise regulation, particularly the CNEL portion, be adopted as a Federal (FAA) regulation, applicable in California only, until a nationwide Federal airport noise regulation goes into effect." The people of California have expended a great deal of time and energy to conceive of and implement the State airport noise regulation - it must be used as a test case. Resulting empirical data will be most valuable for both local, state, and federal agencies.

The Save Our Valley Action Committee (SOVAC) represents and is supported by several thousand residents of the Santa Clara Valley. We have been vitally concerned for several years with the air transportation situation serving our valley. We recently spearheaded an intensive effort to inform our city and county administrations regarding pros and cons of a proposed San Jose Municipal Airport expansion. As a result, a moratorium on any increase in air carrier operations has been mandated by the City Council pending measurement of air and noise pollution levels and the resulting evaluation.

- To summarize; we fully support Task Group 1 recommendations, particularly
- #1a - we also volunteer our services to the Task Group.



Sincerely,

Robert D. Gray, Director

TG 1/197

City of Minneapolis

OFFICE OF CITY COUNCIL
MRS. GLADYS S. BROOKS
ALDERMAN ELEVENTH WARD
307 CITY HALL • 348-2211
MINNEAPOLIS, MINNESOTA 55415

TC 1/188

June 27, 1973

Mrs. Elizabeth Cuadra
Chairman, Task Group 1
Aircraft/Airport Noise Study Task Force
U.S. Environmental Protection Agency
Building 2, - Crystal Mall
Arlington, Virginia 20460

Dear Mrs. Cuadra:

I have been advised of EPA progress in preparation of the report to Congress required under Section 7 of P.L. 92-574, the Noise Control Act of 1972. The insertion of the EPA in the aircraft noise situation was most welcome and we are further encouraged by your draft final recommendations dated May 31, 1973.

In addition to being a member of the City Council representing the section of our community most heavily impacted by noise from operations at Wold-Chamberlain Field, I serve as the Council's representative on the Metropolitan Airports Commission. Thus, I have a dual statutory role which to some may appear to be in mutual conflict. However, I have become convinced that a national strategy precisely as outlined in your Recommendation #1 is the only answer for the long term solution as well as short term alleviation.

Through our local Metropolitan Aircraft Sound Abatement Council on which I also serve, we enjoyed some success in achieving local noise improvements, but there is still need for more improvements.

In our independent studies for measures needed to resolve the aircraft/airport noise problem, airport certification for noise, the central recommendation of EPA, became unequivocally, the logical mechanism.

On behalf of airport community residents in the Twin Cities as well as around all other major commercial airports in the country, I urge that you

- retain your recommendations with one addition. EPA must advise Congress that
- new legislation will be needed to properly implement essential aspects of the

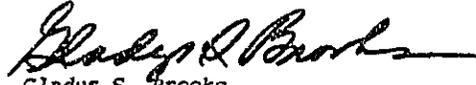


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Mrs. Elizabeth Guadra
June 27, 1973
Page 2

- strategy outlined so well in Recommendation #1. We do not believe the FAA will
- adequately accomplish the measures so thoughtfully identified.

Sincerely,



Gladys S. Brooks
Alderman, Eleventh Ward

GSB:jjj

cc: Messrs. Frank Befera
Richard Erdall
Robert Fzi
John Schettino
Charles Stenvig

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

2200 Churchill Road



Springfield, Illinois 62706
Telephone: (217) 786-6758

XXXXXXXXXXXXXXXXXXXXXXXX

June 20, 1973

Mr. John Schettino
Aircraft/Airport Task Force Director
Office of Noise Abatement and Control
Environmental Protection Agency
Washington, D.C. 20460

Dear Mr. Schettino:

The following comments are respectfully submitted by the Illinois Environmental Protection Agency for the consideration of the Aircraft/Airport Noise Study Task Force.

The Illinois Environmental Protection Agency believes aircraft/airport noise may be reduced by applying the following control strategies:

- (1) The implementation of noise reduction technology at the source as soon as possible in conjunction with
- (2) operational limitations or procedures and
- (3) land use control and incompatible land use conversion or protection.

We believe that these control strategies can be best implemented by the combined efforts of the various levels of government.

Thus, the Illinois Environmental Protection Agency is in general agreement with the preliminary findings and recommendations of the Council of State Governments, which were submitted to the Task Force. If these findings and recommendations are followed, adverse aircraft and airport noise should be effectively reduced.

Mr. John Schettino
June 20, 1973
Page 2

In addition to the recommendations and findings of the Council of State Governments, the Illinois Environmental Protection Agency would like to recommend the following: To effectively reduce airport noise, a tremendous amount of time and effort will be required by the Federal government to implement the airport noise certifications and to reduce the amount of incompatible land uses near airports. Since States can more accurately assess their particular needs, States should be given primary responsibility both for the development of airport noise certifications, subject to Federal approval, and for the development of adequate land use controls. The effect of this recommendation would be to reduce the administrative burden upon the Federal government and to more effectively achieve relief from airport noise.

Thank you for the opportunity to present our recommendations to the Airport/Aircraft Noise Study Task Force.

Sincerely yours,


John S. Moore, Manager
Division of Noise Pollution Control

cc: Jack Marco



CITY OF COLLEGE PARK

THOMAS H. MUEHLENBECK, CITY MANAGER
WINSTON E. PARKER, CITY CLERK

RALPH L. PRESLEY, MAYOR

COUNCILMEN

DON MCLEAN	WARD 1
CALVIN WILSON, JR.	WARD 2
HARRY F. SWANN	WARD 3
TED C. HAYS	WARD 4
R. L. SMELLEY	WARD 5
HERMAN A. BARNARD	WARD 6

June 29, 1973

Ms. Elizabeth Cuadra
Chairman, Task Group 1
Aircraft/Airport Noise Report Study
U.S. Environmental Protection Agency
1971 Jefferson Davis Highway
Arlington, Virginia 22202

Dear Ms. Cuadra:

With regard to the "Final Draft of Task Group 1 Report" dated May 31, 1973, the City of College Park, Georgia would like to take this opportunity to comment on the referenced report.

The City of College Park is located immediately to the west end of three parallel east-west runways at the Atlanta Hartsfield International Airport. The Airport boasts as the busiest airport from a traffic point of view between the hours of 11:00 P.M. and 7:00 A.M. as may be found in the world.

College Park has lived with the noise problem since the advent of jet aircraft and have been able to obtain little if any relief from the FAA or other regulatory agency. We support the involvement of EPA in establishing noise standards.

For your information, I am enclosing a copy of the CNR noise ratings over College Park.

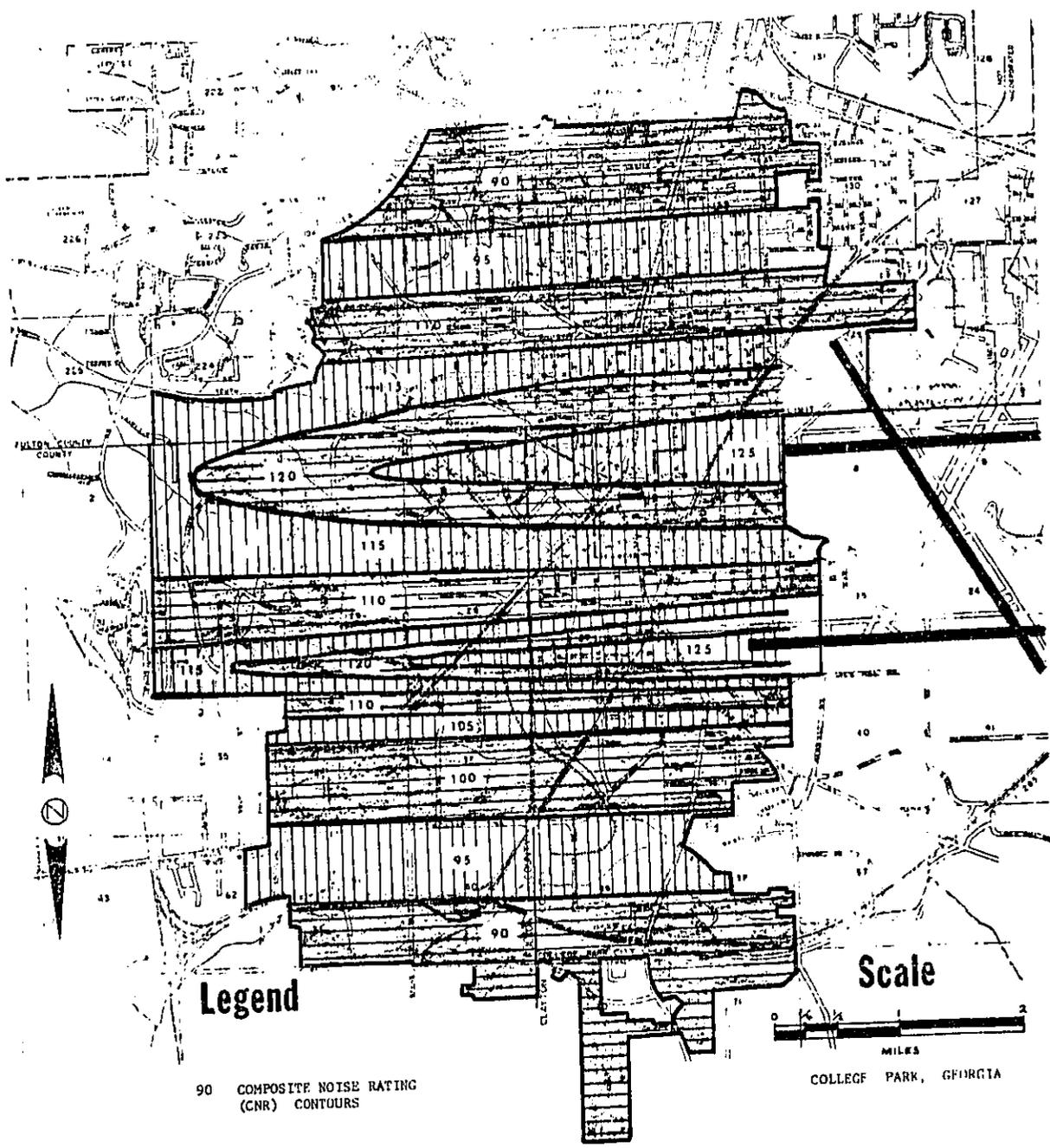
If we can supply additional information, please advise.

Sincerely yours,

Thomas H. Muehlenbeck
City Manager

TC 1/201

FIGURE 9
COMPOSITE NOISE RATING CONTOURS



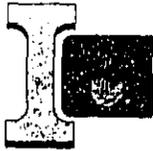
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90 COMPOSITE NOISE RATING
(CNR) CONTOURS

Scale



MILES
COLLEGE PARK, GEORGIA



CITY OF INGLEWOOD CALIFORNIA

CIVIC CENTER

105 EAST QUEEN STREET / INGLEWOOD, CALIFORNIA 90301

June 12, 1973

Elizabeth Cuadra
Environmental Protection Agency
Office of Noise Abatement and Control
1111 20th Street, N. W., Room 531
Washington, D. C.

Dear Ms. Cuadra:

The City of Inglewood supports and concurs with the noise control recommendations as drafted by the EPA. We contend that meaningful changes in operational procedures would bring immediate noise relief without additional cost to the airline industry. The strongest argument of the parties opposing the EPA recommendations is that of "derogation of flight safety." This argument is unfounded and does not even find unanimous support within the airline industry.

More consideration and support has to be given to the advancement and expansion of "quiet engine" development programs. Only advanced engine technology beyond proposed interim measures as applied to the present aviation system will satisfy the demand for peace and quiet. It is shown that the greatest deterrent to an orderly expansion of aviation is noise.

Therefore, it is critical that the proposed noise control proposals will be implemented without delay and compromises using the EPA as driving force and responsible agency.

Very truly yours,

Wolfgang A. Boettger
Acting Environmental Standards Supervisor
Environmental Standards Division

WAB:lm

TC-1/200

ALLAN H. COLMAN
PLANNING AND DEVELOPMENT DIRECTOR

TELEPHONES: 213 / 674-7111, EXT. 230
LOS ANGELES: 213 / 678-7221



CITY OF ALAMEDA • CALIFORNIA

June 29, 1973

Ms. Elizabeth Cuadra
Office of Noise Abatement and Control
Environmental Protection Agency
1835 K Street, NW
Washington, D.C. 20460

Dear Ms. Cuadra:

The City of Alameda, California, is currently reviewing the Draft Reports of the various Task Groups of the Environmental Protection Agency Aircraft/Airport Noise Report Study with penetrating care.

We plan to participate in the public hearings which, according to our understanding, will be held by committees of the Congress and by the Federal Aviation Administration later this year.

However, we wish to express our concurrence with the proposal of the EPA Task Group 1, contained in Recommendation No. 1, Page I-6-2 et seq., of its Draft Report, according to which the FAA is to include certain noise-related elements in its airport-certification regulations. More especially, we wish to emphasize the need for establishing a uniform and scientifically competent validation procedure for assessing the noise-impact areas and areas needing land-use controls, both for current airport operations and for the quantitatively predicted future airport operations.

This City is concerned over representations by the Port of Oakland, proprietor and operator of the Oakland International Airport, which threaten large portions of the City of Alameda to land-use controls based on noise projections for 1980 and 1985. In our opinion, and in the opinion of the managements of other major airports in California and elsewhere, the representations by the Port of Oakland contain the following flaws:

1. They are physically impossible to support. For example, they assume the continued operation of all noisy aircraft existing in 1970, many of which have already gone out of service.

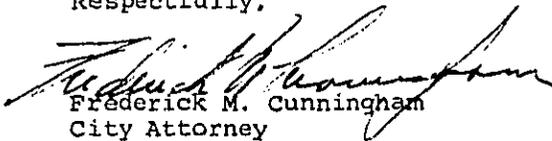
Ms. Elizabeth Cuadra
Environmental Protection Agency

June 29, 1973
Page 2

2. They are contrary to national policy. For example, they assume that none of the currently published FAA Notices of Proposed Rule-Making will result in the promulgation of laws and that the California Noise Standards can be disregarded.
3. They are not corroborated by any existing published plans, whether legal, financial, or physical, whereby facilities will be provided at the Oakland International Airport to support the huge volume of aircraft operations on which the 1980/1985 noise projections by the Port of Oakland are based.

Situations such as this would not arise if the Airport Noise Certification procedure described in Recommendation No. 1 of Task Group 1 were adopted and implemented. In addition, there is an absolute need that a validation procedure be set up to determine - by a consultative and public-hearing process - scientifically competent and factually plausible projections of airport noise-impact contours to a foreseeable future.

Respectfully,


Frederick M. Cunningham
City Attorney

FMC/ms

CC: Hon. Mayor and Council
City Manager
Planning Director

Appendix C

LIST OF TASK GROUP 1 MASTER FILE DOCUMENTS

The documents, letters, draft report sections and position papers listed below are maintained for public reference in the Aircraft/Airport Noise Study master file, at the Environmental Protection Agency's Office of Noise Control Programs, Washington, D. C.

This master file (or docket) was established as a reference materials resource for the use of task group members, EPA staff and consultants and interested public. A further information resource was made available to task group members by the document collection and abstracting efforts of Informatics, Inc., under contract to EPA.

The master file is also intended to serve as a record of the task force process; in addition to the listed documents, it contains summary minutes and tape recordings of Task Group 1 meetings.

The master file was developed from inputs from Task Group 1 members (including EPA representatives), and from interested experts and other citizens who requested that their positions be placed on the study docket. In addition, all citizen letters regarding existing aircraft noise problems received at EPA headquarters during the time period of the study were inserted into the docket.

AIRCRAFT/AIRPORT NOISE STUDY
TASK GROUP 1
MASTER FILE DOCUMENTS

Task Group #1
Serial Number

Item

. SUBMITTED BY CIVIL AERONAUTICS BOARD (3/2/73)

A. Statutes and Regulations:

- 1 1. Synopsis of Purposes and Provisions of the Federal Aviation Act in Relation to the Civil Aeronautics Board (revised March 31, 1971);
- 2 2. 14 C.F.R. 399.110, Implementation of the National Environmental Policy Act of 1969, as amended by PS-47;
- 3 3. Regulation PS-47, adopted June 10, 1971, amending 14 C.F.R. 399.110.

B. Interpretive material on NEPA:

- 4 1. Environmental Considerations in Civil Aeronautics Board Proceedings, by R. Tenney Johnson, General Counsel, Civil Aeronautics Board;
- 5 2. Memorandum, Implementation of the Board's Policy Statement re the National Environmental Policy Act of 1969 (14 C.F.R. 399:110) in decisions of hearing examiners (November 3, 1971);
- 6 3. Letter, C.A.B. Chairman to Russell E. Train, C.E.Q. Chairman (October 2, 1970), reporting on Board's NEPA procedures and Board's statutory authority;
- 7 4. Letter, C.A.B. Acting Chairman to Timothy Atkeson, C.E.Q. General Counsel (April 2, 1971), comments on CEQ Guidelines for preparation of NEPA §102(2)(C) statements;
- 8 5. Letter, C.A.B. Chairman to Russell E. Train, C.E.Q. Chairman (December 20, 1971), reporting on Board's experience in implementing NEPA;
- 9 6. Letter, C.A.B. General Counsel to Kent Frizell, Assistant Attorney General, Land and Natural Resources Division, Department of Justice (March 29, 1972), explaining Board's powers and procedures in regard to conditioning air carrier certificates to specify the use of certain airports.

SUBMITTED BY CIVIL AERONAUTICS BOARD (3/2/73)

C. Court of Appeals' decisions:

- 10 1. Air Line Pilots Association, Int'l v. C.A.B., C.A.D.C. No. 71-1751 (decided January 4, 1973);
- 11 2. The Palisades Citizens Association, Inc. v. C.A.B., 136 U.S. App. D.C. 346, 420 F.2d 188 (1969);
- 12 3. United Air Lines v. C.A.B., 108 U.S. App. D.C. 1, 278 F.2d 446 (1960), vacated sub nom. All American Airways, et al., 364 U.S. 297 (1960);

D. C.A.B. Orders relating to air carrier capacity reductions in certain trans-continental markets:

- 13 1. Order 70-11-35 (November 6, 1970);
- 14 2. Order 71-3-71 (March 11, 1971);
- 15 3. Order 71-5-68 (May 14, 1971);
- 16 4. Order 71-8-91 (August 19, 1971);
- 17 5. Order 72-4-63 (April 13, 1972);
- 18 6. Order 72-11-6 (November 2, 1972);
- 19 7. Order 73-2-60 (February 14, 1973).

E. Memoranda summarizing load factor results in capacity-reduced transcontinental markets:

- 20 1. Dated March 17, 1972--Last Quarter, 1971 data;
- 21 2. Dated May 22, 1972--First Quarter, 1972 data;
- 22 3. Dated June 19, 1972--April, 1972 data;
- 23 4. Dated June 27, 1972--May, 1972 data;
- 24 5. Dated July 27, 1972--June, 1972 data;
- 25 6. Dated August 25, 1972--July, 1972 data;

SUBMITTED BY CIVIL AERONAUTICS BOARD (3/2/73)

- 26 7. Dated September 21, 1972--August, 1972 data;
- 27 8. Dated October 30, 1972--September, 1972 data;
- 28 9. Dated November 28, 1972--October, 1972 data;
- 29 10. Dated January 10, 1973--November, 1972 data;
- 30 11. Dated February 1, 1973--December, 1972 data.
- F. C.A.B. Orders relating to air carrier capacity reductions in
the New York/Newark-San Juan (Puerto Rico) market:
- 31 1. Order 72-1-86 (January 25, 1972);
- 32 2. Order 72-6-70 (June 16, 1972);
- 33 3. Order 72-9-13 (September 5, 1972);
- 34 4. Order 72-11-7 (November 2, 1972).
- G. Memoranda summarizing load factor results in capacity-reduced
New York/Newark-San Juan market:
- 35 1. Dated September 18, 1972--August 1972 data;
- 36 2. Dated September 21, 1972--August 1972 data;
- 37 3. Dated October 16, 1972--September 1972 data;
- 38 4. Dated October 24, 1972--September 1972 data;
- 39 5. Dated November 3, 1972--October 1972 data;
- 40 6. Dated November 21, 1972--October 1972 data;
- 41 7. Dated January 10, 1973--November 1972 data;
- 42 8. Dated February 7, 1973--December 1972 data.

. SUBMITTED BY CIVIL AERONAUTICS BOARD (3/2/73)

H. Other C.A.B. Orders:

- 43 1. Order 71-4-54 (April 9, 1971), Domestic Passenger-Fare Investigation, Phase 6B-Load Factor;
- 44 2. Order 71-7-140 (July 26, 1971), Complaint of the Natural Resources Defense Council, Inc.;
- 45 3. Order 72-2-41 (February 11, 1972), Petition of the City of Inglewood for Decertification.

I. Other:

- 46 1. Letter, C.A.B. Chairman to Senator John V. Tunney (July 26, 1972), commenting on Committee Print No. 6 of S. 3342, The Noise Pollution Control Act of 1972.

SUBMITTED BY DEPARTMENT OF STATE (3/2/73)

- 47 Convention on International Civil Aviation, 1944
- 48 International Standards and Recommended Practices, Aircraft Noise, ICAO Annex 16
- 49 Report of the Special Meeting on Aircraft Noise in the Vicinity of Aerodromes, Montreal, 25 November - 17 December 1969, ICAO Doc. 8857
- 50 Committee on Aircraft Noise, Second Meeting, Montreal, 15 - 26 November 1971, ICAO Doc. 8993
- 51 Sonic Boom Committee, First Meeting, Montreal, 9 - 19 May 1972, ICAO Doc. 9011
- 52 ICAO Air Navigation Commission - Development of SARPS and/or guidance material relating to the quality of the human environment, AN-WP/4115, 20/2/73
- 53 ICAO Assembly Resolutions A16-3, A16-4, A18-11 and A18-12.
- 54 Standard U.S. Draft of Air Transport Agreement, September 28, 1970

- . SUBMITTED BY NASA (3/2/73)
- 55 "A Preliminary NASA Report to the Environmental Protection Agency for the Aircraft/Airport Noise Study," February 28, 1973. (Chapters include Impact Characterization Analysis, Source Abatement Technology, Operating Procedures, Military Aspects).
- 56 . SUBMITTED BY N.O.I.S.E. (3/2/73)
 - "Airport Zoning: The Minnesota Example," Urban Land, Jan., 1973.
- . SUBMITTED BY NATIONAL LEAGUE OF CITIES AND U.S. CONFERENCE OF MAYORS (3/2/73)
- 57 Background information describing the activities of the National League of Cities and U.S. Conference of Mayors.
- 58 U.S. Conference of Mayors Resolutions on
 - Noise Pollution
 - Aircraft Noise
 - Aircraft Noise Abatement
 - Land Use Planning
- 59 National League of Cities 1973 National Municipal Policy on
 - Environmental Quality
 - Transportation
- 60 Maurice A. Garbell. Aircraft Noise Abatement at the San Francisco International Airport, March 10, 1971.
- 61 Information regarding the Dallas-Fort Worth Regional Airport.

SUBMITTED BY COUNCIL OF STATE GOVERNMENTS,
R. TIMOTHY WESTON (3/2/73)

- 62 M. Alushin, D.E. Benor, M.A. Grainer & R.T. Weston, "Port Noise Complaint," Harvard Civil Rights, Civil Liberties Law Review, Vol. 6, No. 1, pp 68-71, December, 1970.
- 63 1971 Massachusetts Airport Noise Legislation, file of information, including testimony by the Airport Study Group of the Harvard Law School Environmental Law Society.
- 64 1970 Massachusetts Airport Noise Legislation, file of information.
- 65 P.A. Franken and D. Standley, "Aircraft Noise and Airport Neighbors: A Study of Logan International Airport," Report DOT/HUD IANAP-70-1, March, 1970.
- 66 P.B. Larsen, "Improving the Airport Environment: Effect of the 1969 FAA Regulations on Noise," 55 Iowa Law Review 808 (1970).
- 67 Pennsylvania Statutes:
- Authorizing Political Subdivisions to establish and operate airports.
- Establishing the Aeronautics Commission and designating the powers and duties thereof (including the power to license airports).
- Airport Zoning Act.
- Aeronautics Act (specifying navigable airspace and duties of aircraft operators regarding damages to land or use and enjoyment).
- 68 J. E. Stephen, "Regulation by Law of Aircraft Noise Levels, From the Viewpoint of the United States Airlines."
- 69 M. Katz, "The Function of Tort Liability in Technology Assessment," University of Cincinnati Law Review, Vol. 38, No. 4, Fall, 1969.

- 70
- SUBMITTED BY TVASNAC (3/2/73)
- "The TVASNAC Proposal for Jet Aircraft Noise Pollution Attenuation," March 1, 1973, with supplements including:
- (a) "Worldwide Airport Nighttime Restrictions," TVASNAC, June 1, 1972
 - (b) "Airport Curfews and Airmail."
 - (c) TVASNAC letter to Commissioner Henry Diamond, New York State Dept. of Environmental Conservation, concerning proposed state noise regulations, September 11, 1972.
 - (d) "Capacity Agreement Results in Big Load Factor Improvement."
 - (e) "The Need for a Retrofit Program."

- 71
- SUBMITTED BY EPA (E. CUADRA)
- Letter from David Standley (Executive Director, City of Boston Air Pollution Control Commission) to Prof. Louis Mayo, February 28, 1973, including comprehensive bibliography of reports, proposed legislation, etc., concerning noise from Logan Airport.

- 72
- R.L. Paullin, "The Status of International Noise Certification Standards for Business Aircraft," paper for the Business Aircraft Meeting and Engineering Display, Wichita, Kansas, April 4-6, 1973.

- 73
- Materials concerning Los Angeles International Airport Noise Abatement Program:
- (a) "Presentation to the Board of Airport Commissioners of Management's Recommendations for Airport Regulations and Policies Designed to Reduce the Noise Contours at Los Angeles International Airport," by Clifton A. Moore, General Manager, Los Angeles Department of Airports
 - (b) Recap of Lawsuits, Court Decisions and California State Legislation-Impact Upon Department of Airports and its Role as Set Forth by City Charter to Accommodate Air Commerce and Navigation.
 - (c) Excerpts from Legal and Official Documents Regarding Local Proprietor's Responsibility in Control of Noise.

(d) Resolutions 7467, 7483, 7484 and 7484A of the Los Angeles City Council.

- 74* Record of Conference (February 6) among EPA and DOT Personnel Regarding Noise Control Act of 1972 (memo to the record by C.R. Foster, DOT Office of Noise Abatement, dtd Feb. 7, 1973)
- 75 EDF letter of Feb. 26, 1973, Hellegers and Janssen to Cuadra (EPA), recommending additional task force members. EPA memo to the record by E. Cuadra, dtd. March 10.
- 76 Letter from Ruth E. Beale to Senator Mathias, dated Jan. 16, 1973, concerning aircraft noise from operations at Washington National Airport. EPA reply to Sen. Mathias dated
- 77 Letter from Robin Gegauff, dated March 2, 1973, concerning noise from operations at Boston - Logan. EPA reply dated March 12.
- 78 Letter from Nicholas C. Yost (Deputy Atty General in Charge, Environmental Unit, State of California) dtd. March 8, 1973, requesting that Task Force actions not negate California Airport Noise regulations (attaching copy of regulations). EPA reply.
- 79 EDF letter to FAA, on Docket No. 12534 (Civil Airplane Fleet Noise Level Requirements, FNL), dated March 2, 1973. (Includes matters regarding international air commerce and nature of U.S. participation in ICAO.)
- 80 Memo from Dr. Lawrence A. Plimlee, M.D., of EPA Office of Research & Monitoring, dtd. Feb. 22, 1973, concerning noise of police helicopters. ONAC reply dtd. March 10.
- 81 Letter from H.P. Kelly of Opa-Locka, Florida, concerning noise from Opa-Locka Airport (both commercial and military operations), dtd. Feb. 12, 1973. EPA reply dtd. March 13, 1973.

*From this point onward, master file documents are listed in serial order without sorting as to task group member organization which submitted the document.

- 82 NASA letter dated March 16, 1973, stating their position regarding need for development of a uniform state law covering land use control around airports, and need for Federal guidelines.
- 83 Letter from Marjorie M. Evans concerning EPA/FAA understanding on the need for EIS under NEPA if standard arrival or departure routes are to be altered.
- 84 Subcommittee report (by R.T. Weston) of the ad hoc subcommittee to study Congressional intent, "Congressional Intent Re. Section 7(b) of the Noise Control Act of 1972; Comparison of Criteria Established in the 1968 and 1972 Acts for the Promulgation of Federal Aircraft Noise Regulations," received March 16, 1973.
- 85 "Selected, Annotated Bibliography on Airport Noise," National League of Cities/ U.S. Conference of Mayors, March 1973.
- 86 William T. Lake, draft chapter on Federal Noise Law, from the Environmental Law Institute's study on federal environmental law, received March 20, from the author (INCLUDES COPYRIGHT RESTRICTIONS)
- 87 EPA memo by W. C. Sperry, dtd. March 20, 1973, concerning ICAO.
- 88 Report, "Airplane Noise Questionnaire Results," based on a study conducted by Attorney General Robert H. Quinn, Commonwealth of Massachusetts, dtd. 1971; submitted to the docket by Elynn R. Weiss, Deputy Assistant Attorney General, letter dtd March 13, 1973.
- 89 "Operations Research Analysis of Aircraft Noise Abatement; Phase I: Development of Methodology," Final Report, IITRI Project No. J 8083, June 1968 (funded by ATA and AIA). Copy contributed by ATA.
- 90 Letter from Janet Gray Hayes, member of the San Jose City Council, San Jose, California, dtd. March 21, 1973, submitting nine items (listed therein) to the docket.

- 91 Letter from Marjorie Evans, concerning environmental and safety aspects of P-3 Orion Flight Training Program at U. S. Naval Air Station, Moffett Field, California (with documentation).
- 92 DRAFT text, "The Meaning of the 'Public Health and Welfare' Pursuant to the Noise Control Act of 1972," by George Washington University (under contract to EPA), dated March 23, 1973.
- 93 Letter, Fred Lee (Sunnyvale, Calif.) to E. Cuadra, April 2, 1973, on noise from touch - and - go practice by U.S. Navy Orions from Moffett Field.
- 94 Letter, M. Evans to E. Cuadra, April 4, transmitting letter from the Environmental Planning Office, City of Palo Alto, concerning noise from training flights at Moffett Field.
- 95 Letter, City of Novato (California) to EPA, April 4, 1973, concerning noise from Hamilton Air Force Base, recommending that the point of conversion of a military air base to joint use or civil use be considered a "new airport" decision point.
- 96 Letter from Edward H. Neuwirth (Coraopolis, Penn.), March 15, 1973, concerning noise from ground testing of aircraft engines at Greater Pittsburgh Airport.
- 97 Letter from John M. Rogan, Foster City, California, March 22, 1973, concerning the role of economics in airline flight operation decisions.
- 98 Letter from Jerry Scaffetta, Long Island, N.Y., March 15, 1973, opposing admission of Concorde (and other SST's) into the U.S.
- 99 Letter from Portola Valley Noise Abatement Committee, Portola Valley, Calif., March 26, regarding need for larger, visible aircraft identification numbers, for ground-based aircraft identification in communities.

- 100 Testimony by Nicholas C. Yost (Deputy Attorney General in Charge, Environmental Unit, Office of the Attorney General of California) before hearing by the Aviation Subcommittee, Commerce Committee, U.S. Senate, March 30, 1973.
- 101 Letter from M. Evans to E. Cuadra, April 2, summarizing her remarks at March 30 meeting of Task Group 1 (focusing upon (a) military aircraft noise problems and (b) light aircraft and business jets.
- 102 Statement on "Control of Aircraft Noise in the Basic Engine/Aircraft Design," submitted by N.O.I.S.E.
- 103 Statement on "Airport Design," submitted by N.O.I.S.E.
- 104 News release dated March 15, 1973, from N.O.I.S.E., concerning the Aircraft/Airport study (submitted by N.O.I.S.E.).
- 105 Letter, William M. Cooper, Jr. (Citizens for Conservation, Bernards Township) to J. C. Schettino, March 20, 1973, concerning aircraft noise problems associated with Metroplex II introduction (New York City area flight control plan) June 1970.
- 106 "Report of the Workshop on Noise Control," including draft model bill for state noise legislation, Second Annual Symposium on State Environmental Legislation, Council of State Governments, April 1973.
- 107 Statement by N.O.I.S.E., dated April 23, 1973, concerning positions on legal/institutional aspects of (a) control of aircraft noise and (b) control of land use.
- 108 Memo from John Bryson and Craig Johnson (NRDC), giving preliminary thoughts on task group recommendations (includes comments on Part I draft)
- 109 "Social and Economic Impact of Aircraft Noise," working paper of the Sector Group on Urban Environment, Organisation for Economic Cooperation and Development (OECD), Paris, 3 April 1973. Prepared for the Fourth Meeting of the Urban Environment Sector Group, May 2-4, 1973.

- 110 Official information on the "Paris noise tax" (Paris Airport Authority), from the Journal Official de la Republique Francaise, February 27, 1973, pp 2173 - 2180. (In French, accompanied by English translation)
- 111 Letter, Charles J. Peters (Acting Assoc. Gen. Counsel, Litigation Div., FAA) to Dr. N. E. Golovin (Deputy Chairman, Program Evaluation and Direction Committee, President's Office of Science and Technology), August 15, 1967, on then existing FAA noise regulatory authority.
- 112 Suggested redraft of TG 1 report section on "Alternatives," received from N.O.I.S.E., dated April 27, 1973.
- 113 Memo to chairman of TG 2 from N.O.I.S.E., "Findings and Recommendations re 'Adequacy of FAA Flight and Operational Noise Controls," dated April 27, 1973.
- 114 Letter from Northeast Clearwater Civic Association, Florida (undated) to EPA, signed by Mrs. Isabelle Meind, concerning noise from student flying practice at Clearwater Executive Airpark.
- 115 Letter from George Carneal, dtd. May 3, 1973, commenting on Parts II, III and IV of TG 1 initial draft.
- 116 Memo, Joan Gravatt to E. Cuadra, dated May 4, 1973, with Department of State preliminary recommendations.
- 117 Preliminary "recommendations" from N.O.I.S.E., dated May 4, 1973.
- 118 Letter, L. Tondel to E. Cuadra, May 3, 1973, transmitting redraft of the work of Writing Group I.
- 119 Letter, L. Tondel to E. Cuadra, May 2, 1973, transmitting his comments on subsections on local government, airport proprietors, land use planning and soundproofing; plus attached reference materials.
- 120 Preliminary "recommendations" from AOCI, dtd. May 3, 1973 (Joseph Lesser)

- 121 Letter, Tondel to Cuadra, transmitting supplemental brief and main brief of the appellees in the Burbank case.
- 122 Preliminary "recommendations" of the National League of Cities / U.S. Conference of Mayors, May 4, 1973.
- 123 "Action Against Aircraft Noise: Progress Report 1973," Department of Trade and Industry, Great Britain.
- 124 Letter, Mr. and Mrs. Walter Buhler to E. Cuadra, dated April 26, 1973, on noise and safety problems associated with training flights at Moffett Field, California.
- 125 Letter, Francis Friesenhahn (Randolph Sub-region Community Council, Randolph AFB, Texas) to EPA, dated 16 April 1973, stating position on acceptable uses of land in CNR Zone 2, and transmitting report of Randolph Airport Environs Study.
- 126 "Legal Aspects of Airport Noise and Sonic Boom," by L. R. Atree and W. F. Baxter (AD 682 900), February 1968.
- 127 Initial draft of subsection on land use planning and soundproofing, from Joseph Lesser, received April 30, 1973.
- 128 Initial draft of subsections on (a) airport proprietors and (b) local governments, from Joseph Lesser, received April 27, 1973.
- 129 Redraft of Section III "Problems," from C. Johnson and J. Bryson, received May 6, 1973.
- 130 Redraft of subsection on DOD, from Martin Menter, received May 3, 1973.
- 131 Initial draft of subsection on CAB, from G. Vitt, received May 1, 1973.
- 132 Initial draft of subsection on HUD, from G. Vitt, received April 26, 1973.

- 133 "Recommendations" of NRDC, transmitted by letter dtd May 4, 1973, Bryson and Johnson to Cuadra.
- 134 Comments on Part I of TG 1 Draft #1, National League of Cities/U.S. Conference of Mayors, (L. Snowwhite), dtd May 1, 1973.
- 135 Letter, D. Longmire to E. Cuadra, concerning noise problem from helicopter overflights in Brentwood/Crestwood Hills area of City of Los Angeles, dtd April 30, 1973.
- 136 Letter, Grumbach to Bryson and Johnson dtd May 2, 1973, responding to their April 20 comments on Part I draft.
- 137 ATA's "recommendations," transmitted by L. Tondel letter dtd May 8, 1973.
- 138 Letter, State of New York Department of Environmental Conservation, to J.C. Schettino, dtd April 25, 1973, stating position on federal and state roles for airport noise control.
- 139 Letter, R. P. Skully to J. C. Schettino, dated May 1, 1973, responding to EPA request for information on application of EIS procedures to changes in STAR's and SID's. Encloses latest draft of FAA's "Procedures for Considering Environmental Impacts of Proposed FAA Actions," FAA Order 1050.____, dated Dec. 4, 1972.
- 140 Letter, R. C. Blomberg (O'Hare Area Noise Abatement Council) to J. C. Schettino, dated April 30, 1973, concerning noise impacting Schiller Park residents from operations at Chicago-O'Hare (with multiple documintation).
- 141 Preliminary draft, "Legal Institutional Resources for Aircraft/Airport Noise Abatement," George Washington University report to EPA under Contract 68-01-1834, dated May 15, 1973.

- 142 Letter, Lutz Kohnagel to EPA, on noise problems from DeKalb Peachtree Airport, dtd May 5, 1973.
- 143 Letter and data from Dr. Erich Buchmann, on aircraft overflight noise at Cabin John, Md., from operations at Washington National Airport, dated May 7, 1973.
- 144 "Recommendations," Janet Gray Hayes, San Jose (California) City councilwoman, dtd April 27, 1973.
- 145 "Recommendations," from TVASNAC, dated May 1, 1973.
- 146 "Recommendations" from AOPA, dated May 10, 1973.
- 147 U. S. Supreme Court decision in the Burbank case, Decision No. 71-1637, dated May 14, 1973.
- 148 Preliminary "recommendations" form Environmental Defense Fund and Sierra Club, dated May 21, 1973.
- 149 Letter, Alice Claeys to EPA, regarding aircraft noise problems in Minneapolis.
- 150 Letter, R.Deane Conrad to E. Cuadra, dtd May 24, transmitting preliminary "recommendations" of the Council of State Governments.
- 151 Letter (multiple signatures) from residents of Ontario, California, opposing expanding use of Ontario Airport (part of Los Angeles Airports System).
- 152 "Aircraft Noise Reduction Technology: A Report by the NASA to the EPA for the Aircraft/Airport Noise Study, "March 30, 1973.
- 153 Letter, Mrs. Beatrice Miles to Congressman Frelinghuysen, concerning aircraft noise in Bernards Township (New Jersey). EPA reply.
- 154 Letter dtd May 12, Elbert E. Farman to Mrs. Dade (EPA) concerning aircraft noise in Garrison-on-Hudson, New York, from operations at Stewart Airport.
- 155 Letter received May 22 (no date), William Sollin (Burbank, California) to EPA/ONAC, concerning aircraft noise from Hollywood-Burbank Airport.

- 156 Letter dtd May 15, Maurice A. Garbell to R. Hurlburt (EPA), transmitting April 6 draft, "Airport Land Use Commission: Proposed Standards," and list by Assemblyman Z'berg entitled, "Possible Legislation Affecting Land Use near Airports," both from California.
- 157 Letter dtd May 24, C. A. Deeds to E. Cuadra, transmitting revised TVASNAC "recommendations."
- 97A Letter dtd May 19, with clippings on San Francisco Airport, from John M. Regan.
- 158 Letter dtd May 4, Malcolm S. Spellman to A.F.Meyer, Jr., on available technology for aircraft noise abatement.
- 159 Letter dtd April 3, Dr. & Mrs Barry Bass to EPA Administrator, on noise from Air National Guard operations at Hulman Field, Terre Haute, Indiana. EPA correspondence to DOD and Dr. & Mrs. Bass.
- 160 Letter dtd May 4, League of Women Voters of West San Bernardino County (California) to EPA, transmitting resolution on impending expansion of Ontario International Airport.
- 161 Letter dtd May 14, Brian Douglass (Manager of Fullerton Municipal Airport) to E. Cuadra, enclosing airport lease section and FAA letter (annotated by Mr. Douglass).
- 162 Letter dtd May 9, Beatrice Miles to J.C. Schettino, concerning aircraft noise problems in Bernards Township (New Jersey).
- 163 CAB Order 73-4-98, dated April 24, 1973, authorizing discussions among United, American and Trans-World Airlines regarding extension of transcontinental capacity agreement.
- 164 Letter dtd May 9, Isabelle A. Joyce to EPA, concerning noise from aircraft operations at Brainard Airport, Hartford, Conn.
- 165 Letter dated May 25, Russell A. Steiner to EPA, concerning effects of noise from military aircraft operating from Lockbourne Air Force Base, Ohio.

- 166 Letter, Aerospace Industries Assoc. to A. F. Meyer, Jr.,
dtd. May 27, 1973. EPA memoranda thereon.
- 167 Letter, John C. Bohonis to W. D. Ruckelshaus, dtd. April 7,
1973, concerning noise from National Airport. EPA acknowl-
edgment.
- 168 Letter, Mr. and Mrs. Henry Stillman to Congressman
Harrison A. Williams, concerning noise from Newark
Airport, dtd. March 18, 1973. EPA reply.
- 169 Letter, Mr. Thomas A. McCarey to Congressman John H.
Ware III, concerning aircraft noise from Philadelphia
International Airport, dtd. April 23, 1973. EPA reply.
- 170 Letter from Charles P. Miller (AOPA) to E. Cuadra, dtd.
March 14, 1973, transmitting a paper, "The Airport Noise
Environment," by Mr. George J. Bean (Director, Hillsborough
County (Florida) Aviation Authority), dtd. May 2, 1972.
- 171 Article by Clifford R. Bragdon, "Urban Planning and Noise
Control," Sound and Vibration Magazine, May 1973.
- 172 Presentation by Gordon A. Miller, Deputy Director of the
California Department of Aeronautics, to the May 18 meet-
ing of Task Group 1, concerning the status of and
experience with the California Airport Noise Standard.
- 173 "Information Brief on Select Bibliography of Acquired
Documents for Aircraft/Airport Noise Report Study,"
Informatics, Inc., transmitted by J. Schettino memo
dtd. June 26, 1973.
- 174 Letter, Charles R. Foster (DOT) to Dr. Henning Von Gierke,
dissolving the Interagency Aircraft Noise Abatement Panel
(IANAP), dtd. April 23, 1973.
- 175 Draft report of Task Group 1, "Legal and Institutional
Analysis of Aircraft and Airport Noise and Apportion-
ment of Authority between Federal, State and Local Govern-
ments," dated 1 June 1973 (in two volumes).
- 176 Letter, G. Lapham, L. Tondel and G. Grumbach to E. Cuadra,
transmitting ATA "recommendations," dtd. June 6, 1973.
- 177 EPA memo, "EPA Airport Noise Study -- AOCI Meeting,"
from Richard J. Denney, Jr. (EPA Assn. General Counsel)
to David D. Dominick (Asst. Admin. for Categorical
Programs) dtd. June 26, 1973.
- 178 NRDC letter, J. Bryson, to A.F. Meyer, Jr., concerning NRDC
"recommendations" in TG 1 report, dtd. June 25, 1973.

- 179 Letter dtd. June 8, 1973, Prof. William H. Rodgers, Jr., to E. Cuadra, transmitting chapter entitled, "Silent Night," from book, "Corporate Country," published June 11, 1973 by Rodale Press.
- 180 ATA letter, Clifton F. von Kann to Alvin F. Meyer, Jr., dtd. July 3, 1973.
- 181 ALPA letter, J.J. O'Donnell to E. Cuadra, dtd. July 2, 1973, transmitting ALPA's comments on the June 1 draft of TG 1 report.
- 182 HUD letter, Clifford W. Graves to John C. Schettino, dtd. June 29, 1973, transmitting HUD's position on the work of the task force.
- 183 AIP letter, Dorn C. McGrath to E. Cuadra, dtd. June 27, 1973, transmitting The American Institute of Planners position.
- 184 AOCI letter, J. Donald Reilly to John C. Schettino, dtd. July 2, 1973, transmitting the Airport Operators Council International's position.
- 185 Sierra Club letter, Majorie W. Evans, dtd. June 15, 1973, transmitting The Sierra Club's position.
- 186 City of San Jose (Calif.) letter, Janet Gray Hayes to E. Cuadra, dtd. June 15, 1973, transmitting position.
- 187 AOPA letter, Charles P. Miller to John C. Schettino, dtd. July 2, 1973, transmitting AOPA position.
- 188 Letter to E. Cuadra, dtd. June 18, 1973, transmitting the position of the Environmental Defense Funds, N.O.I.S.E., Aviation Consumer Action Projects, Environmental Action and Friends of the Earth.
- 189 N.O.I.S.E. letter, dtd. June 30, 1973, transmitting the position of the National Organization to Insure a Sound-Controlled Environment.
- 190 Letter, Richard Dyer to E. Cuadra, dtd. July 2, 1973, transmitting the position of the National Association of State Aviation Officials.
- 191 General Aviation Manufacturers Association position, dtd. June 20, 1973.
- 192 CSG letter, R. Deane Conrad to E. Cuadra, dtd. July 5, 1973; transmitting the position of the Council of State Governments.
- 193 Letter, City of Audubon Park (Kentucky) to E. Cuadra, dtd. June 30, 1973, transmitting comments on Task Group 1 recommendations.

- 194 Letter, City of Newport Beach (Calif.) to E. Cuadra, dtd. July 3, 1973, transmitting comments on recommendations of Task Group 1.
- 195 Letter, City of South San Francisco to E. Cuadra, dtd. July 2, 1973, transmitting comments on recommendations of Task Group 1.
- 196 Letter, Clifton A. Moore (Los Angeles Department of Airports) to Alvin Meyer, Jr., dtd. June 26, 1973, transmitting comments on recommendations of the task force.
- 197 Letter, the Save Our Valley Action Committee (San Jose, Calif.) to E. Cuadra, dtd. June 13, 1973, transmitting comments on recommendations of Task Group 1.
- 198 Letter, City of Minneapolis to E. Cuadra, dtd. June 27, 1973, transmitting comments on the recommendations of Task Group 1.
- 199 Letter, Illinois Environmental Protection Agency to John Schettino, dtd. June 20, 1973, supporting and supplementing the recommendations of the Council of State Governments to Task Group 1.
- 200 Letter, City of Inglewood to E. Cuadra, dtd. June 12, 1973, transmitting recommendations.
- 201 Letter, City of College Park (Georgia) to E. Cuadra, dtd. June 29, 1973, transmitting comments on the report of Task Group 1.
- 202 Letter, City of Alameda (Calif.) to E. Cuadra, dtd. June 29, 1973, transmitting comments on the report of Task Group 1.
- 203 Chairman's Working File: Development of Report Outline.
- 204 Chairman's Working File: Initial Report Draft (partial), April 1973.
- 205 Task Group report draft #2, dtd. May 12, 1973.
- 206 Comment letters on draft #2 (dtd. May 12). Note: Most Participants provided their comments orally, at the meeting; refer to tapes of May 18/19 meeting.
- 207 Chairman's working file: General business of Task Group 1, original notes and attendance lists of meetings, etc. (Two folders; May 18/19 meeting included in second folder).
- 208 Final report of the George Washington University, under EPA contract, concerning the legal and institutional aspects of the aircraft/airport noise problem.

- 209 Department of Commerce letter to John C. Schettino, dtd.
July 19, 1973, transmitting formal comments on the task
force reports.
- 210 Final report of Task Group 1 "Legal and Institutional
Analysis of Aircraft and Airport Noise and Apportionment
of Authority between Federal, State and Local Governments,"
July 1973.

Appendix D

RELATED REPORTS OF THE AIRCRAFT/AIRPORT NOISE STUDY

The task force effort which participated in development of EPA's report to Congress was composed of six task groups, each of which produced a report:

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| Task Group 1: | "Legal and Institutional Analysis of Aircraft and Airport Noise and Apportionment of Authority between Federal, State and Local Governments," EPA NTID 73. 2. |
| Task Group 2: | "Operations Analysis Including Monitoring, Enforcement, Safety, and Costs," EPA NTID 73. 3. |
| Task Group 3: | "Impact Characterization of Noise Including Implications of Identifying and Achieving Levels of Cumulative Noise Exposure," EPA NTID 73. 4. |
| Task Group 4: | "Noise Source Abatement Technology and Cost Analysis Including Retrofitting," EPA NTID 73. 5. |
| Task Group 5: | "Review and Analysis of Present and Planned FAA Noise Regulatory Actions and their Consequences Regarding Aircraft and Airport Operations," EPA NTID 73. 6. |
| Task Group 6: | "Military Aircraft and Airport Noise and Opportunities for Reduction without Inhibition of Military Missions," EPA NTID 73. 7. |

Two supporting contracted studies* were performed under EPA funding in conjunction with the Aircraft/Airport Noise Study:

- 1) Legal/Institutional Resources for Aircraft/Airport Noise Abatement; contractor: George Washington University.
- 2) Aircraft/Airport Operations Study; contractor: Bolt Beranek and Newman.

The findings of the Environmental Protection Agency, as a result of this study, are given in "Report to Congress on Aircraft/Airport Noise: Report of the Administrator of the Environmental Protection Agency in Compliance with Noise Control Act of 1972, Public Law 92-574," July 1973.

*Exact titles and publication dates of reports will become available from the EPA Office of Noise Control Programs when the reports are finalized.

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