

U. S. DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
WASHINGTON, D. C. 20590

STATEMENT OF JOHN H. SHAFFER, ADMINISTRATOR, FEDERAL AVIATION  
ADMINISTRATION, DEPARTMENT OF TRANSPORTATION, BEFORE THE SUBCOMMITTEE  
ON AVIATION OF THE SENATE COMMITTEE ON COMMERCE REGARDING S. 1016 AND  
S. 1566 ON MONDAY, JULY 12, 1971

Mr. Chairman and Members of the Committee:

I welcome this opportunity to appear before you today to  
present the views of the Department of Transportation on S. 1016 and  
S. 1566, both dealing with the control of noise. With me today are  
Mr. Charles E. Anderson, the FAA Deputy General Counsel; and  
Mr. Ronald W. Pulling, the FAA Deputy Associate Administrator for  
Plans. Other members of the staff also are present and available  
to answer specific questions.

S. 1016 is an important part of President Nixon's 1971  
Environmental Program. In his message to the Congress on February 8,  
1971, the President pinpointed the issue that is before this Committee  
today:

"Environmental control efforts too often have been limited  
to cleaning up problems that have accumulated in the past.  
We must concentrate more on preventing the creation of new  
environmental problems and on dealing with emerging prob-  
lems. . . . We must roll back increasingly annoying and  
hazardous levels of noise in our environment, particularly  
in the urban environment. Our goal in dealing with emerg-  
ing environmental problems must be to ward them off before  
they become acute, not merely to undo the damage after it  
is done."



The Administrator of the Environmental Protection Agency (EPA) proposed this legislation to the Congress on February 10, 1971, and testified in support of it last week before the Subcommittee on Environment of this Committee. As I will detail for you in a moment, the aviation community has recognized for many years the fundamental issue the President describes, and is continuing a strong and positive program to meet that issue.

The Administration's proposal -- The Noise Control Act of 1971 -- represents a legislative framework for noise control and abatement.

The proposal would give EPA the authority to:

- o Prescribe criteria for noise to protect the public health and welfare
- o Identify and set standards for the following major sources of noise --
  - oo Construction equipment
  - oo Transportation equipment (including recreational vehicles and related equipment)
  - oo Equipment powered by internal combustion engines
- o Establish labeling requirements for designated products or classes of products
- o Promote the coordination of Federal programs relating to noise research and noise control

Specifically, the bill would amend the provisions of the Federal Aviation Act of 1958 with respect to control of noise from civil aircraft and aircraft components in several respects. FAA standards, rules and regulations would be subject to approval by EPA. However, existing standards, rules and regulations would not be affected



unless revised after enactment of the bill. Furthermore, FAA could issue a type certificate for any aircraft only after prescribing standards governing the noise characteristics of that aircraft. If the Administrator of EPA had reason to believe any existing standard, rule or regulation on noise under the Federal Aviation Act inadequately protected the public from noise, he could request that FAA review such matter and report on the advisability of revising it. The Department of Transportation supports S. 1016, and believes that this proposal reflects laudable objectives that must be sought on a Government-wide basis, in fact on a nation-wide basis. The Department of Transportation urges the Committee and the Congress to enact S. 1016 and to make these objectives a National commitment.

The exemplary effort of the aviation community to combat noise and air pollution demonstrates to all the environmental benefits that a concentrated program may yield. Aviation's efforts also show the potential for success of a comprehensive attack on the noise problem. So, I want to spend a few minutes in giving you a rundown of aviation's programs that deal with current environmental problems and our efforts to prevent the creation of new ones.

The aviation "community" embraces elements of both the private and public sectors. It includes airmen (pilots, engineers, navigators, controllers, mechanics and repairmen), air carriers and many other aircraft operators, aircraft (airframe and powerplant) manufacturers and public and private agencies that own and operate the nation's airport



system, and also the Department of Transportation's Federal Aviation Administration, the Department of Defense, the National Aeronautics and Space Administration, and this Committee and its House counterpart. Over the past several years, aviation's program to deal with noise moved forward on three basic fronts --

- o The source of the noise: The aircraft and its powerplant
- o The path of the sound: The flight path of the aircraft
- o The "receiver" of the sound: The person who hears noise at a specific location

As this Committee knows, the Federal Aviation Administration's commitment to preserving environmental quality began several years ago. As a matter of fact, the FAA was among the first Federal agencies to demonstrate its concern for environmental quality when it established the Office of Noise Abatement in 1966. With its establishment, FAA was equipped to spearhead the organization, development and implementation of a cooperative Government-industry aviation noise management program. Recently, we expanded the responsibilities of that Office and restructured it as the Office of Environmental Quality. The Environmental Quality Office now has overall responsibility within FAA to develop policies and procedures for aircraft noise, smoke emission, exhaust pollution and aircraft waste programs. We believe that we now are well equipped to handle the broad spectrum of environmental challenges facing aviation, and to look ahead to new ones on the horizon.



On July 21, 1968, the Congress enacted Public Law 90-411 (Exhibit 1), that begins "In order to afford present and future relief and protection to the public from unnecessary aircraft noise and sonic boom . . . ." This statute represented the premier substantive Congressional enactment to recognize the environmental impact of noise on the public, and followed the lead set by section 4(a) of the Department of Transportation Act. Many members of this Committee participated in the hearings and debates leading to the enactment of the new authority. As a key element of the "community" of aviation, you too were among the first to take action to deal with the threatening "environmental crisis".

Since you gave us this mandate and the set of tools to combat the problem, we have been working to build a wall against and a lid on the top of aviation noise. We have adopted noise standards for aircraft type certification (Exhibit 2). With an eye toward quieting older jets, we have issued an Advance Notice of Proposed Rule Making that would require the engines of the present jet fleet to be retrofitted with acoustical material. We now are reviewing and evaluating the many comments that we have received on the proposal, and we will be deciding the next step on this proposed rule in the near future. Although not quite as dramatic, we also have **adopted rules** to prohibit the **escalation of noise** that may result from modifications made to aircraft. We have provided the Committee with a timetable for our other activities in the noise regulatory area (Exhibit 3).



The environmental benefits of the noise standards are becoming more and more noticeable as the new wide-body jets enter service. The Boeing 747 has been in service for just over a year now, and soon to be introduced is the McDonnell-Douglas DC-10 with the Lockheed L-1011 to follow. All of these wide-body aircraft use jet engines that are products of a new technology that recognizes and respects environmental guidelines. These new aircraft are more than twice as powerful as their predecessors, yet they are perceptibly quieter and unbelievably free from undesirable emissions. And they are reliable. To date, the Boeing 747 utilizing the Pratt and Whitney JT9D has materialized into an aircraft that has been the most successful of any new aircraft ever introduced by the U.S. aviation industry. Last month, the DC-10 visited New York's LaGuardia and Boston's Logan airports. The press reported that the DC-10 was "like a tiger with laryngitis". Airport neighbors were "delighted with the improvement". So are we! Our success in aircraft noise reduction will be more and more noticeable as these "quiet giants" move into the fleet.

Our work to reduce noise at the source is increasingly successful, and we are heartened by indications from research and development programs now under way. The NASA "quiet-engine" program is yielding a wealth of data which will be put into practice as soon as possible. Other Programs of noise research are expected to absorb about \$3.5 million in fiscal year 1971, and a comparable amount in fiscal year 1972.



We have several programs that consider the path of sound (noise). We select "preferential runways" based on studies linking the noise exposure to an area that arises from the use of a given runway, with the makeup of the population in that area. In turn, use of these runways to the greatest extent possible reduces the noise to which the community is exposed. We have a similar program to establish airport departure procedures so that aircraft on takeoff generate the least amount of noise while maintaining the necessary safety of flight. Our controllers are implementing the FAA "Keep 'Em High" program. Under this program, aircraft enroute and in the terminal areas are kept at higher altitudes, and let down for approach only when they are ready and it is their time to land. We also are continually reworking the air traffic patterns throughout the country to reduce noise impact on the ground.

We are working with the approach navigation aids to see how they can be operated or reworked to reduce noise around airports. A pilot on approach now intercepts the glide path of the instrument landing system (ILS) at a height of about 1,500 feet above the airport's elevation. We are considering moving that up to 3,000 feet. This will allow the pilot to reduce power and begin an earlier descent. Also, we are examining other possibilities -- a steeper glide slope and "dual" or two segment approach. The ILS glide slopes now are 2.5 degrees. By raising the glide slopes to 3 degrees, all approaches will be 300 feet higher when 6.5 miles from the end of the runway. This has the effect



of reducing noise. With the "dual" or two segment approach, a pilot begins the approach using a 6 degree glide slope angle, and then flattens his approach to 3 degrees at an altitude of about 1,000 feet. This also will keep the aircraft higher as it approaches the airport thereby lowering its noise level.

Turning to the "receiver" of the noise, the strong environmental considerations which the Congress enacted in sections 16 (c)-(e) and 18 (4) now guide the FAA in administering the new Airport and Airway Development Act of 1970. We have taken action to implement this new authority (Exhibit 4), and we are convinced that the small expenditure of time and money they may involve will pay untold dividends in the good community relations that will result.

In line with this new authority are existing FAA programs to make "good neighbors" of our airports. New airports are being built on large tracts of land to insulate neighbors from airport operations. The Dallas-Fort Worth airport is on 20,000 acres, and Dulles (not yet 10 years old) was built on 10,000 acres. When Dulles was built, those 10,000 acres seemed enormous; today we wonder. We also are working with the Department of Housing and Urban Development, and State and local units of government to work out compatible land use and development plans for areas around airports. We recognize that we have a long way to go to ensure that the land use patterns do not "grow like Topsy",



but more public officials now recognize the need for land use compatible with the operation of an airport. We are working hard on promoting this principle.

In the broad view, covering not just noise pollution but all environmental factors, is the 10-year National Aviation System Plan and the Annual National Aviation System Planning Review Conference on which the 10-year Plan is based. In essence, this is the product of the ideas of the interested public and the Federal Government. We want and we need the transfusions of new thoughts and ideas that we gain at each annual conference. The conference is wide open -- we welcome all comers. Today, before this Committee and as a matter of public record, I want to give my personal invitation to every person who cares about the complex relationships between aviation and the environment: Attend the 1972 National Aviation System Planning Review Conference. We want to hear your ideas. We urge you to bring them to us. We both will benefit measurably from that exchange.

Our program is a good one, but I am the first to say that we can still do more. But as we do, may I remind all of us that the first mission of the FAA is the safety of flight. We can reduce noise by redesign of the machine (the airframe, the powerplant, or in combination in the aircraft). We can reduce noise by changing procedures to change the path the noise takes. We can work with communities to consider the "receiver" of the sound -- the people who live nearby. But the changes we make must not compromise the safety, health and welfare of those who fly -- the pilots, flight crews and



passengers. Each change, each step must be tested. We must ask each time: Is this the safe as well as the right thing to do?

Aviation was and is in the vanguard of those who are both concerned and acting to deal with environmental problems we face today or foresee tomorrow. The United States can have the clean air, the pure water, the quiet atmosphere and the green spaces that it had in 1771, but that must be accomplished within the social and economic structure of today -- for the world society will never return to 1771. I want those who misrepresent our accomplishments to realize that the airplane is not a predator on the environment. Technology is not the villain that holds the environments' mortgage. We can have quiet, and clean air, and clean water, and green spaces. We cannot, as we sometimes hear said so dogmatically, make the United States a wonderful place in which to live by getting rid of all the progress that has made us the richest, strongest, and healthiest nation in the world. I suggest that the technology which is so often criticized for creating mankind's environmental problems is either the answer to those problems or there is no answer.

Before I close, Mr. Chairman, let me briefly address S. 1566 that also would amend section 611 of the Federal Aviation Act. This bill has five basic features --



- o Requires subsonic transport category aircraft to reduce their effective perceived noise levels by 10 effective perceived noise decibels (EPnDb) below present levels by the end of 1975
- o Authorizes a \$35 million aircraft noise research and development and design demonstration program
- o Authorizes a \$1 billion program to guarantee loans for air carriers to noise retrofit their present fleet
- o Prohibits the Civil Aeronautics Board from rejecting air carrier fare increases to recover the costs of aircraft noise reduction
- o Establishes a Federal grant program to underwrite local airport noise monitoring programs

The authority we now have to regulate aircraft noise under section 611 is fully adequate to protect the public from aircraft noise. As I have outlined for you, our noise program is in the vanguard, and we are constantly moving ahead. We believe that a requirement to reduce noise levels by 10 EPnDb for all aircraft is arbitrary because it is beyond our capacity technologically -- the state of the act has not yet reached that point. Although it may be possible to obtain this goal for some aircraft under certain conditions, current technology has not demonstrated that an across-the-board requirement is possible at this time. In addition, any decision regarding the retrofitting of aircraft is a technical and complex issue closely related to aviation safety. We believe that for these reasons this issue is better handled by administrative proceedings (like those we already have instituted), rather than by a flat legislative mandate.



The Department believes that the loan guarantee authority is both unnecessary and unwarranted. Furthermore, the guarantee authority would apply solely to retrofit loans, and fails to consider the costs of a re-equipment program. A noise re-equipment program may often prove to be both cheaper and more effective than a noise retrofit program. As to the wisdom of barring the Civil Aeronautics Board from refusing fare increases intended to recoup noise reduction costs, we defer to their views. As a general matter, however, we must observe that carte blanche provisions like this invite abuses that a regulatory agency is established to prevent. As to the program to aid local noise monitoring programs, we are persuaded that our noise certification program and the evolving programs to abate noise through operational techniques are the best areas for Federal investment. While we have no objection to noise monitoring at the local level, we have not determined that it should be supported by a Federal program at this time. The aviation programs that I have outlined to you directly enhance the environment. In sum, S. 1566 is basically unnecessary. In addition, its programs are either of doubtful necessity or beyond our technological capacity to accomplish.

In conclusion, Mr. Chairman, we recommend enactment of S. 1016 because we believe that the comprehensive attack on noise pollution that it represents is essential. We strongly oppose S. 1566, as being regressive and unnecessary. We look forward to working more closely with EPA under the provisions of S. 1016, and together we will work out



whatever procedures and relationships may be needed to implement S. 1016, and thus protect and enhance the welfare of those who hear the noise, as well as those who use aviation. We in the Department of Transportation's Federal Aviation Administration are moving ahead as fast as we can using existing technology. Frankly, enactment of S. 1016 will have a relatively minor impact on our regulatory activities and will not impair our aviation safety mission. We will share ~~what~~ we have learned with our sister agency and jointly develop the best possible solutions to mutual environmental problems. All of society will benefit from this relationship and this dedicated effort.

That concludes my prepared statement, Mr. Chairman, My associates and I will be pleased now to respond to questions you may have.





Public Law 90-411  
90th Congress, H. R. 3400  
July 21, 1968

## An Act

82 STAT. 395

To amend the Federal Aviation Act of 1958 to require aircraft noise abatement regulation, and for other purposes.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That title VI of the Federal Aviation Act of 1958 (49 U.S.C. 1421-1430) is amended by adding at the end thereof the following new section:

Aircraft noise  
control.  
72 Stat. 775.

### "CONTROL AND ABATEMENT OF AIRCRAFT NOISE AND SONIC BOOM

"SEC. 611. (a) In order to afford present and future relief and protection to the public from unnecessary aircraft noise and sonic boom, the Administrator of the Federal Aviation Administration, after consultation with the Secretary of Transportation, shall prescribe and amend standards for the measurement of aircraft noise and sonic boom and shall prescribe and amend such rules and regulations as he may find necessary to provide for the control and abatement of aircraft noise and sonic boom, including the application of such standards, rules, and regulations in the issuance, amendment, modification, suspension, or revocation of any certificate authorized by this title.

"(b) In prescribing and amending standards, rules, and regulations under this section, the Administrator shall—

Administrative  
provisions.

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

80 Stat. 931.  
49 USC 1651  
note.

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

"(3) consider whether any proposed standard, rule, 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, rule, 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; and

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

"(c) In any action to amend, modify, suspend, or revoke a certificate in which violation of aircraft noise or sonic boom standards, rules, or regulations 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 Administrator if it finds that control or abatement of aircraft noise or sonic boom and the public interest do not require the affirmation of such order, or that such order is not consistent with safety in air commerce or air transportation."

72 Stat. 779.  
49 USC 1429.

SEC. 2. That portion of the table of contents contained in the first section of the Federal Aviation Act of 1958 which appears under the center heading "TITLE VI—SAFETY REGULATION OF CIVIL AERONAUTICS" is amended by adding at the end thereof the following:

"Sec. 611. Control and abatement of aircraft noise and sonic boom."

Approved July 21, 1968.

#### LEGISLATIVE HISTORY:

HOUSE REPORT No. 1463 (Comm. on Interstate & Foreign Commerce).

SENATE REPORT No. 1353 (Comm. on Commerce).

CONGRESSIONAL RECORD, Vol. 114 (1968):

June 10: Considered and passed House.

July 11: Considered and passed Senate.

