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AVIATION AND THE ENVIRONMENT: NOISE

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HEARING

BEFORE THE

SUBCOMMITTEE ON AVIATION

OF THE

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
HOUSE OF REPRESENTATIVES

ONE HUNDRED TENTH CONGRESS

FIRST SESSION

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U.S. House of Representatives
Committee on Transportation and Infrastructure

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Washington, DC 20515

October 23, 2007

John L. Mica
Ranking Republican Member

James W. Coon II, Republican Chief of Staff

SUMMARY OF SUBJECT MATTER

TO: Members of the Subcommittee on Aviation

FROM: Subcommittee on Aviation Staff

SUBJECT: Hearing on "Aviation and the Environment: Noise"

PURPOSE OF HEARING

The Subcommittee on Aviation will meet on Wednesday, October 24, 2007, at 11:00 a.m., in room 2167 of the Rayburn House Office Building, to receive testimony regarding airport noise issues.

BACKGROUND

Over the last 20 years, air travel in the U.S. has grown faster than any other mode of transportation. The Federal Aviation Administration ("FAA") forecasts that airlines are expected to carry more than one billion passengers by 2015, increasing from approximately 744 million in 2006. With an increase in passenger traffic, there has been an increase in delays. The first eight months of 2007 accounted for the worst delays on record with almost 28 percent – a total of 1.39 million flights – delayed, cancelled or diverted.

According to the FAA, new runways and runway extensions provide the most significant capacity increases. Since fiscal year 2000, 13 new runways have opened at the FAA's 35 critical Operational Evolution Partnership ("OEP") airports providing the airports with the potential to accommodate 1.6 million more annual operations and decrease average delay per operation at these airports by about 5 minutes.

Looking forward, eight OEP Airports have airfield projects (three new runways, two airfield reconfigurations, one runway extension, one end around taxiway, one centerfield taxiway) under construction. These projects will be commissioned through 2012 providing these airports with the potential to accommodate about 400,000 more annual operations and significantly reducing runway crossings. Ten other projects at OEP airports (three airfield reconfigurations, three runway extensions, and four new runways) are in the planning or environmental review stage.

However, despite this progress, the U.S. still faces obstacles in trying to expand our airport capacity through infrastructure improvements. This is because aircraft noise, or the shifting of that noise, generates controversy with airport neighbors and communities. Many of our airports are adjacent to residential neighborhoods and residential communities have often been developed around airports that were once far removed from city centers. In some cases, local governments have not engaged in any meaningful zoning or land-use planning. Accordingly, aircraft noise is an airport capacity issue.

Advanced technology, new operational procedures, and land use measures have all contributed to noise reductions at airports, with advanced technology playing a primary role. In 1990, the Airport Noise and Capacity Act was enacted, which required the transition to quieter aircraft (so-called stage 3) by December 31, 1999 for aircraft 75,000 pounds or more.[1] According to the FAA, jets today are 75 percent quieter (20 decibels) than early jets. The transition to stage 3 aircraft has had the most impact in reducing aviation noise. The FAA states that there has been over a 90 percent reduction in the number of people affected by aircraft noise in the U.S. between 1975 and 2005. In July 2005, the FAA finalized a rule that requires manufacturers submitting an application for a new airplane type design, on and after January 1, 2006, to meet stage 4 noise standards, which will be cumulatively 10 decibels quieter than stage 3.[2]

Since 1990, the U.S. government has spent approximately $600 million on research to reduce commercial aviation source noise, with approximately $34 million of the $600 million funded by the FAA, and the rest provided by the National Aeronautics and Space Administration ("NASA"). In addition, the FAA has spent approximately $40 million on research to characterize noise and improve prediction methods, including work to develop a capability to determine tradeoffs between noise and emissions and quantifying cost and benefits of various mitigation strategies. In May 2006, NASA's Aeronautic Mission Directorate restructured its research and development ("R&D") to focus on primarily fundamental research. This change also affected its R&D relationship with the FAA by decreasing the technical maturity of the research it provides to the FAA. The FAA will need to bridge this "technology gap" by increasing its own R&D budget.[3] The FAA, as part of the core activities of its Next Generation Air Transportation System, plans on pursing significant research on environmental issues, including accelerating development of promising aircraft engine and technologies to reduce noise and emissions. Plans also include research to develop low noise operational procedures and efforts to enable environmental management systems that allow active noise control[4]

However, according to the Government Accountability Office ("GAO"), despite the progress that new technology has had on decreasing aircraft noise, the "expected growth in air traffic may limit the net reduction in overall noise levels generated by individual airports."[5] The FAA echoed this sentiment in a 2004 Report to Congress, stating that the "environmental impact of aircraft noise is projected to remain roughly constant in the United States for the next several years and then increase as air travel growth outpaces expected technological and operational advancements."[6] More recently, the

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[1] Airport Noise and Capacity Act, P.L. 101-508 (1990) (codified at 49 U.S.C. § 47521 et. seq.) ("ANCA"). ANCA also established a process governing airport noise and access restrictions for stage 2 and stage 3 aircraft. FAA administers this program under its regulations at 14 C.F.R. part 161.
[2] 70 Fed. Reg. 38,724 (2005).
[3] H.R. 2881, the FAA Reauthorization Act of 2007, provides $1.8 billion over four years for the FAA's Research, Engineering and Development account.
[4] FAA, *2008-2012 Flight Plan, Charting the Path for the Next Generation* (2007) ("FAA 2008 Flight Plan") at 9, 36.
[5] GAO, *Aviation and the Environment* (GAO/RCED-00-98, April 2000) ("GAO 2000 Report") at 8.
[6] FAA, *Aviation and the Environment, A National Vision Statement, Framework for Goals and Recommended Actions*, Report to Congress (December 2004) ("FAA 2004 Report") at 14.

FAA stated that preliminary analysis by its Joint Planning Development Office demonstrates that "noise and emissions could increase between 140-200 percent over the next 20 years, becoming a significant constraint on planned capacity increases."[7] The FAA believes there is no way to meet this aggressive goal without new technologies and operations. Over the next five years, the FAA's goal is to reduce the number of people exposed to significant noise by four percent per year through fiscal year 2012,[8] and that in fiscal year 2007, approximately 18,600 people in noise impacted areas will be the beneficiaries of noise compatibility projects funded by the Airport Improvement Program.

I. FAA Noise Programs

a. How is Noise Measured?

The take off and landing of aircraft generates the majority of airport-related noise. The analysis of airport noise is based on community reaction to aircraft noise and the likelihood that people will be annoyed. Supplemental analysis is sometimes performed to evaluate other potential effects such as speech interference, sleep disturbance, and learning interruptions. The FAA measures noise exposure based on a yearly day-night average sound level ("DNL") produced by flight operations, which is measured in decibels.[9] A DNL takes into account both the frequency of events as well as the noise level of each event. The DNL also gives a greater weight to flights taking off at night between the hours of 10 p.m. and 7 a.m., such that each flight taking off between those times is counted as 10 daytime takeoffs or landings. If the average cumulative airport-related noise level is at or above a DNL level of 65 decibels, the FAA has determined that the noise from an airport has a significant adverse impact on the community exposed to this level.[10]

b. Regulatory Programs

FAA's statutory authority for providing federal funding of noise compatibility projects is derived from the Aviation Safety and Noise Abatement Act of 1979, and is administered through its regulations at 14 C.F.R. part 150 (hereinafter referred to as the "part 150 program"). Participation in the part 150 program enables an airport operator to receive Airport Improvement Program ("AIP") funding from the funds set aside for noise projects, often referred to as the "noise set-aside." Under current law, 35 percent of AIP discretionary funding, or approximately $300 million per year, is set aside for such noise projects.[11]

However, there are a few exceptions from the requirement that an airport must participate in the part 150 program as a pre-requisite for receiving AIP noise set-aside funds. For example, the FAA may provide AIP noise grant funds to an airport operator without a part 150 program for: insulation of public buildings that are used primarily for educational or medical purposes; noise mitigation projects at congested airports that are part of an environmental record of decision ("ROD"); as well as noise mitigation projects as part of an airport development project where there is an environmental finding (in an environmental assessment, finding of no significant impact, or ROD), and the mitigation is

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[7] FAA 2008 Flight Plan at 28.
[8] Id. at 36.
[9] This method of measuring noise was adopted by the FAA from the U.S. Environmental Protection Agency in response to the Aviation Safety and Noise Abatement Act of 1979 (49 U.S.C. §47501 et seq.); the Act also required the FAA to develop a single system for measuring aircraft noise that has a reliable relationship between noise exposure and reactions of people to that noise and can be applied uniformly at airports and surrounding communities.
[10] *See generally* 14 C.F.R. part 150, Appendix A, Table 1 (2007).
[11] *See* 49 U.S.C. § 47117(e). The Airport Improvement Program funds projects for new and improved facilities at airports, including runways, taxiways, terminal buildings, land acquisition, and noise abatement.

required to allow the development project to go forward.[12] In addition, until the recent sunset of its authority on September 30, 2007, the FAA could provide funding to a state or local jurisdiction for noise planning grants under certain circumstances, as described in subsection (c) below.[13]

Under the FAA's part 150 program, an airport operator may submit a noise exposure map[14] and a noise compatibility program ("NCP") to the FAA for review. An airport's development of a part 150 NCP must be conducted in consultation with local governments and affected communities, airport users and the FAA itself. After the submission of a NCP to the FAA, the agency has 180 days to approve or disapprove recommendations in the NCP, or it is automatically approved by law, with the exception of proposed changes to flight procedures.[15] If the NCP is approved, the projects that involve FAA actions to implement, including changes in flight procedures and approval of AIP funding for eligible measures, must go through an environmental review process under the National Environmental Policy Act of 1969.

An airport's NCP sets forth the measures that the operator has taken, or proposes to take, to reduce existing incompatible land uses and prevent the introduction of new incompatible land uses at the airport in areas covered by the noise exposure map. While local authorities are ultimately responsible for determining land use compatibility, federal land use guidelines describe uses such as homes, schools, and hospitals as incompatible where noise exposure is at or above a DNL level of 65 decibels, while other uses including certain commercial and manufacturing activities are considered compatible above a DNL level of 65 decibels.

Some of the types of projects that the FAA funds under the part 150 program include: soundproofing (such as by insulating a home, replacing doors, windows, and perhaps adding central air conditioning); acquiring homes and relocating the residents to comparable housing elsewhere; and soundproofing schools or medical facilities. However, since October 1, 1998, the FAA has restricted approval of noise remediation measures (e.g., for sound insulation, acquisition, and relocation) for new non-compatible land uses in an effort to discourage additional non-compatible construction. In such circumstances, the FAA limits such funding to preventative measures only, such as zoning, subdivision regulation, building codes, and similar land use and or building controls.[16]

Importantly, an airport operator is <u>not</u> required to participate in the part 150 program; rather it is voluntary. Some airports may choose not to avail themselves of the part 150 program for reasons including: an airport may have a long-standing noise program that is essentially equivalent to, but predates, the part 150 program, so the undertaking of part 150 program may be redundant; the cost of conducting the study itself (for a large airport, the costs can exceed $1 million); numerous incompatible land uses surround the airport such that land use mitigation would be cost prohibitive, dampening interest in accessing the AIP noise-set aside via part 150; and the use of alternative funding methods for noise mitigation (e.g., passenger facility charges, AIP funding for schools and medical facilities, local bonding). Moreover, conducting a part 150 study does not guarantee that better solutions will be reached or that all mitigation projects proposed by an airport or community will actually be funded by

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[12] *See* 49 U.S.C. §§ 47504(c)(2)(D); 47504(c)(2)(E); and 47110(b)(1).
[13] H.R. 2881, the FAA Reauthorization Act of 2007, would extend this authority until 2011.
[14] A noise exposure map identifies an airport's present and future noise patterns, including non-compatible uses in the area of the airport and serves as a standard reference to the airport's existing and future noise impacts for proposed development near an airport.
[15] 49 U.S.C. § 47504 (b). Flight procedures generally must be reviewed for safety and efficiency prior to being implemented, and therefore are not subject to the 180 approval deadline.
[16] *See* 63 Fed. Reg. 16,409 (1998).

the FAA. To date, only 17 of the top 50 busiest airports have not submitted a part 150 study.[17] The FAA states that by the end of 2007, 271 airport sponsors will have taken part in the noise planning process and, of these, 237 have first-time approved NCPs. The FAA also has approved 88 updates to these NCPs.

Unlike the AIP program, airports seeking to fund noise mitigation projects through the Passenger Facility Charge ("PFC") program do not need to have an approved part 150 NCP. Airports can generally use PFCs to pay for the types of noise mitigation projects that are eligible under AIP and the part 150 program, as well as project financing costs. In addition, airports have more flexibility under the PFC program to set their own priorities for which noise-related projects they will fund, subject to FAA approval.[18] However, unlike the AIP program, airports seeking to impose a new PFC charge for noise mitigation, as well as any other project, must get approval from the FAA, and must consult with airlines serving that airport, and any comments the airport receives from the airlines must be addressed in its application for PFC collection.

c. Land Use Planning

Current law recognizes that:

> It is in the public interest to recognize the effects of airport capacity expansion projects on aircraft noise. Efforts to increase capacity through any means can have an impact on surrounding communities. *Non-compatible land uses around airports must be reduced* and efforts to mitigate noise must be given a high priority.[19] [emphasis added]

State and local governments (including airport proprietors) are responsible for determining appropriate land uses around airport property and for interpreting the effect of noise contours upon those lands. In 1998, the FAA embarked on a Compatible Land Use Planning Initiative to help state and local governments achieve and maintain compatible land uses around airports to mitigate the effects of airport-related noise, including preparing guidance and sharing information.

However, in its 2004 Report, the FAA stated that "while federal and industry investments can be applied to reduce aircraft noise, it is local authorities that control land use decisions near airports" and that "while some communities have taken active roles in addressing land use issues near airports . . . a disconnect remains between federal aviation policy and local land-use decision-making."[20]

In 2003, the FAA was given the statutory authority to issue AIP grants for land compatibility planning to state or local governments if they are located near a large- or medium-hub airport that does not have a current part 150 NCP or if the NCP is over 10 years old.[21] To date, the FAA has issued two noise planning grants to the following communities: $750,000 to Des Plaines, Illinois (outside of

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[17] The 17 airports include: Boston Logan International; Chicago O'Hare International; Dallas/Fort Worth International; Dallas Love Field; Denver International; Washington Dulles International; Gillespie Field (San Diego, CA); Houston-David Wayne Hooks; Houston-George Bush Intercontinental; John F. Kennedy International (NY); John Wayne (Orange County, CA); LaGuardia (NY); Miami International; Newark International; Phoenix Deer Valley; Phoenix Mesa Gateway; and Van Nuys (CA).
[18] GAO 2000 Report at 34.
[19] 49 U.S.C. 47101(c).
[20] FAA 2004 Report at 14.
[21] 49 U.S.C. § 47141.

Chicago O'Hare) and $300,000 to San Mateo, California (near San Francisco International).[22] However, that authority expired in September 2007; H.R. 2881 extends this authority until 2011.

II. Funding for Noise Mitigation

Airport operators may use either AIP or PFC funds for noise related projects, including acquiring homes and relocating people, soundproofing homes and other buildings, and constructing noise barriers. Noise projects are 80 percent eligible under AIP for large- and medium-hub airports, and 95 percent eligible at small, non-hub, general aviation and reliever airports. As noted above, 35 percent of AIP discretionary funding, or approximately $300 million per year, is set aside for noise projects each year. In addition, noise projects are 100 percent eligible under the PFC program, including the local AIP match.

In 2007, the FAA issued 12 AIP grants and one PFC approval for new or updated noise studies at a cost of approximately $6.1 million, and 70 grants for noise compatibility mitigation, totaling $290 million. PFC collections in 2006 for noise planning and mitigation was approximately $34 million.

Since 1982, the U.S. has issued $5 billion in AIP grants and approved the imposition of $2.8 billion in PFC revenue for noise mitigation measures, such as soundproofing schools, homes, and churches located near airport property, as well as on land purchases and relocation assistance.

A breakdown of the AIP monies spent on noise mitigation measures since 1982 is set forth below.

AIP National Noise Data FY 1982-2007	Total
Mitigation Measures for Residences	$1,902,897,204
Land Acquisition	$2,170,069,384
Noise Monitoring System	$170,466,264
Mitigation Measures for Public Bldg.	$702,619,381
Noise Compatibility Plan	$86,779,196
Total	$5,032,831,429

Source: FAA, 2007

A break down of the PFC monies collected for noise mitigation measures since 1992 is set forth below.

PFC National Noise Data FY 1992-2007	Total
Multiphase noise projects	$1,282,997,018
Land Acquisition	$480,995,096
Soundproofing	$1,018,054,010
Monitoring	$30,955,390
Planning	$14,793,986
Other	$11,272,000
Total	$2,839,067,500

Source: FAA, 2007

[22] FAA, *Airport Improvement Program, Fiscal Year 2006, 23rd Annual Report of Accomplishments*, Report to Congress (August 2007) at 58.

III. H.R. 2881, the FAA Reauthorization Act

H.R. 2881, which passed the House on September 20, 2007, includes several provisions related to noise mitigation and land use initiatives. Section 132 allows airport operators to reinvest the proceeds from the sale of land that an airport acquired for a noise compatibility purpose, but no longer needs for that purpose -- giving priority, in descending order, to the following: reinvestment in another noise compatibility project at the airport; reinvestment in another environmentally related project at the airport; reinvestment in another otherwise eligible AIP project at the airport; transfer to another public airport for a noise compatibility project; and finally, payment to the Airport and Airways Trust Fund.

Sections 503 and 504 allow the FAA to accept funds from airport sponsors to conduct special environmental studies for ongoing federally funded airport projects, or studies to support approved airport noise compatibility measures or environmental mitigation commitments, or to hire staff or obtain services to provide environmental reviews for new flight procedures that have been approved for airport noise compatibility planning purposes.

Section 505, the CLEEN engine and airframe technology partnership, directs the FAA, in coordination with NASA, to enter into a 10-year cooperative agreement with an institution, entity, or eligible consortium to carry out the development, maturing, and certification of continuous lower energy, emissions and noise engine and airframe technology, including aircraft technology that reduces noise levels by 10 decibels at each of the three certification points relative to 1997 subsonic jet aircraft technology.

Section 506 phases out all civil subsonic jet stage 2 aircraft less than 75,000 pounds in the 48 contiguous states within five years. Section 507, the Environmental Mitigation Pilot Program, funds six projects at public-use airports to take promising environmental research concepts into the actual airport environment to demonstrate measurable reductions of aviation impacts on noise, air quality or water quality.

In addition, section 818, the Redevelopment of Airport Noise Properties Pilot Program, provides new tools to encourage airport compatible redevelopment of noise impacted properties adjacent to airports to ensure joint comprehensive land use planning.

WITNESS LIST

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The Honorable Joseph Crowley
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HEARING ON AVIATION AND THE ENVIRONMENT: NOISE

Wednesday, October 24, 2007

HOUSE OF REPRESENTATIVES
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE,
SUBCOMMITTEE ON AVIATION,
Washington, DC.

The Subcommittee met, pursuant to call, at 11:03 a.m., in Room 2167, Rayburn House Office Building, the Honorable Jerry F. Costello [Chairman of the Subcommittee] presiding.

Mr. COSTELLO. The Subcommittee will come to order. I think Members and others may be held up outside; there is a little demonstration going on down the hall. But I am sure Members will come in as soon as they can.

The Subcommittee will come to order. The Chair will ask all Members, staff, and everyone to turn off electronic devices or put them on vibrate.

The Subcommittee is meeting today to hear testimony on Aviation and the Environment: Noise. I have a statement which I will submit for the record so that we can go to our two colleagues on the first panel.

I welcome everyone here today on the issue of airport noise issues. The purpose of the hearing is to learn more about noise issues near our airports and what communities have done and what they are doing to address the problem.

Over 750 million people traveled by air in 2006; one billion people are expected to travel by air in the year 2015.

As airports struggle to increase capacity to meet demands, they must reach a balance between the need to expand with the quality of life of the people who live near and around our airports.

I have, as I said, a full statement that I will submit for the record so we can expedite matters and go directly to our first panel of witnesses. But, before I do, and before I recognize Mr. Petri, the Ranking Member, for his opening statement or any comments, I ask unanimous consent to allow two weeks for all Members to revise and extend their remarks and to permit the submission of additional statements and materials by Members and witnesses. Without objection, so ordered.

At this time, the Chair recognizes the Ranking Member, Mr. Petri.

Mr. PETRI. Thank you very much, Mr. Chairman. I also ask consent to submit my full statement for the record.

Let me only say this is obviously an important hearing that concerns many of our constituents, especially those who are affected

by changes in the level of noise because of changing flight patterns and so on.

Overall, it is my own experience, and I think the experience of this Committee, that the broad picture is that the situation has gotten somewhat better. Sound levels are going down. We will be hearing from Pratt and Whitney about the improvements that are being made. But that being said, it doesn't solve the problem for someone who confronts an increase in noise because of changing flight patterns, and I look forward to hearing from our colleagues about the concerns of their constituents in that regard.

Mr. COSTELLO. I thank the Ranking Member for his comments and would recognize our first panel of witnesses, two colleagues from the New York delegation. We will ask our colleagues to offer their testimony, and traditionally we have not asked Members who are testifying before this Subcommittee to wait around and answer questions. We realize that you have busy schedules, as we do. In fact, I just left a markup to be here, and I have to go back to that markup in a few minutes.

But, at this time, the Chair would recognize the Honorable Joseph Crowley, who is a Member of Congress, of course, from the New York Seventh District, and Carolyn McCarthy, who is a Member of Congress from New York's Fourth District.

At this time, the Chair would recognize Mr. Crowley for his testimony.

TESTIMONY OF THE HONORABLE JOSEPH CROWLEY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. CROWLEY. Thank you, Mr. Chairman.

Chairman Costello and Ranking Member Petri, Members of the Subcommittee, thank you for conducting this hearing.

In my district, airport noise is a daily burden shouldered by my constituents, and I appreciate your attentiveness to this important issue.

As you know, I represent Queens and the Bronx, New York, and we are home to LaGuardia Airport, one of the Nation's busiest airports, and the busiest and most congested airspace in the United States.

If you looked at a map of the area, you would probably focus on the fact that LaGuardia Airport is surrounded by Flushing Bay on one side and the Grand Central Parkway on the other. It is, however, also in the middle of several densely populated communities, including Woodside, Astoria, East Elmhurst, Jackson Heights in Queens, and many parts of the Bronx as well.

While the airport is a central part of our community—helping support New York's economy by shuttling visitors and busy people in and out of the region—its presence does negatively impact on the day-to-day life for tens of thousands of my constituents.

In particular, the air pollution resulting from road traffic and airplanes at LaGuardia is a severe problem, as is the noise pollution caused by the airport and its related facilities.

That is why, working with the Environmental Protection Agency and New York University, I commissioned a study to determine the effects of airport and airport-related noise on my constituents.

The results of this report concluded that some residents living near LaGuardia were exposed to noise levels nearly four times greater, with some levels exceeding the 65 decibel threshold set by the Federal Aviation Administration, than those experienced by residents not living within close proximity to the airport

Twenty-four hour time histories also found that residents living within the footprint of LaGuardia were exposed to noise levels in excess of the levels New York City code stipulates for sleeping areas from the house of 10:00 p.m. to 7:00 a.m., and more than 55 percent of the people living within the flight path were reportedly bothered by aircraft noise.

Similarly, homes surrounding JFK Airport were subjected to comparable levels of noise as those around LaGuardia, and I would expect they would be comparable to any homes and communities surrounding our Nation's major airports.

These findings are particularly noteworthy because noise is not just an annoyance or inconvenience. It is hazardous to one's health and well-being, and it diminishes an individual's quality of life.

The World Health Organization found that airport noise has been linked to cardiovascular disease. And the Federal Interagency Committee on Aviation Noise, in September 200 report, concluded, and I quote: "Research on the effects of aircraft noise on children's learning suggests that aircraft noise can interfere with learning in the following areas: reading, motivation, language and speak acquisition, and memory. The strongest findings to date are in the area of reading, where more than 20 studies have shown that children in noise impact zones are negatively impacted and affected by aircraft."

The FAA has recognized the need to mitigate airport noise and has created a volunteer process whereby airport authorities may undertake a Part 150 study to determine the extent of airport noise on a community and then, as a follow-up, establish a plan for remediation of that noise, which could include residential soundproofing.

Yet, despite the overwhelming evidence that airport noise can severely impact the health and well-being of individuals, particularly our children, the Port Authority of New York and New Jersey has never undertaken or even attempted to conduct a Part 150 study or noise mitigation effort for the homes in the neighborhoods surrounding LaGuardia or its other airports: JFK, Newark, Teterboro, or Stewart Airports.

In fact, in the Vision 100 Century of Aviation Reauthorization Act, this Committee directed, at my request, that the Port Authority of New York and New Jersey begin a Part 150 study and residential soundproofing. The Committee's bipartisan language I won't read, but will submit for the record in my testimony.

Unfortunately, the Port authority ignored the explicit direction of this Committee and still has not taken any action to soundproof residences in my area, which is why I am here today.

It is my hope this public forum and the further engagement of this Committee will encourage the Port Authority of New York and New Jersey to finally pursue the necessary course of action.

As this Committee knows, only 17 of the top 50 busiest airports have not submitted a Part 150 study, and three of these 17 air-

ports—LaGuardia, JFK, and Newark—are operated by one entity, the Port Authority of New York and New Jersey.

In fact, other large airports have successfully conducted Part 150 studies and soundproofed homes. Of particular note is Los Angeles International Airport. LAX completed its study and is soundproofing the homes in its footprint.

It has been a major success story, with the major concern being the length of time to fully implement and mitigate all the homes for noise.

If LAX can undertake this project, why can't the Port Authority of New York and New Jersey?

I have worked diligently with this Committee's leadership, both under former Chairman Don Young and now under our Chairman Costello and full Chair Oberstar, on the issue of airport noise. I have appreciated your past efforts and support.

I hope you will agree that the time has come for soundproofing and other noise mitigation efforts to get underway at the homes surrounding LaGuardia Airport and the other four airports under the Port Authority's control.

And if today's hearing does not compel the Port Authority to act, I am going to ask that the FAA Reauthorization plans, which is working its way through the chambers—including the Ways and Means Committee on which I sit—include language strengthening the laws regarding soundproofing of homes and places of worship, and mandating soundproofing and other forms of noise abatement for people living in the footprints of our Nation's largest and busiest airports.

Airport and airport-related noise is a real issue of concern to my constituents, both those living around an airport like my constituents or those in the flight path like my colleague, Mrs. McCarthy's.

I sincerely appreciate and thank Chairman Oberstar and you, Chairman Costello and Ranking Member Petri, for holding this hearing, for inviting me to testify, and for inviting the Port Authority of New York and New Jersey to testify. I look forward to continuing to work with you on this matter. I thank you again.

Mr. COSTELLO. The Chair thanks you, Mr. Crowley, for your thoughtful testimony and for your leadership on this issue.

The Chair now recognizes the gentlelady from the Fourth District from New York, Congresswoman McCarthy.

TESTIMONY OF THE HONORABLE CAROLYN MCCARTHY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mrs. MCCARTHY. Thank you. I would like to thank Chairman Costello, Ranking Member Petri for holding this hearing today and allowing me the opportunity to testify before the Transportation and Infrastructure Subcommittee on Aviation. A lot of my testimony goes along the same lines as my colleague, Mr. Crowley. We share the same problems. I hope this hearing will allow us to explore the effects that airplane noise has on communities near busy airports, and I hope that we can continue to work together in order to find solutions that will reduce airplane noise.

I represent the Fourth Congressional District of New York. My district is located in Nassau County, a densely populated area adja-

cent to John F. Kennedy International Airport. Due to the close proximity to JFK, many communities in my district are severely affected by noise from airplanes landing and taking off from JFK, including the Village of Floral Park.

I receive hundreds of calls, letters, and e-mails regarding airplane noise. This issue affects thousands of my constituents on a daily basis. The Village of Floral Park and the Town-Village Aircraft Safety and Noise Abatement Committee, which represents several communities in my district, have led the effort to reduce airplane noise. This is who I represent in my testimony today.

The communities surrounding JFK have always experienced airplane noise from planes flying in and out of JFK. The residents were fully aware of this when they purchased their homes in the area. However, due to several factors, there has been a gradual increase in the volume of air traffic and airplane noise since 2000. The result is that it is significantly more difficult to maintain a decent quality of life in these communities.

But the concerns extend beyond quality of life. Airplane noise not only affects the quality of life of residents, but can also have dangerous effects on their health. The extended exposure to the loud DNL levels not only affects the hearing of adults and children, but has also been linked to increased blood pressure.

Airplane noise has also been found to have an effect on children's education, as my colleague, Joe Crowley, has said. Children who are exposed to prolonged periods of airplane noise learn to read at a slower pace than those not exposed to the noise. These factors come into play every day for the residents of Floral Park and the surrounding communities. We know that the DNL levels are high, but there has not been a study to determine how serious the health risks are for residents.

Despite these quality of life and health concerns, airplane noise and traffic increase in 2000 at JFK, Congress passed legislation in 2000 to phase out slot restrictions at JFK. The full impact of this legislation occurred on January 1st, 2007, when the restrictions on the hourly departures and arrivals were completely eliminated. In the first four months of this year, the volume of air traffic has increased by 26.4 percent. As a result, the FAA authorized JFK to utilize three of its four runways for longer periods than was historically permitted, thus limiting the number and length of the breaks between airplane noise flying over the affected communities.

The elimination of the limits on departures or arrivals from JFK has forced the airport and New York TRACON to deviate from the letter of agreement, which has a significant impact on the areas surrounding JFK. Airplane noise can be heard at all hours of the day and into the night. Flights over these communities can continue for more than 16 hours a day, with airplanes departing and landing as often as 30 to 60 seconds apart. Residents of these communities have reported up to 115 planes per hour during peak time.

One solution to the increase in traffic and an increase in airplane noise is to reinstate the limits on departures and arrivals from JFK. Short of this, we should at least begin discussing how JFK and airline carriers can come to an agreement to reduce air traffic. A reduction of air traffic to and from JFK will reduce airplane

noise, as well as delaying congestion. The idea is also supported by President Bush, who recently sent a letter to Secretary Peters, asking he to confer with the members of the aviation industry and regulations to find a solution to reduce the air traffic congestion and delays.

A small number of communities bear the enormous burden of airplane noise from increased air traffic in order to benefit the larger region, and, as a result, the Federal Government should offer their assistance. The air traffic going in and out of JFK brings significant benefits to Long Island and to New York. The accessibility that JFK and LaGuardia airports provide to the New York area allows individuals to conveniently conduct business, visit family, or simply take a vacation. This is good for New York and this is also good for Long Island. However, the cost of the increase in traffic at JFK includes flight delays, congestion, and almost constant airplane noise that plagues all of our communities.

The Federal Government should increase and expand the assistance available under the Airport Improvement Program for soundproofing. The Airport Improvement Program has done a great job of ensuring students living in these affected areas have a quieter learning environment by soundproofing schools with noise levels above 65 DNLs. This funding should be increased and made available to soundproof additional facilities.

Lastly, JFK was excluded from the FAA's noise mitigation study under the New York/New Jersey/Philadelphia Airspace Redesign. Although the main goal of the Airspace Redesign is to reduce delays and increase efficiency, reducing airplane noise should also be a priority. Airplane noise over the affected areas is directly related to the amount of the air traffic to and from JFK. Reduction in delays and an increase in efficiency will only make more slots available for departures and arrivals at JFK, resulting in an increase in air traffic airplane noise. If a noise mitigation study had been conducted by the FAA for JFK, it may have been possible to identify migration measures to decrease airplane noise. I urge the FAA to conduct a noise mitigation study on the areas surrounding JFK under the Airspace Redesign.

I thank you again for the opportunity to testify. I look forward to working with the Committee and with my colleague, Mr. Crowley, to reduce airplane noise over the communities surrounding JFK and LaGuardia. With that, I thank you for this opportunity to testify, and my full testimony has been handed in.

Mr. COSTELLO. The Chair thanks you, and let me mention, concerning the AIP program and the reauthorization bill, we have substantially increased the authorization for the AIP program, as you suggested in your testimony. I believe the amount is $15.8 billion over the course of the bill. So we are anxiously awaiting the other side of the Capitol to take action on their bill so that we can go to conference and, in fact, produce a bill that provides increased funding to our airports.

The Subcommittee thanks both of you not only for your testimony here today. As Congressman Crowley pointed out, this hearing is a result of a request that he and other Members of the New York delegation made, as well as Mr. Hall on our Subcommittee, who is on his way over here. So we thank you. We assure you that

the Subcommittee will continue to work with you and work with the delegation on this important issue. Thank you.

The Chair would now ask the second panel to come forward, and as you are moving forward, I will begin with introductions.

The first witness on the second panel is Carl Burleson, who is the Director of the Office of Environment and Energy for the FAA; Dr. Gerald Dillingham, the Director of Physical Infrastructure Issues for the U.S. Government Accountability Office; Ralph Tragale, who is the Manager of Government and Community Relations for the Port Authority of New York and New Jersey; Deborah McElroy, the Senior Vice President, Government Affairs, for the Airports Council International-North America; the Honorable Arlene Mulder, who is the Mayor of Arlington Heights and the Chairperson of the O'Hare Noise Compatibility Commission; Dr. Alan Epstein, the Vice President of Environment and Technology, Pratt and Whitney, United Technologies Corporation; and Mr. Dennis McGrann, who is the Executive Director of the National Organization to Insure a Sound-Controlled Environment.

With that, before we recognize our witnesses and receive their testimony, the gentleman from Tennessee, the former Chairman of this Subcommittee, would like to make a brief statement

Mr. DUNCAN. Mr. Chairman, thank you. Ordinarily, I wouldn't interrupt the proceedings like this, but I have got an appointment in just a few minutes with former Congressman Bill Lipinski, and I need to leave here in just a few minutes.

I did want to say just a couple of things. Sometimes we have trouble admitting that great progress has been made in a particular area, and perhaps that is because people within the government working on a particular problem always want more funding and companies outside of government who are working on the same problem want more money as well.

But according to our briefing papers, the FAA says that today jets are 75 percent quieter today than earlier jets. We are also told that there has been an over 90 percent reduction in the number of people affected by aircraft noise from 1975 to 2005. A lot of that has come about because of tremendous interest in this problem and tremendous pressure from Chairman Oberstar when he chaired this Subcommittee for many years, and also work by the Full Committee.

We are also told in the briefing papers that, since 1982, the AIP has provided $5 billion for noise abatement projects and PFC charges have provided another $2.4 billion for these projects since 1982. So we have spent an awful lot of money in this area.

Now, I have noticed in past years that some people who live close to airports seem to develop superhuman hearing. I remember one time, when this Subcommittee was touring the Dallas Airport, we were told that one man had the airport on his speed dial and had called several thousands of times to complain about aircraft noise; and, of course, the Dallas Airport is the second largest airport, geographically, in the Country, so many other airports really have worse problems in this area, or had them, than the Dallas Airport.

But whenever we have done scientific testing in the homes of some of these people who have complained the most, we have found that the decibel levels just weren't there.

Now, all I am trying to get at is this: There probably are a few places where we still have a serious problem with noise, but we have made tremendous progress and we have spent many, many billions of dollars on this problem in the last few years, and perhaps it may be time to consider that some of these billions may be better spent in other ways at most airports in this Country.

But I thank you for calling this hearing to look into this and thank you for letting me make these comments at this time.

Mr. COSTELLO. The Chair thanks the gentleman and at this time will recognize our first witness for his testimony.

Ladies and gentlemen, as you know, we will ask all of you to submit your entire statement into the record and we would ask you to summarize your testimony in five minutes or less.

The Chair now recognizes Mr. Burleson for his testimony.

TESTIMONY OF CARL E. BURLESON, DIRECTOR, OFFICE OF ENVIRONMENT AND ENERGY, FEDERAL AVIATION ADMINISTRATION; DR. GERALD DILLINGHAM, DIRECTOR, PHYSICAL INFRASTRUCTURE ISSUES, U.S. GOVERNMENT ACCOUNTABILITY OFFICE; RALPH TRAGALE, MANAGER, GOVERNMENT AND COMMUNITY RELATIONS, PORT AUTHORITY OF NEW YORK AND NEW JERSEY; DEBORAH C. MCELROY, SENIOR VICE PRESIDENT, GOVERNMENT AFFAIRS, AIRPORTS COUNCIL INTERNATIONAL-NORTH AMERICA; THE HONORABLE ARLENE J. MULDER, MAYOR OF ARLINGTON HEIGHTS AND CHAIRPERSON, O'HARE NOISE COMPATIBILITY COMMISSION; DR. ALAN EPSTEIN, VICE PRESIDENT, ENVIRONMENT AND TECHNOLOGY, PRATT AND WHITNEY, UNITED TECHNOLOGIES CORPORATION; DENNIS M. MCGRANN, EXECUTIVE DIRECTOR, N.O.I.S.E., NATIONAL ORGANIZATION TO INSURE A SOUND-CONTROLLED ENVIRONMENT

Mr. BURLESON. Chairman Costello, Congressman Petri, Members of the Subcommittee, I am pleased to appear before you this morning to address an issue that is central to any discussion of aviation and the environment: aircraft noise.

This is not a new issue. In 2003, we celebrated the hundredth anniversary of the Wright Brothers flight and the opening of the aviation age; 2003 also marked the 92nd anniversary of the first editorial complaining about aircraft noise. In AERO magazine in 1911, an editorial on the fitting of silencers noted "that the tremendous racket that is present associated with the aero plane plays a considerable part in prejudicing the public against these machines."

The good news is we have overcome enough of the public prejudice to have 2 billion people fly worldwide each year, more than the number of people that populated the earth in the early 20th century. The challenge, of course, is that aircraft noise remains the most significant environmental issue in the U.S. system today, as it seeks to add capacity to meet demand for air travel by our citizens.

We have made major strides in lessening aircraft noise impacts in the United States over the past few decades. As Congressman Duncan just noted, in the 30-year period between 1975 and 2005, passenger enplanements grew from a little over 200 million to more

than 700 million, while exposure to significant aircraft noise declined more than 90 percent, from over 7 million Americans in 1975, to now about a half million.

Quieter aircraft and engine technology made possible by Federal and industry investments and research, development, and deployment has produced the bulk, about 90 percent, of this noise reduction. These technology advances have been complimented by noise abatement and flight procedures, compatible land use efforts, and noise compatibility programs.

The FAA has strongly supported noise compatibility programs at nearly 300 airports in the U.S. with both technical and financial assistance. Primarily through the process known as the Part 150 program, the FAA has provided about $5 billion since 1982 in airport improvement grants and nearly $3 billion in passenger facility charges since 1990. So that totals $8 billion in financial assistance for airports for noise projects.

Now, two years ago, in a report to Congress based on input from a wide section of stakeholders, we laid out a national vision and strategy for tackling noise, as well as other key aviation environmental issues. This vision has become the basis of the environmental approach at the heart of the NextGen plan. The national vision includes achieving absolute reduction in the numbers of people exposed to significant aircraft noise even as aviation grows. It reflects the reality that despite impressive past achievements, communities and citizens remain concerned about aircraft noise, and we must continue to take steps to address these impacts.

To tackle this challenge will require a robust and multifaceted approach that develops and deploys new technologies, takes advantage of operational advances, and includes effective policies and investments. Frankly, the challenges going forward may prove more difficult as we cope not just with traffic growth, but the need to find solutions not just for noise, but simultaneously for air quality and climate effects. We don't have the luxury of considering just one aviation environmental impact in isolation.

In the near term, we want to accelerate the ability to employ operational procedures, such as continuous descent arrivals or CDA, to lessen aviation's environmental footprint. CDA is one of these win-win strategies that gets you less noise, less emissions, and less fuel burn, as well as saving time. We are pleased by this Committee's support in the aviation reauthorization bill, of provisions that would help us enhance deployment of operational flights like CDA, as well as a provision that would expand AIP eligibility to include environmental assessment of noise abatement flight procedures like this.

It is clear we are not going to be able to repeat our past success in reducing noise without advances in technology. Proposals in this Committee's aviation reauthorization bill, such as the consortium to develop lower energy emissions and noise technology, or CLEEN, and the pilot program for demonstrating promising technologies, would offer FAA, as well as other partners, the ability to accelerate the development of new noise and emissions technologies.

In closing, it is clear that the public remains concerned about aircraft noise impacts, and this concern represents a key constraint on the future growth of aviation. We have no single or simple revolu-

tionary solution at this point. What we do have is a clear vision of what the Next Generation system needs to achieve in environmental improvements and a commitment to advance those improvements in technology, operations, and policy. Success will require a partnership and shared responsibility, and the FAA is committed to working with all stakeholders to manage the National Aviation System in a sound environmental manner.

Mr. Chairman, that completes my prepared statement. I would be willing to take questions at the proper time. Thank you.

Mr. COSTELLO. The Chair thanks you for your testimony and now recognizes Dr. Dillingham.

Mr. DILLINGHAM. Thank you, Mr. Chairman, Mr. Petri, Mr. Duncan, Members of the Subcommittee. My testimony this morning addresses three questions: first, what are the key factors that affect the level of aviation noise exposure for communities? Second, what is the status of efforts to address the impacts of aviation noise? And, finally, what are the major challenges and next steps for reducing the effects of aviation noise?

Our research has shown that three key factors affect the level of aviation noise for communities. The first and primary factor is the operation of jet aircraft engines. It is also the case that airframes can be a significant source of noise, and with the current trend in engine noise reduction, the relative effect of airframe noise could increase.

The second factor is local government decisions that allow communities to expand near airports. FAA has issued guidance that discourages residential uses in areas that are exposed to significant levels of noise. However, some communities face strong demographic and economic pressures that can lead to incompatible development. The end result is that some of the gains in reducing community exposure to noise are being eroded by incompatible land development.

The third factor is aircraft flight paths, including changes in those flight paths which are intended to improve system safety and efficiency or that result from diversions. Flight path changes can expose some previously unaffected communities to aircraft noise.

With regard to our second question, numerous efforts are under way to address the impact of aviation noise. First, a more stringent noise standard is being implemented as new aircraft are being designed and manufactured. According to FAA, the current standard resulted in a 32 percent reduction in the number of people exposed to significant noise levels. The new standards, known as Stage 4, will be 10 decibels lower than the prior standard.

There are, however, some considerations that may affect the impact of the new standard on reducing noise level. For example, many of the aircraft in the current fleet already meet the new standard, and it could be at least a decade before the entire fleet is Stage 4 compliant. Furthermore, further increases in air traffic may offset the reductions in noise levels that result from these quieter aircraft.

A second type of effort is noise mitigation measures. These are typically carried out by airports and funded primarily through FAA's Part 150 noise compatibility program. Since its inception in 1982, nearly 300 airports have participated in the Part 150 pro-

gram, and these airports have invested over $8 billion in AIP and PFC funds for noise-related purposes.

Another type of effort is the noise research that is conducted and sponsored by FAA and NASA. This type of research has contributed to the development of technologies that have significantly reduced aviation noise, such as quieter engines and airframes. But some stakeholders are concerned that declines in Federal funding may have slowed the pace of government-initiated and sponsored research and, in turn, this may delay the next significant technological leap for reducing aviation noise.

The implementation of NextGen is another effort with significant possibilities for mitigating both noise and emissions. For example, systems such as ADSB will allow more precise control of aircrafts during approach and descent, thereby enabling the use of procedures such as CDA, which will reduce communities' exposure to both aviation noise and emissions.

Finally, some airports are making efforts beyond what is required to respond to community concerns. These airports are using such techniques as supplemental metrics to identify the effects of exposure to aviation noise, mitigation beyond the 65 DNL, and expanded community outreach and education programs.

Turning to our last question on the major challenges and next steps, Mr. Chairman, we think that, in the future, as in the past, technological advances through R&D will be the key to reducing aviation noise. However, given the government's overall fiscal condition and other national priorities, additional Federal funding for noise reduction may be difficult to obtain. It may require some tradeoffs and new initiatives. The environmental and related provisions in FAA's reauthorization bill, such as the CLEEN program and the environmental mitigation pilot program, are the kinds of initiatives that can directly address this issue.

For the airlines, equipping with NextGen technologies that will enable operations that could reduce community exposure to aviation noise will also be challenging. FAA estimates the cost of equipping the fleet to take full advantage of NextGen will be about $14 billion. Consideration might be given to ways to incentivize early equipage and training for pilots.

Of course, there is no silver bullet for aviation noise. Even with quieter aircraft and more efficient NextGen procedures, aviation noise is expected to persist around airports, even if the so-called silent aircraft comes into the fleet some time in the 2030 time frame. As a very important next step in addressing the challenge, local and Federal officials will need to improve their cooperation and efforts to deter incompatible land use and regulations.

Mr. Chairman and Members of the Subcommittee, in the final analysis, the national airspace is an essential part of the Nation's critical infrastructure, global economic competitiveness and national security. Ensuring that this national system can operate safely and efficiently will require compromise and cooperation among the various levels of government and the balancing of legitimate community concerns and environmental issues with the strategic needs of the Country. Thank you.

Mr. COSTELLO. Thank you, Dr. Dillingham.

You probably all heard the bells ring. We have two recorded votes on the Floor, but we will proceed to take Mr. Tragale's testimony before we recess to go over and vote, and then we will return immediately.

Mr. Tragale.

Mr. TRAGALE. Thank you. Chairman Costello, Congressman Petri, Congressman Duncan, other Members of the Subcommittee, good morning. My name is Ralph Tragale and I am the Manager of Government and Community Relations for the Port Authority of New York and New Jersey. I would like to thank you for organizing this hearing and giving us the opportunity to talk about how we have handled noise at our airports. While my comments are brief, they will demonstrate the significant results, I think, that our noise programs have achieved in the New York/New Jersey area.

The Port Authority is a bi-State pubic agency that was created by the two States, with the consent of Congress, and we operate many of the major transportation facilities in the New York/New Jersey area, including things like the George Washington Bridge, the Holland and Lincoln Tunnel, several bridges that connect Staten Island and New Jersey. We also own and formerly operated the World Trade Center site in Lower Manhattan.

More importantly, the agency operates four commercial airports—John F. Kennedy, Newark Liberty, LaGuardia, Teterboro Airport—and those airports are responsible for generating $62 billion in annual economic activity. Just last year we accommodated over 104 million annual air passengers, which is a huge impact to the economy. Those operations account for 375,000 jobs in the New York/New Jersey area.

In addition, on November 1st, the Port Authority will take over operation of Stewart International Airport. We are very excited about that and, at this time, I would like to personally thank Congressman Hall, even though he is not here, for his help in helping us acquire the airport, as well as Congressman Hinchey.

Regarding the issue at hand, the Port Authority first dealt with noise in 1959. The Port Authority—I don't know if you are aware—established the first aviation noise policy in the world. We have a departure noise limit at our airports, 112 PND (perceived noise decibel), and we feel that is important to mention because it was that rule, that predated all the noise standards in the world, that really led aircraft engine manufacturers to go into a serious research and development stage to build quiet engine technology. At that time, every aircraft in the world wanted to come to New York at some time. It was that important to them that they made the investment to build quiet engine technology, and I think the Port Authority led the way in that regard.

Over the next more than 40 years, the Port Authority developed several major noise mitigation programs. All of those programs working with local communities to develop zoning requirements, run-up restrictions, flight abatement procedures, voluntary curfews and other things, and it was those programs that led FAA to develop the Part 150 study. So the Part 150 study is a voluntary Federal program and it really has all the elements of the Port Authority existing noise programs, as I stated. The only thing that we don't do is the residential soundproofing. However, I must state

that we have a significant commitment to school soundproofing. To date ,we have 78 schools in our noise program, and we have committed over $400 million in funding to soundproof those schools.

To get back to the issue of noise and the people impacted, in the 1970s there was over 2 million people in the noise contour of our airports, and right now it is less than 100,000. So we believe, together with the efforts of the industry, the airlines, and certainly Congress, we have been able to make a tremendous effort to reduce noise, and that is a 95 percent decrease in the number of people impacted by noise.

However, obviously, we won't be satisfied until we have full noise compatibility between our airports and our neighbors. That is very important to us and that is why we worked hard with FAA on their Airspace Redesign and other procedures to try and address this need.

Obviously, the million dollar question is why don't we have a Part 150 study, so I will just address that. As I noted earlier, it is a voluntary Federal program; it is not a mandated program. And as I also stated, it is developed mostly after our existing noise abatement programs. So we have all the elements of it except for the residential piece. We felt that it was more important to soundproof schools and, as I said, we have invested $400 million in that. So we stand ready to work with Congressman Crowley, Congresswoman McCarthy, and other Members of our delegation, as well as this Subcommittee, to address any future requirements on us.

At this time, I would just like to say thank you very much. I would like to thank the Committee and the Committee staff for their help in this hearing. Thank you very much.

Mr. COSTELLO. The Chair thanks you.

The Chair will announce that the Subcommittee will stand in recess for about 20 minutes, and we will come immediately back after the second vote and hear the testimony of the rest of the panel.

[Recess.]

Mr. COSTELLO. The Subcommittee will come to order and the Chair now recognizes Ms. McElroy for her testimony.

Ms. MCELROY. Thank you, Chairman Costello, Members of the Subcommittee. We appreciate the opportunity to participate in this important hearing. My name is Debby McElroy, and I serve as Executive Vice President, Policy and External Affairs for Airports Council International-North America. Our member airports enplane more than 95 percent of the domestic and virtually all of the international airline passenger and cargo traffic in North America.

Continued robust growth for the aviation industry is predicted by both government and industry analysts, increasing attention on the environmental impacts of aircraft and airport operations. Airport directors well understand this concern and, for decades, have taken proactive steps to better understand and mitigate those impacts, especially aviation noise in their local communities.

Additionally, since much of the major source of aviation-related noise, aircraft, is outside an individual airport's control, ACI and its members are working collaboratively to influence international, Federal, and State and local organizations, as well as working with manufacturers and airlines to continue to address this important issue.

While, over the last three decades, aircraft engines have become quieter, reducing the overall exposure of aircraft noise, there are still many older noisy aircraft in the U.S. fleet, and aircraft noise continues to be an issue. Many airport directors will tell you that, despite their best efforts, including working with local communities to manage the push for continued residential development near airports, airport noise remains at the forefront of their agenda. That is why we have been disappointed that the International Civil Aviation Organization negotiations have not yielded more stringent noise standards for newly certificated aircraft. As Dr. Dillingham stated earlier, it could be more than a decade before an appreciable change is realized.

Airport operators continue to focus on reducing the aviation noise impacting local communities, implementing FAA directed noise abatement runway use and flight tracks, programs for ground run-ups, noise management programs, airport sponsored pilot awareness or fly quiet programs, sound insulation programs, and local land use actions.

Now, while much has been done, airports are continuing to enhance the mitigation of noise primarily through the Airport Noise Compatibility Program, often referred to as Part 150, which promotes comprehensive airport noise planning and mitigation. Airport operators decide to undertake a Part 150 study when doing so promises to further reduce aircraft noise exposure to jurisdictions within the airport's environment. As part of this voluntary program, FAA has approved both AIP grants and PFC funding for noise mitigation to assist local communities. Such assistance, as discussed earlier, includes soundproofing residences, schools, and hospitals; conducting land use and zoning studies; as well as designing noise abatement procedures.

It is important to note that not all airports use the Part 150 process. Several, like the Port Authority, already have long-established community planning processes that parallel the 150 requirements. Other airports already enjoy a high degree of community support for their noise mitigation programs and have determined that a Part 150 study is not required.

Airports across the Country also work with local citizens, governments, and elected officials to develop procedures and programs to reduce noise. You will shortly hear from Mayor Mulder, who will detail the process in place at the O'Hare Noise Compatibility Commission. San Francisco's Community Roundtable is another example. The airport's Fly Quiet Program is a locally-based initiative that promotes a participatory approach in complying with noise abatement procedures by grading an airline's performance. As part of the program, San Francisco staff generates a Fly Quiet Report which provides airline scores on the noise mitigation procedures. The overall scores are then made available to the public.

There is also San Jose's Neighborhood-Focused Acoustical Treatment Program, which identifies residences and other sensitive living areas. At these locations, sound insulation improvements are installed at no cost to the proper owner.

ACI-NA applauds the Subcommittee and the full T&I Committee for its hard work on H.R. 2881. We especially commend you for your efforts to mitigate noise by phasing out aircraft weighing less

than 75,000 pounds that do not meet Stage 3 requirements and the establishment of an environmental mitigation pilot program. Continued research is also critical, as you recognize, and we appreciate your efforts with the CLEEN Engine and Airframe Technology program, as well as increasing ACRP funding, which provides research funds to study programs to mitigate the impact of noise.

We also appreciate the addition of AIP eligibility for completion of the environmental review and assessment activities necessary to implement flight procedures included in an airport's Part 150 program. We would ask that you consider expanding this to cover flight procedures not yet included in the airport's Part 150 program. This provision would allow AIP funding so that an airport, which believes implementation of the procedures would significantly benefit the community, wouldn't have to wait to amend their program. That way, we could work with the airlines and the FAA to more expeditiously implement those procedures.

We also would ask that the Part 161 program be re-examined to provide additional options for airports to solve noise problems with reasonable non-discriminatory operation restrictions.

In closing, ACI and its member airports thank you for the opportunity to share our views, and we look forward to working with you as you address this important issue.

Mr. COSTELLO. We thank you for your testimony.

The Chair now recognizes Mayor Mulder.

Ms. MULDER. Chairman Costello and Ranking Member Petri and Members of the Subcommittee, I want to say good morning, or afternoon at this point. It is certainly a privilege to b with you and share our story with you.

I am here today representing the O'Hare Noise Compatibility Commission, which is a consortium of communities and school districts in the O'Hare area that works on meaningful methods of reducing the impact of aircraft noise around O'Hare International Airport.

I also am the Mayor of the Village of Arlington Heights, a community of nearly 80,000 residents located directly northwest of O'Hare International Airport, and I personally live under the most frequently used longest runway.

As a community in close proximity to O'Hare, Arlington Heights has been concerned about the impact, and its negative impact, particularly, of aircraft noise for many years. In 1991, citizens began, in earnest, making criticisms and taking an active role. As a result, we were the first suburb to create a noise committee and initiated the first sound measuring study. In that study, we learned a great deal and we researched other airports.

As a result of that, in 1996, Mayor Daley extended an invitation to the suburbs around O'Hare, after extensive fighting between the neighbors of O'Hare and the airport. It was at that time that the Village of Arlington Heights, along with others, chose to join this commission.

By way of background, the Compatibility Commission, which I will refer to as ONCC, was officially formed, as I said, in 1996, and we have to commend Mayor Daley and his vision for trying to create a mechanism for constructive ways for the suburbs and school districts to work more effectively with the Department of Aviation,

as well as FAA and the air traffic controllers. We also meet with the airline pilots and other stakeholders in the aviation industry in looking for ways to curb the negative impact.

As a result of Mayor Richard M. Daley's vision and ongoing commitment—which I must stress is extremely important, I believe, in a major city like Chicago—that all the members work together and all of our meetings are open to the public, and we are very proud of the accomplishments, collaboration, not confrontation, that we have in our existence of more than a decade.

We do our work and we choose to do it in a board room, not a courtroom. The members of ONCC are locally elected officials and appointed representatives of the suburban communities. These members are not paid for the service to this Commission, but they do live and work in the suburbs and are affected by aircraft noise, and want to answer to their constituents.

The 42 municipal and school district members of the Commission strive to balance the regional economic engine that O'Hare is and the quality of life issues that are vital to the residents living near the airport. ONCC also understands that reducing aircraft noise cannot be accomplished with the simple flip of a switch; it is an evolutionary process that results in subtle day-to-day progress and, over time, produces significant measurable results.

There are three standing committees. One is the technical committee where we research processes that you have heard from Mr. Burleson before, CDA and other means of actually changing the flight patterns that can reduce noise. The other two are for schools and residential sound insulation. That is looking at points of impact, as opposed to the source, which the technical committee views.

By the end of 2006 program year, the O'Hare Residential Sound Insulation Program will have insulated more than 6,100 homes at the average cost of $30,000 per home, for a total of $180 million. The School Sound Insulation Program, the world's largest, to date has $285 million having been spent on effectively soundproofing 114 schools.

The Residential and School Sound Insulation Programs are currently funded through FAA airport improvement program grants at the total of 80 percent, with the City of Chicago using PFCs for the additional 20 percent. FAA is now the primary funded of O'Hare Residential Sound Insulation, as the FAA required the mitigation as part of the record of decision in the O'Hare Modernization Program, referred to as the OMP, for the first time, 5900 single-family homes that would be sound insulated from 1996 to 2004, the City of Chicago, in that first group, funded that program entirely using PFCs.

The ONCC is looking at this new program with part of the OMP as actually having the opportunity to insulate homes before those residents have the impact of the new opened runways.

O'Hare Compatibility Commission is also looking at how to mitigate noise by using land planning, and thanks to the very innovative program put together by the FAA, there are grants available that communities can use as incentive to look at rezoning and having more compatible use where air paths will be utilized.

As the City of Chicago continues its aggressive noise mitigation efforts at O'Hare and Midway, the ONCC supports the City of Chicago's efforts to obtain substantial increase in the AIP Noise Set Aside, as well as the FAA discretionary grants for Midway and O'Hare sound insulation projects. We commend the Aviation Committee and the House of Representatives for significant AIP dollars increase in the new reauthorization bill.

ONCC also agrees with the position of many airports across the Country, including Chicago airport system, to give the airports the ability to increase the passenger facility charge rate ceiling and provide the airports with the flexibility of setting that amount.

What all the members of ONCC, including the City of Chicago, who sits with us and has one vote, as all of us do, share is the concern for the impact of noise on residents. All of the members, regardless of their individual positions on the O'Hare Modernization Program, are dedicated to finding the most effective ways to reduce aircraft noise.

The ONCC is now working to renew the enthusiasm in this mandate, given the fact that we can make a difference. The ONCC strongly commends FAA administration for thoroughly defining environmental goals in the Next Generation Air Transportation System. Through NextGen, we realize that the FAA will be able to substantially address the impacts of air traffic growth by increasing the national air capacity system while addressing the quality of life impacts at the same time.

FAA is able to implement the new procedure by merging aircraft navigation capabilities, which was alluded to prior to my comments, so I won't repeat them. But the initiatives like NextGen, ONCC an continue advocating for additional funding for technological approaches and the research for advanced flight track procedures like RNAV.

NextGen also addresses another cutting edge approach, and that is the CDA. ONCC highly commends, again, the FAA for working towards the implementation of these new technologies. The Aviation and Environment Report, which I believe all of you received, is an extensive work that I had the honor to participate in. This ha certainly come from many, many highly educated and technical people, and I think FAA has shown new aggressiveness and innovativeness.

ONCC asks that Congress continue to support FAA and the groups that promote open dialogue, accessibility to information and forums such as we have done in O'Hare. I have with me an article from Minneapolis where lawsuits are still hindering the growth of aviation. It is imperative that we work and sit at the table together.

I want to thank you today. Sound insulation has been the most effective way to reach people who have negative impact. They do come to the table and listen. Thank you.

Mr. COSTELLO. Mayor, we thank you for your testimony.

The Chair now recognizes Dr. Epstein.

Mr. EPSTEIN. Mr. Costello and Members of the Subcommittee, thank you for the opportunity to address aircraft noise, one of the most significant challenges facing U.S. commercial aviation. I am Alan Epstein from Pratt and Whitney, which has been producing

dependable engines for over 80 years. I am here to speak about Pratt and Whitney's innovative technology, which will dramatically reduce community noise and emissions.

Fifty years ago, the first commercial engines were designed with little regard to noise. Since their sound levels were like being next to speakers at a rock concert, they quickly proved unacceptable. In the early 1960s we introduced the first turbo fans, which reduced noise. Today, three engine generations later, we have reduced the number of people impacted by aircraft noise by 95 percent. However, our national goal should be to eliminate aircraft noise as a community concern.

Aircraft design has always involved compromise between low noise and low cost. Recently, Pratt and Whitney has developed Geared Turbofan engine technology to rebalance this compromise. We can now achieve both low cost and very low noise. We are very excited about our new Geared Turbofan engine for 70 to 200 passenger aircraft. This engine reduces fuel burn and CO2 by more than 12 percent. It also reduces noise by almost 20 decibels, below Stage 4. This is like the difference between standing near a running garbage disposal and listening to the sound of my voice.

Two weeks ago, we announced that the Geared Turbofan will power the new Mitsubishi Regional Jet, which will enter service in about six years. This technology can be applied from the smallest regional jets to the largest wide bodies. To take full advantage of the Geared Turbofan very low noise, we must also modernize the Nation's air traffic control system.

The current constraints of the overburdened system do not allow even exceptionally quiet aircraft to deviate from existing traffic patterns. For example, an aircraft flying to the east coast from LAX must fly west to gain altitude over the ocean to reduce noise before it crosses over the city. An advanced Geared Turbofan powered airplane would be quiet enough to take off directly to the east. This would save an average of 12 minutes of flight time, which reduces fuel, cost, and emissions. But unless we modernize air traffic control, airlines will not be permitted such freedom.

Recently, much has been written about climate change and the role that aviation may play. We at Pratt and Whitney believe that environmental goals such as reduced CO2 can, and must, be achieved without compromising the low noise the communities deserve. A Geared Turbofan simultaneously offers the lowest fuel burn, noise, and cost. An advanced engine of this type will deliver the low CO2 of giant supersonic propellers without their inherent noise penalties. In fact, this so-called open rotor would be a large step backwards in noise compared to modern airplanes.

Aerospace is this Nation's largest manufacturing export. We have done so well because of superior products. But advanced technology is expensive. Our Geared Turbofan incorporates 20 years of research, more than $1 billion of Pratt and Whitney investment. We built on foundational technologies developed in partnership with NASA. The U.S. is the world leader in aviation because of historical research partnership of government, university, and industry.

Recently, I was at an aviation conference where EU investment plans were presented. Frankly, I am worried. Just as other nations have increased their investment, U.S. funding has dropped sharply.

Therefore, we strongly support such initiatives as the proposed FAA CLEEN program. However, even with CLEEN, our Nation's investment in basic aviation technology is only a tiny fraction of what it was 20 years ago. We must do more at FAA and NASA.

In summary, it is important to take an integrated approach to reducing aviation's impact on the environment. Pratt and Whitney's Geared Turbofan and the modern air traffic control system will make a real difference.

Thank you for the opportunity to testify. I would be happy to answer any questions.

Mr. COSTELLO. Thank you, Dr. Epstein.

The Chair now recognizes Mr. McGrann.

Mr. MCGRANN. Chairman Costello, Ranking Member Petri, Members of the Committee, my name is Dennis McGrann, and I am the Executive Director of the National Organization to Insure a Sound-Controlled Environment. NOISE is an affiliate of the National League of Cities and, for over 37 years, has served as America's preeminent community voice on aviation noise issues. We are compromised of locally elected officials, including city council members, mayors, county supervisors and commissioners from communities across the United States adjacent to major commercial airports.

Our members regularly participate in cooperative communications with airports and the aviation industry stakeholders, and we serve on a national level as Chair of the FAA's PARTNER advisory board, as well as a member of the FAA's Airport Compatibility Planning Committee and the Environmental Working Group.

Mr. Chairman, on behalf of thousands of Americans in communities across the United States who live under the flyways of our major commercial aviation corridors and who deal with the environmental, health, and safety consequences associated with aviation noise, I would like to thank you for holding this hearing today and addressing these critical issues.

I would also be remiss if I did not take time to thank Full Committee Chairman Oberstar for his years of dedicated service and attention to the challenges faced by communities and airport neighbors across the Country, and for addressing the issues of aviation noise. In 2003, Chairman Oberstar was awarded the NOISE Lifetime Achievement Award and Environmental Champion for his outstanding efforts in engaging local communities in aviation noise and related issues.

Our members are communities that depend on airport neighbors for jobs, commerce, and our economic vitality. We recognize that the reality of aviation today requires that the system needs to increase capacity and that our airport neighbors need to grow to accommodate this expansion. We are, however, dedicated to addressing the issues faced by communities, who chronically with the adverse environmental and health impacts of excessive aviation noise, and continuously seek to engage all community and aviation stakeholders in a constructive dialogue to address these issues.

I would like to call attention today to three key aspects that we believe are essential in pursuing meaningful route to effective management of noise issues: communication, research and development, and ongoing noise mitigation.

First, the benefits of effective communication between communities and airports are clear. When airports and communities work together to meet the challenges of aviation noise, success follows. NOISE supports those efforts and advocates for communication and cooperation, as opposed to litigation and confrontation. We work to foster this dialogue and strive to bring together community leaders, airport operators, and government officials to establish a framework for empowerment of localities surrounding airports.

As an example, for 25 years, the San Francisco International Airport Community Roundtable has fostered a successful airport/community interaction and involvement. Eighteen cities, the operator of San Francisco International Airport, the city and county of San Francisco, and the County of San Mateo comprise the roundtable, a voluntary public forum established in 1981 for discussion and implementation of noise mitigation strategies at San Francisco International Airport.

Another development that will enhance communication is the PARTNER-sponsored Noisequest web site, designed to educate communities and airports on effective strategies and available tools which will help create a constructive dialogue when addressing noise issues and community concerns.

We also urge continuation of a Vision 100 initiative that enables community empowerment, that is, the extension of authorization for Section 160, which authorizes the FAA to fund grants to States and local government units with the goal of reducing incompatible land use around large-and medium-sized airports. This program is a key step towards avoiding litigation and a useful tool for communities to use independent of the airport operator.

A second important element to addressing these issues is a key to future funding of research and development efforts. There are numerous programs and technologies today being explored that hold great potential for the future with quieter skies. One example is PARTNER research and testing in the development of continuous descent approach (CDA), which allows for quieter landing procedures. We cannot stress enough the value of investment in CDA and other technologies, which may not only aid in the reduction of noise pollution, but decrease adverse environmental impacts of aviation on our land, air, and water.

It is essential, while working to achieve better technology and community involvement, we must not abandon effective noise mitigation efforts. While we work towards this communication and technologies, we still must be aware and concerned with communities that have seen their neighborhood airports expand around them and who now deal daily with the resultant environmental consequences. Homes, schools, hospitals and churches in communities adjacent to major airports are often subject to the effects of excessive aviation noise. We need to promote noise mitigation, compatible land use planning, insulation programs, and other effective strategies in these communities to reduce noise and achieve NextGen's stated goal of a real reduction in the environmental impact of the national aviation system.

Again, Mr. Chairman, I commend you and your colleagues for holding this hearing today, and I pledge that NOISE will continue

to provide a vehicle for interaction between communities, airports, and national aviation stakeholders. Thank you.

Mr. COSTELLO. Thank you, Mr. McGrann.

The Chair will go to and recognize the gentleman from Texas, Mr. Lampson, under the five minute rule.

Mr. LAMPSON. Thank you, Mr. Chairman.

I remember, several years ago, at a meeting in Europe, when the United States businesses were told they couldn't fly their airplanes in because we were using a hush kit, and they wanted us to have like what they were doing, engines that were designed to be quieter, and we had a significant fight over that but ultimately won, thank goodness. It seems to me that we ought to be doing whatever we can possibly do to drive the technology to get our airplanes flying more quietly, but what I want to know is: Who will get the money? Who will be doing that research, what agencies or wherever it will go? What kind of money do we need to be putting into it? And what can we reasonably expect as a possible solution? What is going to help drive quieter engines, is it bigger mufflers or what is it? Can you talk a little bit about that for me, please, anyone?

Mr. DILLINGHAM. I will take a shot at it first, Mr. Lampson. I think that, as in the past, research and development is probably going to be the path to the technological leap that you are talking about. I think that, as in the past, it will be NASA and FAA, FAA-sponsored research with universities and the private sector.

One of the problems is that, over the last decade,—I think one of the panelists mentioned it this morning—is that the funding for aeronautical research has been declining, and a point that we mentioned in our statement with regard to NASA is that NASA has adjusted its research portfolio to focus on earlier stages of research, and it leaves what we are referring to as a research gap for things that are going to be available within the NextGen time frame. NASA would disagree with that, but based on the numbers that we have seen, we think that that is really a potential problem or is a problem now.

But on the positive side, as many of the panelists have mentioned, some of the provisions in the FAA reauthorization will speak to closing that research gap.

Mr. LAMPSON. When and if—and hopefully there will be—money goes to NASA—NASA is already strapped significantly, and I was hoping that was where you would go with your answer, seeing how significant a supporter and proponent of what we have been getting out of our National Aeronautics and Space Administration—do we give them blanket money or direct it specifically? And, if so, how specific? Where do we put it? And what kind of money are we talking about? NASA is $2.8 billion down in its own budget now because—and I wasn't paying attention to the time, Mr. Chairman, I am sorry—because of the loss of the last shuttle and because of the storm in Florida doing damage. Do you have any advice there? And then I will quit. My apologies for going over.

Mr. BURLESON. Thank you, sir, for the question. I think the advice I would offer, Congressman, is the proposal that both the Administration put forward, and which the House has taken up in its legislation. I think this is really the way forward, which is to find

a balanced approach which puts a correct emphasis on immediate mitigation through insulation; work on operational procedures to enhance the ability to reduce aviation's environmental footprint through those measures; and then to find a way to balance what is NASA's proper role. NASA has done exceptional work for this Country in foundational research, as my colleague from Pratt and Whitney described how much their engine has been based on longer term research of NASA; but then also filling this gap, which is, I think, the CLEEN proposal that we very strongly support. IT offers the ability to try to work more directly in a consortium with industry to accelerate the introduction of technology and noise and emissions that are at a certain stage of maturity, but need a way to get over this gap to commercialization.

So I think that is really the way forward to having this balanced approach in several different ways.

Mr. LAMPSON. Thank you very much. Anything that any of you would like to add to that for us, we would love to hear from you, regardless of what Committee it will be going to. Thank you very much.

Thanks, Mr. Chairman.

Mr. COSTELLO. The Chair thanks the gentleman from Texas and recognizes the Ranking Member, Mr. Petri.

Mr. PETRI. Thank you very much, Mr. Chairman. We have only a few minutes left because of votes on the Floor, and I reserve my time at this point.

Mr. COSTELLO. Very good. The Ranking Member reserves his time and the Chair now recognizes the gentleman from New York, Mr. Hall.

Mr. HALL. Thank you, Mr. Chairman. I will be quick.

I would like to thank all of you for coming here today and thank Mr. Crowley and Ms. McCarthy, my colleagues in absentia, for further enlightening us on their situations living close to a major airport.

Mr. Tragale, I have a number of constituents who are, on the one hand, looking forward to working with you and with the Port Authority on the expansion and growth of Stewart Airport, which we know is going to be an important economic contributor to our district and to the Hudson Valley, but at the same time are concerned about the noise level increasing as the number of flights increase. Can you tell me what specific action the Port Authority expects to take to diminish the effect of increased noise levels around Stewart?

Mr. TRAGALE. Thank you, Congressman, for the question. If I may, you weren't here earlier, but I publicly thanked you for your efforts in helping us acquire Stewart, so thank you very much again.

In terms of how we are going to work with the community at Stewart and in the Orange County community that you represent, I think one of the things that you have heard from people there is we already met with more people, even not operating an airport, than the existing airport operator ever has. So I think that is a testament to how we are going to go forward after November 1st.

But also, last week we issued a letter, and your office was invited as well. We are establishing a citizens advisory panel at Stewart

Airport to ensure that all entities in the community have a say in how we grow the airport together in a smart, efficient, and with a good quality of life as a key component of that. So we will be making all of our decisions in concert with you and with the other members of the community.

Mr. HALL. I very much appreciate that, and thank you for that approach.

Mr. Burleson, you mentioned in your testimony that Airspace Redesign is not without its impacts on some individuals and communities. Some of the communities in my district are in that situation, and I was curious if you or if the FAA intends to take any further action to mitigate the effect of their increased noise on these people in, specifically, I would say, the Pound Ridge area of Westchester and the Warwick area of Orange County, who feel that even before the redesign has been implemented, they perceive increased noise and see it on paper increasing further. Is there any way that you plan or do you plan to work with them to try to mitigate that?

Mr. BURLESON. Thank you, Congressman, for the question. I think if you look at the record of how the work has been undertaken in the Airspace Redesign, we clearly recognize that it is a difficult issue. As you try to modernize airspace, clearly, while the overall numbers show that there will be fewer people impacted by moderate noise, that doesn't mean everyone equally benefits as you make these changes. I think there have been a number of meetings and the FAA has tried to address this in a reasonable fashion.

I think in terms of the specific areas that you are mentioning, I would defer to my air traffic colleagues. I will take your question to them and will get back to you.

Mr. HALL. Thank you.

[Information follows:]

Insert for the record at page 62, line 1360, in response to Representative Hall's question:

There has been an increase in overall aviation activity in the Pound Ridge and Warwick areas that is not related to the Airspace Redesign Project. Rather, it is the result of increased air traffic today at all airports in the New York/New Jersey/Philadelphia metropolitan areas.

As a result of the Airspace Redesign Project, some areas in the Pound Ridge and Warwick areas are projected to have noise increases, while others will have noise decreases. Overall, the decreases outweigh the increases, and noise levels for both areas will remain below a 40 decibel day-night average sound level (DNL).

As points of reference, Federal guidelines consider a DNL 65 decibel level to be a significant level of noise; 55 to 65 decibels is moderate noise exposure; and a 45 decibel level is the goal for interior sound insulation of residences exposed to significant noise. Typical ambient noise levels in quiet suburban residential areas are in the 48 to 52 DNL range.

Hence, outdoor aircraft noise exposure in the Pound Ridge and Warwick areas—in the 20 and 30 decibel ranges—is classified as low level noise. Mitigation options such as land acquisition and relocation, sound insulation, or community land use changes are not appropriate for low level noise. Aircraft routing options were thoroughly reviewed during the airspace redesign process, and the FAA made every effort to mitigate noise wherever feasible in accordance with Federal standards. No further mitigation actions are proposed with respect to the Airspace Redesign Project.

However, I assure you that the FAA has an ambitious program laid out to explore new technologies and operational procedures to make aviation quieter in the future. We commend the House for provisions in H.R. 2881 that support additional programs necessary to achieve future reductions of aircraft noise and emissions, as well as to address aviation energy consumption, climate effects, and alternative fuels.

* * *

Mr. HALL. Mr. Chairman, I will submit other questions in writing and yield back.

Mr. COSTELLO. The Chair thanks the gentleman and now recognizes Ms. Norton.

Before Ms. Norton is recognized, let me say that we have votes on the Floor again, and what the Chair intends to do is have Ms. Norton ask questions. I have two very quick questions, and then Mr. Petri and I have agreed that we will submit questions to you in writing, and we will adjourn the hearing prior to leaving to vote.

Ms. NORTON. Mr. Chairman, since you have to go to the Floor and, unfortunately, I do not, because this is a vote on a rule and not on the Committee as a whole, if you would like to go first, since I can remain afterwards and ask my questions.

Mr. COSTELLO. Very good.

Mr. Tragale, two quick questions. One is the Port Authority does not participate in the 150 program. Can you tell us why?

Mr. TRAGALE. Well, as I stated in my testimony, we feel that we have all the important components of the 150. The only component we don't have is residential soundproofing. But we feel that our significant commitment to the school soundproofing program, $400 million, certainly shows that we are committed to reducing the impact of noise.

Mr. COSTELLO. And the second part of the question is why has the Port Authority chosen not to soundproof the homes within the area.

Mr. TRAGALE. Well, I think the easy answer to that is since the 1970s, when there were 2 million people in the contour, to today, what is less than 100,000, and over a 95 percent reduction in noise, people impacted by noise, we feel that we have more than achieved goals that any airport operator can point to, and spending money on homes that are no longer being impacted would seem to be an imprudent use of Federal dollars.

Mr. COSTELLO. Just a comment. Mayor, let me compliment you and Mayor Daley for the program that was implemented with the O'Hare modernization. Obviously, it has worked very well, from your testimony and what we have heard from others, and it, I think, is a model that can be used for other airports around the Nation.

The Chair is now going to recognize Ms. Norton. As she correctly pointed out, she does not have to go to the Floor to vote, but at some point, some day, I hope she is in fact required to go to the Floor and vote with us. But I will recognize Ms. Norton and, before I do, thank all of our witnesses. After her questioning, the hearing will be adjourned. We thank you, and the Ranking Member, Mr. Petri and I will submit written questions to you. Thank you.

The Chair now recognizes Ms. Norton.

Ms. NORTON. I thank you, Mr. Chairman. Any day now, we are going to get the vote bill through the Senate, it is going to come up again, and I am pleased to be able to vote in this Committee and to be a Member of this Committee.

I suppose Mr. Burleson is the appropriate party to ask my question. In a real sense, my question, my information comes out of the region where I live and the district I represent. It is certainly germane to, and increasingly so, to areas around the Country. I would

like Mr. Burleson, there is a brief mention on page 2 of your testimony suggesting a kind of tradeoff between noise and aviation emissions that comes with change in aircraft design and operations. I wish you would elaborate on that. I mean, noise is an environmental menace; the emissions are an environmental menace. What is the correlation you speak of? What is the tradeoff implied in your reference?

Mr. BURLESON. Thank you for the question, because I think this is really a core issue that we are going to have to grapple with going forward. Certainly, my colleague from Pratt and Whitney can elaborate some on the nature of engines, but when you design an engine and are trying to maximize certain characteristics, the nature of combustion is such that, if you want to reduce noise, especially in high bypass engines, you tend to burn at a higher temperature the fuel, which produces more nitrogen oxide.

So, oftentimes, in the design of an engine, you may have a tradeoff between am I maximizing noise or am I trying to reduce nitrogen oxide. And then you would have a different impact in terms of am I reducing noise in a community or am I more concerned about how nitrogen oxide contributes to the local air quality impacts.

Ms. NORTON. I would really like to ask you about that tradeoff. You speak, I guess this is at page 4, about the reduction in what you call older aircraft. Are you saying that the newer aircraft emit more harmful carbons than the aircraft they have replaced?

Mr. BURLESON. No, Congresswoman. What I am trying to convey is, as you design engines, there are actually three design elements: one with noise, one with local air quality impacts, and then you also have fuel burn, which contributes to greenhouse gas emissions. So the good news is actually that noise and fuel burn tend to go on the same path, at least in the paths of engine design. Nitrogen oxide has been harder to reduce. So as aircraft have been produced and as stringent standards have been raised, this is just an issue that, both in the design of the aircraft, as well as the operation of the system, we have to take into account. For example, when you put in noise abatement procedures, you potentially have a more circuitous route to an airport, potentially burning more fuel, and that might, while it reduces noise, might actually produce more local emissions.

So what we have tried to do or, actually, the path we are going down is, traditionally, people have looked at these issues in stovepipes; they have only looked at noise, they have only looked at local air quality or they have only looked at, now, greenhouse gas emissions. And what we have said is, and actually where we are spending money in the FAA, is building a set of models that helps us understand both that the design of the aircraft, how are these trade-offs made, as you are operating the aircraft in the system how are those trade-offs made. Most importantly, as we are thinking about policies and standards and market-based approaches or noise abatement and approaches like this, how do we design a set of approaches and policies that ensure that knowledge is made known to citizens and, as we are making national policy, how we deal with these different impacts.

So, again, I think we are at the point of building those models and hopefully we are going to be able to provide a better under-

standing of what we need to do in each of these areas and, therefore, reach the targets more effectively and more cost-effectively.

Ms. NORTON. Well, I am not sure we were trying to do all three at the same time before. I mean, the interest in emissions may not have been as important as, for example, the complaints of regions about the kind of noise. And it is hard for me to believe, given the extraordinary change in engines and aircraft and aircraft noise, that if one was in fact focused, given the state of scientific knowledge today, the kind of work you have already done, that one could not in fact tackle all at the same time, because the notion of being left between a rock and a hard place is very disconcerting.

Mr. EPSTEIN. If I can respond to that, Congresswoman.

Ms. NORTON. Yes, please.

Mr. EPSTEIN. Conventional thinking has led us to a mature state of airplanes and engines, and the tradeoff that Mr. Burleson talked about is a very real one, and some forward-thinking people in my company, almost two decades ago, said how do we get out of this. We always have to deliver products that give the most value to our customer, which is money, so they want the lowest cost engines and there has always been a tradeoff between cost and noise, and noise was the poor cousin.

What we realized was that by innovative architecture, in this case putting the gear in, we could simultaneously give our customers the lowest cost, which is what they want, and the communities the lowest noise. As Mr. Burleson said, that is also the lowest fuel burn and CO2. So this is a discontinuous change in how we make airplane engines and I think it will have a big effect.

Ms. NORTON. So is your testimony that this innovation you are talking about, does in fact handle all three of these issues?

Mr. EPSTEIN. It improves all three at the same time, yes. We couldn't sell our engines if they didn't provide real value to our customers, and they are more than happy to get the additional benefits of low emissions and low noise.

Ms. NORTON. Well, of course, the industry is under such pressure about gas prices. It is hard to believe that that hasn't been first and foremost. Then, of course, in certain regions like this we have had change in aircraft which help to deal with the noise issue, which is a major problem in Virginia, major problem in the District. Then there have been ordinary changes involving, perhaps, use of more fuel, such as the change in vector, the change in direction of the aircraft. After 9/11 there was an immediate concern in the neighborhoods because the direction was changed when, for security reasons, there was a great concern about where planes fly. That has been since changed, and I think the planes can now fly in ways that mitigate the noise, because the complaints went away, and I think after people got used to, after we got used to where the risk was, we began to deal with it.

But I am very concerned that the industry is really put in a very, very difficult position with the genuine need to deal with emissions of various kinds, with the cost of gasoline and unwillingness of the American people, frankly, to pay for more gas, to begin to conserve. Therefore, these prices are going to stay up. I am concerned about choices in research that, if choices have to be made, it is hard for me to believe that the choices are not going to be made consistent

with where the most pressure is, and the pressure of fuel costs, particularly for this industry, is pretty overwhelming.

And then, of course, we have great concern throughout the world about emissions, and we are trying to deal with that at the same time. Local communities probably are most vocal about noise, and here the industry has to deal with all three at the same time, so does the FAA. I suffer from believing, frankly, that particularly given the advances that have already been made through technology and science, I suffer from believing that we can in fact deal with all of this at the same time and that the need and the necessity to do so is going to drive it. And the real question for me is does Congress need to do anything to drive the unusual challenge of dealing with several different priorities at the same time.

Yes.

Ms. MULDER. Congresswoman, if I can just, from a community perspective, again, I know in my testimony I commended FAA because I believe that in the recent couple of years they have really become innovative with creating a center of excellence, and there are several layers of that. To give an example, we were very excited when United announced to us that they were going to be phasing out the 727s. I said, oh, you have heard that we don't like all that noise because those hush kits don't really work. And he looked at me and said, well, mayor, I wish I could say that, but it really is because we had to put three pilots in that plane, and in the replacement we only need two.

So the airlines are pushed to look at cost. The other incentive is when our engine manufacturers are producing these more efficient engines, they use and burn less fuel. We have been talking about flight patterns that actually reduce the fuel burn as well. Money is in every one of these levels, and I have always told everyone in the industry you can't take away the hope of our residents that we are working on this. There is another thing that is going to help that is out there. And I think the center of excellences are bringing the different components of the aviation industry together, and if everyone does a little bit, the end product—and there are, I think, three diagrams at the end of my testimony that show the significant decline in our complaint calls to the airport increase in the number of insulations of homes and schools, and those are things that are telling our constituents that people care and they are working on it, and industry is working with the Government.

So I think supporting FAA, supporting NASA, continue the research, we need to keep doing this, because when you look at other nations, there is significant subsidy for the airline, Airbus, for example, compared to Boeing, how much money they get from their governments. Airports get money from governments much more extensively than here in this Country. And it is such an important component of our transportation, it is essential, from a residential standpoint, to know that my Federal Government, Congress, is supporting FAA's creative and innovative new direction.

Mr. DILLINGHAM. Congresswoman Norton, if I could?

Ms. NORTON. Yes.

Mr. DILLINGHAM. You asked a question about what could Congress do, especially in terms of this sort of three-pronged effort. I think the Congress is already doing a lot through the AIP, the in-

crease in the AIP fund; through some of the provisions that are currently in the reauthorization that is being considered. And I think, just to underscore what was just said, what has given us the most bang for our buck over time has been research and development, and there is, in fact, research and development going on in all three of those areas. What is unfortunate, though, is that the research and development dollars have been on a steady decline over the last decade or so, and to the extent that other nations, as mentioned earlier, are putting more into research and development, that is something that should be considered, is to keep the research and development monies flowing.

But I think that the other nations of the world are approaching this noise and emissions issue the same way we are, in terms of trying to go at it three ways. So I think it is not going to be overnight. Noise is always going to be with us. Emissions are always going to be with us. But there is progress being made and there is a plan that goes out two decades to address these issues.

Ms. NORTON. Well, I appreciate your testimony. I must say the complexity of the challenges faced lead me to see the great hope, frankly, in R&D. I don't think you can simply, by regulation, say to the industry we want more of this, so do it. Not in this climate, not given this industry and the pressure it has been under and not given fuel costs. Now you have a whole new awakening of the American people to the importance of controlling emissions, to greening, to our responsibility.

I would hope that we would use this new awakening to make people understand the complexity of it, that you have got to do several things at the same time or else, forgive me, you won't have to worry about noise, the glacier shall have melted and nobody will much be around to see or even hear the noise.

The Chair indicated that he asked all of his questions. I want to thank you on his behalf and on behalf of the Committee for very important testimony, which I assure you will be used by this Subcommittee and taken to the Full Committee to see what we can do to speed an understanding of what is needed to meet the complex new challenges.

Thank you very much. This panel is dismissed.

[Whereupon, at 1:05 p.m., the Subcommittee was adjourned.]

OPENING STATEMENT OF
THE HONORABLE RUSS CARNAHAN (M0-3)
SUBCOMMITTEE ON AVIATION
TRANSPORTATION AND INFRASTRUCTURE COMMITTEE
U.S. HOUSE OF REPRESENTATIVES

Hearing on
Aviation and the Environment: Noise

Wednesday, October 24, 2007, 11:00 AM
2167 Rayburn House Office Building

Chairman Costello and Ranking Member Petri, thank you for holding this important hearing on Aviation Noise and the Environment.

The affect of aviation noise on our constituents and the environment is a critical issue. Quite frankly, airplanes and the operations at airports create a large amount of noise. The expected one billion passengers who will fly in the United States' airspace by 2015 will result in more airplane travel and thus more noise. It is imperative that the FAA plan for the residual effects that this increase in passengers will cause.

I would like to recognize the positive contributions that Lambert St. Louis Airport has made to address this issue. Over the past few years, Lambert has successfully purchased residential land around the airport and converted it to commercial use. Locating businesses adjacent to airports, as opposed to homes, greatly reduces the negative effects of airplane noise. I applaud Lambert for tackling this issue with success.

Again, Mr. Chairman, I thank you for holding today's hearing, and I look forward to hearing from our witnesses.

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STATEMENT OF
THE HONORABLE JERRY F. COSTELLO
SUBCOMMITTEE ON AVIATION
HEARING ON
AVIATION AND THE ENVIRONMENT: NOISE
OCTOBER 24, 2007

- I welcome everyone to our Subcommittee hearing on *Aviation and the Environment: Noise.*

- For people who live near an airport, noise is the most evident environmental impact of aviation. Over the next 20 years, increases in air traffic could outstrip the technological progress in making airplanes quieter, and become a constraint on expanding our nation's airports.

- Our national aviation policy must continue to balance the need to reduce air traffic delays and expand capacity with the need to improve the quality of life of people who live near airports.

- The FAA administers its statutory authority to provide federal funding for noise mitigation projects through part 150 of its regulations, commonly referred to as the "part 150 program." Participation in the part 150 program, with a few exceptions, enables an airport operator to be eligible to receive AIP funding from the monies set aside for noise projects (approximately $300 million), often referred to as the "noise-set aside."

- The part 150 process is voluntary. Airport operators often undertake a part 150 study when doing so will mitigate aircraft noise in communities within the airport's surrounding area.

- However, some airports may choose not to participate in the part 150 program. Some airports, like Chicago O'Hare, have chosen to fund a majority of their noise mitigation projects through alternative methods, such as AIP funding related to airport development or the collection of passenger facility charges (PFCs).

- In 1996, Mayor Daley created the O'Hare Noise Compatibility Commission (ONCC) as a policy making group to direct funding for noise reduction projects, so as to better reflect the concerns of the communities most affected by aircraft noise that surround O'Hare. Arlene Mulder is the Chairperson of the Commission, and I am interested in hearing more from her on these local initiatives, and why the City chose to facilitate noise mitigation through programs other than the part 150 process.

- Since 1982, the FAA has issued $5 billion in AIP grants and approved $2.8 billion in PFC revenue for noise mitigation projects. In 2007 alone, the FAA issued 12 AIP grants and approved 1 PFC application for noise studies and 70 grants for noise compatibility mitigation. Noise mitigation continues to be a priority not only for local communities, but the federal government as well.

- That is why H.R. 2881, the FAA Reauthorization Act of 2007, includes several provisions related to noise mitigation and land use initiatives, such as a phase out of stage 2 aircraft less than 75,000 pounds and a pilot program to encourage airport compatible redevelopment of noise impacted properties adjacent to airports to ensure joint comprehensive land use planning.

- Moreover, the importance of well-funded environmental research cannot be overstated as we struggle to keep pace with the expected growth in aviation. H.R. 2881 includes approximately $1.8 billion in research funding as well as a program for the development and certification of lower emissions and noise engine and airframe technology, otherwise known as the CLEEN program.

- As the demand for air travel increases, and airports try to increase their capacity, community attitudes will become an even more important element of airport system planning. All interested stakeholders must continue to work together to better manage local aircraft noise issues within surrounding airport communities. Without effective, long-term

management strategies for aircraft noise, airports face a significant constraint on meeting future capacity needs.

- It is my hope that this hearing allows all of us to better understand all facets of the aircraft noise issue and to take advantage of successful practices at other airports to manage the challenges that lie ahead.

- With that, I want to again welcome our witnesses today and I look forward to their testimony.

- Before I recognize Mr. Petri for his opening statement, I ask unanimous consent to allow 2 weeks for all Members to revise and extend their remarks and to permit the submission of additional statements and materials by Members and witnesses. Without objection, so ordered.

Testimony of Congressman Joseph Crowley
House Committee on Transportation and Infrastructure, Subcommittee on Aviation
Hearing - Aviation and the Environment: "Noise"
Wednesday, October 24, 2007

Chairman Costello, Ranking Member Petri, members of the Subcommittee – thank you for conducting this hearing. In my district, airport noise is a daily burden shouldered by my constituents and I appreciate your attentiveness to this issue.

As you know, I represent Queens and the Bronx, New York, and we are home to LaGuardia Airport - one of the nation's busiest airports, in the busiest and most congested airspace in the country.

If you looked at a map of the area, you would probably focus on the fact that LaGuardia Airport is surrounded by Flushing Bay on one side and the Grand Central Parkway on the other. It is, however, also in the middle of several densely populated communities, including Woodside, Astoria, East Elmhurst, and Jackson Heights, Queens.

While the Airport is a central part of our community – helping to support New York's economy by shuttling visitors and business people in and out of the region – its presence does negatively impact the day-to-day life for tens of thousands of my constituents.

In particular, the air pollution resulting from the road traffic and airplanes at LaGuardia is a severe problem, as is the noise pollution caused by the airport and its related facilities.

That is why, working with the Environmental Protection Agency and New York University, I commissioned a study to determine the effects of airport and airport-related noise on my constituents in Queens.

The results of this report concluded that some residents living near LaGuardia were exposed to noise levels nearly four times greater – with some levels exceeding the 65 DNL threshold set by the Federal Aviation Administration – than those experienced by residents not living within close proximity to an airport.

Twenty-four hour time histories also found that residents living within the footprint of LaGuardia were exposed to noise levels in excess of the levels New York City code stipulates for sleeping areas from the hours of 10 p.m. to 7 a.m. And, more than 55% of the people living within the flight path were reportedly bothered by aircraft noise.

Similarly, homes surrounding John F. Kennedy Airport were subjected to comparable levels of noise as those around LaGuardia, and I would expect they would be comparable to any homes and communities surrounding our nation's major airports.

These findings are particularly noteworthy because noise is not just an annoyance or inconvenience. It is hazardous to one's health and well-being and diminishes an individual's quality of life.

The World Health Organization found that airport noise has been linked to cardiovascular disease. And, the Federal Interagency Committee on Aviation Noise in its September 2000 report concluded that: "Research on the effects of aircraft noise on children's learning suggests that aircraft noise can interfere with learning in the following areas: reading, motivation, language and speech acquisition, and memory. The strongest findings to date are in the area of reading, where more than 20 studies have shown that children in noise impact zones are negatively affected by aircraft."

The FAA has recognized the need to mitigate airport noise and has created a voluntary process whereby airport authorities may undertake a Part 150 study to determine the extent of airport noise on a community, and then as a follow-up, establish a plan for remediation of that noise, which could include residential soundproofing.

Yet, despite the overwhelming evidence that airport noise can severely impact the health and well-being of individuals, particularly our children, the Port Authority of New York and New Jersey has never undertaken or even attempted to conduct a Part 150 study or noise mitigation efforts for the homes in the neighborhoods surrounding LaGuardia, or its other airports – JFK, Newark, Teterboro and Stewart Airports.

In fact, in the *Vision 100 – Century of Aviation Reauthorization Act*, this Committee directed, at my request, that the Port Authority of New York and New Jersey begin a Part 150 study and residential soundproofing. The Committee's bipartisan language stated:

> *Although the FAA determined that aircraft noise pollution was the strongest and most widespread concern raised by the public at its twenty-eight public scoping meetings in five states in 2001, the Port Authority of New York and New Jersey has not undertaken action to mitigating residential complaints in the neighborhoods surrounding its airports. Therefore, it is the hope of the Conference Committee that the PANYNJ will work in good faith with the New York and New Jersey Congressional delegations to address these issues, including undertaking a part 150 study to qualify for Federal residential soundproofing dollars or to begin undertaking residential soundproofing in the most affected areas in the footprint with particular focus on the neighborhoods surrounding LaGuardia Airport.*

Unfortunately, the Port Authority ignored the explicit direction of this Committee and still has not taken any action to soundproof residences in my area, which is why I am here today.

It is my hope this public forum and the further engagement of this Committee will encourage the Port Authority to finally pursue the necessary course of action.

As this Committee knows, only 17 of the top 50 busiest airports have not submitted a Part 150 study, and three of these 17 airports – LaGuardia, JFK and Newark - are operated by one entity, the Port Authority of New York and New Jersey

In fact, other large airports have successfully conducted Part 150 studies and soundproofed homes. Of particular note is Los Angeles International Airport. LAX completed its study and is soundproofing the homes in its footprint.

It has been a major success story, with the major concern being the length of time to fully implement and mitigate all homes for noise.

If LAX can undertake this project, why can't the Port Authority of New York and New Jersey?

I have worked diligently with this Committee's leadership, both under former Chairman Don Young, and now under you, Chairman Costello and full Committee Chairman Oberstar, on the issue of airport noise. I've appreciated your past efforts and support.

I hope you will agree that the time has come for soundproofing and other noise mitigation efforts to get underway at the homes surrounding LaGuardia Airport and the other four airports under the Port Authority of New York and New Jersey's control.

And, if today's hearing does not compel the Port Authority to act, I am going to ask that the FAA Reauthorization plan, which is working its way through the chambers - including the Ways and Means Committee on which I sit - include language strengthening the laws regarding soundproofing of homes and places of worship and mandating soundproofing and other forms of noise abatement for the people living in the footprints of our nation's largest or busiest airports.

Airport and airport-related noise is a real issue of concern to many of our constituents, both those living around an airport like my constituents, or those in the flight path like Congresswoman McCarthy's.

I sincerely appreciate and thank Chairman Oberstar and Subcommittee Chairman Costello for holding this hearing, for inviting me to testify, and for inviting the Port Authority of New York and New Jersey to testify. I look forward to continuing to work with you on this matter.

Opening statement of Rep. Graves 10/24/07:

FIRST I'D LIKE TO THANK THE CHAIRMAN AND RANKING MEMBER FOR HOLDING TODAY'S HEARING. SECOND, I'D LIKE TO THANK THE WITNESSES FOR COMING IN TO TESTIFY TODAY ABOUT THIS IMPORTANT ISSUE.

"NOISE" IS BIG PROBLEM FACING THE AVIATION INDUSTRY AND LOCAL COMMUNITIES. FIRST, IT IS DIFFICULT FOR FOLKS THAT LIVE NEAR AIRPORTS TO HAVE THE SOUND OF PLANES GOING OVERHEAD AT ALL HOURS. SECOND, CONCERNS ABOUT INCREASING NOISE LEVELS CAUSES HUGE HEADACHES FOR AIRPORTS WISHING TO EXPAND THEIR CAPACITY AND/OR CHANGE THEIR FLIGHT PATHS. WE ALL KNOW ONE OF THE BEST WAYS TO IMPROVE CAPACITY IS TO ADD RUNWAYS AND IMPROVE APPROACHES INTO AIRPORTS. UNFORTUNATELY, BOTH OF THESE SOLUTIONS BRINGS A DIFFERENT SET OF PROBLEMS – LOCAL COMMUNITIES OFTEN STRIDENTLY OBJECT BECAUSE OF CONCERNS RELATED TO NOISE. I CAN UNDERSTAND WHY PEOPLE ARE CONCERNED, WHICH IS WHY I'M HAPPY TO HEAR ABOUT EFFORTS TO MAKE PLANES

QUIETER, BUT I AM ALSO INTERESTED IN LEARNING HOW WE CAN AVOID THIS PROBLEM ALL TOGETHER IN THE FUTURE. NAMELY, I FEEL STRONGLY THAT LOCAL COMMUNITIES AND AIRPORTS NEED TO WORK TOGETHER TO ENSURE THAT, TO THE GREATEST EXTENT POSSIBLE, LAND AROUND AIRPORTS IS DEVELOPED IN THE FUTURE WITH USES THAT ARE COMPATIBLE TO THE REALITY OF BEING LOCATED NEAR AN AIRPORT.

Statement of the Honorable Doris O. Matsui
Subcommittee on Aviation Hearing: "Aviation and the Environment: Noise"
Wednesday, October 24, 2007

Mr. Chairman, thank you for holding this hearing today. As our country grows increasingly concerned about the environmental impacts of policies that are made here in Washington, it will be crucial for this subcommittee to stay at the forefront of this debate.

I know that my constituents in Sacramento are focused on the environment. They sent me here to pass laws that protect what is left of the natural world.

They want us to accomplish this without impacting their day-to-day lives to a great degree, which is the main part of our challenge as policymakers.

When it comes to the noise generated by my city's airports, however, my constituents are lucky. Our main airport, Sacramento International, has a very small noise footprint.

In fact, there are no residential areas in my district that are adversely impacted by aircraft noise from Sacramento International's operations.

This arrangement has not come without a price, Mr. Chairman. Our airport is about a half-hour-trip from the center of the city, and even longer from some of the residential parts where my constituents live.

While it is advantageous that our airport is located outside the city limits, it can be difficult to access as a result.

happening through

What is ~~encouraging—and~~ what gives me pause ~~at the same time—is~~ that this could soon change. Many new families are moving to my district, Mr. Chairman. Acreage that used to be open space is being rapidly developed to make room for these new arrivals. As development inches closer and closer to our main airport, noise abatement will become a more important issue in Sacramento.

Moving forward, it will be critical for local governments in my district to make responsible, effective land use decisions. They should not have to do this alone, Mr. Chairman. The federal government can and should be a positive partner in making land use policy.

This is particularly true when it comes to aircraft noise issues. My constituents will call upon Congress to fix noise problems that might develop down the line, so we should be involved in this in a constructive way from the beginning.

For this reason, I am eager to hear today's testimony, particularly as it pertains to land use. I am especially interested in learning how other cities and suburbs across the country have addressed the issue of aircraft noise.

Armed with the knowledge that experts in this area have acquired in the last few years, I am certain that my district will continue to be a place that encourages air travel without harming the environment.

I would like to thank today's witnesses for coming here today to offer their testimony. Thank you again, Mr. Chairman, for convening today's panel. I yield back the balance of my time.

Testimony of Congresswoman Carolyn McCarthy
Fourth Congressional District of New York

Committee on Transportation and Infrastructure
Subcommittee on Aviation
Hearing

Aviation and the Environment: "Noise"
October 24, 2007

I would like to thank Chairman Oberstar, Chairman Costello, Ranking Member Petri, and Ranking Member Mica for holding this hearing today and allowing me the opportunity to testify before the Transportation and Infrastructure Subcommittee on Aviation. I hope this hearing will allow us to explore the affect that airplane noise has on communities near busy airports; and I hope that we can continue to work together in order to find solutions that will reduce airplane noise.

I represent the Fourth Congressional District of New York. My district is located in Nassau County, a densely populated area adjacent to John F. Kennedy International Airport. Due to the close proximity to JFK, many communities in my district are severely affected by noise from airplanes landing and taking off from JFK, including the Village of Floral Park, New York.

I receive hundreds of calls, letters, and e-mails regarding airplane noise each year. This issue affects thousands of my constituents on a daily basis. The Village of Floral Park and the Town-Village Aircraft Safety and Noise Abatement Committee, which represents several communities in my district, have led the effort to reduce airplane noise. This is who I represent in my testimony today.

In my testimony I will address (1) the recent increase in air traffic at JFK and the resulting increase in airplane noise which is destroying residents' quality of life, (2) the burden that a small number of communities bear in order to benefit the larger region and how federal assistance should be used to ease this burden, and (3) the Federal Aviation Administration's (FAA) failure to include a noise mitigation study for JFK, one of the busiest airports in the country, under the New York/New Jersey/Philadelphia Airspace Redesign.

First, the communities surrounding JFK have always experienced airplane noise from planes flying in and out of JFK. The residents were fully aware of this when they purchased homes in the area. However, due to several factors, there has been a gradual increase in the volume of air traffic and airplane noise since 2000. The result is that it is significantly more difficult to maintain a decent quality of life in these communities.

Congress passed legislation in 2000 to phase out slot restrictions at JFK. The full impact of this legislation occurred on January 1, 2007 when the restrictions on the hourly

departures and arrivals were completely eliminated. In the first four months of this year, the volume of air traffic has increased by 26.4 percent. As a result, the FAA authorized JFK to utilize three of its four runways for longer periods than was historically permitted, thus limiting the number and length of the breaks between airplane noise over affected communities.

Furthermore, New York TRACON and JFK were forced to deviate from a Letter of Agreement due to the increase in air traffic, which resulted in an increase in airplane noise. This Letter of Agreement was between New York TRACON and JFK and was meant to abate noise in the communities surrounding JFK by more equitably distributing the noise generated by aircraft activity. The Letter of Agreement states,

> "[I]n the interest of noise abatement, every attempt will be made to rotate assignments at intervals of eight hours. Consideration will be given to the previous runway selection in order that a distribution of noise will be accomplished in a reasonable manner."

Due to the increase in volume of air traffic brought on by the elimination of the limits on hourly departures and arrivals, JFK officials determined it is no longer possible to enforce this section of the Letter of Agreement.

The Letter of Agreement also states,

> "Runways 22L/R shall not be used for arrival traffic between 2300 and 0700 unless traffic, delays, weather, or construction prevent the use of any other arrival runway."

Runways 22L/R, when used, directly impact communities in my district. Bad weather conditions, winds from the south and southwest, and delays serve as a constant justification for using Runway 22L during daytime and nighttime hours. According to the Federal Bureau of Transportation Statistics, four in ten flights are delayed by a minimum of 15 minutes at JFK. This is further supported by the recent request by President Bush to Secretary Peters to confer with members of the aviation industry and regulators to find a solution to reduce air traffic congestion and delays.

The elimination of the limits on departures and arrivals from JFK has forced JFK and New York TRACON to deviate from the Letter of Agreement, which has a significant impact on the areas surrounding JFK. Airplane noise can be heard at all hours of the day and into the night. Flights over these communities can continue for more than 16 hours a day with airplanes departing and landing as often as every 30 to 60 seconds. Residents of these communities have reported up to 115 planes per hour during peak periods.

At one point in time, the residents of the affected areas were able to enjoy a calmer and quieter way of life. This way of life was possible because of the limits on the hourly departures and arrivals from JFK with the enforcement of the Letter of Agreement

between New York TRACON and JFK. The elimination of these limits is the primary cause of the delays at JFK and the increase in airplane noise over the communities surrounding the airport. As a result, the suburban lifestyle of hundreds of families, children, and seniors who make up the communities surrounding JFK is being destroyed.

One solution to the increase in traffic and an increase in airplane noise is to reinstate the limits on departures and arrivals from JFK. Short of this, we should at least begin discussing how JFK and airline carriers can come to an agreement to reduce air traffic. A reduction of air traffic to and from JFK will reduce airplane noise as well as delays and congestion.

Second, a small number of communities bear the enormous burden of airplane noise from increased air traffic in order to benefit the larger region, and as a result, the federal government should offer assistance. The air traffic going in and out of JFK brings significant benefits to Long Island and New York. The accessibility that JFK and LaGuardia airports provide to the New York area allows individuals to conveniently conduct business, visit family, or simply take a vacation. This is good for New York; and this is good for Long Island. However, the cost to the increase in traffic at JFK includes flight delays, congestion, and almost constant airplane noise that plague certain communities.

The affected communities consist of hard-working, tax-paying citizens who have chosen to live in the suburbs in order to enjoy a quieter way a life. As I stated previously, many of the families currently living in the affected communities were aware of the airplane noise when purchasing their homes. However, they could not have foreseen such a large increase in air traffic due to the elimination of the limits on departures and arrivals from JFK. Although some may argue that this was necessary to allow for more access to New York and the surrounding areas, it is unfair to expect a small number of communities to bear the burden without assistance from the federal government.

The federal government should increase and expand the assistance available under the Airport Improvement Program for soundproofing. The Airport Improvement Program has done a wonderful job of ensuring that our students living in these affected communities have a quieter learning environment through the soundproofing of schools with noise above 65 DNL. This funding should be increased and made available to soundproof additional facilities.

Last, JFK was excluded from the FAA's noise mitigation study under the New York/New Jersey/Philadelphia Airspace Redesign. Although the main goal of the Airspace Redesign is to reduce delays and increase efficiency, reducing airplane noise should also be a priority. Airplane noise over the affected areas is directly related to the amount of air traffic to and from JFK. A reduction in delays and an increase in efficiency will only make more slots available for departures and arrivals at JFK, resulting in an increase in air traffic and airplane noise. If a noise mitigation study had been conducted by the FAA for JFK, it may have been possible to identify mitigation measures to decrease airplane noise. I urge the FAA to conduct a noise mitigation study on the areas around JFK under the Airspace Redesign.

Thank you again for the opportunity to testify today. I look forward to working with the Committee on Transportation and Infrastructure to reduce airplane noise over the communities surrounding JFK.

1 Harry E. Mitchell

Statement of Rep. Harry Mitchell
House Transportation and Infrastructure Committee
Subcommittee on Aviation
10/24/07

--Thank you Mr. Chairman.

--Like many large, metropolitan areas around the country, Phoenix is not new to aviation capacity and noise issues.

--In 2006, Sky Harbor was the nation's 8th busiest airport.

--However, unlike many other metropolitan areas, which are often forced to choose

2

between improved capacity and improved noise mitigation, our rapid growth provides us with a unique opportunity to plan ahead, and build for a better future.

--Sky Harbor has made a genuine commitment to noise abatement, and that is an important first step.

--In addition, Valley communities are working together to develop Phoenix-Mesa Gateway Airport on the site of the former Williams Air Force Base in Mesa. The

3

reduced development surrounding the former base, combined with its proximity to major ground transportation arteries make it a sensible piece of our future aviation puzzle.

--The mayors of Mesa, Phoenix, Gilbert and Queen Creek, as well as the Governor of the Gila River Indian Community are all part of the Williams Gateway Airport Authority, and that's exactly the kind of regional cooperation the Valley needs if we're going to meet our future needs.

4

--And based upon our recent growth, our future needs are staggering.

--Almost overnight, the Phoenix metropolitan area has become one of the largest in the nation. According to the U.S. census, we are now the nation's 13th largest, just behind San Francisco and Boston.

--According to the FAA, we are one of eight metropolitan areas that will need additional capacity beyond the improvements that are already planned.

5

--And as we begin to face these future challenges, we are starting with a national system that already has its hands full meeting the needs of the passengers it is already serving.

--According to the Bureau of Transportation Statistics, the first half of 2007 was the worst for airline delays since they started keeping comprehensive statistics. Nearly 28 percent of flights were delayed.

6

--These are all incredibly complex issues, and that's why I am grateful we have the opportunity to discuss them here today.

--I look forward to hearing from today's witnesses.

--At this time, I yield back.

OPENING STATEMENT OF
THE HONORABLE JAMES L. OBERSTAR
SUBCOMMITTEE ON AVIATION
AVIATION AND THE ENVIRONMENT: NOISE
OCTOBER 24, 2007

- I want to thank Chairman Costello and Ranking Member Petri for calling today's hearing on *Aviation and the Environment: Noise*. The Federal Aviation Administration (FAA) forecasts that airlines are expected to carry more than 1 billion passengers by 2015, increasing from approximately 744 million in 2006. With an increase in passenger traffic, there has been an increase in delays. The first eight months of 2007 accounted for the worst delays on record with almost 28 percent – a total of 1.39 million flights – were delayed, cancelled or diverted.

- The FAA states that new runways and runway extensions provide the most significant capacity increases. There has been some development of airport capacity over the past few years: new runways have been opened at some of the nation's busiest airports, including runways in Detroit, Cleveland, Denver, Miami, Houston, Orlando, Minneapolis-St. Paul, and Cincinnati. These efforts will continue. Between now and 2011, 6 airports plan to begin 8 airfield projects (5 new runways, 2 runway extensions, and 1 airfield reconfiguration). H.R. 2881, the FAA Reauthorization Act of 2007, provides record funding levels for the FAA's airport programs: a total of $15.8 billion for four years.

- However, I am mindful of the obstacles that the United States still faces in trying to expand our airport capacity through infrastructure improvements. Many of our airports back up to residential neighborhoods because local governments did not engage in any meaningful zoning or land-use planning. This serious lack of foresight has stifled the growth of many of our nation's busiest airports, thereby inhibiting growth for local industries. The local residents are unwilling, and rightfully so, to destroy their quality of life by agreeing to more operations at the airport.

- During hearings in 1990 on federal aviation noise policy, I observed that even if we succeed in "increasing air traffic control technology modernization and expanding the physical capacity of airports to accommodate more aircraft, if the public is not willing to accept the burden of noise generated by expanded air traffic, then the other two advances will be nullified." Today, this statement is still true. Noise abatement, like runways, is a capacity issue.

- While advanced technology, new operational procedures, and land use measures have all contributed to noise reductions at airports, advanced technology has played the primary role. According to the FAA, jets today are seventy-five percent quieter (twenty decibels) than early jets. The transition to stage 3 aircraft has had the most impact in reducing aviation noise, and aircraft that meet stage 4

standards will cumulatively be ten decibels quieter than stage 3. The FAA states that there has been over a 90 percent reduction in the number of people affected by aircraft noise in the U.S. between 1975 and 2005.

- While we have made great strides in reducing environmental impacts on communities in the last few decades, the FAA predicts that "noise and emissions could increase between 140-200 percent over the next 20 years, becoming a significant constraint on planned capacity increases."

- Accordingly, as the U.S. increases its infrastructure investment, it must balance airport capacity expansion with environmental protection. The FAA has several programs that aid airports and communities in dealing with noise issues. Since 1982, the U.S. has issued $5 billion in Airport Improvement Program (AIP) grants and approved the imposition of $2.8 billion in Passenger Facility Charge (PFC) revenue for noise mitigation measures, such as soundproofing schools, homes, and churches located near airport property, as well as on land purchases and relocation assistance.

- Under the FAA's part 150 program, an airport operator may be eligible for money set aside under the AIP for noise projects (approximately $300 million per year) if it submits a noise exposure map and a noise compatibility program (NCP) to the

FAA for review. An airport's development of a part 150 NCP details the measures that the operator has taken, or proposes to take, to reduce existing incompatible land uses and prevent the introduction of new incompatible land uses at the airport in areas covered by the noise exposure map.

- However, participation in the part 150 program is voluntary, and some airports have chosen not to participate. For example, some airports have chosen to take advantage of alternative funding methods for noise mitigation that do not require a part 150 NCP, such as the use of PFCs, as well as available AIP funding for schools and medical facilities and noise projects in conjunction with airport development projects. Other airports have chosen not to participate because they may have a long standing noise program similar to, but predates the part 150 program; are concerned about the cost of conducting the study itself (for a large airport, the costs can exceed $1 million); or may have numerous incompatible land uses around the airport making mitigation cost prohibitive. According to the FAA, 17 of the top 50 busiest airports do not participate in the part 150 program, including New York's JFK and LaGuardia airports. I look forward to hearing the testimony of the Port Authority of New York and New Jersey regarding why it has chosen not to avail itself of the part 150 program.

- Moreover, the importance of well-funded U.S. research to reduce aircraft noise and emissions cannot be overstated. Since 1990, the U.S. government has spent approximately $600 million on research to reduce commercial aviation source noise, with approximately $34 million of the $600 million funded by the FAA, and the rest provided by the National Aeronautics and Space Administration (NASA). The FAA plans on pursing significant research on environmental issues, including accelerating development of promising aircraft engine and technologies to reduce noise and emissions as it proceeds with the Next Generation Air Transportation System. We must act now to preserve vital research programs as we move forward towards new global aviation noise and emissions standards; H.R. 2881 includes approximately $1.8 billion in research and development funds for the FAA.

- H.R. 2881 also includes several provisions related to noise mitigation and land use initiatives, such as the phasing out of stage 2 aircraft; research programs for the development, maturing and certification of continuous lower energy, emissions and noise engine and airframe technology; allowing airport operators to reinvest the proceeds from the sale of land that an airport acquired for a noise compatibility purpose into other noise/environmental projects; and providing new tools to encourage airport compatible redevelopment of noise impacted properties adjacent to airports to ensure joint comprehensive land use planning.

- We must continue to be aggressive in both research and development as well as to reduce incompatible land use around airports. Only in this way can we be sure that our commercial aviation industry continues to thrive, but not at the expense of surrounding communities.

- Thank you again, Mr. Chairman, for holding this hearing. I look forward to hearing from our witnesses.

STATEMENT OF

REP. THOMAS E. PETRI, RANKING MEMBER

SUBCOMMITTEE ON AVIATION

HEARING ON

Aviation and the Environment: Noise

October 24, 2007, 11:00 a.m., 2167 RHOB

I'd like to thank the Chairman for calling this important hearing today.

Aviation is essential to our healthy economy and the free flow of travel and commerce.

This subcommittee has looked at the environmental impacts of aviation, including noise, many times before. We have heard from Members of Congress and the communities they represent.

We have also sought to reduce and mitigate noise impacts through legislation.

Additionally, the FAA has issued regulations and conducted research and development efforts along with NASA.

Due to these efforts, tremendous gains have been made.

The broader population can now afford air travel. In fact, commercial and regional carrier revenue passenger miles have grown more than 93 percent since just 1990.

But, as evidenced by this hearing today, noise problems continue to exist.

I look forward to hearing the testimony of today's witnesses. The FAA and GAO will summarize the overall aviation noise picture and share their thoughts on next steps and challenges ahead.

I understand that for aircraft of the "70 to 150 passenger size," the Pratt & Whitney Geared Turbofan engine will reduce cumulative noise levels by about 20 decibels below current Stage 4 regulations. That is remarkable and I look forward to hearing more about the benefits of this new technology.

One thing has become very clear to me; aviation noise is a complicated issue requiring a complex and multi-pronged solution.

MR. WESTMORELAND

Mr Chairman –

I am going to have a short opening statement; I would like to submit for the record a statement written by the city of College Park Georgia's Mayor Pro Tem, Charles Phillips. Even though College Park, Georgia is not in my district I have met with city officials a number of times to discuss noise related issues between Hartsfield-Jackson International Airport, the busiest airport in the world, and the city of College Park, Georgia in which many parts of Hartsfield Airport is located in.

As we consider taking steps to implement the Next Generation Air Transportation System, we would be well advised to consider the vast implications that the new system will have on airports and the communities that host airports such as College Park, Georgia.

Mayor, Pro Tem Phillips statement shows that Congress must be forward thinking in our approach to mitigate environmental impacts related to the growth of aviation to foster public acceptance of air transportation growth, with innovation resulting from meaningful partnership at local and regional levels.

In short, a local government perspective is necessary as Congress considers NextGen. The success of NextGen requires considerably increased airport capacity. Local and regional cooperation and proper land use policies will be necessary for this to happen -- an ongoing and signficant challenge that must be realistically confronted if NextGen is to be achieved. College Park's experience with the growth of Hartsfield-Jackson can offer an instructive lesson on how to handle this in the most meaningful and productive way - therefore I would respectfully request that Mayor, Pro Tem Phillips statement be added to record for this hearing on behalf of the city of College Park, Georgia.

STATEMENT OF CARL E. BURLESON, DIRECTOR, OFFICE OF ENVIRONMENT AND ENERGY, FEDERAL AVIATION ADMINISTRATION, BEFORE THE COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE, SUBCOMMITTEE ON AVIATION, HEARING ON AVIATION AND THE ENVIRONMENT: NOISE. OCTOBER 24, 2007

Chairman Costello, Congressman Petri, Members of the Subcommittee:

I am pleased to appear before you this morning to address an issue that is central to any discussion of aviation and the environment, aviation noise. Today I would like to provide a brief overview of the Federal Aviation Administration's (FAA) activities that help to minimize the environmental impacts associated with aviation noise, and how we are taking into account other environmental concerns as well as we move forward with the transformation to the Next Generation Air Transportation System (NextGen).

As this Committee well knows, in 2003, we celebrated the 100th anniversary of the Wright Brothers flight and the opening of the aviation age. What I suspect many do not know is that 2003 also marked the 92nd anniversary of the first editorial complaining about aircraft noise. An editorial from AERO magazine in 1911 entitled "On the Fitting of Silencers" noted "that the tremendous racket that is present associated with the aero plane plays a considerable part in prejudicing the public against these machines."

The good news is we have overcome enough of the public "prejudice against these machines" to have 2.0 billion people fly each year – more than the number of people that populated the earth in the early 20th century. However, the challenge is that aircraft noise remains a central environmental concern as it both impacts the quality of life of residents near airports and slows the growth of aviation and the benefits it brings to our nation.

Major strides in lessening the environmental effects of aircraft have been made over the past few decades in the United States. As you can see in the attached Chart 1, in a thirty-year period between 1975 and 2005, passenger enplanements grew from a little over 200 million to more than 700 million. In that same time period, exposure to significant

aircraft noise declined more than 90 percent – from over 7 million Americans exposed to significant* aircraft noise in 1975 to about half million today. Few industries can cite this level of improvement in environmental performance while achieving such significant growth.

As you can see in Chart 2, the technology in aircraft has improved substantially over the last few decades. In fact, quieter aircraft and engine technology, supported by national regulatory and legislative actions, changed the nature of the fleet operating today and produced the bulk of gains in reducing aircraft noise. This progress in aircraft technology was made possible by significant federal and industry investments in research and development. Technology has been complemented by enhancements in air traffic procedures, efforts to foster compatible land-use, and a federal airport noise compatibility program.

As Chart 3 shows, FAA has supported noise compatibility programs at nearly 300 airports in the U.S. with technical assistance and with financial assistance for noise mitigation measures, such as soundproofing homes and public buildings such as schools and hospitals located near airport property, in addition to land acquisition and relocation assistance. This investment occurs through the Airport Improvement Program (AIP) and the Passenger Facility Charge (PFC) program. In 2007, 35 percent of AIP discretionary funding, or approximately $300 million, was set aside for noise and environmental projects. Since 1982, the FAA has provided about $5 billion in AIP grants and, since 1990, we have approved nearly $3 billion in PFC spending--a total of almost $8 billion in financial assistance to airports for noise projects.

The FAA's noise compatibility program, known as the Part 150 program (after the section of the regulatory code where it is codified), has played a major role in advancing compatible land use near airports by offering federal grants to help reduce noise impacts and non-compatible land uses. FAA has also advanced compatible land use by carrying out noise abatement air traffic procedures and voluntary preferential runway use

* Annual Day-Night Sound level of 65 decibels or higher (DNL 65 dB)

programs approved under Part 150. This process is a voluntary, comprehensive, balanced approach. It is also an inherently collaborative one, relying on airport operator leadership, stakeholders' involvement, and FAA technical assistance, FAA approval, and AIP or PFC funding or other implementation of approved measures. The basic premise underlying this program is that decisions on airport noise compatibility are ultimately local decisions and there is no "one size fits all approach" or a single solution for all airports, but that one set of tools can be used by all airports.

There are two main products of a Part 150 study: a noise exposure map and a noise compatibility program. The map depicts and quantifies an airport's current noise exposure and forecasts future noise exposure, going out at least five years. This knowledge supports both current and future noise planning efforts. With regard to Part 150 noise compatibility programs, these contain recommendations tailored for that airport and community that can reduce aircraft noise exposure and non-compatible land uses with measures such as noise abatement flight tracks, preferential runway use, land acquisition and relocation, soundproofing, special zoning, enhanced building codes, and disclosure requirements.

Congress has also given FAA the flexibility to fund certain noise projects with AIP funds at airports that do not have a Part 150 program. We can fund sound insulation of public buildings, including schools and hospitals, in an area impacted by airport noise. Schools near airports under the jurisdiction of the Port Authority of New York/New Jersey, near Chicago O'Hare and near Boston Logan airports have benefited from this flexibility. We also provide funding for environmental mitigation for airport development, including noise mitigation that has been included as a commitment in an environmental Record of Decision for an airport development project. Under a pilot provision that was included in Vision 100, we issued two grants, again outside the Part 150 process, to noise-impacted communities located around large and medium hub airports for planning and projects to reduce noncompatible land uses by State and local governments. The communities receiving these grants, Des Plaines, Illinois, near Chicago O'Hare International Airport, and San Mateo, California, near San Francisco International Airport, were able to use the

funds for compatible land use planning. We think this authority has been useful, and although it lapsed at the end of fiscal year 2007, we are pleased that this Committee's reauthorization bill adopted the Administration's proposal to extend it as part of the reauthorization of our programs.

The restructuring of U.S. airline fleets in the aftermath of September 11th, driven by a number of market changes, including the rise in fuel costs in recent years, led to a steep reduction in the national noise exposure between 2002 and 2004 (see Chart 4). You can see in Chart 5 that there has been nearly a 70% reduction of older, hushkitted* aircraft operating since 2000. However, Chart 4 also shows that a resurgence in aircraft operations has begun to reverse the downward trend of noise exposure. So while FAA's targets of absolute reductions in national noise exposure from 2002 have been met to-date, you can see in Chart 4 that we face an increasing challenge in our ability to sustain the current target of 4% reduction per year .,

Despite impressive achievements, aircraft noise still affects people living near airports. It remains the most significant environmental challenge facing airlines and airports as they seek to grow capacity. And I am sure that many citizens in communities around airports in the U.S. will take little solace from a declining national trend. They remain concerned about the need to deal with aircraft noise in their communities. We understand this. Let me share how we're tackling this continuing challenge.

We laid out a national vision and strategy for tackling noise, as well as other key environmental impacts with respect to aviation, in a report provided to Congress in 2005. It is important to note the report was not just a government vision of what should happen. Rather, a wide cross section of stakeholders provided input in creating this vision--including a number of community groups living near airports. This report has not collected dust on a shelf. It has become the basis of the environmental strategy at the heart of our NextGen plan.

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* "Hushkitted" aircraft means Stage 2 aircraft whose engines were modified sufficiently to meet Stage 3 noise requirements.

For NextGen, we are committed to reducing significant noise impacts even as we grow the aviation system. We are committed to continuing to achieve absolute reduction in the number of people exposed to significant noise. This goal requires a robust and multi-faceted environmental program that develops and invests in new technologies, takes advantage of operational advances, and includes effective policies and investments.

We are conducting research to advance our current capabilities to measure and assess the impact of aircraft noise. This includes evaluating metrics to characterize aircraft noise and assessing the health and welfare impacts. We are investigating various noise metrics such as loudness and single event metrics. Research also includes aircraft noise in national parks where a quiet setting is a generally recognized purpose, and low frequency noise around airports. We are also conducting research to attempt to better correlate land use and aircraft noise patterns and potentially identify a land use metric. Based on a recently completed assessment of noise characterization within the Airports Cooperative Research Program, we are developing a strategic plan for prioritizing investment in NextGen noise research.

It is also important to take into account the relationship between noise and aviation emissions – as there are often trade-offs among environmental factors as you change aircraft design and operations. Maximizing an aircraft engine or an operational procedure for noise may cause unintended increases in emissions, and vice versa. We have made an early substantial investment in advanced computer models to better calculate aviation noise and emissions, their relationships and their health and welfare impacts, to increase our knowledge base and improve future solutions. One of our future challenges is to find solutions not just for noise but simultaneously for local air quality *and* climate effects *and* energy consumption. We won't have the luxury of considering one aviation impact in isolation from others.

In the near term, we want to accelerate the ability to employ operational procedures, such as continuous descent arrivals or CDA, to reduce aviation's environmental impact. CDA

allows an airplane to fly a continuous descent path to land at an airport, rather than the traditional "step downs" or intermediate level flight operations. The airplane initiates descent from a high altitude in a near "idle" engine (low power) condition until reaching a stabilization point prior to touch down on the runway. You can see in Chart 6 the results of a demonstration of CDA at Louisville Airport- and significant reduction in areas of exposure to aircraft noise.

CDA is one of those win-win strategies, having environmental and economic benefits, that can reduce noise, emissions, and fuel burn, as well as flight time. Our successful demonstrations at Louisville and Atlanta airports and the integration of a CDA at Los Angeles airport are examples of the ongoing work. We are very pleased that this Committee's aviation reauthorization bill, H.R. 2881, includes a proposal that would help us enhance the development and use of CDA and other operational flight procedures. We also appreciate inclusion of a provision that would expand AIP eligibility to include environmental assessment of noise abatement flight procedures. These offer significant near-term help for reducing noise exposure.

There are also near term environmental benefits to be gained through airspace redesign. As you know from the recent hearing before this Subcommittee, the New York/New Jersey/Philadelphia Airspace Redesign would reconfigure that airspace to make routes and procedures more efficient and less complicated, allowing for improved use of available runways, and more flexibility to manage delays in severe weather. In addition to the benefits for delay reduction, which translates to economic savings, the environmental advantages include reduced fuel consumption over time which translates into reduced aircraft emissions, including greenhouse gas emissions. As the FAA analysis made clear, this redesign is not without impacts on some individuals and communities, especially in the short-term. However, the total number of individuals exposed to a day-night sound level greater than 45 dB will be reduced by more than 600,000. These are impressive gains.

Setting aside this particular redesign effort, it is important to remember there are airspace redesigns ongoing across the U.S., and these efforts are very important from an

environmental standpoint in addition to reducing delays. Without the ability to change the structure of airspace across the U.S., we will not be able to take full advantage of the capabilities that advanced aircraft and air navigation procedures offer. This will translate into less ability to manage not only noise, but local air quality and greenhouse gas emissions impacts from aviation.

Advances in technology must play a crucial role if we are to repeat our successful past thirty-year effort at reducing noise while growing the aviation system. We are identifying technology gaps and targets we will need to address to meet the noise challenges in the years ahead. Proposals in the pending aviation reauthorization bill, such as the consortium to develop lower energy, emissions and noise technology (CLEEN) and the pilot program for demonstrating promising technologies, would offer FAA and other partners the ability to pursue research and accelerate the development of new noise and emissions technologies, as well as alternative fuels to reduce noise and emissions of the U.S. fleet. We also have a cooperative working relationship with NASA and broad participation of outside stakeholders through our research advisory committee, the Partnership for AiR Transportation Noise and Emissions Reduction (PARTNER) Center of Excellence advisory board, and our NextGen Environmental Working Group.

Another vital area of effort is FAA's work internationally. FAA represents the U.S. at the International Civil Aviation Organization (ICAO) in developing new noise and emissions standards, including a pivotal role in the models and data underpinning these decisions. We are pursuing partnerships with other authorities and the international industry in a number of areas to advance improvements in aviation's environmental performance. For example, earlier this year the FAA and European Commission announced the Atlantic Interoperability Initiative to Reduce Emissions, or AIRE. The AIRE initiative is targeted to undertake demonstrations in both the U.S. and Europe to accelerate the ability of airlines and air navigation authorities to employ air traffic procedures that reduce aviation's emissions and noise footprint on either side of the Atlantic.

In closing, it is clear today that aircraft noise impacts the public and remains a key constraint on the future growth of aviation. It is also evident we have no "silver bullets." What we do have is a clear vision of what the Next Generation system needs to achieve in environmental improvements – absolute reduction in significant impacts even while growing the system, and we are working hard toward those goals. We initiated a number of endeavors that will help get us there and have presented proposals in our reauthorization that are vital if we are to be successful in these efforts—proposals that this Committee has supported in large part.

Success will require partnership and shared responsibilities among many stakeholders—with air carriers operating quieter and cleaner aircraft; airports providing good planning and local environmental mitigation measures; air traffic management facilitating environmentally-friendly procedures consistent with safe and efficient operation; federal programs and investments supporting the necessary technology and operational improvements and environmental mitigation; and local governments ensuring compatible land-use around airports. The FAA is committed to working with all stakeholders to find the right balance to manage capacity growth in a sound environmental manner.

Mr. Chairman, that completes my prepared statement. I would be happy to answer any questions you and the Members may have.

Chart 1: Trends in Aircraft Noise Exposure and Capacity Expansion

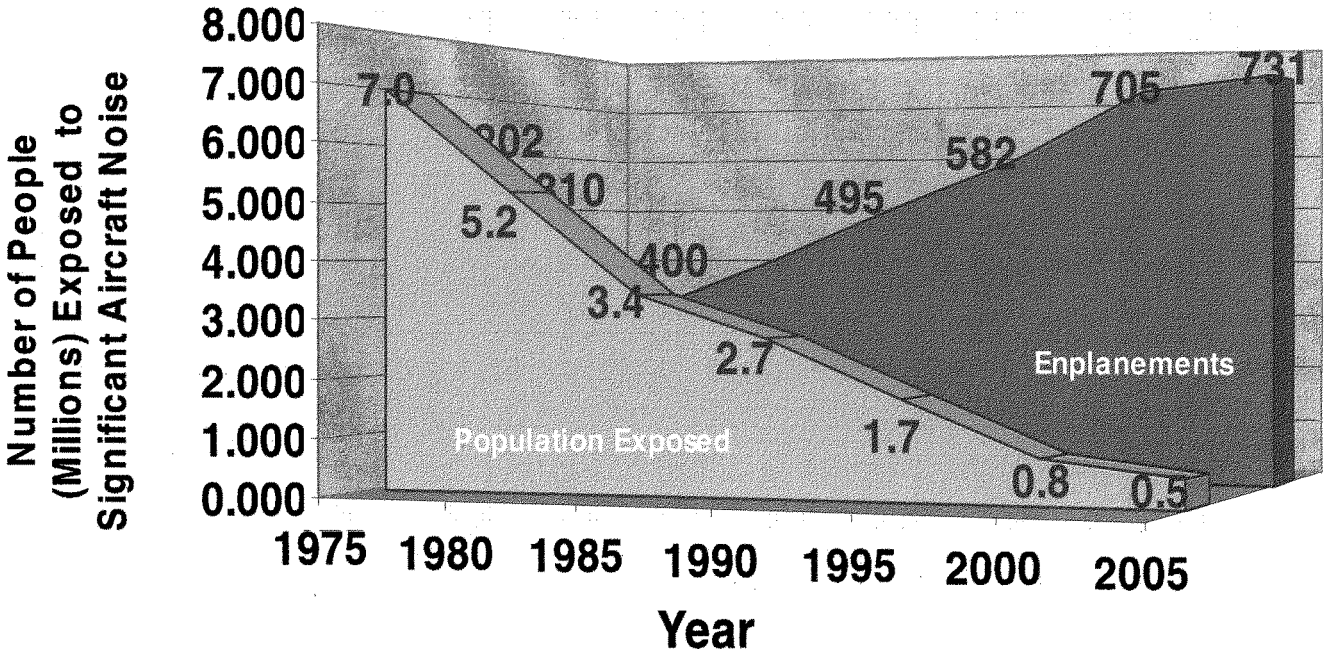


Chart 2: Progress in Noise Reduction

Significant Progress has been made…

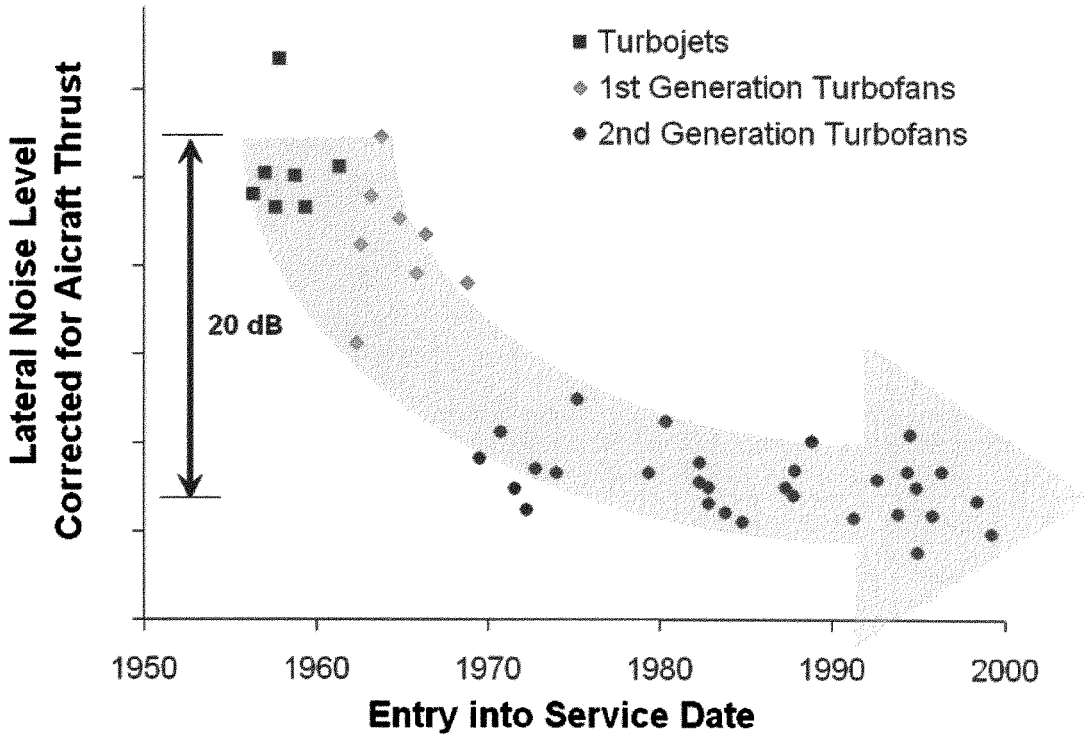


Chart 3: Financing Noise Mitigation: Resources Invested

- Approved Noise Compatibility Programs:

  325 (includes updates)

- AIP Grants Related to Noise:
  - FY 1982-2007: $5.0 billion
- PFC Funding Related to Noise:
  - FY 1992-2007: $2.8 billion

Chart 4: National Noise Exposure Trends vs. FAA Targets

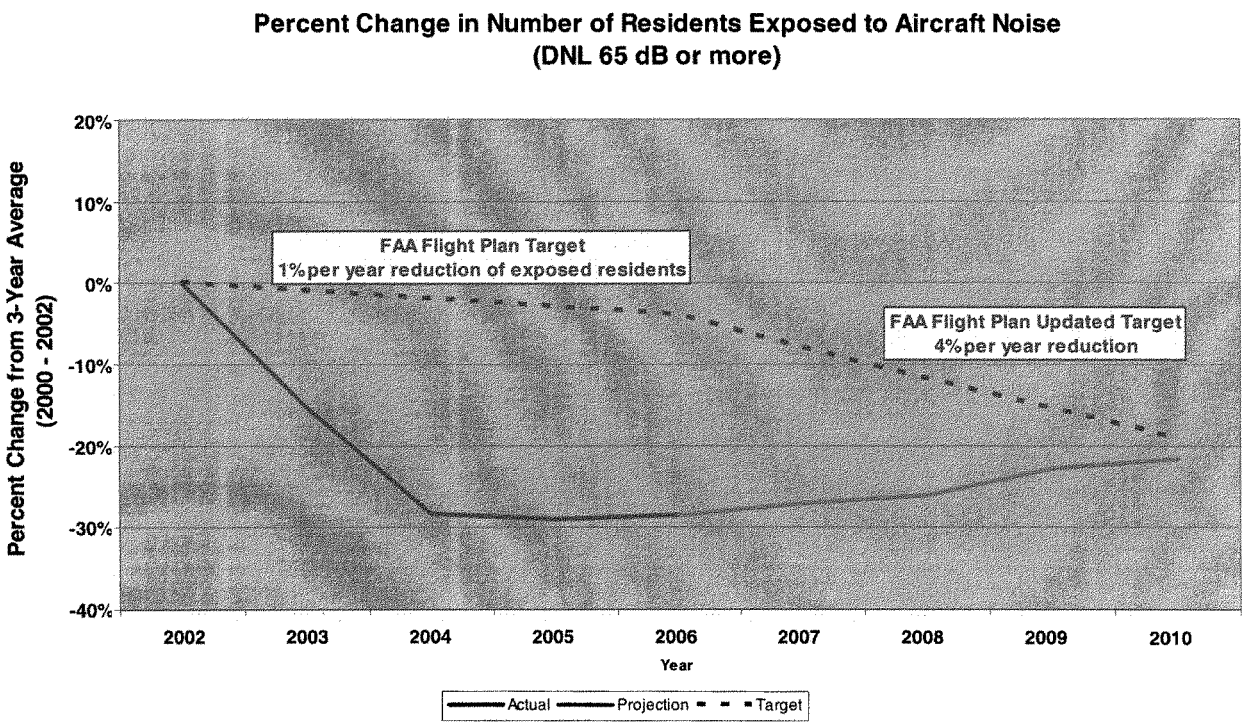


Chart 5: Hushkitted Aircraft in US Fleet

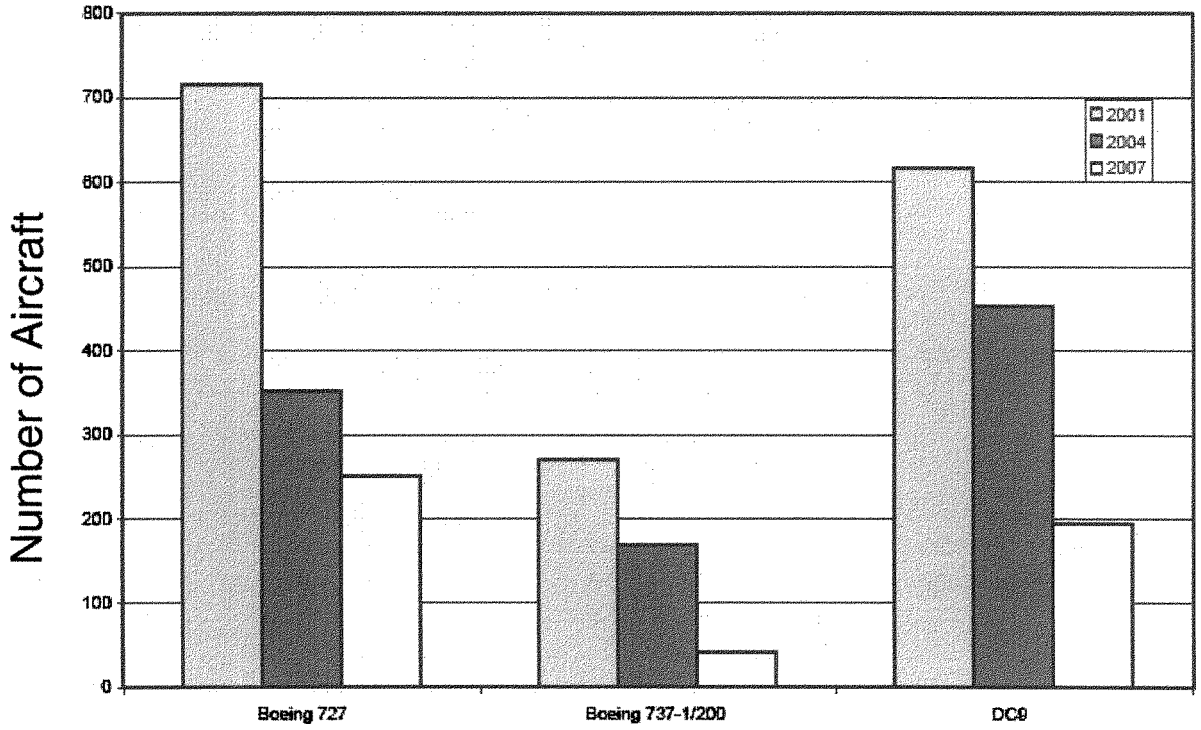
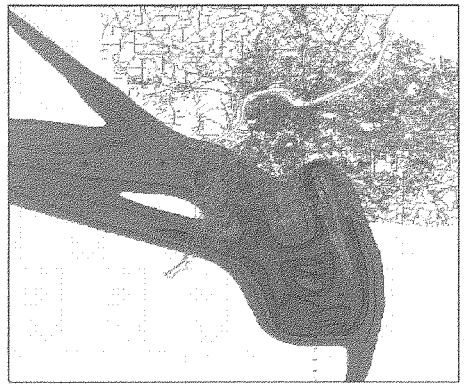
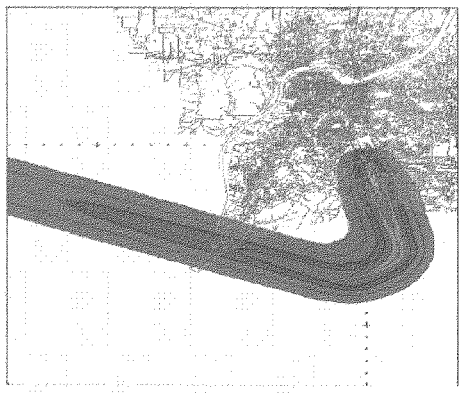


Chart 6: Results of Continuous Descent Arrivals at Louisville

Normal Flight Arrivals



Using CDA



Reduction in Noise Exposure Area

3 Hr. DNL	35.0	40.0	45.0	50.0	55.0	60.0	65.0
Square miles	360.49	208.89	108.08	46.05	19.71	6.32	2.31
Color							

U.S. Department
of Transportation
**Federal Aviation
Administration**

Office of the Assistant Administrator for Policy,
Planning and Environment

800 Independence Avenue, SW
Washington DC, 20591

DEC 2 0 2007

Ms. Holly E. Woodruff Lyons
Republican Staff Director and Senior Counsel
Subcommittee on Aviation
Committee on Transportation and Infrastructure
2251 Rayburn Office Building
Washington, DC 20515-6257

Dear Ms. Holly Woodruff Lyons:

Please find enclosed responses to questions for the record submitted by Subcommittee Ranking Member Thomas E. Petri following the October 24, 2007 hearing held by the Subcommittee on Aviation on "Aviation and the Environment: Noise."

I hope the information is helpful. If you have any questions about the enclosure or if I may be of further assistance, please do not hesitate to contact me at 202 267-3576.

Sincerely,

Carl E. Burleson
Director, Office of Environment and Energy

Enclosure

Enclosure

FAA Response to Questions for the Record Submitted by Representative Petri following the October 24, 2007 Hearing on *Aviation and the Environment: Noise.*

Question: What do you believe the Federal government can do to promote compatible land use planning by state and local governments?

Response: Compatible land use planning is important for a healthy interface between airports and communities. It helps address quality-of-life concerns and prevents land use encroachment that can hinder needed airport capacity development. The FAA promotes compatible land use planning around airports within the limits of congressionally-granted authority. FAA employs a variety of measures at its disposal. These include technical guidance, the airport noise compatibility program under Federal Aviation Regulations (FAR) Part 150, Airport Improvement Program (AIP) funding, airport sponsors' compliance with a compatible land use assurance in AIP grant agreements, and a program enacted in Vision 100 legislation to promote land use planning by state and local governments around large and medium airports where there is no Part 150 program or an outdated program. Unfortunately, this Vision 100 program had a sunset date of September 30, 2007. We are pleased to see its proposed renewal in H.R. 2881.

In addition, the FAA has established and chairs an Airport Compatibility Planning Committee to assist in promoting compatible land use practices around airports by sharing best practices and information, identifying issues and barriers to effective planning, and discussing and promoting strategies for improvements. Committee members include representatives from other Federal agencies with land use concerns and roles, local governments, commercial and general aviation associations, the American Planning Association, environmental interests, and consultants. The FAA has funded several research efforts to undertake a closer examination of aspects of land use development and encroachment. We are asking the Airport Compatibility Planning Committee to review recent research and provide advice on the best use of results, whether additional research is warranted, and if so, in what areas more research would be the most productive.

Question: Should Congress make participation in the Part 150 Noise Compatibility Program mandatory? If not, why not?

Response: The FAA does not recommend making Part 150 mandatory. Under current law, any public use airport not exclusively used by helicopters is eligible to participate voluntarily in the Part 150 program. There are over 5,000 public use airports in the U.S. The National Plan of Integrated Airport Systems identifies approximately 3,400 of these airports as significant for the national system, and almost 300 airports participate in Part 150. In the FAA's experience, airports that do not participate either do not have sufficient local noise impetus or have their own individual programs outside the umbrella of Part 150. If Part 150 were to be made mandatory for all eligible public use airports, it would impose a substantial noise planning burden that far outweighs the benefits for many airports, and would overwhelm the FAA's ability to provide technical and funding support. Part 150 would be partially redundant for airports with ongoing environmental reviews under the National Environmental Policy Act (NEPA).

A mandatory Part 150 program would not necessarily yield additional noise benefits or produce new community mitigation programs. Part 150 is structured so that each airport sponsor has the authority to determine which measures to recommend in a Part 150 program. The FAA can only approve or disapprove recommendations based on specific statutory and regulatory criteria. Hence, going through a Part 150 planning process will not produce different results from an airport's current situation unless the airport sponsor opts to do so.

The undertaking of a Part 150 program tends to raise community expectations. This is a good thing when an airport sponsor utilizes Part 150 to put more noise mitigation measures into effect. However, if an airport sponsor does not think more measures are warranted or are affordable, the heightened community expectations that are not fulfilled by a mandated Part 150 effort can leave the airport and the community in a worse confrontational situation.

The FAA views the extension of the Vision 100 program of direct AIP grants to state and local governments for land use planning and projects around large and medium airports that do not have a Part 150 program, or that have an outdated Part 150 program, as a good option. This extension is proposed by section 146 of H.R. 2881.

Question: How important is the need for airspace redesign across the country if we're going to continue to see reduction in environmental impacts?

Response: The purpose of airspace redesign is to address congestion and delays for some of the busiest airports and airspace in the nation. The redesign efforts are critical in that they enhance the efficiency and reliability of the national airspace system (NAS), while providing the ability to accommodate projected growth and use of new technologies. Noise reduction is not the focus of airspace redesign, and it is not FAA policy to move aircraft from overflying one community to another for noise purposes. At the same time, the FAA takes noise and other environmental impacts into consideration during the design and environmental review processes. We use this information, together with operational needs, in selecting the preferred alternative and for mitigation.

With the anticipated growth in aviation demand, it will be important to achieve the best efficiencies not only to reduce congestion and delays, but also to reduce fuel consumption, aircraft emissions, and climate change effects. Future flexibility in airspace management also provides new opportunities for noise mitigation, consistent with airspace needs.

United States Government Accountability Office

GAO

Testimony

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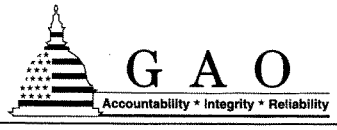
AVIATION AND THE ENVIRONMENT

Impact of Aviation Noise on Communities Presents Challenges for Airport Operations and Future Growth of the National Airspace System

Statement of Gerald L. Dillingham, Ph.D.
Director, Physical Infrastructure Issues



GAO-08-216T

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Highlights

Highlights of GAO-08-215T, a testimony before the Subcommittee on Aviation, Committee on Transportation and Infrastructure, House of Representatives

Why GAO Did This Study

To address projected increases in air traffic and current problems with aviation congestion and delays, the Joint Planning and Development Office (JPDO), an interagency organization within the Federal Aviation Administration (FAA), is working to plan and implement a new air traffic management system, known as the Next Generation Air Transportation System (NextGen). This effort involves implementing new technologies and air traffic control procedures, airspace redesign, and infrastructure developments, including new or expanded runways and airports. Community opposition is, however, a major challenge, largely because of concerns about aviation noise. As a result, according to JPDO, aviation noise will be a primary constraint on NextGen unless its effects can be managed and mitigated.

GAO's requested testimony addresses (1) the key factors that affect communities' level of exposure to aviation noise, (2) the status of efforts to address the impact of aviation noise, and (3) major challenges and next steps for reducing and mitigating the effects of aviation noise. The testimony is based on prior GAO work (including a 2000 survey of the nation's 50 largest airports), updated with reviews of recent literature, FAA data and forecasts, and interviews with officials from FAA and the National Aeronautics and Space Administration (NASA), industry and community representatives, and aviation experts.

To view the full product, including the scope and methodology, click on GAO-08-215T. For more information, contact Gerald L. Dillingham at (202) 512-2834 or dillinghamg@gao.gov.

October 24, 2007

AVIATION AND THE ENVIRONMENT

Impact of Aviation Noise on Communities Presents Challenges for Airport Operations and Future Growth of the National Airspace System

What GAO Found

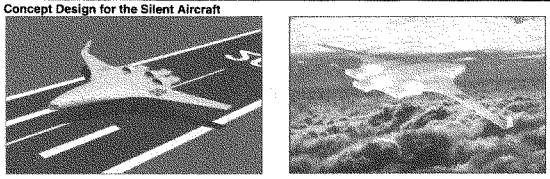
Key factors affecting the level of aviation noise that communities are exposed to include jet aircraft operations, land uses around airports, and aircraft flight paths. With more stringent regulatory standards for aviation noise, enabled by advances in technology, aircraft operations have become quieter, but aviation noise is still a problem when communities allow incompatible land uses, such as residences, schools, and hospitals, near airports. Aircraft flight paths also expose communities to aviation noise, and airspace redesign efforts, which are intended to improve aviation system safety and efficiency, may expose some previously unaffected communities to noise, raising concerns in those communities about higher noise levels.

A number of efforts are underway or planned to address the impact of aviation noise on communities. More stringent noise standards for aircraft have been implemented, billions of federal dollars have been spent to soundproof buildings around airports, federal and private funding for research and development has advanced technologies to reduce aviation noise, NextGen technologies and procedures are being planned and will contribute to reducing communities' exposure to noise, some airports have imposed restrictions on the operation of certain aircraft, and airports are reaching out to communities to address their concerns about aviation noise and gain support for projects to increase airports' safety and efficiency.

Major challenges for reducing or mitigating the effects of aviation noise include continuing to make technological advances; obtaining substantial funding—from the federal government for NextGen in particular and from industry for equipping aircraft with new technologies—and cooperating on land-use issues. Next steps could include state and local actions to limit incompatible development, FAA's issuance of guidance related to the disposal of land acquired with federal funding for noise mitigation purposes, and the passage of legislative proposals that would address environmental issues, including the reduction of aviation noise.

FAA and NASA officials generally agreed with the information presented in this testimony and provided technical clarifications that GAO incorporated.

Concept Design for the Silent Aircraft



Source: Cambridge-MIT Institute.

Mr. Chairman and Members of the Subcommittee:

I appreciate the opportunity to testify before you today on the issue of aviation noise. As you know, air traffic has grown steadily over the past 5 years and is expected to continue growing, from 740 million air passengers in fiscal year 2006 to nearly 1 billion in 2015. With this growth has come a host of benefits and costs, from greater productivity and mobility for the nation as a whole to increased air traffic congestion, flight delays, and environmental issues, including aviation noise. To handle the forecasted growth, the Joint Planning and Development Office (JPDO), an interagency organization within the Department of Transportation's Federal Aviation Administration (FAA), is working to plan and implement a new air traffic management system, the Next Generation Air Transportation System (NextGen). Critical objectives for NextGen are to improve the overall safety and increase the efficiency of the National Airspace System. Achieving these objectives for airports will involve the implementation of new technologies and air traffic control procedures, airspace redesigns, and infrastructure developments, including new or expanded runways and airports. Community opposition to these developments is, however, a major challenge, largely because of concerns about aviation noise. According to JPDO's 2007 Concept of Operations document, "current operational trends show that environmental impacts . . . will be the primary constraint on the capacity and flexibility of the NextGen unless these impacts are managed and mitigated." JDPO further states that noise has been and will continue to be a primary area of concern. Legislative proposals to reauthorize FAA[1] include a number of provisions designed to address aviation noise issues.

My testimony today addresses the following questions: (1) What are the key factors that affect the level of aviation noise exposure for communities? (2) What is the status of efforts to address the impact of aviation noise on communities? (3) What are the major challenges and next steps for reducing and mitigating the effects of aviation noise? My statement is based on our previous reports on aviation and the environment, one of which included a survey of the nation's 50 largest

[1]H.R. 2881 and S. 1300.

airports;[2] a synthesis of recent empirical literature; current FAA data and forecasts; published reports of selected airports' noise abatement initiatives and community-based aviation noise groups' efforts; and interviews with officials from FAA and the National Aeronautics and Space Administration (NASA), representatives of aviation industry groups and aircraft manufacturers, and selected aviation noise experts. We conducted our work from September to October 2007 in accordance with generally accepted government auditing standards.

Summary

Key factors affecting the level of aviation noise that communities are exposed to include jet aircraft operations, land uses around airports, and aircraft flight paths. Jet aircraft operations are the primary source of aviation noise, particularly during takeoffs and landings, and people's perceptions of aviation noise, which vary from one individual to another, can also influence communities' views on aviation noise. As a result, even comparatively low levels of noise exposure can create concerns in communities surrounding airports. More stringent standards for aviation noise—imposed through legislation and regulation and enabled by advances in technology—have, together with the airlines' response to the economic downturn following the terrorist attacks of September 11, 2001, led to the retirement or modification of older, noisier jet aircraft and their replacement with new, quieter jet aircraft. According to FAA, this change in the composition of the U.S. commercial fleet has been the most important factor in decreasing noise around airports. Local government decisions that allow communities to expand near airports may, however, erode the reductions in noise achieved through the introduction of quieter aircraft. FAA has issued guidance that discourages incompatible land uses, such as residences, schools, and hospitals, in areas with significant aviation noise, but communities face strong development pressures, and research suggests that federal land-use guidelines have had mixed results in deterring residential development in these areas. Finally, aircraft flight paths expose communities to aviation noise near airports, and changes in those flight paths may reduce or eliminate noise exposure in some communities and introduce or increase it in others. To date, FAA's

[2]See GAO, *Aviation and the Environment: Airport Operations and Future Growth Present Environmental Challenges*, GAO/RCED-00-153 (Washington, D.C.; Aug. 30, 2000). For this report GAO surveyed officials from the nation's 50 busiest commercial service airports to obtain their views on the key environmental concerns and challenges affecting airports' operations and future growth and to identify the efforts under way to address these concerns.

airspace redesign projects, which are intended to improve safety and efficiency while reducing congestion and delays, have generally involved changes in flight paths above 10,000 feet and have not greatly affected community noise levels. A planned project in the New York/New Jersey/Philadelphia area would, however, involve changes to flight paths at lower levels and has led to expressions of concern from communities that could experience higher noise levels.

A number of efforts are underway or planned to address the impact of aviation noise on communities. First, more stringent noise standards, which are significantly lower than the prior standards, are being implemented as new aircraft are being designed, built, and integrated into the U.S. commercial fleet. However, the implementation of these new standards may not have a significant impact on aviation noise levels because many aircraft in the current fleet met the new standards before they were required, the new aircraft will be integrated into the fleet over time, and increases in air traffic are likely to offset the reductions in noise levels attributable to quieter aircraft. Second, noise mitigation measures can reduce the impact of aviation noise on communities. These measures, which are typically carried out by airports and funded primarily through FAA's voluntary Part 150 Noise Compatibility program, include soundproofing buildings, acquiring noise-sensitive properties, and relocating people. Nearly 300 airports have participated in the Part 150 program and have both received and raised billions of dollars for mitigation measures. New FAA guidance, which is scheduled for release at the end of 2007, and the proposed FAA reauthorization legislation would respectively facilitate and expand airports' noise mitigation options. Third, research has led to the development of technologies that have reduced aviation noise, and this research is continuing, although declines in federal funding may have slowed the pace of government efforts. Both the National Aeronautics and Space Administration (NASA) and FAA have sponsored aviation noise research, often in collaboration with industry or academia. Such collaboration, for example, has contributed to the development of a Boeing aircraft that is expected to produce 60 percent less noise than its predecessor. Fourth, the planning for NextGen includes an environmental focus because concerns about aviation noise and emissions, which will grow with the expected increase in air traffic, will constrain efforts to expand system capacity. New technologies are being designed to control aircraft more precisely during approach and descent, thereby enabling the use of procedures that will reduce communities' exposure to aviation noise and emissions. Fifth, at an airport's request, FAA can impose restrictions on the operation of certain types of aircraft to reduce the impact of noise in surrounding communities. Generally,

however, airports and airports negotiate such restrictions without involving FAA. Finally, airports are using additional studies of aviation activity, supplemental measures of the effects of exposure to aviation noise, and community outreach and education to respond to community concerns about aviation noise and gain support for projects to increase airports' safety and efficiency.

Major challenges and next steps for reducing or mitigating the effects of aviation noise include technological advances, substantial funding from government and the aviation industry, and cooperation on land-use issues. In the future, as in the past, technological advances through research and development will be the key to reducing aviation noise, but the timing of future advances is uncertain. Furthermore, additional federal funding for noise reduction research and development programs may be difficult to obtain without shifting funds from other federal noise reduction efforts, such as the Part 150 program. For the airlines, equipping new and existing aircraft with the NextGen technologies that will reduce communities' exposure to aviation noise will also be challenging. FAA estimates that the costs of equipping the fleet to take full advantage of NextGen will be about $14 billion. Yet even with quieter aircraft and quieter and more efficient NextGen procedures, aviation noise will persist around airports, and incompatible land uses will pose challenges for airports and FAA. State and local officials can help to address these challenges through land-use planning and regulations that limit incompatible development, and FAA can complete and issue proposed guidance that will clarify the options available for airports to dispose of adjacent land previously purchased with federal grants to buffer surrounding communities from aviation noise. The options, which would require passage of the pending FAA reauthorization legislation, include selling the land and using the sale proceeds for environmental projects. Cooperation on land-use issues among officials at all levels of government and aviation stakeholders will also be necessary to reduce or mitigate aviation noise sufficiently to obtain public buy-in for the capacity enhancement projects that are critical to a safe and efficient national air transportation system.

We provided a draft of this testimony to FAA and NASA for review and comment. The agencies generally agreed with the information presented and provided technical clarifications that we incorporated as appropriate.

Jet Aircraft Operations, Land Uses, and Aircraft Flight Paths Are Key Factors That Affect Communities' Level of Noise Exposure

Noise is one of the most significant environmental impacts of aviation. Although noise is present around virtually every airport in the country, the problem is greatest near busy commercial airports served by large jet aircraft. According to FAA, the retirement of older, louder aircraft and ground-based noise-mitigation efforts over the past 35 years have reduced by over 90 percent the number of people affected by significant aviation noise levels—defined as a 65-decibel[3] day night level (DNL 65 dB) or greater[4]—despite nationwide increases in population and air traffic. FAA's estimates indicate that from 2000 to 2006 alone, the number of people affected by these noise levels dropped by more than a third, from about 780,000 to about 500,000. [5] Nevertheless, these half million people are still exposed to significant aviation noise levels, and as communities expand near airports just outside the highly exposed areas and as air traffic increases, millions more are affected by lower levels of aviation noise. Changes in aircraft flight paths can also affect communities' exposure to aviation noise, redirecting air traffic over some communities that were not previously exposed and diverting it from others.

Aircraft Operations Are the Major Source of Aviation Noise

Both jet aircraft engines and jet airframes produce aviation noise during aircraft operations, particularly during takeoffs and landings. Moreover, certain types of aircraft contribute disproportionately to the level of noise around airports. In our 2000 report on environmental concerns and challenges for airports, we reported that the primary issue of concern identified by officials of the nation's 50 busiest airports was the noise generated by older jet aircraft. With the implementation of technologies to reduce aircraft engine noise, efforts to reduce noise from airframes will become more important.

[3]A decibel is a unit for expressing the relative intensity of sounds on a scale from zero for the average least perceptible sound to 130 for the average pain level.

[4]The impact of aviation noise is usually analyzed in terms of the extent to which this noise annoys people by interfering with their normal activities, such as sleep, relaxation, speech, television viewing, and school and business operations. The generally accepted model for assessing the effects of long-term noise exposure assigns additional weight to sounds occurring at night (between 10:00 p.m. and 7:00 a.m.), and when those sound levels exceed 65 decibels, individuals report a noticeable increase in annoyance.

[5]These estimates reflect a revision in FAA's method of estimating the number of people exposed to significant aircraft noise. FAA previously estimated that the number of people exposed to significant noise in 2000 was about 500,000.

As technologies for reducing aviation noise have advanced (see our discussion of some of these advances in the next section of this testimony), regulatory standards for jet aircraft noise have become more stringent. The Airport Noise and Capacity Act of 1990 authorized the Secretary of Transportation to reduce aviation noise through a program to phase out older, noisier aircraft – known as Stage 2 aircraft— by December 31, 1999. Aircraft owners could either retire Stage 2 aircraft weighing over 75,000 pounds or modify them with hushkits to sufficiently muffle the noise they generated to meet Stage 3 standards. FAA had adopted the Stage 3 standards in 1977, the year they were established by the International Civil Aviation Organization (ICAO), and all aircraft designed after that time were required to meet the Stage 3 standards, but previously certified aircraft designs were grandfathered until the 1990 act required that they be retired or modified.[6] However, the act exempted aircraft weighing less than 75,000 pounds, a category that includes older business class jets. Stage 2 aircraft that weigh less than 75,000 pounds and Stage 3 aircraft that have been recertified as such after being modified with hushkits are in compliance with current standards, although these aircraft tend to be louder than new aircraft in the same weight range.[7] Bills pending in both the House and the Senate[8] would require, with certain exceptions, that all existing aircraft meet Stage 3 standards, including those aircraft under 75,000 pounds that are currently exempted. In addition, in July 2005, FAA issued a Federal Aviation Regulation[9] requiring that all new jet aircraft designs be subject to the current, more stringent ICAO noise standards, known as Stage 4. Specifically, any new aircraft whose design was submitted to FAA for approval on or after January 1, 2006, must meet these standards, which are based on the Chapter 4 standards adopted by ICAO in 2001. The Stage 4 standards are 10 decibels

[6]ICAO is an advisory organization affiliated with the United Nations that aims to promote the establishment of international civil aviation standards and recommended practices and procedures. FAA is the U.S. representative to ICAO.

[7]Some older business class jets that do not meet Stage 3 standards are still in service. According to the Airports Council International-North America, these louder business jets pose a noise problem at some smaller airports.

[8]H.R. 2881 and S. 1300.

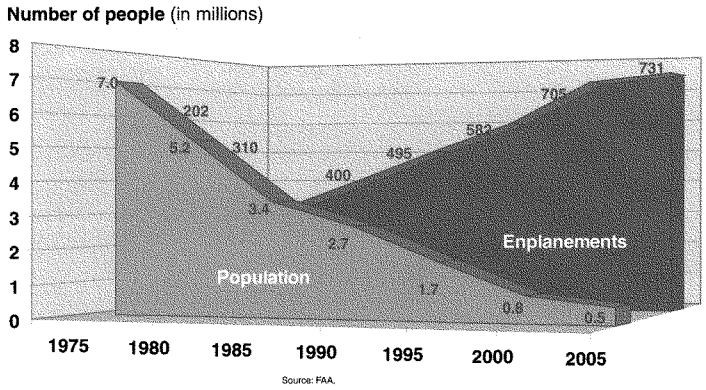
[9]14 CFR Parts 36 and 91.

lower on a cumulative basis[10] than the Stage 3 standards and represent a significant reduction in noise.

Since 2001, substantial progress has been made in retiring older, noisier aircraft. According to FAA, there has been a reduction of about 70 percent in the number of registered aircraft that have been modified with hushkits—mainly Boeing 727s and DC-9s. Today, there are 498 registered hushkitted aircraft, which make up about 8 percent of the U.S. commercial aircraft fleet. The replacement of these older aircraft with new, quieter aircraft has been the most important factor in decreasing noise around airports since the significant noise reductions achieved through the phaseout of Stage 2 commercial aircraft, according to FAA. Figure 1 indicates that the number of people exposed to significant noise levels has decreased even as the number of people flying has increased.

[10]Under the Stage 4 standards, none of an aircraft's maximum noise levels at takeoff, flyover, and approach can exceed Stage 3 noise levels. Compliance with the standards is determined by subtracting an aircraft's maximum takeoff, flyover, and approach levels from the maximum permitted noise levels. The differences obtained are the noise limit margins, which are added together to determine what is termed the effective perceived noise (EPN). When the three margins are added together, the total must be 10 EPN dB or greater; and when any two of the margins are added together, the sum must be 2 EPN dB or greater.

Figure 1: Trends in Aviation Noise Exposure and Enplanements

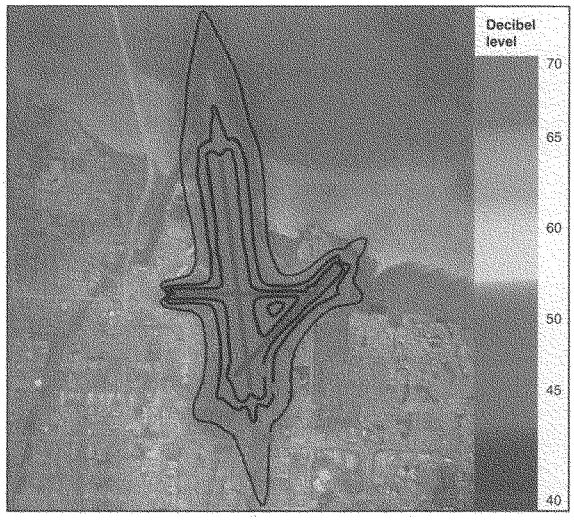


Source: FAA.

Incompatible Land Use Exposes Communities to Aviation Noise and Erodes Gains in Noise Control Achieved through More Stringent Standards and Advances in Technology

Decisions that allow communities to expand near airports may expose residences, schools, hospitals, and other uses to aviation noise. Such decisions are made primarily by local governments, but airports, which cannot control development in the communities that surround them, may nevertheless be held accountable by these communities for the effects of aviation noise. Although the areas around airports exposed to significant noise levels (DNL 65 dB or greater), known as noise contours (see fig. 2), have shrunk with the retirement of older aircraft, the incompatible use of land around airports remains a problem in dealing with the effects of aviation noise. Some stakeholders have said that the gains that have been made in noise attenuation through regulation and technology are being eroded or threatened by incompatible land use.

Figure 2: Aerial Photo Overlaid with Color-shaded DNL Contours



Source: Wyle Aviation Services.

FAA set the DNL 65 dB standard that is used to measure noise contours. This standard reflects the level of noise exposure over time that FAA has determined annoys people by interfering with normal activities such as sleep, relaxation, school, and business operations. FAA has also issued guidelines that identify land uses that would not be compatible with the noise generated by a nearby airport's operations, as well as land uses that could successfully be located close to an airport without interfering with their activity. Despite this guidance, however, strong pressure exists to develop residential areas around heavily used airports, and despite the steady decline in the number of people exposed to significant noise levels (DNL 65 dB and above), large numbers of people are still exposed to at least some noise around airports. And for FAA, population increases in areas around airports that are exposed to even moderate amounts of aviation noise pose a challenge because, given individuals' varying

sensitivity to noise, even comparatively low levels of exposure can generate community concerns. Population growth near airports also creates challenges for airports when planning expansion projects to meet the growing demand for air travel.

Any efforts to limit development have implications for the tax base of local communities. As a result, as FAA noted in a 2004 report to Congress on aviation and the environment,[11] there is a disconnect between federal aviation policy and local land-use decision-making. Until recently, evidence about trends in land use incompatible with airport activity was mostly anecdotal, but some empirical research is now available. For example research sponsored by FAA and NASA shows that for 92 commercial airports, between 1990 and 2000, "the effectiveness of existing federal land-use guidelines on reducing total noise exposure and deterring residential development inside the DNL 65 dB contours is mixed." Moreover, according to the research, "land-use planning has done little to address the increasing population aggregation on lands near existing noise footprints."[12]

Furthermore, according to FAA, incompatible land use is emerging as a problem around reliever airports, which predominantly service general aviation traffic that would otherwise go to nearby busy airports. These airports are located in quieter suburban and rural areas where aviation noise is more noticeable. Local governments with jurisdiction over land-use planning and development continue to permit building near airports, where developable land is comparatively plentiful. As a result, communities that did not exist when some airports were built are now opposing increases in aircraft operations and expansion at these airports.

[11]FAA, *Aviation and the Environment: A National Vision Statement, Framework for Goals and Recommended Actions* (Washington, D.C.: December 2004).

[12]Timothy F. LeDoux, *Airports and Their Cities: The Effectiveness of Mitigating Noise Exposure through Land Use Planning, 1990-2000*, Wyle Research Report WR 07-23, October 2007.

Airspace Redesign Initiatives May Change Some Communities' Exposure to Aviation Noise

The air traffic environment for the nation's airspace was designed and implemented in the 1960s and has undergone only minor changes over the years. However, the use of the airspace has changed significantly, with higher overall air traffic volumes and greater use of smaller and regional jet aircraft. As discussed later in this statement, FAA's airspace redesign initiatives have the potential to improve safety and efficiency by allowing the use of new arrival and departure procedures that can reduce the impact of noise and emissions on nearby communities. At the same time, though, they have led to concerns about aviation noise in some communities that were not previously exposed to it.

Airspace redesign projects usually involve changes in aircraft arrival and departure routes from airports. These changes may result in exposing some communities to less noise and others to more noise. FAA has completed over 30 airspace redesign projects, including projects around major airports such as those serving Las Vegas, Dallas-Fort Worth, Minneapolis, and Boston. According to FAA, between 2002 and 2007, airspace redesign projects have produced almost $700 million in customer benefits from reduced delays, more efficient routing, and reduced restrictions attributable to a more balanced air traffic control workload.

Until recently, most airspace redesign projects have involved changes in flight paths above 10,000 feet and have therefore not had a significant impact on noise levels in communities near airports. However, FAA has approved the most ambitious airspace redesign project to date, which involves flight path changes in the New York/New Jersey/Philadelphia airspace, including changes at levels below 10,000 feet. According to FAA, this airspace is some of the most complex and congested anywhere in the world, with about one third of the nation's commercial air traffic passing through it. Delays and congestion in this airspace or at area airports tend to ripple throughout the system. Airspace redesign projects have the potential to alleviate some of these problems at this critical chokepoint in the national airspace system.

Because the airspace redesign for the New York/New Jersey/Philadelphia area will make changes to arrival and departure routes, the noise contours in the area will also change, exposing some communities to less noise and others to more. According to FAA's analysis of the effect of the redesign, fewer people would be exposed to moderate to significant noise levels than is currently the case, but some people who live under the new flight paths would be exposed to higher though moderate levels of noise. On the basis of this analysis, the environmental impact statement prepared for the redesign project concludes that the project will not have a significant

environmental impact with respect to noise. However, the possible shift in noise contours has led to significant expressions of concern, including litigation in many of the communities that could experience higher though moderate levels of aviation noise. One of these communities, which has a large minority population, contends that the redesign would disproportionately affect minority neighborhoods. This contention could raise concerns about environmental justice.[13] We are currently reviewing the New York/New Jersey/Philadelphia airspace redesign at the request of this Subcommittee.

A Number of Efforts Are Underway or Planned to Reduce the Impact of Aviation Noise

To reduce the impact of aviation noise, FAA, in conjunction with NASA, aircraft and aircraft engine manufacturers, airlines, airports, and communities, follows what the International Civil Aviation Organization refers to as its "balanced approach." This approach recognizes that short-term opportunities to mitigate the impact of aviation noise on communities should be combined with longer-term efforts to reduce aviation noise. Efforts include reducing noise at the source through more stringent standards; implementing noise abatement programs in communities near airports; supporting research and development programs for new technologies to make aircraft quieter, developing and implementing NextGen technologies and procedures, and restricting aircraft operations . In addition, many airports address aviation noise issues through studies, supplemental analyses, and community outreach.

Implementation of More Stringent Noise Standards May Not Noticeably Reduce Current Noise Levels

As aircraft whose design was approved on or after January 1, 2006, are integrated into the fleet, the new Stage 4 noise standards will be implemented. While these standards are more stringent than the prior Stage 3 standards and have been adopted internationally as well as domestically, their implementation may not have a significant impact on aviation noise levels. According to the Airports Council International-North America, which represents many of the nation's airports and other

[13]Environmental justice generally refers to efforts to identify and address the disproportionately high and adverse human health and environmental impacts on minority and low income populations. In 1994, President Clinton issued an executive order requiring all federal agencies to make environmental justice a priority. In accordance with the executive order, the U.S. Department of Transportation issued an Order on Environmental Justice upholding principles laid out in the National Environmental Policy Act and other federal statutes that ensure the social, economic and environmental welfare of low-income and minority communities, as well as their involvement in the environmental and transportation decision-making processes.

stakeholders, the Stage 4 standards were already being met by a significant proportion of the aircraft in production when ICAO adopted its identical Chapter 4 standards in 2001. Additionally, aircraft manufacturers' sales forecasts indicate that most of the new aircraft coming into service in the near future will be for the international market rather than for the U.S. market.

During the discussions leading up to the adoption of the ICAO Chapter 4 standards, the European Union argued that more stringent noise limits would push technology toward quieter aircraft. However, under the current ICAO system, a key criterion for the adoption of new standards is that they must be found to be "technologically feasible"—that is, demonstrably capable of being introduced across a sufficient range of the fleet, as shown by the commercial deployment or deployability of technologies that can meet the specified noise reductions.[14] Aviation industry representatives indicated that they considered the ICAO process rational for several reasons, including "not pushing the technology envelope," which could lead to a potential trade-off with aircraft performance. Additionally, industry representatives have stated that new product development programs are already complex and pose many business and schedule risks. As a result, they believe it is inadvisable to force more aggressive standards because they could lead to delays in new programs. More recently, ICAO has formed independent review committees under its Long Term Technology Goals initiatives to begin discussions with stakeholders on technologies that might be available 10 to 20 years from now. These committees are not charged with developing standards, but rather with involving stakeholders in these early discussions and preparing a report based on these efforts that is designed to stimulate further development of the most promising technologies and better inform ICAO when new standards may need to be considered.

[14]The other criteria for adopting new standards are that they must provide environmental benefits, be economically reasonable, and take the potential interrelationships between noise and emissions into account.

Noise Mitigation Programs Have Reduced Adverse Noise Effects, and Proposed Guidance and Proposed Legislation Would Support Further Noise Mitigation Efforts

Most airports are owned and operated by state governments and local municipalities. Therefore, the primary responsibility for addressing community concerns about noise resides with these entities. Nevertheless, airports can reduce the impact of noise on surrounding communities by undertaking measures to mitigate incompatible land use, such as acquiring noise-sensitive properties, relocating people, modifying structures to reduce noise, encouraging compatible zoning, and assisting in the sale of affected properties.

FAA supports airports' efforts to mitigate aviation noise through its voluntary noise compatibility program, known as the Part 150 Noise Compatibility Program, which provides guidance to airports on the types of land uses that are incompatible with certain levels of airport noise and encourages them to develop a noise compatibility program to reduce and prevent such uses. As part of the process, airports map the area affected by the noise and estimate the affected population. According to FAA, mitigation measures, such as soundproofing homes, have brought relief to tens of thousands of people in neighborhoods near long-established airports since the early 1980s.

Airports that participate in the Part 150 program can receive noise set-aside funds from the Airport Improvement Program (AIP),[15] which they must match to varying degrees, depending on their size.[16] According to FAA, nearly 300 airports have participated in the program. These funds can be used to, among other things, soundproof buildings and support relocation by acquiring homes in areas with significant noise. Thirty five percent of AIP discretionary funds are reserved for planning and implementing noise compatibility programs. In fiscal year 2006, FAA issued 90 noise-related AIP grants totaling $305 million.

Since the early 1980s, the federal government has issued grants or allowed airports to impose charges to mitigate noise around many airports. According to FAA, it has provided about $5 billion in AIP grants and

[15]The AIP program provides federal funds for development projects at the entire range of the nation's 3,400 airports – from small general aviation airports to the very largest airports that handle several million passengers per year.

[16]According to FAA, noise projects are eligible for 80 percent funding under AIP for large- and medium-hub airports and 95 percent funding at small, nonhub, general aviation, and reliever airports.

airports have used about $2.8 billion in passenger facilities charges (PFC)[17] for Part 150 noise mitigation studies and projects. In total, this funding amounts to nearly $8 billion (see table 1). FAA officials further noted that while the vast majority of airport noise mitigation projects use some AIP or PFC funding, airports may undertake projects with other financing.[18]

Table 1: AIP and PFC Investments for Noise-Related Purposes through Fiscal Year 2007

Dollars in millions	
AIP funds, fiscal years 1982-2007	**Funding**
Mitigation measures for residences	$1,903
Land acquisition	$2,170
Noise monitoring system	$170
Mitigation measures for public buildings	$703
Noise compatibility plan	$87
Total AIP funds	**$5,033**
PFC funds, fiscal years 1992-2007	
Multiphase	$1,283
Land acquisition	$481
Soundproofing	$1,018
Monitoring	$31
Planning	$15
Total PFC funds	**$2,828**
Grand total	**$7,861**

Source: FAA.

Although all airports are eligible to participate in the Part 150 program, some of the busiest commercial airports do not. Among these are New York's JFK International and La Guardia, Newark International, Houston's George Bush Intercontinental, Dallas-Fort Worth International, Boston-Logan International, Dulles International, O'Hare International, and Miami International (see app. I for a list of those airports among the 50 busiest that do not participate in the Part 150 program). According to FAA, some

[17] Passenger facility charges are fees airports can charge passengers to fund FAA-approved projects. Not all airports charge these fees.

[18] According to FAA, noise projects are 100 percent eligible under PFC and airports can use PFC funds for the required match for AIP funding.

airports have chosen not to participate in the Part 150 program for a variety of reasons. Some airport operators view the program as too complicated, costly, and difficult to implement. FAA officials note that some larger airports that have chosen not to participate in the program may have such a significant number of incompatible land uses that it would be financially prohibitive to implement mitigation measures in all areas significantly affected by noise and that the projects that were undertaken could take decades to complete. In addition, in some cases, neighborhoods are so clustered together that mitigation measures would have to be applied to a substantial number of homes outside significant noise contours in order to establish equitable neighborhood boundaries. FAA officials further note that an airport's nonparticipation in the Part 150 program does not mean that the airport does not have an airport noise mitigation program. For example, Boston Logan Airport has a noise program that predates the Part 150 program and qualifies for federal noise mitigation funding under the program through a grandfathering provision. Airports can also use AIP discretionary grant and PFC funds for noise mitigation without joining the Part 150 program. In addition, some soundproofing of schools and healthcare facilities is eligible for federal funding even if an airport does not participate in the Part 150 program.[19]

Besides providing funding for airports' noise mitigation efforts through the Part 150 program, FAA published draft guidance in June 2007 on the acquisition, management and disposal under AIP of noise land—that is, land that is exposed to significant noise levels. The guidance initiative was in part a response to the findings of an audit by the Department of Transportation Inspector General of 11 airports that disposed of land acquired for noise mitigation purposes.[20] The audit found that each of the 11 airports had noise land acquired with AIP funds, ranging from nominal acreage at several airports to hundreds of acres at others, that either was no longer required for noise compatibility purposes or did not have a documented need for airport development. The Inspector General concluded that with improved oversight of noise land and its disposal, FAA could recover an estimated $242 million for the Airport and Airways Trust Fund, which provides most of the funding for aviation programs, or

[19] 49 U.S.C. 47504 c (2) (D).

[20] U.S. Department of Transportation, Office of the Inspector General, *Audit of the Management of Land under Airport Noise Compatibility Programs* (Washington, D.C.: Sept. 30, 2005).

for other airport noise mitigation projects.[21] This finding was particularly important in light of the constrained resources that are available for all aviation programs. The final FAA guidance, which is scheduled for issuance by the end of calendar year 2007, explains the current options for reinvesting or transferring the proceeds from the sale of noise land acquired under AIP, giving preference to investment in airport noise compatibility projects. Provisions in the House[22] and Senate[23] reauthorization proposals would authorize these options. These provisions have the potential to help airports further mitigate the adverse effects of the incompatible land uses around airports and could provide additional resources for noise mitigation and other AIP-eligible investments.

The House reauthorization bill (H.R. 2881) also contains other provisions that, if enacted, could enhance FAA's and airports' efforts to mitigate the impact of noise on communities. Section 503 would allow FAA to accept funds from airport sponsors[24] to conduct special environmental studies to support approved noise compatibility measures for federally funded airport projects. In addition, Section 504 would allow FAA to accept funds, including AIP grants and PFC funds, from a sponsor in order to hire staff or obtain services to provide environmental reviews for new flight procedures that have been approved for airport noise compatibility purposes. Finally, Section 507 would authorize a new pilot program to allow FAA to fund six environmental mitigation demonstration projects at public-use airports to take previously laboratory-tested environmental research concepts into the airport environment in order to determine if they can measurably reduce or mitigate the environmental impacts of aviation noise or emissions.

[21]Under current law, an airport that disposes of noise land acquired with AIP grant funds is required either to return a proportional amount of the sale proceeds to the Trust Fund or to reinvest that amount in a noise compatibility project at the airport.

[22]FAA Reauthorization Act of 2007, House of Representatives Report 110-331, 110th Congress 1st Session, Section 132, pg. 9, September 17, 2007.

[23]Aviation Investment and Modernization Act of 2007, U.S. Senate, 110th Congress 1st Session, Section 203, pg. 30, May, 2007.

[24]An airport sponsor is the entity that owns the airport. For example, the City of Los Angeles is the sponsor for Los Angeles International Airport.

Past Research Has Significantly Advanced Noise Reduction Technologies, and Efforts Are Continuing, though Federal Funding Has Declined

Research and development of technologies for reducing aviation noise has led to advancements that have significantly reduced the amount of noise produced by aircraft, and this research continues, although further advancements will be challenging. NASA, FAA, academic institutions, and the aircraft and manufacturing industry are all involved in research and development projects aimed at reducing aviation noise and its impacts.

Collaboration with Industry and Others Has Advanced Research on Aviation Noise

NASA, in partnership with the aircraft and aircraft engine manufacturing industry, has contributed to a number of advancements in aircraft engine and airframe technology that have substantially reduced the amount of noise produced by aircraft and may lead to further reductions in the future, depending on the extent to which current research leads to noise-reducing aircraft engine and airframe designs. For example, through partnerships with industry, NASA has conducted research on engine noise reduction technologies that have significantly reduced aviation noise. Research on the use of composites has also enabled reductions in the weight of aircraft, which affects the amount of noise the airframe produces. As a result of these and other advancements, the newest aircraft currently in production will produce substantially less noise than the models they will replace. For example, Boeing estimates that the 787 aircraft will produce 60 percent less noise than the 767 and the noise from the 747-800 will be 30 percent less than the 747-400 it is replacing. Similarly, Airbus says that its new A-380 jumbo jet will produce 46 percent less noise than the 747-400. However, industry representatives have indicated that returns are diminishing from these types of improvements.

FAA conducts a significant amount of its research on aviation noise issues, much of it through the Partnership for Air Transportation Noise and Emission Reduction (PARTNER), the Department of Transportation's Volpe National Transportation Systems Center, and other entities. PARTNER is a Center of Excellence that brings together experts from government, academia, and industry.[25] Sponsored by FAA, NASA and Transport Canada,[26] PARTNER includes 11 collaborating universities and

[25]FAA Centers of Excellence are FAA partnerships with universities and affiliated industry associations and businesses throughout the country that conduct aviation research in a number of areas including advanced materials, aircraft noise and emissions, and airworthiness.

[26]Transport Canada is the department within the government of Canada that is responsible for developing policies, regulations and services for the Canadian transportation system.

approximately 50 advisory board members who represent aerospace manufacturers, airlines, airports, state and local governments, and professional and community groups. The collaborating universities and organizations represented on the advisory board provide equal matches for federal funds for research and other activities. PARTNER projects related to aviation noise involve testing alternative descent patterns; identifying a means to reduce aircraft landing noise, fuel consumption, and emissions; assessing the human health and welfare risks of aviation noise; and developing online resources to better inform the public about aviation noise issues. According to FAA, in the last 10 years, it has spent about $42 million on research to characterize noise and improve prediction methods, including developing a capability to determine the trade-offs between noise and emissions and quantifying the costs and benefits of various mitigation strategies.

Federal Funding for Aviation Noise Research Has Declined

Federal funding for aviation noise research has declined over the past decade, particularly for NASA, which provides most of the federal funding for aeronautics research. NASA's budget for aeronautics research has dropped by about half over the past decade and is about $717 million for fiscal year 2007.[27] Partly to address this overall funding reduction, NASA has reorganized its aeronautical research portfolio to focus on what it calls "fundamental" research—a relatively early stage in the research and development process that is less costly than the later stages.[28] According to FAA, the combination of a dramatic decrease in NASA's funding and the reorganization of its aeronautical research portfolio to focus on fundamental research has left a gap in the near- and mid-term applied research and development that could produce technological solutions within the NextGen time frame.

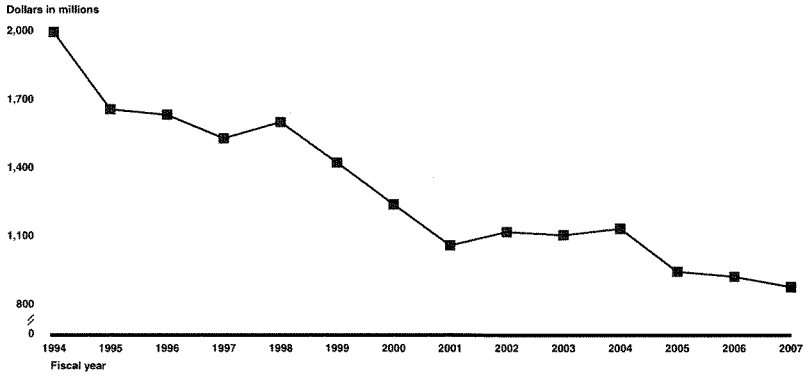
[27]According to NASA, about $58 million this budget goes toward noise-related research for subsonic fixed-wing aircraft.

[28]According to NASA. fundamental research includes(1) foundational research, which is the lowest level of the research pyramid on which advanced noise reduction technologies can be built; (2) discipline-level fundamental research, which includes the development of noise prediction methods that can be used to understand the potential for noise reduction of various concepts; (3) multidiscipline-level fundamental research, which includes studying the trade-offs between noise, emissions, and performance that must be understood in order the determine the performance characteristics of a new aircraft; and (4) system-level fundamental research, which includes explaining research issues when noise reduction technologies are integrated into a new aircraft and can include major wind tunnel tests.

According to FAA, most of the federal funding available for mitigating aviation noise is targeted to sound insulation projects for buildings around airports and relocation or acquisition programs. In a 2002 report on reducing the environmental impacts of aviation, the National Research Council's Committee on Aeronautics Research and Technology for Environmental Compatibility noted that the vast majority of federal expenditures on aviation noise are allocated to noise abatement at individual airports rather than to research on quieter aircraft and engines, which would ultimately reduce aviation noise nationally and internationally. The report concluded that the funding for federal research programs was too low to remove noise as an impediment to the growth of aviation—a conclusion that FAA reiterated in its 2004 report to Congress on aviation and the environment. An analysis prepared by the Aerospace Industries Association[29] indicates that NASA's aeronautics budget, which includes funding for noise reduction research, has been declining in constant dollars since the mid-1990s (see fig. 3).

[29]The Aerospace Industries Association represents the nation's leading manufacturers and suppliers of civil, military, and business aircraft, helicopters, unmanned aerial vehicles, space systems, aircraft engines, missiles, material, and related components, equipment, services, and information technology.

Figure 3: NASA Aeronautics Funding, Fiscal Years 1994-2007



Source: Aerospace Industries Association.

Legislative Proposals Would Increase Funding for Noise Reduction Technologies, and More Efficient Targeting Can Maximize Research Resources

FAA officials told us that both the Senate and the House reauthorization proposals for FAA include several provisions for funding programs that the authorizers believe will be critical to address the research gap. For example, the CLEEN[30] Engine and Airframe Technology Partnership would create a program for the development, maturation, and certification of engine and airframe technologies for aircraft over the next 10 years to reduce aviation noise and emissions. FAA said that the program is intended to provide some short-term advancement while NASA focuses on longer-term research on noise and emissions.

NASA officials told us the agency has become more effective in targeting its research resources to areas that have the most potential for success. In particular, these officials cited work on significant noise-reducing technologies that could be implemented in aircraft and engine designs as early as 2015, depending on whether manufacturers take over

[30]CLEEN stands for continuous lower energy, emissions and noise.

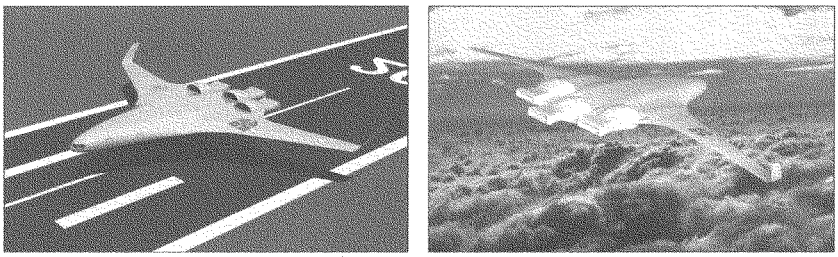
responsibility for integrating the new technologies into production-ready aircraft. NASA has set goals for developing technologies that could reduce what is known as effective perceived noise (EPN) by 42 EPN dB[31] below Stage 3 standards and that could be implemented in the next generation of aircraft,[32] which NASA refers to as N+1, by 2015 (N is the current generation of advanced twin-engine aircraft). For the longer term (2020), NASA is focusing on the development of tools and technologies that can be used in the design of advanced hybrid wing body aircraft (N+2) and that would achieve even greater noise reductions, in the range of 52 EPN dB below Stage 3 standards.[33] According to NASA, both of these research efforts are also aimed at reducing emissions and fuel burn, which in combination with noise reductions would help mitigate the environmental effects of future increases in air traffic. NASA officials stress that because NASA's research ends at a relatively early stage of development, aircraft and engine manufacturers would need to take over responsibility for integrating the noise reduction improvements into aircraft and engine designs, and their assumption of this responsibility is not guaranteed. NASA and others in the aeronautics research community are working on similar advanced designs, such as the "silent aircraft" concept that involves researchers from Cambridge University in Great Britain and the Massachusetts Institute of Technology (see fig. 4).

[31]See footnote 10.

[32]The reductions would occur in aircraft that would replace such current aircraft as the Boeing 737 and Airbus A320. Reductions would be different for larger aircraft and regional jets.

[33]The noise reductions NASA predicts would be achieved through the technologies it is researching would be achieved if noise reduction is the only goal. However, when other factors are considered, such as the need to reduce pollutants like nitrogen oxides, the noise reductions may be lower.

Figure 4: Concept Design for the Silent Aircraft



Source: Cambridge-MIT Institute.

Planning for NextGen Includes an Environmental Focus, and Technologies and Procedures Are Being Developed to Reduce Noise as well as Improve Efficiency

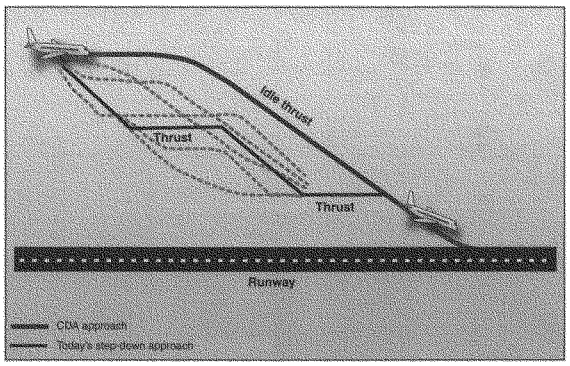
Part of the planning for NextGen includes reducing the environmental impact of aviation because concerns about aviation noise and emissions, which will increase with the expected growth in air traffic, are strong constraints on system capacity. A preliminary JPDO[34] analysis shows that noise and emissions could increase between 140 and 200 percent over the next 20 years as a result of increased flights, which would become a significant constraint on planned capacity improvements.

Technologies and procedures that are being developed as part of NextGen to improve the efficiency of flight operations are also expected to help reduce the impact of noise. One such technology, considered a centerpiece of the NextGen system, is the Automatic Dependent Surveillance–Broadcast (ADS-B) satellite aircraft navigational system. ADS-B is designed, along with other navigation technologies, to provide for more precise control of aircraft during approach and descent. This improved control will facilitate the use of various air traffic control procedures that will reduce communities' exposure to aviation noise and emissions. For example, the Continuous Descent Arrivals (CDA) procedure (see fig. 5) is expected to allow aircraft to remain at cruise

[34]As noted, JPDO is the interagency office housed within FAA that is responsible for planning NextGen and coordinating the transition to this new system. A JPDO task team is responsible for researching, developing, implementing, and maintaining an environmental protection strategy for NextGen.

altitudes longer as they approach destination airports, use lower power levels, and thereby lower noise and emissions during landings. Under current landing procedures, aircraft make step-down approaches that alternate short descents and forward thrusts, which produce more noise than a continuous descent. The PARTNER Center of Excellence has designed and flight-tested a nighttime CDA procedure for the Louisville International Airport, which United Parcel Service plans to begin using for its hub operations in the near future. [35]

Figure 5: Comparison of CDA and Current Step-Down Approach



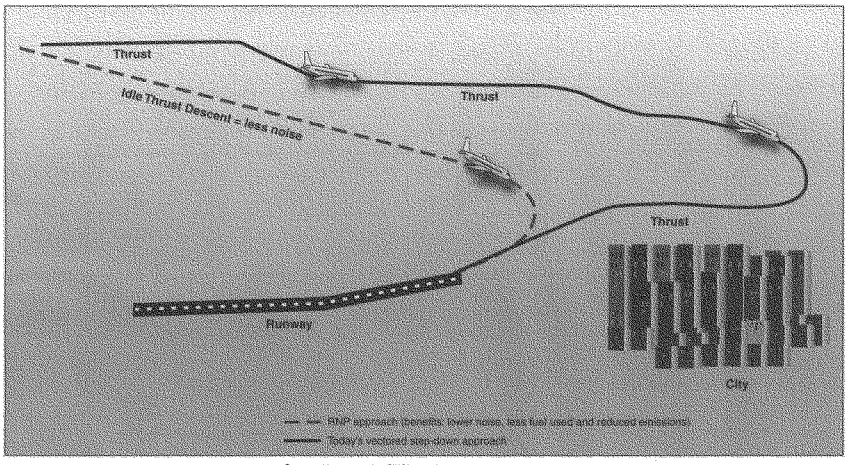
Sources: Navarus and AVTECH; and Art Explosion (clip art).

Note: Continuous Descent Arrivals keep aircraft higher for longer and then have them descend at near-idle power to touchdown. Optimal profiles are not always possible, especially at busy airports.

[35]See John-Paul Clarke, et al., *Partnership for Air Transportation and Emissions Reduction Development, Design, and Flight Test Evaluation of a Continuous Descent Approach Procedure for Nighttime Operation at Louisville International Airport* (Cambridge, MA: Jan. 9, 2006).

Similarly, Area Navigation/Required Navigation Performance (RNP) procedures[36] will permit aircraft to descend on a precise route that will allow them to avoid populated areas. FAA notes, however, that the new procedures will not always be usable when traffic is heavy at busy airports (see fig. 6).

Figure 6: Comparison of RNP and Current Step-down Approach



Sources: Naverus and AVTECH; Art Explosion (clip art).

Note: An RNP approach path allows for idle-thrust, continuous descent instead of today's step-down approaches with vectors. RNP precision and curved-approach flexibility can shift flight paths to avoid populated areas.

[36]Area Navigation/Required Navigation Performance procedures provide enhanced navigational capability to the pilot. Area Navigation equipment can compute the airplane's position, actual track, and ground speed, and then provide meaningful information relative to the route of flight selected by the pilot. A critical component of Required Navigation Performance is the ability of the navigation system to monitor the aircraft navigation system to monitor its achieved navigation performance and to identify for the pilot if an operational requirement is or is not being met during an operation.

Airport Restrictions on Aircraft Operations Offer Limited Relief from Aviation Noise

Airports can seek restrictions on the operations of certain types of aircraft to reduce the impact of noise on surrounding communities. FAA implements a national program for reviewing airport noise and access restrictions, known as Part 161. Through this program, FAA reviews airports' requests to limit the operations of louder aircraft. According to FAA, the Part 161 process has rarely been used since 2000. Only a few airports have drafted Part 161 studies to support requests for restrictions, and only one—Naples Airport in Florida—has fully completed the Part 161 process. Los Angeles International Airport and Bob Hope Airport in Burbank, California, have indicated to FAA that they will be submitting Part 161 studies to FAA to restrict the operations of certain aircraft that meet the Stage 3 noise standards. FAA's approval will be required for the restrictions these airports are seeking. Because the Part 161 process demands that airports submit studies showing, among other things, the benefits of restricting aircraft operations, airport operators generally choose to negotiate informal agreements with airlines rather than seek mandatory restrictions. Airports have also imposed curfews on aircraft operations in order to reduce the impact of noise in the early morning and late evening. For example, at Reagan National Airport and San Diego International Airport, louder aircraft are not allowed to land or take off in the late evening and early morning.

Airports Are Using Additional Studies, Supplemental Noise Metrics, and Community Outreach to Address Community Concerns about Aviation Noise

According to FAA, communities are increasingly aware of efforts to plan for and mitigate aviation noise, and complaints about noise are coming increasingly from outside the DNL contours, along with demands for action to address noise in areas outside significant noise contours. Some community groups and the Environmental Protection Agency (EPA) have questioned whether the DNL standard adequately captures the impact of noise on people. FAA officials note that the Federal Interagency Committee on Aviation Noise[37] supports the use of the DNL measure and that the use of the metric to measure noise near airports has been upheld in court decisions. However, a number of airports have undertaken additional measures, such as special noise studies, to respond to community concerns about aviation noise.

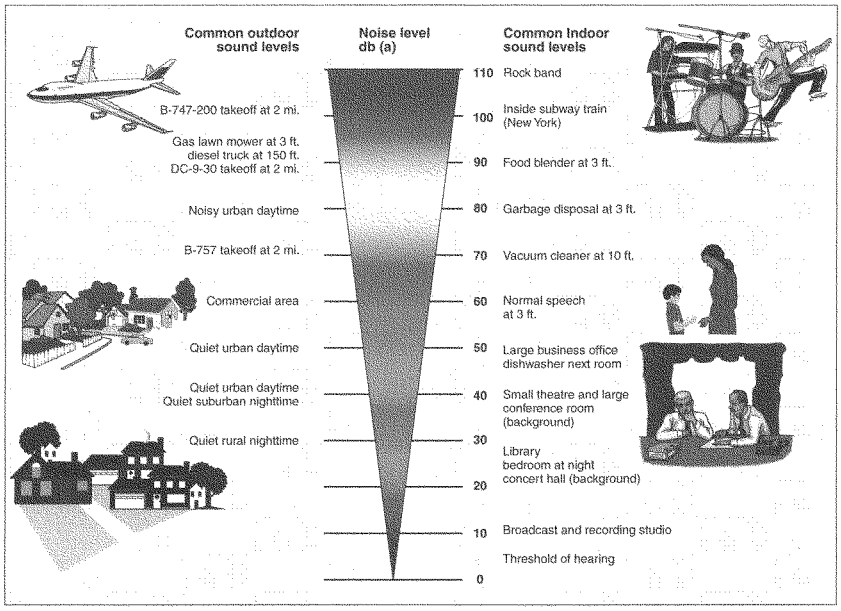
[37]The Federal Interagency Committee on Aviation Noise serves as a forum for debate over future research needs to better understand, predict, and control the effects of aviation noise, and to encourage new technical developments in these areas. Federal agencies represented on the committee include the Departments of Defense, Housing and Urban Development, the Interior, and Transportation; the U.S. Environmental Protection Agency; and NASA.

According to some noise experts, the typical airport noise study presents results only in terms of DNL contours on a background map, but very rarely quantifies noise exposure with DNL or any other metric at specified geographic locations in the study area. While DNL contours are used effectively to establish land-use guidelines and define noise mitigation program boundaries, they do not provide residents with practical information about the aviation noise they will experience in their homes. By contrast, the special noise studies not only enable residents to locate their homes on a map that is overlaid with DNL contours, but they also indicate how often airplanes fly overhead, at what time of day flights occur, or how those flights may interfere with activities such as sleeping, speaking, or watching television. According to the experts we spoke with, the public has responded very positively to receiving this detailed information about noise exposure.

With growing complaints about noise from outside the DNL contours, airports are also contracting for analyses based on alternative noise metrics to supplement the DNL noise analysis. Although the Federal Interagency Committee on Noise[38] in 1992 recommended continuing the use of the DNL noise metric as the principal means of describing airport noise exposure, it also recommended supplementing this description with noise analyses based on alternative metrics. According to a leading engineering firm that specializes in performing noise analyses, two supplemental metrics are thought to define exposure in ways that the general public can understand more readily than the DNL metric. One of these metrics, the Number Above—which counts how many times noise exceeds a selected threshold level in a given time period—has emerged as the most useful supplemental metric, while another metric, Time Above—the total time that noise exceeds the threshold during the time period—is also being used with increasing frequency. According to FAA officials, FAA supports the use of supplemental metrics, noting that they may be useful in evaluating some specific noise impacts, such as interference with speech, sleep, and learning (see fig. 7).

[38] The Federal Interagency Committee on Noise was the predecessor of the Federal Interagency Committee on Aviation Noise.

Figure 7: Levels of Noise Associated with Various Activities



Sources: FAA, Art Explosion, and © Corel Draw.

Besides additional studies and supplemental noise metrics, airports are using community outreach and education to address some of the impacts of aviation noise. Representatives of airports and local governments we spoke with emphasized that effective community outreach programs are essential for addressing noise issues that arise when airports are planning to expand or change their operations. One of these representatives noted that early and continuous open communication between the airport, local governments, and the affected communities is a key to gaining support for projects to increase airport capacity. They pointed out that airports should

have ongoing efforts to seek stakeholder involvement on airport-related issues and not wait until potential noise problems arise, such as when airport expansion projects are being planned. For example, the San Francisco International Airport has been bringing community representatives and aviation officials together since 1981 to discuss and attempt to resolve airport-related issues through the San Francisco Roundtable—a voluntary body created by the airport that includes representatives from 45 Bay Area jurisdictions, FAA officials, airline advisers, air traffic managers, and the airport director. In addition, according to a San Francisco International Airport official, the airport reaches out to the community through its Managed Noise Mitigation program, which encourages communities affected by airport noise to determine their noise mitigation priorities and manage their distribution of noise mitigation funds in accordance with their priorities. Other airports have also made community outreach an important component of their efforts to deal with the impacts of aviation noise. For instance, Chicago established the O'Hare Noise Compatibility Commission in 1996 to begin constructive dialogue on aircraft noise issues with the 40 communities surrounding O'Hare International Airport. The commission's community outreach efforts include a Web site on aircraft noise issues; a community outreach vehicle that travels to schools, libraries, and community events and provides aircraft noise and noise-monitoring demonstrations; and a quarterly newsletter that highlights the work of the commission and its work to reduce noise at O'Hare.

To support airports' community outreach efforts, the Transportation Research Board (TRB) is undertaking a project that is intended to result in guidance for airports on best practices in community outreach. According to TRB, the project will identify the jurisdictions with authority over various aspects of aviation noise and the obstacles to airport operations and development that can occur because of surrounding communities' negative perceptions about local aviation noise. The study will result in a guidebook about local aviation noise that will allow airport decision makers to manage expectations related to aviation noise within the community. The study also includes alternative ways to communicate noise issues and suggests other improvements that can help ease concerns about aviation noise issues.

Reducing the Impact of Aviation Noise Poses Challenges Involving Technology, Funding, and Cooperation on Land-use Issues

Reducing aviation noise requires technological advances, substantial funding from government and the aviation industry, and cooperation among stakeholders and communities on land-use issues. Fulfilling these requirements will be challenging because the pace of improvement in existing technologies may have slowed, government and industry resources are constrained, and land use involves strong competing interests. While most of these challenges will take years to fully address, steps can be taken now to help mitigate the impact of noise on communities and reduce the constraints that noise can have on transforming the air traffic system.

Technological Advances through Research and Development Are Key to Future Aviation Noise Reduction

The first challenge will be to continue reducing the amount of noise from aircraft engines and airframes. NASA's, FAA's, and manufacturers' past research and development efforts have led to advances that have significantly lowered aviation noise, but the timing of the next leaps in technologies is uncertain. While NASA is conducting work on technologies that it believes could, with industry support, lead to significant noise reductions by 2015, FAA and aircraft industry representatives maintain that, for some time, reductions in aircraft noise are likely to be incremental. In addition, it may be technologically challenging to improve the environment by reducing aviation noise without adversely affecting the environment in other ways. As we reported in 2003,[39] designing aircraft engines to minimize noise could increase fuel burn, which would release more carbon dioxide and other greenhouse gases into the atmosphere.

Providing Funding for Research and Development and for Equipping the Fleet with NextGen Technologies Poses Challenges for Government and Industry

Funding noise reduction research and development programs poses a challenge for federal agencies. Given the federal government's long-term structural fiscal imbalance, additional funding for such programs may not be available without shifting funds from other aviation noise reduction efforts, such as programs to mitigate the impact of noise on communities. Currently, most of the federal funding for reducing aviation noise goes to soundproofing programs. Although funding for noise mitigation programs may not generate the highest return on investments, reducing such funding could make it more difficult to obtain community approval of airport expansion projects necessary to increase system safety and efficiency. Provisions in the Senate and House reauthorizations bills such as the

[39]See GAO, *Aviation and the Environment: Strategic Framework Needed to Address Challenges Posed by Aircraft Emissions*, GAO-03-252 (Washington, D.C.: Feb. 28, 2003)

CLEEN proposal could help to address the challenges in this area, and industry funding will continue to play an important role.

Implementing new noise reduction technologies, whether by integrating new, quieter aircraft into the fleet or by retrofitting aircraft, poses financial challenges for the aviation industry. Aircraft have an average lifespan of about 30 years, and it can take almost that entire period for airlines to pay for an aircraft. The current fleet is, on average, about half as many years old—11 years for wide-body aircraft and 14 years for narrow-body aircraft—and is therefore expected to be in operation for many years to come. Additionally, the financial pressures facing many airlines make it difficult for them to upgrade their fleets with new, quieter aircraft. Currently, for example, U.S. carriers have placed a small proportion of the over 700 orders (40, or less than 6 percent) that Boeing officials say the company has received for its new state-of-the-art 787. These financial pressures also have implications for airlines' ability to equip new and existing aircraft with NextGen technologies such as ADS-B that can enable more efficient, quieter approaches and descents. FAA estimates that it will cost the industry about $14 billion to equip aircraft to take full advantage of NextGen. Congress and FAA may want to consider how to incentivize the airlines to train their pilots and to equip and retrofit the fleet with the technologies necessary to operate in NextGen as soon as possible.

Managing Land Use for Compatibility with the Airport Environment Requires Cooperation among Stakeholders and Communities

Even with the introduction of quieter aircraft and the implementation of NextGen technologies and procedures that will enable quieter aircraft approaches and landings, there will still be some noise around airports. Additionally, these reductions in aviation noise are likely to be eroded by the public's increasing awareness of and sensitivity to even moderate amounts of aviation noise and to predicted increases in the number of aircraft flying overhead. Hence, incompatible land use will continue to present obstacles to airport expansion projects. However, since most airports are owned and managed by state or local authorities, it is incumbent upon those authorities to work in good faith with FAA to minimize incompatible land use in their jurisdictions (see fig. 8).

Figure 8: Residential Exposure to Aviation Noise

Source: Nova Development (clip art).

State and local authorities can take action, through land-use planning and development, zoning, and housing regulation, to limit the use of land near airports to purposes compatible with airport operations. State and local governments could require, for example, that appropriate notice of airport noise exposure be provided to purchasers of real estate and to prospective residents near airports to ensure awareness of aviation noise issues. In addition, FAA can make it easier for airports to dispose of AIP noise land by completing and issuing its draft guidance on this process. Passing the related provisions in the Senate and House FAA reauthorization bills will also be important steps.

Thank you, Mr. Chairman and Members of the Subcommittee, this concludes my prepared statement. I will be glad to answer any questions that you may have at this time.

Contact and Acknowledgments

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Appendix I: U.S. Airports That Are among the Nation's 50 Busiest and Do Not Have a Part 150 Noise Mitigation Program

Airport
Boston-Logan International
Chicago-O'Hare International
Dallas-Fort Worth International
Dallas Love Field
Denver International
Gillespie Field (San Diego, CA)
Houston-David Wayne Hooks
Houston-George Bush Intercontinental
John F. Kennedy International (New York, NY)
John Wayne-Orange County
Miami International
Newark International
New York La Guardia
Phoenix Deer Valley
Phoenix Mesa Gateway
Van Nuys (Van Nuys, CA)
Washington Dulles International

Source: FAA.

Related GAO Products

Airport Finance: Observations on Planned Airport Development Costs and Funding Levels and the Administration's Proposed Changes in the Airport Improvement Program. GAO-07-885. Washington, D.C.: June 29, 2007.

Reagan National Airport: Update on Capacity to Handle Additional Flights and Impact on Other Area Airports. GAO-07-352. Washington, D.C.: February 28, 2007.

Aviation and the Environment: Strategic Framework Needed to Address Challenges Posed by Aircraft Emissions. GAO-03-252. Washington, D.C.: February, 28, 2003.

Aviation Infrastructure: Challenges Related to Building Runways and Actions to Address Them. GAO-03-164. Washington, D.C.: January 30, 2003.

Aviation and the Environment: Airport Operations and Future Growth Present Environmental Challenges. GAO/RCED-00-153, Washington, D.C.: August 30, 2000.

Aviation and the Environment: Results from a Survey of the Nation's 50 Busiest Commercial Service Airports. GAO/RCED-00-222. Washington, D.C.: August 30, 2000.

Aviation and the Environment: FAA's Role in Major Airport Noise Programs. GAO/RCED-00-98. Washington, D.C.: April 28, 2000.

Reagan National Airport: Limited Opportunities to Improve Airlines' Compliance with Noise Abatement Procedures. GAO/RCED-00-74. Washington, D.C.: June 29, 2000.

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United States Government Accountability Office
Washington, DC 20548

November 9, 2007

The Honorable Thomas E. Petri
Ranking Republican Member
Subcommittee on Aviation
Committee on Transportation and Infrastructure
U. S. House of Representatives

Dear Mr. Petri:

This letter responds to your October 24, 2007, request that I address questions submitted for the record related to the October 24, 2007, hearing entitled *Aviation and the Environment: Noise.* My responses to your questions are attached. The responses are based on the research we conducted in preparation for the hearing and my knowledge of the areas addressed by the questions.

If you have any questions or would like to discuss the responses, please contact me at 202-512-2834

Sincerely yours,

Gerald Dillingham

Gerald L. Dillingham, Ph.D.
Director
Civil Aviation Issues

Enclosure

cc: Holly Woodward – Lyons, Republican Staff Director
Stacie Soumbeniotis, Democratic Staff Director

Responses to Post-Hearing Questions for the Record
"Aviation and the Environment: Noise"
Subcommittee on Aviation
Committee on Transportation and Infrastructure
U.S. House of Representatives
Hearing Held on October 24, 2007

Questions from Ranking Republican Member Petri

- **We have been hearing forecasts of thousands of very light jets that will soon be coming into the NAS. Do you have any information as to what effect they will have in terms of noise issues?**

Currently, the number of very light jets (VLJ) that are flying in the National Airspace System (NAS) is relatively low. However, industry predictions are that there may be as many as 7,600 VLJs operating in the NAS by 2025.[1] Our research indicated that the effect of increasing numbers of VLJs on the NAS will probably be mixed. Most, if not all, the VLJs that are in production or planned for production will meet the most stringent noise standard—Chapter IV. However, Chapter IV is only less noisy than earlier noise standards, as opposed to not noisy at all. Additionally, VLJs have shorter runway requirements and can get higher into the air before flying over buildings adjacent to airports. However, the lower noise effect of VLJ aircraft could be significantly diminished as their numbers increase. Furthermore, if VLJs make extensive use of smaller airports, as many experts believe they will, some communities may experience more aviation noise than they currently experience or be exposed to jet aircraft noise for the first time. These communities will likely be very vocal in expressing any concerns that they have about new or increased aviation noise.

- **To what extent did the GAO's review identify any potential health effects of aircraft noise and emissions?**

In preparing for this hearing, we conducted a selective review of the literature on the potential health effects of aircraft noise and emissions. We found that recent research on

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[1]GAO, *Very Light Jets: Several Factors Could Influence Their Effect on the National Airspace System*, GAO-07-1001 (Washington, D.C.: Aug. 24, 2007).

noise pollution is limited and more current information is generally available on air pollution, particularly on the effect of aviation emissions on climate change.

In 1992, the World health Organization (WHO) identified noise-related health "effects," including behavioral and medical effects. Behavioral effects included interference with speech, sleep, and children's learning, while medical effects included hearing loss and nonauditory health effects such as cardio-vascular issues, hypertension, and mental health concerns. According to WHO, the claims about these types of nonauditory health effects are difficult to prove or disprove, but in general it is assumed that protecting against hearing loss or speech and sleep interference also protects against nonauditory health risks. In 2001, an expert WHO panel developed community guidelines reflecting international scientific opinion on dealing with aviation noise. The guideline uses the precautionary principle as a fundamental tenet: "when an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically."

In 2000, the Federal Interagency Committee on Aviation Noise (FICAN) concluded that research on the effects of aviation noise on children's learning suggests that aircraft noise can interfere with learning in the following areas: reading, motivation, language and speech acquisition, and memory. According to FICAN, the strongest findings to date are in the area of reading, where more than 20 studies have shown that children in noise impact zones are negatively affected by aviation noise. FICAN concluded that it was also possible that, for a given level of noise, the effects of aviation noise on classroom learning may be greater than the effects of noise from road and railroad traffic.

The research that we reviewed on the health impacts of aviation-related air pollutants generally concludes that there is an association between aircraft emissions and lung function impairment; cardiovascular effects, especially in those persons with heart conditions; premature mortality; eye and respiratory tract irritation; headaches; dizziness; visual disorders; and memory impairment.

To its credit, FAA recognizes the growing public health concerns associated with the forecasted doubling or tripling of aviation traffic and aviation emissions. In order to reduce the uncertainties associated with the quantification of health and human exposure risks. FAA has initiated a research project through a cooperative research organization, the Partnership for Air Transportation Noise and Emissions Reduction. The main scientific objective of this project is to understand and evaluate the potential incremental health risks due to direct (primary) and indirect (secondary) exposure to air pollutants from aviation operations, such as hazardous air pollutants (HAPS or toxics), ozone, and particulate matter.

- **How do you think airspace redesign initiatives will affect community noise concerns?**

Airspace redesign projects usually involve changes in the routes by which aircraft arrive at and depart from airports. As a result of these changes, some communities may be exposed to less noise and others to more noise than they previously experienced. Airspace redesign projects not only have the potential to improve system safety and efficiency, but they will also permit the use of procedures such as Required Navigation Performance and Continuous Descent Arrivals, which can reduce the noise and emissions associated with arrivals and departures.

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United Technologies

Statement of
Alan H. Epstein
Vice President, Technology and Environment
Pratt & Whitney

Before the

Subcommittee on Aviation
Committee on Transportation and Infrastructure
U.S. House of Representatives

Hearing on Aviation and Environment: Noise
October 24, 2007

Mr. Chairman and members of the subcommittee, my name is Alan Epstein and I am the Vice President of Technology and Environment for Pratt & Whitney. Pratt & Whitney is a world leader in the design, manufacture and service of aircraft engines, industrial gas turbines and space propulsion systems. Pratt & Whitney has been producing airplane engines for over 80 years and rocket engines for this nation's space program for over 40 years. We take great in pride in the company motto, Dependable Engines, because that's what we've been building for 82-plus years. Pratt & Whitney is part of United Technologies Corporation, a global technology corporation with a long history of pioneering innovation in aerospace, aviation, helicopter design, climate control, elevator design and hydrogen fuel cells.

I appreciate the opportunity to participate in this hearing addressing aviation noise, one of the most significant challenges facing U.S. commercial aviation. Other witnesses at today's hearing addressed the importance of modernizing this country's air traffic control system and associated initiatives on aircraft routing and other noise abatement procedures. These are necessary and wise investments that the nation must make to ensure the health of commercial aviation, the convenience of the traveling public, and the well being of our airport's local communities. I am here to speak about an innovative, complementary approach to reducing community noise, employing technological advances which will dramatically reduce the noise and emissions made by future aircraft engines.

The first commercial jet engines were designed over 50 years ago with little regard to noise. Producing sound levels similar to being next to the speakers at a live rock concert, they quickly proved unacceptable to the communities around airports. The introduction of the first turbofan engines helped reduce noise and each succeeding generation has reduced the noise footprint further. According to the December 2004 Report to the United States Congress, "Aviation and the Environment – A National

Visions Statement, Framework for Goals and Recommended Actions," we have collectively achieved a 95% reduction in the number of people impacted by aircraft noise over the last 35 years. However, we can do even better. Our national goal should be to eliminate aircraft noise as a concern of communities near airports.

Aircraft design has always involved some compromise between producing the lowest noise, improving fuel efficiency and delivering the best operating cost. While low noise has been an important factor, the aircraft design must be economically viable to enable public transportation at the competitive ticket prices that the flying public has come to expect. In response to this challenge, Pratt & Whitney developed Geared Turbofan™ engine technology in order to rebalance this design compromise so that the engine simultaneously achieves optimal economy and lower noise. This is especially important for the shorter range, narrow-body commercial aircraft that are responsible for most of the country's airline operations. Thus, airlines that are generally motivated to choose engines with the best financial impact will also be buying very quiet airplanes.

At Pratt & Whitney, we are very excited about our new Geared Turbofan engine for the next generation of passenger aircraft. The Geared Turbofan engine promises a new level of very low noise while offering the airlines superior economics and environmental performance. For aircraft of 70 to 150 passenger size, the Geared Turbofan engine reduces the fuel burned, and thus the CO_2 produced, by more than 12% compared to today's aircraft, while reducing cumulative noise levels about 20dB below the current Stage 4 regulations. This noise level, which is about half the level of today's engines, is the equivalent difference between standing near a garbage disposal running and listening to the sound of my voice right now.

This technology is not in the distant future. We announced earlier this month that our Geared Turbofan engine has been selected as the exclusive engine for the new Mitsubishi Regional Jet. We are currently building a Geared Turbofan engine that will ground test later this year and flight test in 2008. Aircraft with Geared Turbofan engines will be entering service in the 2012 to 2013 timeframe. Pratt & Whitney's technology and innovation doesn't stop there. In fact, Pratt & Whitney will apply this technology to a family of next generation engines that will power applications from regional jets to single aisle aircraft and wide body aircraft.

There is significant synergy between improved air-traffic control capabilities and the very low noise levels that Geared Turbofan engine-powered aircraft can deliver. The constraints of the presently overburdened air traffic control system, especially in congested urban areas, do not allow even exceptionally quiet aircraft to deviate from the existing traffic patterns. This prevents an airline operator from utilizing the optimum flight track for a very low noise aircraft and thus removes an incentive to make the investment needed to achieve exceptionally low noise fleets.

For example, airlines traveling to the east coast from Los Angeles take off due west at night to gain altitude to reduce the noise signature over the city. An aircraft powered with Pratt & Whitney Geared Turbofan engines flying the optimal flight path

would produce less noise than today's aircraft at a higher-altitude. This would save an average of 12 minutes of flight time, reducing fuel cost and emissions.

A smaller, but still important improvement in emissions and noise can be realized immediately by keeping current engines on existing airplanes operating at their highest efficiency levels. Simple things like washing the interior of an aircraft engine are a cost effective approach to maximizing engine efficiency. Pratt & Whitney's new EcoPower engine water wash service lets airlines clean their engines, at the gate if desired, and captures the effluent to eliminate residue. This simple, environmentally responsible process can improve engine efficiency by one percent.

Recently, there has been much written concerning climate change and the role that aviation may play. At Pratt & Whitney, we believe that the exceptionally low noise levels that local communities deserve can be achieved without compromising other environmental goals such as reduced CO_2 and emissions. Our Geared Turbofan engine offers a balanced approach to engine noise, fuel efficiency and reduced emissions. We continue to work on more advanced technology that will offer still lower noise and fuel burn in the future. An advanced Geared Turbofan engine will deliver the low fuel burn and CO_2 output of the giant supersonic propellers now being studied, without the inherent noise disadvantages. Indeed in the future, it will be possible to design aircraft in which the primary noise sources are not the engines but are instead the airframe itself. But without adequate research support by the federal government, this technology may not become reality.

Aerospace continues to be, as it has been over several decades, this nation's largest manufacturing export. Our export sales have been so favorable because we have produced superior products using the most advanced technology. But, advanced technology is expensive to develop. Pratt & Whitney's Geared Turbofan engine incorporates 20 years of development experience and more than $1 billion of technology investment. This is stockholders' money invested upfront, years before any revenue comes in. However, some of the foundational technologies underlying these engines were developed in partnership with the government, NASA in particular, over several decades. This historical partnership of government, universities, and private industry has benefited our country since aviation's inception over 100 years ago, making the United States the world leader in the highly competitive commercial and military aviation business.

Recently, I was at an international conference at which the European Union investment plans for civil aviation were presented. Frankly, I am worried that as other nations have increased their investment in fundamental aeronautical technologies, the corresponding U.S. investment has dropped precipitously, especially at NASA. This nation must invest in basic technology if it is to maintain its favorable aerospace balance of trade, maintain employment, and significantly reduce aviation's environmental impact both on local communities and on the planet. Therefore, we strongly support such initiatives as the proposed FAA Continuous Low Emissions, Energy and Noise (CLEEN) program. However, even with CLEEN, our nation's investment in real dollars on

fundamental civil aviation technologies is a tiny fraction of what it was twenty years ago. We must do more at both the FAA and NASA if the U.S. aerospace industry is to remain a world leader, especially in light of global competition and increasing concerns with the environment.

In summary, I would stress that it is important to take an integrated approach to reducing aviation's impact on the environment, in particular community noise. We can achieve dramatically reduced engine noise and CO_2 emissions and significantly improved economic performance in the near term with Pratt & Whitney's Geared Turbofan engine. The combination of new engine technology and modern air traffic control systems can make a real difference in the quality of life of around our airport communities, reduce emissions, and deliver significant economic benefits to the traveling public and airline industry.

Thank you again for the opportunity to address this important topic. I would be happy to answer any questions.

Testimony of Deborah McElroy
Executive Vice President, Policy and External Affairs
Airports Council International-North America

before the

House Transportation and Infrastructure Committee
Subcommittee on Aviation
Aviation and the Environment: Noise
October 24, 2007

Airports Council International-North America
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(202) 293-8500

Chairman Costello, Ranking Member Petri, members and staff of the House Transportation and Infrastructure Subcommittee on Aviation, thank you for allowing Airports Council International-North America (ACI-NA) the opportunity to participate in this important hearing on "*Aviation and the Environment: Noise.*" My name is Deborah McElroy and I serve as Executive Vice President, Policy and External Affairs for ACI-NA. ACI-NA member airports enplane more than 95 percent of the domestic and virtually all the international airline passenger and cargo traffic in North America. Nearly 400 aviation related business are also members of ACI-NA.

Mr. Chairman, as you well know, continued robust growth for the aviation industry is predicted by both government and industry analysts, increasing attention on the environmental impacts of aircraft and airport operations. Airport directors well understand this concern and for decades have taken proactive steps to better understand and mitigate those impacts, especially aviation noise in their local communities. Additionally, since much the major source of aviation-related noise – aircraft –is outside an individual airport's control, ACI-NA and its members are working collaboratively to influence international, federal and state/local organizations, manufacturers and airlines to continue to address this important issue. We have been disappointed that International Civil Aviation Organization (ICAO) negotiations have not yielded more stringent noise standards for new production aircraft.

The good news is, over the last three decades, aircraft engines have become quieter, reducing the overall exposure of aircraft noise. Yet given these technological advances

with newer aircraft, there are many older noisier aircraft in the US airline fleet and aircraft noise continues to be an issue in airport communities. Many airport directors will tell you that despite their best efforts, the push for continued residential development near airports keeps noise at the forefront of their agenda.

In the United States, while the federal government controls aircraft certification standards and flight routing, airport operators have worked to reduce the noise impacting nearby communities and encouraged the FAA to institute programs tailored to the unique concerns at each airport. Common noise-related actions include FAA-directed noise abatement runway use and flight tracks, programs for ground run-ups, noise management programs (that monitor runway use and flight tracks, as well as compile noise complaints), airport-sponsored pilot awareness/fly quiet programs, sound insulation programs, and local land use actions.

Common Noise-Related Actions/What Airports are Specifically Doing

Part 150 Noise Compatibility Program - Many airports are mitigating noise through the Title 14 CFR part 150 (Part 150) Airport Noise Compatibility Program. Implemented as a FAA final rule in 1985, this program promotes comprehensive airport noise planning and mitigation. As part of this voluntary program, FAA has approved $4.5 billion in AIP grants and $3 billion in PFC funding for noise mitigation funds to assist local communities. Such assistance includes soundproofing residences, schools, hospitals, conducting land use and zoning studies, designing noise abatement procedures and other strategies.

Airport operators decide to undertake a Part 150 study when doing so promises to reduce, or further reduce, aircraft noise exposures to jurisdictions within the airport's environment. There are two main products of a Part 150 study: 1) Revised Noise Exposure Maps (NEM) and 2) Noise Compatibility Plan (NCP).

Airport Operators prepare NEMs using the integrated noise model (INM), a computer application designed to: quantify current noise exposure; look at abatement alternatives; and forecast future noise exposures. For the purpose of the study, they create maps that represent baseline, or most recent conditions, and also maps that show forecasted conditions at least five years into the future.. The future-anticipated contours help with long-term planning efforts.

Noise Compatibility Plans are menus of actions that the FAA and the communities that are near the airport can take to reduce aircraft noise exposure. NCPs can consist of preferential flight tracks, preferential runway use, limiting the time and location of maintenance run-ups, the acoustical treatment or acquisition of edifices, special zoning, enhanced building codes and disclosure requirements.

Under federal law, FAA can only provide funds from its Part 150 program to assist a community with noise mitigation if the airport is a participant in the Part 150 program. According to the "2008-2012 FAA Flight Plan", approximately 20,000 individuals in

noise impacted areas will receive benefits from noise compatibility projects funded under AIP in fiscal 2007.

Citizen Advisory Groups- The greatest issue of concern for airports is working with neighbors to reduce the impact of aircraft noise operations. Many airports across the country, including Chicago, San Francisco and San Jose work with local citizens, governments and elected officials to develop procedures and programs to reduce noise.

In Chicago, the O'Hare Compatibility Commission (ONCC) is the organization dedicated to reducing aircraft noise in the communities around O'Hare International Airport. It was established in 1996, following an invitation from Chicago Mayor Daly to suburban mayors to begin constructive dialogues on aircraft noise issues with the goal of reducing noise. Since its founding, the ONCC's membership has grown tremendously and now includes 24 municipalities, Cook County and 15 school districts that represent 40 communities around O'Hare. These members are represented by their mayors and school superintendents at approximately 30 public meetings that the ONCC and its committee hold annually.

The ONCC operates through three standing committees: Technical, Residential Sound Insulation, and School Sound Insulation. Total spending on these programs since they began is approximately $440 million dollars.

Like Chicago, the San Francisco International Airport's (SFO) "Community Roundtable" is one of the longest established community based airport noise mitigation organizations in the country, and is an example of neighborhood groups working cooperatively with the airport and the aviation industry to reduce noise impacts. Established in 1981, the Roundtable's 45 representatives and alternates are elected officials representing the City and County of San Francisco and San Mateo County, as well as advisory members, airline chief pilots, and FAA staff. SFO airport staff support and attend monthly Roundtable meetings, at which public discussion focuses on airport noise abatement activities.

SFO's Fly Quiet Program is an Airport Community Roundtable initiative implemented by the Airports Noise Abatement Office. The purpose of this program is to encourage individual airlines to operate as quietly as possible at SFO. The program promotes a participatory approach in complying with noise abatement procedures and objectives by grading an airline's performance. As part of the program, SFO staff generate a Fly Quiet Report, which provides airline scores on the following elements: Fleet noise quality, exceedances of allowable noise levels, nighttime preferential runway use, shoreline departure frequency, gap departure quality, and foster city arrival rating. The overall scores are made available to the public via newsletters, publications, and public meetings. Fly Quiet encourages implementation of new noise abatement initiatives by recognizing and publicizing active participations.

As part of the City of San Jose's corporate priority of Neighborhood-Focused Service Delivery, the Mineta San Jose International Airport established the Acoustical Treatment Program. The program identifies residences and other sensitive living areas within the 65 and 60 decibels California Noise Exposure Level contours where interior noise exposure is at or above 45 decibels. At these locations, sound insulation improvements are installed at no cost to the property owner. Aspects of the program include allowing the property owners to review the improvement specifications and a field office and showroom. The program, which should be completed by 2008, has committed over $90 million for treating structures within the 65 decibels contour and will fund $100 million for other structures that have historical significance.

Airports Appreciate Measures in H.R. 2881

ACI-NA applauds the Aviation Subcommittee, as well as the full Transportation and Infrastructure Committee, for its hard work on H.R. 2881, the "Federal Aviation Administration Reauthorization Act of 2007". We especially commend you for your efforts to mitigate aircraft noise by phasing-out Stage 1 or 2 aircraft less than 75,000 pounds within the 48 contiguous states after December 31, 2012. Also for the establishment of the "Environmental Mitigation Pilot Program" permitting FAA to fund six projects at public-use airports to take promising environmental research concepts for mitigation related to aircraft noise, emissions or water quality.

Continued research is also critical. The aviation industry will benefit from the Committee's leadership in establishing the "CLEEN Engine and Airframe Technology

Partnership" included in H.R. 2881 for FAA to enter into a ten-year cooperative agreement for the development, maturing and certification of continuous lower energy, emissions and noise engine and airframe technology. Additionally, we commend your efforts to increase funding for the Airport Cooperative Research Program (ACRP), which provides research to further mitigate the impacts of noise to airport communities.

Additional Action Congress Could Take to Address Noise

However, we believe it is important for Congress to consider additional actions to assist airports in mitigating the impact of aviation noise on their communities:

- **Expand AIP Eligibility for Part 150 Studies**: Development of new flight procedures can provide benefits both to airport/airspace capacity and noise impact reduction. For instance, the implementation of a Continuous Descent Approach has been shown to save fuel and reduce noise below the flight path. Louisville Regional Airport Authority was host to the first-ever test of the continuous descent approach (CDA). The CDA test results offered the potential for a reduction in aircraft noise for residents living 10 to 30 miles off the end of the airport's runways.

  Implementation of such procedures, where appropriate, should be facilitated. Currently development of flight procedures to abate noise is authorized for inclusion in a Part 150 program, and would thus be AIP eligible. However, the NEPA analysis of such flight restrictions is not currently AIP-eligible. ACI-NA believes it would be helpful to amend Sec. 47504(c)(1) to expressly provide that

AIP funds could be expended for NEPA processing of such procedures. This is important, because FAA now finds that its staff is often unable to take on additional work relating to NEPA review of flight track procedures, and it does not have the resources within its Operations and Maintenance budget to pay consultants to do so. This provision would allow AIP funding so that an airport that believes that implementation of the procedures would provide significant noise benefits would not have to wait an inordinate amount of time before such procedures could be implemented, thus delaying noise relief for surrounding communities.

- **Require FAA to Expeditiously Review Part 161 Proposals**: Airports must follow 14 CFR Part 161 (Part 161)guidelines, which were issued in 1990 to implement the Aircraft Noise and Capacity Act (ANCA). Part 161 requires analysis and public notice of noise or flight restrictions and FAA approval before airports can adopt such measures. Given increasing congestion and noise complaints, many airports are already proactively participating in Part 161 studies. However, the FAA remains slow in approving Part 161 studies and to date, only one airport (Naples) has been approved to implement airport-specific measures. (However, the restrictions have not yet been put into place.) ACI-NA agrees with FAA that a balanced approach to addressing noise issue is critical, but airports believe that there are instances where operating restrictions are the only available measure to address noise concerns. In the face of growing congestion, ACI-NA believes Part 161 should be re-examined to provide

additional options for airports to solve noise problems with reasonable, non-discriminatory operating restrictions.

Summary

In closing, ACI-NA and its member airports thank you for the opportunity to share our views on this important matter. We look forward to working with you as addressing this important issue is critical for the future of the aviation industry.

November 21, 2007

The Honorable Thomas E. Petri
Ranking Member
Subcommittee on Aviation
2251 Rayburn House Office Building
Washington, DC 20515

Dear Ranking Member Petri:

Thank you for allowing Airports Council International-North America (ACI-NA) the opportunity to share our views during October's Subcommittee hearing on *"Aviation and the Environment: Noise"* Per your request in the October 24 letter, ACI-NA is providing the responses below to the specific questions raised in your letter.

Question: *"Should Congress make participation in the Part 150 Noise Compatibility Program mandatory? If not, why not?"*

Answer: ACI-NA would oppose requiring that all airports conduct a Part 150 study as it would limit the flexibility of airports to address local circumstances. In cases where airports already have long-established community planning processes that parallel the Part 150 requirements, ACI-NA believes such a mandate would only serve to introduce yet another, unfamiliar process into the local dialog. Clearly, for airports that enjoy a high degree of community support with little controversy, a Part 150 process may not be needed.

Additionally, there are some airports where both the airport and local community have a less productive relationship. In some cases airports have been involved in litigation and the introduction of a separate federally mandated Part 150 planning process might hinder, rather than assist, resolution of the controversy. ACI-NA feels that airports should have the discretion to decide, based on local circumstances, whether a formal Part 150 process would contribute value in their noise abatement efforts with their community. We do not believe a federally mandated one-size fits-all solution is the appropriate approach.

Question: *"There has been some criticism that residents of new development projects in the vicinity of airports should not receive no-cost sound-insulation as they knew the airport was there when they bought the home and therefore were on notice of airport noise issues. How would you respond to this comment?"*

Answer: For decades, airports have worked diligently with local officials to address aircraft noise and land use conflicts. While everyone understands that aircraft have become much quieter over the last three decades, noise continues to be the primary environmental concern of communities located near airports. Airport operators continue to take actions to reduce the noise impacting nearby communities and by instituting programs tailored to the unique noise concerns at each airport. One of the most effective measures is local land use restrictions. Airports have developed land use and zoning programs to encourage compatible commercial development, as well as acquired land in the areas thought to be most severely affected by noise to prevent residential development.

However, there are some instances where airports do not have control over adjacent land or its zoning and cannot prevent residential development of these areas. We understand the concern that airports should not be required to pay for sound-insulation for homes purchased in areas that are known to be impacted by aircraft noise. However, we also believe it is important that the potential homeowner be provided notice to ensure a full understanding of the potential noise impact and the fact that the airport will not provide no-cost sound insulation.

In closing, ACI-NA and its member airports thank you for the opportunity to comment on this important issue. We look forward to working with you, and the Committee, as addressing noise issues is critical for the future of the aviation industry.

Sincerely,

Debby McElroy

Deborah McElroy
Executive Vice President, Policy and External Affairs
Airport Council International-North America

SUBCOMMITTEE ON AVIATION

U.S. HOUSE OF REPRESENTATIVES

WASHINGTON, D.C.

OCTOBER, 24, 2007

TESTIMONY OF DENNIS MCGRANN

EXECUTIVE DIRECTOR, NATIONAL ORGANIZATION TO INSURE A SOUND-CONTROLLED ENVIRONMENT

NOISE

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Chairman Costello, Ranking Member Petri and Members of the Committee, my name is Dennis McGrann and I am the Executive Director of the National Organization To Insure A Sound-Controlled Environment (NOISE). An affiliate of the National League of Cities, NOISE has served for over 37 years as America's only nation-wide, community based association composed of locally elected officials who represent thousands of constituents throughout the United States and are committed to reducing the impact of aviation noise on local communities.

Mr. Chairman, I would like to thank you today on behalf of those Americans who live under the flightways of our major commercial aviation corridors and who deal with the environmental, health and safety consequences associated with aviation noise issues for holding this hearing today and addressing these critical issues.

I would also be remiss if I did not take the time to thank full Committee Chairman Oberstar for his years of dedicated service and attention to the challenges faced by communities and airport neighbors across the country and for addressing the issues of aviation noise. In 2003 Chairman Oberstar was awarded the NOISE Lifetime Achievement and Environmental Champion Award for his outstanding efforts in engaging local communities in aviation noise and related airport issues.

NOISE serves to allow communities to join together and, with a single voice, inject the concerns of their constituents into the national debate on airport expansion policy. NOISE seeks to resolve noise concerns by bringing affected communities, local airport officials, and federal policymakers together to work on airport expansion proposals responsibly and collaboratively. NOISE also advocates for federal policies to reduce unreasonable levels of aviation noise through a combination of quieter aircraft, increased noise abatement resources, and the opportunity for local communities to contribute to airport expansion decisions NOISE members meet three times annually around the country to discuss aviation issues. These forums provide an outstanding opportunity for the exchange of opinion and information among the diverse interests in the aviation noise community.

NOISE serves as chair of the FAA's Center of Excellence for Aircraft Noise and Aviation Emissions Mitigation, known as PARTNER. Cosponsored by the FAA, NASA, and Transport Canada, PARTNER was established in September 2003 to foster break through technical, operational and workforce capabilities enabling quieter and cleaner aircraft.

NOISE has been a member of the Airport Compatibility Planning Committee (ACPC) since February 2005. The ACPC is a select FAA committee of government and aviation industry stakeholders. The goal of the ACPC is to encourage the use of compatible land use planning near airports.

NOISE is also a member of the Environmental Working Group, (EWG) which was created as a result of a Vision-100 mandate to devise a strategy for the transformation of the national aviation system. The EWG advises the joint planning and development office (JPDO) regarding implementation of the next generation air transportation system (NextGen).

The first hand knowledge of our members in implementing noise mitigation/abatement programs in their communities has prompted the FAA to turn to NOISE in recent years to provide leadership and input on items such as PARTNER research and the implementation of programs such as Part 150. The FAA Airports division recently requested that NOISE members offer their expertise and real-world experience to help improve the FAA Part 150 process. The Government Accountability Office has also

recently asked for input from NOISE members in preparation for an upcoming report on noise issues.

Beyond providing comments and insights on federal aviation programs and reports, NOISE members are often asked to actively participate or present at aviation conferences and events. For example, NOISE representatives were able to present at the 32nd Annual FAA Aviation Forecast Conference. This was the first year that environmental concerns were on the agenda for the conference. NOISE was also invited to participate as a presenter in a panel discussion about community noise issues at the 2007 Airport Noise and Emissions Symposium (ANERS) event in La Baule, France. These national and international events on aviation noise issues provide our members with an opportunity to interact with such key industry stake holders.

Our members are communities that depend on our airport neighbors for jobs, commerce and our economic vitality. We recognize that the reality of aviation today requires the system to increase capacity and our airport neighbors will need to grow to accommodate this expansion. We are, however, dedicated to addressing the issues faced by communities who chronically deal with the adverse environmental and health impacts of excessive aviation noise and continuously seek to engage all community and aviation stakeholders in a constructive dialogue to address these issues.

I would like to call attention today to three key aspects that we believe are essential to pursuing a meaningful route to effective management of noise issues: communication; research and development; and ongoing noise mitigation.

First , the benefits of effective communication between communities and airports are clear. When airports and communities work together to meet the challenges of aviation noise, success follows. NOISE supports those efforts and advocates for communication and cooperation as opposed to litigation and confrontation. We work to foster this dialogue and strive to bring community leaders, airport operators and government officials together and to establish a framework for the empowerment of localities surrounding airports.

For over 25 years, The San Francisco International Airport/ Community Roundtable has fostered successful airport/community interaction and involvement. Eighteen cities, the operator of San Francisco international airport, the city and county of San Francisco and the county of San Mateo comprise the roundtable, a voluntary public forum established in 1981 for the discussion and implementation of noise mitigation strategies at San Francisco International Airport (SFO). The roundtable monitors a performance-based aircraft noise abatement program as implemented by airport staff, interprets community concerns and attempts to achieve additional noise mitigation through a cooperative sharing of authority brought forth by the aviation industry, the FAA, airport management and local elected officials.

Another development that will enhance communication is the PARTNER *Noisequest* website-- designed to educate communities and airports on effective strategies and available tools which help create a constructive dialogue when addressing noise issues and community concerns.

We also urge continuation of a Vision 100 initiative that enables community empowerment, that is the extension of the authorization of section 160 which authorizes the FAA fund grants to states and units of local government with a goal of reducing incompatible land use around large and medium-sized airports. This program is a key step towards avoiding litigation and a useful tool for communities to use independently of the airport.

The second important element to addressing these issues and a key to the future is full funding of research and development efforts. There are numerous programs and technologies being explored today that hold great potential for a future with quieter skies. One specific example is the PARTNER led research and testing in the development of the continuous descent approach, (CDA) which allows for quieter landing procedures. I can't stress enough the value of investment into CDA and other technologies, which many not only aid in reduction of noise pollution but also decrease the adverse environmental impacts of aviation on our land, air, and water.

It is essential that while working to achieve better technology and community involvement, we must not abandon effective community based noise mitigation efforts. While we work toward better communication and advanced technologies, we must still be aware and concerned with the communities that have seen their neighborhood airports expand around them and who now deal daily with the resultant environmental consequences. Homes, schools, hospitals and churches in the communities adjacent to major airports are often subject to the effects of excessive aviation noise. We need to

promote noise mitigation, compatible land use planning, insulation programs and other effective strategies in these communities to reduce noise and achieve the NextGen stated goal of a real reduction of the environmental impact of the national aviation system.

A prime example of the benefits of cooperative effort is the recently announced MSP agreement between the Metropolitan Airports Commission (MAC) and signed by the City Councils of Minneapolis, Richfield and Eagan, which provides extensive noise mitigation for thousands of citizens in these communities that were affected as a result of the expansion of the airport. A recent editorial asserts that the community leaders, officials and members of the MAC deserve great credit for reaching this agreement which will result in quality of life enhancements.

Again, Mr. Chairman, and Members of the Committee, I commend you for holding this hearing today and pledge that NOISE will continue to work to provide a vehicle for interaction between communities, airports and national stakeholders and will actively support initiatives and programs which effectively address aviation noise abatement.

STATEMENT

OF

MAYOR ARLENE J. MULDER
VILLAGE OF ARLINGTON HEIGHTS, ILLINOIS AND
CHAIRPERSON, O'HARE NOISE COMPATIBILITY COMMISSION

ON

AVIATION AND THE ENVIRONMENT: "NOISE"

WEDNESDAY, OCTOBER 24, 2007
11:00A.M.
2167 RAYBURN HOB

BEFORE

HOUSE TRANSPORTATION AND INFRASTRUCTURE COMMITTEE

SUBCOMMITTEE ON AVIATION

OCTOBER 24, 2007

Chairman Costello, Ranking Member Petri and members of the Subcommittee, good morning to all of you. It is my pleasure and privilege to be with you today.

I am here today with you representing the O'Hare Noise Compatibility Commission, which is a consortium of communities and school districts in the O'Hare area which works on meaningful methods of reducing the impact of aircraft noise around O'Hare International Airport.

I am also the Mayor of Arlington Heights, Illinois, a community of nearly 80,000 residents, located directly northwest of O'Hare International Airport.

As a community in close proximity to O'Hare, Arlington Heights has been concerned with the impact of aircraft noise for many years. In 1991, we were the first Chicagoland suburb to take an active role in monitoring jet noise and addressing noise-related issues. In direct response to these issues, we formed the Arlington Heights Advisory Committee on O'Hare Noise, which continues to counsel the Arlington Heights Village Board. I was the first Chairperson of that committee and I continue to be very active in addressing aircraft noise issues as Chairperson of the O'Hare Noise Compatibility Commission (ONCC) since 1997.

By way of background, the O'Hare Noise Compatibility Commission was formed in November 1996 on an invitation by Chicago Mayor Richard M. Daley in order to develop constructive ways for suburbs and school districts to work more effectively with the Chicago Department of Aviation, the FAA, the Air Traffic Controllers, the airlines, the pilots and many other companies and organizations in the Aviation industry on aircraft noise reduction in communities around O'Hare Airport.

As a result of Mayor Daley's vision and the ongoing commitment of our members, all of the work of the O'Hare Noise Compatibility Commission is a matter of public record and open meetings. We believe in collaboration, not confrontation. We do our work in the boardroom, not the courtroom.

The members of the ONCC are locally elected officials and appointed representatives of suburban communities. These people, who are not paid for their service to the commission, live and work in the suburbs affected by aircraft noise.

The 42 Municipal and School District members of this Commission understand that there needs to be a balance between the regional economic engine that is O'Hare and the quality of life issues that are vital to the residents living near the airport.

The ONCC also understands that reducing aircraft noise cannot be accomplished with the flip of a switch. It is an evolutionary process that results in subtle day-to-day progress, but over time produces significant, measurable outcomes.

The ONCC works primarily through three standing committees.

The Technical Committee examines and promotes the use of cutting edge technologies and procedures aimed at reducing aircraft noise at its sources.

The ONCC's other two standing committees are concerned with reducing noise at its points of impact, specifically schools and homes.

The School Sound Insulation program is the world's largest. To date, over $285 million have been spent on effectively sound insulating schools around O'Hare, with 114 now completed.

By the end of the 2006 program year, the O'Hare Residential Sound Insulation Committee will have directed the insulation of more than 6,100 homes at an average cost of $30,000 each, totaling over $180 million.

For your information, for the O'Hare Residential and School Sound Insulation Programs, the current funding mechanism has FAA Airport Improvement Program funding at 80%, and City of Chicago Passenger Facility Charges at 20%.

The FAA is now the primary funder of the O'Hare Residential Sound Insulation Program as the FAA required mitigation in the Record of Decision for the O'Hare Modernization Program (OMP). For the first 5,900 single-family homes that were sound-insulated from 1996-2004, the City of Chicago funded that Program entirely with PFC revenues, which the ONCC and residents in surrounding communities which have benefited from this Program we are extremely grateful for.

One of our area communities was the beneficiary of one of only two communities nationwide of another creative FAA initiative, which is its Land Use Compatibility Grant Program. Another step O'Hare communities can take to mitigate aircraft noise is to update land use planning to reduce existing non-compatible land uses and head off introduction of new uses not compatible with the airport's modernization. Due to the FAA's funding and the community's planning, the City of Des Plaines, IL was awarded a $750,000 federal grant to upgrade zoning ordinances and industrial design standards and conduct studies looking at how O'Hare's new contours will affect the city.

As the City of Chicago continues its aggressive noise mitigation efforts at O'Hare and Midway Airports, the ONCC supports the City of Chicago's efforts to obtain a substantial increase in the AIP Noise Set Aside as well as FAA discretionary grants for Midway and O'Hare sound insulation projects. We commend the Aviation Committee and House of Representatives for significant AIP dollar increases in the new FAA Reauthorization Bill.

The ONCC also agrees with the position of many airports across the country, including the Chicago Airport System, to give them the ability to increase the Passenger Facility Charge rate ceiling and provide airports flexibility in that rate-setting.

It is also important for the members of this panel and the general public to understand that the ONCC is not for or against the City of Chicago on airport development issues, including the O'Hare Modernization Program.

What all the members of the ONCC, including the city of Chicago, share is concern for the impact of aircraft noise on residents. All of our members, regardless of their individual positions on the O'Hare reconfiguration proposal or other airport-related issues, are dedicated to finding the most effective ways to reduce aircraft noise.

The ONCC is now working with renewed enthusiasm and a new mandate. We have been given specific responsibilities concerning aircraft noise mitigation as O'Hare is being redeveloped. When the O'Hare Modernization Program was first announced, the ONCC pledged to be involved in the FAA's Environmental Impact Statement process every step of the way. We kept that promise and made constructive suggestions on aircraft noise issues throughout the process.

Now the ONCC has an important role as the O'Hare Modernization Program moves forward. For the first time, we have the opportunity to sound-insulate homes before aircraft noise arrives. The OMP also provides a new framework to explore revised aircraft flight procedures that have the potential to reduce aircraft noise significantly over residential areas, especially at night.

Related to the future in increased aviation capacity and related environmental impacts which may result from it, the ONCC strongly commends the Federal Aviation Administration for thoroughly defining environmental goals in the Next Generation Air Transportation System (NextGen).

Through NextGen, we realize that the FAA will be able to substantively address the impacts of air traffic growth by increasing National Air System capacity while addressing quality of life impacts at the same time. The FAA will be able to implement new procedures that enhance emerging aircraft navigation capabilities, including performance-based navigation, which will assist the FAA in achieving various NextGen goals.

With initiatives and projects like NextGen, the ONCC can continue lobbying for additional funding for technological approaches to aircraft noise mitigation, such as NASA's quiet engine technology research and advanced flight track procedures like RNAV, or Area Navigation. The procedures developed follow the preferential nighttime flight tracks that were designed to navigate aircraft towards areas of more compatible land use, such as forest preserves, highway corridors and industrial areas. The use of this technology will automatically compensate for wind drift and air speed while ensuring airspace safety, efficiency, and, when possible, minimizing the noise impacts to surrounding residences.

NextGen also addresses another creative and cutting-edge approach procedure, which is called Continuous Descent Approach (CDA). This technology allows pilots to fly computer-driven steeper runway approaches. A steeper approach reduces noise by keeping aircraft at higher altitudes for longer periods, reducing required engine power during descent and delaying flap extension which reduces airframe noise. The ONCC highly commends the FAA for working towards implementation of CDA at airports throughout the country.

In conclusion, I speak for all ONCC members in saying that we welcome the challenges ahead and the opportunity to continue serving all the residents of the O'Hare region, cooperatively and collaboratively.

As we move forward into the future, the ONCC will continue its role in aircraft noise mitigation and will remain focused on enhancing the quality of life in communities around O'Hare.

The ONCC stresses that Congress support groups like ours which promote open dialogue, accessibility to information, and forums for the exchange of viewpoints on the impacts, alternatives, and mitigation prospects.

The ONCC urges you and all decision makers in the process to consider quality of life issues at the same priority level as airport efficiency and safety. At the same time, we all agree safety is obviously the top priority.

In addition, the ONCC will continue to address the aircraft noise issues that exist today around O'Hare and it urges the members of this Committee to remain concerned with everyone who must live and learn in homes and schools around America's airports today and well into the future.

Thank you very much for your time and attention. I look forward to any questions you may have.

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PAGE 02

O'Hare Noise Compatibility Commission

Arlene J. Mulder
Chairperson

Raymond J. Kuper
Vice-Chairperson

November 25, 2007

The Honorable Thomas E. Petri
Congressman and Ranking Republican Member
Subcommittee on Aviation
U.S. House of Representatives
Committee on Transportation and Infrastructure
Washington, DC 20515

Dear Congressman Petri:

On behalf of the O'Hare Noise Compatibility Commission (ONCC) and its 42 members, I want to thank you very much for allowing me the opportunity to provide testimony to you and other members at the Aviation Subcommittee's hearing on "Aviation and the Environment: Noise" on October 24, 2007.

As I explained during my testimony before the Committee, the O'Hare Residential Sound Insulation Program is now firmly focused on the future. The noise contour is based on the reconfiguration of the runway layout under the O'Hare Modernization Program (OMP).

After years of making its voice heard on behalf of area residents during the environmental impact process for the OMP, the O'Hare Noise Compatibility Commission (ONCC) was given specific responsibilities by the FAA as the airport is reshaped. Among those responsibilities outlined in FAA's Record of Decision on the OMP is continued oversight of the residential sound insulation program as it is positioned to address the areas around the airport where aircraft noise is likely to occur as new runways are constructed.

Beginning with the 2006 insulation program, eligible single-family and multi-family residential buildings are being insulated in areas projected by the FAA to be affected by aircraft noise upon completion of the OMP. That means for the first time, in many areas, the O'Hare Residential Sound Insulation Program will be addressing noise issues in advance. Historically the program worked to mitigate the impact of existing noise, only. It should be noted that while multi-family homes will be included in the program, the 2006 phase will include only buildings up to four-units. Technical issues must be addressed before larger residential complexes can be included in the program.

Eligible residences are those that experience a yearly average day-night noise level ("DNL") increase of 1.5 decibels or more within the 65 DNL or greater contour in the projected noise contour map for the OMP, or which are newly within the 65 DNL or greater noise contour according to the projected noise contour map for the OMP.

While some aspects of the O'Hare Residential Sound Insulation Program are new, the standards of fairness used by the ONCC in overseeing the program since 1997 remain unchanged. Homes continue to be insulated on a "worst-first" basis, and block rounding remains an important part of the program to make sure that all homes on the same block are sound insulated even if some do not fall within the contour.

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www.oharenoise.org

Based on information provided by the Federal Aviation Administration's Chicago Airports District Office, Boston Logan's Residential Program is the only other area besides the O'Hare Program that addresses impacts before noise is projected to occur. Other jurisdictions may follow suit.

As I stated in my testimony, the look and sound of O'Hare is changing. The ONCC is ready to meet the challenges as an advocate and resource for all O'Hare area residents.

If you have any questions regarding the approach that the ONCC is taking with regard to implementing the O'Hare Residential Sound Insulation Program, you are welcome to contact me at (847) 368-5105, or via e-mail at mayor@vah.com

Thank you again for allowing me the opportunity to provide you with testimony at this important hearing.

Regards,

Arlene J. Mulder

Arlene J. Mulder
Mayor, Village of Arlington Heights and
Chairperson, O'Hare Noise Compatibility Commission

THE PORT AUTHORITY OF NEW YORK AND NEW JERSEY

STATEMENT OF RALPH F. TRAGALE

MANAGER, GOVERNMENT & COMMUNITY RELATIONS

SUBCOMMITTEE ON AVIATION

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

U.S. HOUSE OF REPRESENTATIVES

HEARING ON AVIATION AND THE ENVIRONMENT: NOISE

2167 RAYBURN HOUSE OFFICE BUILDING

UNITED STATES HOUSE OF REPRESENTATIVES

OCTOBER 24, 2007

RALPH F. TRAGALE
MANAGER
GOVERNMENT & COMMUNITY RELATIONS
PORT AUTHORITY OF NY & NJ
NEW YORK, NY 10003
212-435-3730

Chairman Costello, Congressman Petri, Congressman LoBiondo, Congressman Hall and other distinguished Members of the Subcommittee, good afternoon. My name is Ralph Tragale and I am the Manager of Government & Community Relations for The Port Authority of New York and New Jersey's Aviation Department. On behalf of the Port Authority, I would like to thank you for organizing this hearing and giving me the opportunity to testify today and to share with you our thoughts regarding aviation and the environment. My comments, while brief, are intended to demonstrate the significant effort by the Port Authority to address the issue of aircraft noise and to share with you the results of that effort.

The Port Authority is a bistate public authority created in 1921 by the two States with the consent of Congress. Its mission on behalf of the States is to identify and meet critical transportation infrastructure needs of the bistate region and facilitate the movement of people and goods to and from the rest of the nation and the world. The Port Authority operates many of the busiest and most important transportation facilities in the region. In addition to the airports, these include the George Washington Bridge and Bus Station; the Lincoln and Holland tunnels; three bridges connecting Staten Island and New Jersey; the PATH rapid-transit system; the Downtown Manhattan Heliport; Port Newark; the Elizabeth-Port Authority Marine Terminal; the Howland Hook Marine Terminal on Staten Island; the Brooklyn Piers/Red Hook Container Terminal; and the Port Authority Bus Terminal in midtown Manhattan. The agency also owns the 16-acre World Trade Center site in Lower Manhattan.

The agency also operates four airports that are critical to the nation's trade, travel, commerce and tourism – John F. Kennedy International (JFK); Newark Liberty International (EWR); LaGuardia (LGA); and Teterboro (TEB). In 2006 these airports accommodated 104 million passengers, with over 2.6 million tons of cargo on 1.2 million aircraft movements. This activity produces an astounding $62 billion in annual economic activity and directly and indirectly supports more than 375,000 jobs in the New York/New Jersey metropolitan region. In addition, on November 1st of this year, the Port Authority will take over operations at Stewart International Airport. On behalf of the Port Authority I would like to take this opportunity to thank Congressman John Hall and Maurice Hinchey for all their support in helping us acquire Stewart.

AVIATION AND THE ENVIRONMENT: NOISE

Regarding the issue at hand, Aviation and the Environment, with a specific focus on noise. The Port Authority has a long history of actions taken to reduce the impact of aircraft noise on residential areas around each of our airports. The oldest one of these actions is our departure noise limits adopted in 1959, which required that aircraft be operated not to exceed 112PNdB in the nearest community under the flight path.

This restriction is part of the Port Authority's terms and conditions that every air carrier must adhere to if they wish to operate at our airports. It is the responsibility of each air carrier to determine methods of compliance, which could include thrust reduction, turning away from the community, limitations of gross weight, or utilizing aircraft with quieter engines. This was truly historic. It was the first noise rule established in the aviation industry, and we believe it was the catalyst that led to engine manufacturers efforts in research and development of quiet engine technology. This may be a bold statement, but at the time the New York/New Jersey market was undeniably the most important destination in the world for the aviation industry and because of that, virtually every aircraft built had to use one of the Port Authority's airports in the course of their business. This fact required that manufacturers in this country and abroad build the quietest engines possible.

Over the next almost 40 years, the Port Authority developed a series of programs that led the nation's noise mitigation strategies. Some of these initiatives included restrictions on run up of aircraft engines during maintenance, noise abatement flight procedures zoning guidance for local municipalities and voluntary curfews to name just a few. The Port Authority's programs were very successful and in the 1980s led to the FAA's development of the Part 150 Program. This voluntary federal program was developed using the Port Authority's existing noise abatement programs as a model and helped airports build strong relationships with their neighbors. Other than our school soundproofing program which to date includes 78 schools at an estimated cost in excess of $400 million our focus and the programs we have developed have been directed on mitigating noise at the source – the aircraft engine.

Our analysis indicates that our approach has been very successful. In the 1980s the number of people then living in noise-impacted areas around the three major commercial airports was close to 2 million. Thanks to our noise programs, and the establishment of mandated Stage III noise limits on new aircraft engines, the number of people now living in federally defined noise-affected areas has dropped more than 95% to under 100,000 based on the most recent noise exposure maps.

However, the Port Authority will not be content until we achieve full noise compatibility between each airport and its residential neighbors while taking into account the requirements of the national aviation system, which is critical to this region's economic fabric. The FAA is in the midst of a multi-year airspace redesign effort to implement new flight procedures, new technologies, aircraft equipment and other infrastructure, in the NY/NJ region where the need is greatest. The FAA believes that new navigational technologies and new procedures will allow flights to be redirected over the least noise sensitive places such as highways and industrial areas.

CONCLUSION

Now the million-dollar question. Why has the Port Authority not conducted a Part 150 study? As I noted earlier, it's a voluntary program modeled after our existing noise abatement programs. Most importantly, we already employ all the elements of a Part 150, except of course for residential soundproofing. However, as I also said, we have a huge commitment to reducing the noise impact from aircraft, evidenced by our significant school soundproofing program. In addition, we stand ready to meet with airport neighbors to continue working together to ensure that the Port Authority and our airport partners remain good neighbors.

The Port Authority is deeply grateful to this committee and its staff for giving us this opportunity to discuss these important issues and is committed to our joint goal of protecting the air traveling public and the people who live, work and learn near our nation's airports. I welcome the opportunity to answer any questions the Committee might have. Thank you.

###

Honorable Jerry F. Costello
Chairman, Subcommittee on Aviation
U.S. House of Representatives
Rayburn House Office Building
Washington, DC 20515

Government & Community Relations

Dear Chairman Costello:

Thank you for inviting the Port Authority of New York & New Jersey to provide testimony before your committee on October 24, 2007 in regard to Aviation and the Environment: Noise.

Attached please find responses to questions that Congressman Joseph Crowley submitted for the record.

1. In your oral and written testimony, you state that the Port Authority already employs all elements of a Part 150 study "except of course for residential soundproofing". This is even in light of language included in the Vision 100 Conference Report that stated the Port Authority should work with the affected Congressional delegations to undertake a Part 150 study to qualify for Federal residential soundproofing dollars or to begin undertaking residential soundproofing in the most affected areas in the footprint with particular focus on the neighborhoods surrounding LaGuardia Airport. But the Port Authority did not even consider heeding this Congressional directive. Why? And If I am incorrect, please inform me of the actions taken by the PANYNJ itself to respond to the concerns of the language drafted into law in the Vision 100 law (PL 108-176)

   The specific language:

   > *Although the FAA determined that aircraft noise pollution was the strongest and most widespread concern raised by the public at its twenty-eight public scoping meetings in five states in 2001, the Port Authority of New York and New Jersey has not undertaken action to mitigating residential complaints in the neighborhoods surrounding its airports. Therefore, it is the hope of the Conference Committee that the PANYNJ will work in good faith with the New York and New Jersey Congressional delegations to address these issues, including undertaking a part 150 study to qualify for Federal residential soundproofing dollars or to begin undertaking residential soundproofing in the most affected areas in the footprint with particular focus on the neighborhoods surrounding LaGuardia Airport.*

225 Park Avenue South, 18th Floor
New York, NY 10003

THE PORT AUTHORITY OF NY & NJ

Since the early 1960s, the Port Authority has developed and implemented programs that led the nation in noise mitigation strategies. Some of these initiatives included restrictions on run up of aircraft engines during maintenance, noise abatement flight procedures, zoning guidance for local municipalities and voluntary curfews to name a few. The Port Authority's programs have been very successful and led to the FAA's development of the Part 150 Program. We believe that the results of our programs achieved the goal of reducing noise in the communities around the airports and thus met the intent of the language you cited in your question.

2. In your written and oral testimony, you highlighted that the Port Authority has soundproofed 78 schools at a cost of over $400 million. While I welcome this investment, wouldn't one assume that this soundproofing of schools proves that the Port Authority recognizes and agrees with the numerous studies showing airport noise does disrupt learning and interferes with reading, motivation, language and speech acquisition, and memory in children?

   And if so, how can you address this problem of children's learning by soundproofing just schools and not the homes where they live, sleep and do their homework? And if you do not agree with the scientific evidence of the adverse effects of noise on the development of children, then why would you soundproof schools?

The Port Authority acknowledges the noise impact from aircraft on students' learning environment and that is why we have committed to a significant school-soundproofing program that I mentioned in my testimony. Consistent with that, we are committed to reducing the impact of noise in residential communities and we feel that we have achieved much in that regard. Our results speak for themselves in that there was a 95% reduction in the number of people including school children who live in the 65 DNL noise contour.

3. In your testimony, you highlight that in the 1980's, the number of people living in noise-impacted areas around the 3 major commercial airports operated by the Port Authority was close to 2 million. You now state that this number is closer to 100,000, due to Stage III aircraft and your "noise programs". I agree that Stage III aircraft has been helpful, but can you disclose what specific actions the Port Authority has taken to mitigate the noise in the footprint communities surrounding the 3 major airports operated by the Port Authority.

THE PORT AUTHORITY OF NY & NJ

The Port Authority has a long history of actions taken to reduce the impact of aircraft noise on residential areas around each of our airports. The oldest one of these actions is our departure noise limits adopted in 1959, which required that aircraft be operated not to exceed 112PNdB in the nearest community under the flight path.

This restriction is part of the Port Authority's terms and conditions that every air carrier must adhere to if they wish to operate at our airports. It is the responsibility of each air carrier to determine methods of compliance, which could include thrust reduction, turning away from the community, limitations of gross weight, or utilizing aircraft with quieter engines. This was truly historic. It was the first noise rule established in the aviation industry, and we believe it was the catalyst that led to engine manufacturers efforts in research and development of quiet engine technology. This may be a bold statement, but at the time the New York/New Jersey market was undeniably the most important destination in the world for the aviation industry and because of that, virtually every aircraft built had to use one of the Port Authority's airports in the course of their business. This fact required that manufacturers in this country and abroad build the quietest engines possible.

4. For a number of years, you have dismissed undertaking a Part 150 study or conducting residential soundproofing under the guise of waiting for the new FAA Airspace Redesign. We understand that this redesign will have no real net positive or negative impact on air noise in the footprint communities of LaGuardia Airport. Seeing that, would the Port Authority now support residential soundproofing for those communities, seeing that the Airspace Redesign won't assist the thousands of people you acknowledge will not be benefiting noise-wise from this new FAA Airspace Redesign ?

The Port Authority has believed for many years that the FAA's Airspace Redesign project would offer some relief from the impact of aircraft noise on our neighbors. Unfortunately our hope and the hope of our neighbors has not materialized in the FAA's final redesign. That is unfortunate and we publicly expressed our disappointment directly to the FAA. While this reality has not changed our current position on conducting a Part 150, we are committed to work cooperatively with the Subcommittee, its staff and Congressman Crowley to achieve meaningful relief for people who live around our airports.

Sincerely,

Ralph Tragale
Port Authority of NY & NJ

BEFORE THE
SUBCOMMITTEE ON AVIATION
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
UNITED STATES HOUSE OF REPRESENTATIVES
WASHINGTON, D.C.

TESTIMONY OF
STEPHEN A. ALTERMAN, PRESIDENT
CARGO AIRLINE ASSOCIATION
1220 19TH STREET, NW, SUITE 400
WASHINGTON, DC 20036
202.293.1030

ON

AVIATION AND THE ENVIRONMENT: NOISE

OCTOBER 24, 2007

Good morning. My name is Steve Alterman and I am the President of the Cargo Airline Association, the nationwide organization representing the interests of the all-cargo air carrier industry, as well as other businesses and entities with a stake in the air cargo supply chain. (A list of current members is attached).

The issue of aviation noise is very important to the all-cargo industry and we, along with our aviation colleagues, have been making progress toward improving aircraft noise. As you may know, according to the FAA, there has been a 90 percent reduction in the number of people adversely affected by aircraft noise in the United States over the past 30 years. In order to continue progress in this area we support NextGen modernization efforts that include new technologies and operational procedures aimed at reducing communities' exposure to noise. Additionally, as we move forward, I would like to point out an area where we see a chance for improved regulatory coordination as it relates to aircraft noise and emissions.

Aircraft engines emit both noise and emissions, yet the regulatory jurisdiction to set standards in these two areas is currently split between the FAA (which is responsible for the noise component) and the EPA (which sets emissions standards). This bifurcated authority makes little sense and invites regulatory results that may be internally inconsistent. Therefore, the setting of noise and emissions standards should be consolidated, and the most appropriate agency to handle these consolidated functions is the FAA.

Regulations affecting either noise or emissions may have a significant impact on the other. For example, it is quite possible that rules requiring engine modifications for noise purposes will have a direct effect on emissions from these same engines (and vice versa). Consolidation of the noise and emissions certification standards will insure that the interrelationship of these two environmental issues is adequately addressed.

With respect to both noise and emissions, the FAA is already the voice of the U.S. Government in international circles. The primary venue for this representation is the International Civil Aviation Organization (ICAO). Indeed, in an August 17, 2004, letter from the EPA to the FAA, the EPA notes that resource constraints preclude the EPA from even participating in the ICAO environmental processes. Transfer of the engine emission certification responsibility to the FAA is simply a further recognition of FAA primacy in this area.

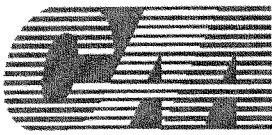
Environmental issues such as noise and emissions must be viewed in the context of the maintenance of a safe, reliable, air transportation system. The FAA possesses the

background and expertise to evaluate environmental requirements in this respect – the EPA does not.

Therefore, the Cargo Airline Association is supportive of section 510 of the FAA Reauthorization legislation (H.R.2881). The bill calls for the FAA Administrator to make arrangements for a review to determine whether it is desirable to have regulatory responsibility for both engine and noise standards housed within one agency. We believe this is a positive first step in addressing this issue. Also included in FAA Reauthorization is the CLEEN (continuous lower energy, emissions and noise) program for the development, maturation, and certification of engine and airframe technologies to reduce aviation noise and emissions – we believe programs such as CLEEN are critical in the effort to address environmental challenges and were pleased to see it included in legislation passed by this committee.

In summary, the Cargo Airline Association and its member companies are committed to working with Congress, the FAA and colleagues in the aviation community to address the issue of aircraft noise.

Thank you very much.



THE CARGO AIRLINE ASSOCIATION
The Voice of the Air Cargo Industry

MEMBERSHIP LIST

ALL-CARGO AIR CARRIERS

* ABX Air, Inc.	Wilmington, OH
* Atlas Air, Inc.	Purchase, NY
* FedEx Express	Memphis, TN
* United Parcel Service	Louisville, KY
* Air Transport International	Little Rock AR
Capital Cargo International	Orlando, FL
DHL Express	Miami, FL
First Air	Gloucester, Canada
Kalitta Air	Ypsilanti, MI
Kitty Hawk Inc.	Dallas, TX
USA Jet Airlines, Inc.	Belleville, MI

AIRPORT ASSOCIATE MEMBERS

Ft. Wayne International Airport	Ft.Wayne, IN
Louisville International Airport	Louisville, KY
Memphis-Shelby County Airport Authority	Memphis, TN
New Orleans International Airport	New Orleans, LA

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City of College Park, Georgia
House Transportation and Infrastructure
Subcommittee on Aviation
Hearing on Aviation and the Environment: "Noise"
October 24, 2007

The Honorable Jerry Costello, Chairman
House Committee on Transportation
Subcommittee on Aviation
2251 Rayburn House Office Building
Washington, DC 20515

The Honorable Thomas Petri, Ranking Member
House Committee on Transportation
Subcommittee on Aviation
2251 Rayburn House Office Building
Washington, DC 20515

Chairman Costello and Congressman Petri,

Thank you for the opportunity to address an issue very near and dear to my heart and to the concerns of my City. I want to also thank Congressman Lynn Westmoreland for reaching out to us to share our story.

I write to you as a member of the City Council of College Park, Georgia. My City is home to the busiest passenger airport in the entire world, Hartsfield-Jackson Atlanta International Airport. I am sure that all of you Subcommittee Members have at one point or another in your congressional careers flown through this fine airport. If you have, you have probably visited the Great City of College Park, although you may not have known it. Most of the operational lands at the airport (including the terminal building, the T Gates, the A Gates, and more than ½ of the B gates) lie in the corporate limits of my City. You should know that that the land underneath those areas once housed a thriving residential neighborhood. To facilitate airport growth (to allow Hartsfield-Jackson to become the grant airport envisioned by the region dozens of years ago), we had to sacrifice hundreds of homes and thousands of homeowners had to leave the City.

As your Committee and fellow Members of Congress consider taking steps to implement the Next Generation Air Transportation System (NextGen), you would be well advised to consider the vast implications that the new system will have on airports and the communities that host airports. The goal of NextGen is to achieve an air system capable of meeting future air traffic demand, consistent, among other things, with national security and environmental objectives. This goal will require additional and larger airports serving more planes and more passengers, a requirement that historically has proven difficult to meet. Congress must be forward thinking in its approach to mitigate environmental impacts related to the growth of aviation to foster public acceptance of air transportation growth, with innovation resulting from meaningful partnership at local and regional levels.

In short, a local government perspective is necessary as Congress considers NextGen. The success of NextGen requires considerably increased airport capacity. Local and regional cooperation and proper land use policies will be necessary for this to happen -- an ongoing and signficant challenge that must be realistically confronted if NextGen is to be achieved. College Park's experience with the growth of Hartsfield-Jackson can offer an instructive lesson on how to handle this in the most meaningful and productive way.

NextGen envisions a system with more aircraft, which will result in increased noise "pollution" in and around major airports. To help address the problem of aircraft noise in and around airports, the Congress created the Airport Noise Compatibility Program (often referred to as the Part 150 Program). The program allows the FAA to provide grant funds to airports and their host communities to redevelop adjacent land in ways that are compatible with aircraft noise. The Part 150 program has been successful where airports have partnered with their host

communities in meaningful and productive ways. Under the Part 150 Program, airports must submit to the FAA a Noise Compatibility Program (or NCP) to provide the basis for federal implementing grants.

In developing the NCP, airports are supposed to consult with their host communities on a range of issues, including zoning, targeted development, associated infrastructure, and the future of residential land use. When airports that truly partner with their host local governments at the front end of this process, this typically results in development of land use policies that mitigate the impact of increased airport noise on the average resident. The loss of residential neighborhoods to accommodate larger airport operational land can and should be offset by reinvestment of those properties in uses compatible with aircraft noise (typically that means rezoning and converting incompatible properties into compatible, often commercial, properties). Communities can offset losses to their property taxes with increases in other sorts of revenue.

Under the Part 150 Program, airports and their communities may, if they so choose, sound insulate affected properties to the extent practicable. The City of Inglewood, California (host to LAX) has a very robust and successful sound insulation program (that the City actually runs) that provides new windows, air conditioning, and wall and attic insulation, to homeowners living under most of the LAX flight paths.

Partnership with the host local community should continue during and after implementation of a NCP as an airport's operational needs shift, land use options change, and lands acquired with federal dollars may be returned to productive use. In other words, standards

requiring continued collaboration, partnership and respect for needs that can be accommodated must be the order of the day if NextGen is to have the local foundation it needs to flourish.

Our specific experience in College Park, related to Hartsfield-Jackson, offers mixed results. My City has given up tremendous opportunities to facilitate growth at Hartsfield-Jackson. We have turned over more than 36% of the land within our City limits to the airport because it was deemed to be incompatible with airport noise (most of which was bought by the airport using Part 150 grant funds). We have changed many of our zoning ordinances to bring them in line with increased airport activity and aircraft noise. We have reconfigured many of our city streets to accommodate the airport (including several recently that were needed to allow for construction of the famous "Fifth Runway").

However, much of this came at considerable expense to College Park. Our population now stands at about half of what it was before the airport started to grow. The airport controls much of the commercially viable real estate (and accordingly acts in its own interest, rather than those of College Park). We are restricted in the amount of residential growth that we would like to have because of the ever present aircraft noise. Much of this situation was created because of inadequate partnership at the outset of Hartsfield-Jackson's expansion. Mr. Chairman, College Park's residents (who are among Atlanta's most poor) now live with constant aircraft noise and our City government has little power to address their concerns. NextGen would support further growth at Hartsfield-Jackson and other major airports but it is likely to bring increased aircraft noise to the people who live there.

Congress should take steps to improve adequate and meaningful consultation, and implement rules that require significant collaboration between airports and their host communities when it comes to expansion and the impact of aircraft noise pollution. If local communities are to share in shouldering the costs of a robust air transportation system to take this nation into the future, they should be treated as genuine partners in the effort by both airport management and the federal government.

You have a unique opportunity, Mr. Chairman and Members of this Subcommittee, to implement NextGen in a way that is not only compatible with growth in the air traffic system, but also compatible with growth in the size of airports. These two are inextricably linked. I would ask the Subcommittee to consider these needs on the front end, even though they might occur on the back end. Who could rightfully fault you for proper planning and applying lessons learned, especially when everyone can win?

I thank you for this opportunity and will welcome any questions from the Committee.

Sincerely,

Signed

Charles E. Phillips, Sr.
Mayor, Pro Tem

SIERRA CLUB – National Parks and Monuments Committee

October 21, 2007

To: U.S. Senate: Committee on Commerce, Science, and Transportation

Re: Oversight Hearing on the Dept. of Transportation (Oct. 18, 2007)

The Sierra Club, with its 840,000 members nationwide, wishes to comment for this Oversight Hearing on two current areas of concern concerning the Department of Transportation and its Federal Aviation Administration, re the failure to provide due-diligence, straightforward, timely implementation, of either

1. The National Parks Air Tour Management Act (enacted April 5, 2000)
2. The proposed Aviation Noise Abatement Policy (issued by FAA July 14, 2000 in a Federal Register Notice for Comment)

The National Parks Overflights Act of 2000 (NPATMA)

Congress had intended this legislation, within two years of its original enactment, to prevent significant adverse impacts of air tour noise on units of the National Park system, which were and still are barraged by noisy helicopter and fixed-wing, low-level air touring enterprises subject to management by the FAA.

This intent has been unacceptably delayed and frustrated.

The way Congress intended relief was to have the Park Service (NPS) and the Federal Aviation Administration (FAA) jointly develop air tour

management plans for national parks –though excluding those in Alaska, and Rocky Mountain National Park and Grand Canyon National Park. Unfortunately, not a single air tour management plan has been completed well more than seven years since the passage of the Act. Among other factors, this has mainly been the result of FAA's consistently challenging the authority of the Park Service, especially re the significance of noise impacts from air tours on national parks.

Sierra Club believes that Congress should clarify the intent of the NPATMA by making it explicit that the Park Service has the unimpeded, sole authority to determine the significance of noise impacts on the parks, while the FAA has the authority to ensure airspace safety. With this clarification, the Park Service will have the clear authority it needs to make progress in better protecting natural sounds and quiet in the Parks.

Sierra Club also believes that Congress should stipulate additional measures which FAA could have undertaken years ago under NPATMA, and failed to do so, again by not exercising due diligence. These were the subject of two recent General Accountability Office (GAO) reports. In fact, specifics from these two reports have informed certain sections in the pending FAA Reauthorization Act from either House.

If appropriately managed, air tours provide a unique way for a reasonably controlled number of park visitors to experience some, though not necessarily all, of America's parks. However, we believe it is unfair for air tours and their noise to continue detracting from the experience of other visitors.

FAA has not exercised the overall due-diligence required, and otherwise has obstructed the progress which Congress intended. As an unfortunate result, the National Parks Overflights Advisory Group

learned in June, 2007, that (1) no air tour management plan (ATMP) was near completed; and (2) that of $32 million earmarked for air tour management, only $9 million had been spent, and that if there were no ATMP's soon, the remainder would have to be returned to the U.S. Treasury unspent.

The senior NPS representative at that June, 2007 NPOAG meeting deplored the situation, and said that the viability of this DOT program could be seriously questioned without a single ATMP having been put in place. The September, 2007 meeting of the NPOAG heard this sad story repeated, with the reasons for it essentially unchanged. After October 1st of next year, many millions of dollars, intended for national parks protection from adverse air tour impacts, will increasingly return to the Treasury unspent, unless the impasse between the agencies (largely created by FAA's negligence, lack of due-diligence, and/or obstructionism) is resolved.

FAA proposed Noise Abatement Policy of 2000

The FAA has apparently abandoned its efforts to produce a revision of its Noise Abatement Policy of 1976. [1] It was improper, furthermore, that the FAA made no disclosure of said abandonment to a thereby blind-sided, concerned public.

Background

Three months after the Y2000 enactment of the NPATMA, the FAA issued its proposed "Aviation Noise Abatement Policy 2000." The Secretary of Transportation thereby published a departmental policy statement, which included as Goal 5, "to provide specific

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[1] Wyle Noise Bulletin #53 – "FAA's Aviation Noise Abatement Policy" (Oct. 10, 2007 - Wyle Laboratories, Inc., Arlington, VA), available at http://www.wylelabs.com/content/global/documents/FAA1976NoisePolicy

consideration to locations in national parks and other federally managed areas having unique noise sensitivities."

This was then translated to proposed "Policy Element 6: Areas with Unique Noise Sensitivities", (discussed at length [see FR 43811] within the subject announcement.)

This element had been a long-standing concern. This policy element section had appeared within "FAA's Noise Policy for Management of Airspace over Federally Managed Areas", issued Nov. 8, 1996, by FAA Administrator David R. Hinson. The FAA in 2000 reasserted through Policy Element 6, a need/intention to focus, "to identify the extent to which low-level noise . . . may adversely impact areas with unique noise sensitivities."

Elsewhere in the same Federal Register 2000 notice, the FAA said in "Section 4: Assessing Aviation Noise", that it wanted to accomplish such identification, "in the vicinity of national parks in pristine areas, and land uses such as wildlife refuges." (FR at 43821)

However, FAA's recent abandonment of the 2000 draft Noise Abatement Policy, after all the public comment[2] it provoked (See Docket FAA-2000-30109), is unacceptable and incomprehensible. To thereby return the nation to an outdated, 40-odd year old noise policy is unworthy of the Department of Transportation, and counter-productive to FAA's own stated NextGen goals of a 3x increase in airspace capacity by 2025. Aviation growth of such magnitude cannot occur without a properly updated Noise Abatement policy. This would include metrics, parameters, and thresholds more meaningful/acceptable to the general public, such as recently

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[2] Noise Pollution Clearinghouse, "The Failure of America's Aviation Noise Abatement Policy", by Les Blomberg and James Sharp, 2002

developed by the Commonwealth of Australia.[3] The Australian document confirms the views of many acoustic specialists in the U.S., that single-event metrics[4] and the disclosure of "respite" intervals are especially needed and appropriate.

KEY QUESTIONS: Was this 2000 Noise Abatement Policy abandonment accepted by any Secretary of Transportation within the past seven years, and if so, by which one(s) and why? Was the interested public informed of such abandonment, and how? How does FAA now intend to inform the public, and promulgate a comprehensive noise abatement policy?

The many hundreds of commentators on the Draft Policy and FAA Docket, and the Congress itself, deserve a full explanation. The Sierra Club was one of those commenters (comment of October 21, 2000, on "Draft 2000 Aviation Noise Abatement Policy.)

To make it clear to the Committee the problems at issue (since FAA has suppressed them to date, without response and without a policy), we are enclosing a copy of our October 21, 2000 official comment for the Docket, now exactly seven years after its original submission.

Conclusions

The implications for national parks' aviation noise assessment and aviation noise mitigation generally, remain serious, as seen both from

(1) FAA's obstinacy and/or stalling with the NPATMA:

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[3] "Guidance Material for Selecting and Providing Aircraft Noise Information", Commonwealth of Australia, 2003, at http://www.dotars.gov.au/aviation/environmental/transparent_noise/pdf/GuidanceMaterial.pdf

[4] "What's In Your DNL?" by William Albee, Tom Connor, Royce Bassarab, Roger Odegard, and Clint Morrow, Oct. ,2006, at http://www.wylelabs.com/content/global/documents/dnl.pdf

(2) FAA's failure to achieve—or even offer-- a cooperative policy outcome, congruent with NPS, re national parks noise assessment.

The result is no air tour management plan for any park, now heading towards eight years after the NPATMA, thus threatening the future viability of the entire air tour management program for national parks.

Elapse of so much time on both these matters confirms that the Park Service now ought to be legislatively assigned sole authority to determine the significance of noise impacts on the Parks.

The Sierra Club appreciates the time of Committee staff and members in undertaking to evaluate and correct this situation. We will respond willingly to further inquiry as needed.

Sincerely,

Dickson J. Hingson, Ph.D.

Sierra Club – National Parks and Monuments Committee

The commenter is based in Flagstaff, AZ and may be reached at dhingson@infowest.com, or at 928-699-8366 with any questions. The Sierra Club's home office is 85 Second Street, San Francisco, CA 94105

Also attached: Sierra Club's Oct. 21, 2000 comment on FAA's Draft Noise Abatement Policy

October 21, 2000

Federal Aviation Administration
Office of the Chief Counsel
Attention Rules Docket (ACG-200), Docket No. 30109
800 Independence Avenue, SW
Washington, DC 20591

Re: **Draft 2000 Aviation Noise Abatement Policy: Sierra Club comment**

The Sierra Club, on behalf of our 650,000 members, welcomes this comment opportunity on FAA's proposed Draft Noise Abatement Policy. We are particularly interested in Goal 5 and Element 6 as to locations in national parks and other federally managed, protected areas having unique noise sensitivities.

The focus of many of our comments is on units managed by the National Park Service. However, the following statements, and some of our comments, apply also to the broader range of "preserves", i.e., those federally managed, protected areas thus bearing unique noise sensitivities. Please note, however, that the Statement which follows our Background Principles below is concerned specifically with scenic air tours.

Background Principles of Sierra Club re Natural Quiet

I. The sounds and silences of nature are among the intrinsic elements which combine to form the natural environment. Natural sounds amidst intervals of stillness are inherent components of the "scenery and the natural and historic objects and the wildlife" within National Monuments, and units of the National Park System and National Wilderness Preservation System (all hereinafter called preserves.)

II. Natural quiet is the extended opportunity to experience only natural sounds amid periods of deepest silence. The quiet to be preserved or restored is as defined by the National Park Service as "the quiet at the lower end of the ambient sound level range that occurs regularly between wind gusts, animal sounds, etc., not just the average sound level." As the Park Service explains, "Lulls in the wind or interludes between animal sounds create intervals where the quiet of a sylvan setting is quite striking. In considering natural quiet as a resource, the ability to hear clearly the delicate and quieter intermittent sounds of nature, the ability to experience interludes of extreme quiet for their own sake, and the opportunity to do so for extended periods of time (are) what natural quiet is all about."

III. Many of these preserves are vast, open places of astonishing beauty and wilderness. Each preserve area has a distinct and powerful aura, fully

dependent upon the tenuous natural sounds and natural quiet. As such, these areas afford unique opportunities for undistracted respite, solitude, contemplative recreation, inspiration, and education. Further, these units also provide scarce refuge and undisturbed natural habitat for animals. Artificial, human-generated noise can disturb some sensitive animal activities. Therefore, noisy overflights which disturb the peace are not normally appropriate in our preserves.

Reference: National Park Service, U.S. Department of Interior, Report to Congress on Effects of Aircraft Overflights, 1994.

Statement Concerning Scenic Air Tours

I. The Sierra Club supports management tools and methods to diminish or eliminate impacts from aircraft tours and landings (including bans of tours and landings wherever and whenever appropriate) upon National Monuments and units of the National Park System and National Wilderness Preservation System (all hereinafter called preserves.)

II. A goal of agency managers should be to preserve and, where impacted, fully restore the natural quiet within their individual preserve and to address this issue in the preserve's general management plan.

III. Key Statement:

(a) Appropriate Control and Management:

The Sierra Club believes that, to be the most appropriate and effective, control over air tour use of airspace above preserves should entirely rest with the respective land management agencies (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service.) These are the agencies which are in position to understand the preserves most intimately, and which are charged to provide them the fullest possible resource protection.

(b) External Sources of Noise:
The managing agency should work with responsible parties to reduce or eliminate air tours or landings outside a preserve, if needed to restore natural quiet within the unit. Federal managers of adjoining preserves should coordinate their management planning efforts.

(c) Monitoring:
The Sierra Club supports the establishment of appropriate noise standards and comprehensive baseline sound level monitoring and sound source

> inventories of all preserves. This includes continual assessment of noise from all human-generated sources and incorporation of public comments about noise impacts.
>
> The foregoing Sierra Club Background Principles and Statement re Air Tours Over Preserves admittedly is significantly at odds with FAA's past insistence on "exerting (FAA) leadership" in 'balancing' the interest of the general public and/or aviation transportation vs. "the need to protect certain natural environments from the impact of aviation noise." (Reference: FAA 1996 Noise Policy for Management of Airspace Over Federally Managed Areas, issued Nov. 8, 1996.)

The historical record is this: FAA' sense of "balance" or "leadership" in such matters has inevitably resulted in protracted, legalistic delays, litigation, and inappropriate tour aircraft noise derogation of premier preserves, such as at the Grand Canyon. This stems from its industry-promoting organizational culture, above all.

FAA has historically failed – time and again – to truly protect the natural preserves from the increasing impact of tour aviation noise. (See Statement of The Wilderness Society, re this same Docket.) The Sierra Club thus agrees with The Wilderness Society that FAA should relinquish its felt need to pursue this sort of "balancing" insofar as the environmental protection and assessment needs of natural preserves is concerned. The FAA should instead, at the earliest possible opportunity, cede control of environmental assessment, standards, and criteria, and related NEPA process-control, etc.) insofar as regulation of air tours in noise-sensitive airspace, i.e. preserves, is concerned. This may require FAA support for amending present law as well as administrative procedure. The FAA would retain a constructive consultative role, particularly with regards to various airspace efficiency and safety matters.

A beneficial aspect of this change, from the FAA perspective, might be a welcome lightening of its ever-increasing responsibilities (becoming nearly impossible; see recent mass media coverage re summer airport gridlock and radar failures, etc.) FAA would not longer be beleaguered with convoluted NEPA leadership and public-process responsibility for the preserves re air tours. Its role there would b consultative, and re-focused on safety and efficiency. FAA solicitors would also shed some of the enormous burdens of litigation which they now carry. FAA would no longer bear the heavy burden of extensive scientific noise modeling and baseline noise research involving preserves. This consumes so much staff time and fiscal resources. That duty would devolve more properly to NPS (or other land agency), perhaps in consultation with the Environmental Protection Agency.

FAA could then focus its concerns of "balancing' airspace efficiency and technical practicability and environmental sensitivity on air tours and other aviation noise over "non-preserve" areas. These still represent the vast majority of the agency's airspace management responsibility. They present – in themselves – more than enough, ever-increasing headaches in "balancing."

The Sierra Club says all this because, historically, the FAA has ignored Section 4(f) of the Transportation Act, generally preferring end runs around it. It likewise has repeatedly ignored the first three "bulleted" items in its own Nov. 1996 "Noise Policy for Management of Airspace over Federally Managed Areas."

Illustrative recent examples of FAA neglect of that policy's public participation, communication, and "consult actively" requirements are

(1) Zion National Park (Utah)

The inadequate and misleading draft Supplemental Noise Analysis (June, 2000) (re Zion National Park) for the St. George (Utah) Replacement Airport was produced despite FAA "oversight." It is likely the Noise Analysis will have to be entirely redone. Section 4(f) of the DOT Act likewise still remains insufficiently addressed by FAA at Zion, in terms of this project (For documentation, contact, Marty Ott, Superintendent, at (435) 772-0140.)

(2) Saddle Mountain Wilderness Area (Arizona)

FAA has failed to consult with USFS re this Wilderness, or designate the area as "noise-sensitive" in response to the USFS' request of three years ago, as protection against the imminent derogation impacts of Grand Canyon air-touring upon said Wilderness. It also neglected its NEPA responsibilities in this regard. (For documentation, contact John Neeling, Wilderness Manager for this unit at North Kaibab National Forest, Fredonia, AZ, at 520-643-7395.)

(3) Bryce Canyon and Grand Canyon National Parks

Noisy helicopter and propeller low-level touring has grossly exceeded levels consistent with Sec. 4(f) of the DOT Act or with the National Park Organic Act, or with the spirit and intent of the 1987 Overflights Act (P.L. 100-91) and 1964 Wilderness Act. (For documentation, contact Fred Fagergren, Superintendent, Bryce Canyon National Park, at (435) 834-5322, or Ken Weber at Grand Canyon National Park (520) 638-7753.)

In all of the specific instances cited, requisite FAA consultation has, in our view, been either lacking, insufficient, perfunctory, or otherwise not genuinely comprehensive, responsive or timely.

The Sierra Club statement on air tours (above) provides some further guidance which now may be applied to this next (following) FAA statement, from the current policy draft.

FAA Statement:

"A primary focus for FAA is to identify the extent to which low-level noise . . . may adversely impact areas with unique noise sensitivities. At present, no scientifically verified, predictable criteria have been established." *We respond to this in three ways:*

(1) Sierra Club's introductory Statement on Air Tours (Sec. II-(a) suggests rather, that FAA's more appropriate role would instead support NPS (or USFS Wilderness Managers, etc.) authority in making this identification and establishing criteria for assessing low-level noise impacts. (This would include establishing particularly stringent criteria for helicopters, which FAA acknowledges are perceived by the general public as more significantly annoying than other aircraft operating at the equivalent decibel level.)

(2) NPS policy prohibits the derogation of Park resources. Until such time as criteria are established, there exists the continuing derogation of Park resources by various low-level air tour impacts. Therefore the current level of use should be made static (i.e., capped) for three years (providing enough time for NPS to develop criteria.) If new criteria are not established in three years, then the level for existing tours should be decreased ten percent each year (based on the rate of use at the trigger year), to a level not to exceed ten percent of use at the three-year trigger date.

(3) The Sierra Club Statement thus means that in the creation of comprehensive noise management plans, low-level scenic tour aviation generally should adhere to NPS' definition of natural quiet, and to NPS' legitimate mission to fully protect or restore it. The standard for natural quiet should be based on audibility and not noticeability standards for both tour and commercial jet aircraft, and for general aviation.

FAA Statement:

"One of the cornerstones of the FAA's Year 2000 aviation noise abatement policy is the continuation of aircraft source-noise reduction."

Sierra Club Comment:

(1) The FAA should make use of best available technology such as Global Positioning Systems to create flight corridors that avoid areas with unique noise sensitivities. It is likely that many commercial flight corridors over sensitive areas in use today are done so out of precedent and not necessity.
(2) The FAA should commit to establishing quiet technology standards for aircraft under 75,000 pounds, as well as Stage IV standards for larger aircraft. Quiet technology should address not only reduction of high pitched engine noise, but also deeper pitched low frequency noise.

Further Comment re Commercial Jet (High Altitude) Aviation

The Sierra Club's prefatory (italicized) Statement re Air Tours did not specifically address the regulation of high-altitude commercial jets traveling longer, point-to-point distances over Parks and Wilderness units.

However, it is becoming obvious that growing jet traffic is providing increasingly significant, frequent, and distracting noise impacts over otherwise pristinely quiet National Park and designated Wilderness units.

The nation's airspace efficiency needs obviously make it impossible to route commercial transportation aircraft around so many Park and Wilderness units as now (or may in the future) exist. However, the FAA in consultation with the Park Service or other land agency could designate a few national parks, and a few national Wilderness preservation units as priorities for restriction from at least the bulk of this traffic noise, at least for some critical period of the day (e.g. sunset and evening hours.) A short (illustrative only) list of premier, particularly vulnerable national parks to be so designated might then be

Grand Canyon
Zion
Bryce
Yosemite
Rocky Mountain

(Four of these five are taken from the "short lists" of NPS priority parks for aviation noise concerns, found in Sec. 10.3.4.1 and Sec. 10.3.4.2 of the 1994 NPS Report to Congress on Aircraft Overflights.) This author previously made similar suggestions in his individual comments on FAA's Advance Notice of Public Rulemaking on this subject, issued March 17, 1994. Six years later, the need for relief and respite in at least a few parks is even more apropos as the projected amount of commercial jet traffic – thus noise intrusions – is steadily increasing.

A "short list" of a few wilderness units might be similarly drawn up for special protection and mitigation.

The Sierra Club urges the FAA, in consultation with the NPS or appropriate land-based agency managers, to so designate those few national parks and designated wilderness areas as places for special mitigation. The deference to the "power of place" of these special places would certainly represent a welcome maturation of our environmental consciousness and national pride in protecting them.

Affected transcontinental jet routes would thus be lengthened by only a few miles, in most cases. For example, the existing commercial east-west jet traffic routes could be "bowed" (slightly bent) 10 miles to either the north or to the south of the Grand Canyon National Park's boundaries, with only minuscule additions to total flight mileages. This is not a new concept to FAA; it does this sort of accommodation all the time with respect to Military Special Use areas.

Conclusion

Visitors to our national parks and wilderness areas have a right to experience the entire natural environment, including the soundscape, unimpaired. Within units of the National Park System, natural quiet – the extended opportunity to experience simple natural sounds amid periods of deepest silence – must be preserved for the enjoyment and inspiration of present and future generations. The FAA has an obligation to reduce and even eliminate intrusions on the experience of natural quiet. We appreciate the opportunity to comment on the proposed Noise Abatement Policy 2000.

Sincerely,

Dickson J. Hingson, Ph.D., chair
Subcommittee on Noise/Aviation
Sierra Club – Recreation Issues Committee

Commenter's Mailing Address: (original shows former address in Rockville, UT)

Sierra Club – Headquarters Mailing Address: 85 Second Street, San Francisco, CA 94105

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