

In the matter of:

AVIATION NOISE ABATEMENT POLICY 2000  
DOCKET 30109

REQUEST FOR COMMENTS

Submitted to:

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Attn: Rules Docket (AGC-200), Docket 30109  
Federal Aviation Administration  
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This document is in response to the Federal Aviation Administration's call for public comment to help the agency revise the 1976 National Aviation Noise Abatement Policy. The text draws from documentation prepared by Stop the Noise Coalition, National Helicopter Noise Coalition, Preserve Unique Magnolia Association and the World Health Organization. It is presented in 3 parts:

1. Background
2. General Recommendations
3. World Health Organization Recommendations

#### I: Background

In 1976, the U.S. Department of Transportation (DOT) published its Aviation Noise Abatement Policy, which was intended to provide a course of action for reducing aviation noise. Unfortunately the principles contained in that document and subsequent legislative and regulatory actions were an abysmal failure at addressing the noise problem. It did not result in a dramatic reduction in the size and scope of the noise problem that now adversely affects millions of American citizens.

The lack of an effective policy during the past 25 years, and the industry-protective nature of the Federal Aviation Administration (FAA) has led to misrepresenting the true scope of the noise problem. Both Congress and the public have been misled into believing that fair and balanced measures were in place to protect the environment and citizens, and preserve a viable aviation community. In reality, the FAA has turned a blind eye to communities--ignoring the growing noise problem, and the need to phase out general aviation business jets (Stage 2), under 75,000 pounds. The Agency has a myopic view of noise, assuming that noise outside of the archaic 65 DNL is not a "real" problem, or does not impact millions of citizens who live near airports.

The DOT is now considering a revised policy statement that may extend to all forms of transportation noise. This long overdue revision is divided into two parts.

First, the Secretary of Transportation will publish a policy statement broadly addressing noise concerns. Second, based on this policy statement, the FAA Administrator will then issue aviation noise policy guidelines.

The issuance of a draft document on aviation noise abatement is the first step in the process to develop the aviation noise policy. According to the FAA, "it is intended to stimulate ideas that will result in comments to the public docket". It is regrettable that the FAA did not allow adequate time for public comment (six weeks in mid-summer), nor did it give widespread notice to community organizations and individuals that the national noise policy was being revised. It goes without saying that the aviation industry, with its powerful lobbying and close ties to the FAA, will have undue influence over any policy decisions.

The FAA states, "its revised policy will reaffirm the major tenets of the 1976 Aviation Noise Abatement Policy and include subsequent developments." It summarizes current conditions affecting aviation and sets forth goals, policies, and strategies for addressing them. This policy document also outlines the foundations and methodologies for assessing aviation noise, promoting research and development in aircraft noise reduction technology and noise abatement procedures, and promoting compatible usage of noise impacted lands. Finally, it presents a selective listing of reference materials that form the basis for the Federal Government's aviation noise policies.

These goals are commendable. However, in light of the FAA's long history of failures to adequately address the national noise problem, it is hoped that the revision will, in fact, confront the real noise problems and provide meaningful answers.

## II: General recommendations

1. The FAA must allow a fair amount of time for the comment period pertaining to the proposed noise policy.

The citizens of the United States have lived with the FAA's Noise Abatement Policy since 1976, and now, after 25 years, there is a sudden rush to revise it. The FAA released the draft policy statement to a very limited audience of Federal Register readers, with only a very limited public comment period--a total of only six weeks, and then in late summer 2000, when many people are on vacation, or community groups are unable to comment.

Moreover, the FAA has released its draft just before the Government Accounting Office (GAO) was about to publish its own study of airport noise. This timing limits public participation and excludes potentially relevant information. This is another example of the unresponsive actions of the FAA, when it comes to addressing noise reduction. If the FAA wants serious, detailed and responsible public participation, it should allow for an extended comment period, and then leave the file open for another 90 days for supplementary comment. It must also launch a broad-based communication effort to reach millions of citizens living near airports heavily impacted by noise, state and local municipalities, acoustic professionals, independent researchers, scientists, etc. Only after widespread notice has been given, with adequate response time, should the FAA then

revise its policy. This should obviously be after the GAO study (part of the AIR-21 Act) is complete and released to the public.

2. In order to frame a meaningful noise policy, the FAA's conflict of interest with the aviation industry must be addressed immediately.

The FAA has a conflicting mission, serving both as regulator and promoter of aviation. The FAA's role as a "booster club" for the aviation industry, financier of aviation and airport expansion, and as noise, safety, environmental and health regulator are in conflict. These missions are out of balance, as clearly demonstrated by the FAA's Noise Abatement Policy. This conflict is nowhere more clear than in the FAA's use of terminology. The noise policy is characterized as an "abatement" policy, when, in reality, the real intent of the policy is to encourage noise "mitigation". Noise mitigation addresses reducing the noise impacts by placing the burden on residents (read--soundproofing a handful of dwellings in the 65 DNL near airports). Noise abatement addresses reducing noise at its source (read--curfews, phase out of noisy Stage 2 and "hushkitted aircraft) general aviation (GA) jets, research and development of cleaner and quieter aircraft, limiting access to airports and placing restrictions on operations. The role of the FAA must change. The FAA cannot effectively do its job of abating noise unless it turns that responsibility and POWER OF ENFORCEMENT over to the Environmental Protection Agency (EPA), or other unbiased environmental regulating agency that places the health of our ENVIRONMENT ahead of commerce. As a result of this existing system, an imbalance favoring commerce has arisen that has had a significant, devastating effect on public health and our environment, (which includes noise). Consequently, aviation (operations) is the worst environmental and probably public health problem we face. The FAA must increase its focus on safety, crash prevention, and crash investigation. The EPA should oversee environmental regulation of aviation impacts and address the noise problem and other environmental and public health problems, while local governments AND AFFECTED NEIGHBORING COMMUNITIES should oversee airport expansion, airport access and land use compatibility.

The FAA makes no secret of its role as an aviation booster club. A recent FAA publication, FAA Aviation Forecasts, Fiscal Years 1996-2007 begins its executive summary with the headline, "Two Years of Traffic Growth and Profits Too!" The logical solution to the conflict of interest is to remove the conflict by dividing the FAA's roles between more appropriate agencies. The FAA should remain the regulator of passenger and aircraft safety. Another regulating agency, such as the EPA, should be the regulator of environmental quality, noise and aviation's damaging health impacts. The multi-billion dollar airline industry already serves as the booster club; it is not an appropriate role for a government agency, the FAA. Finally, local communities that are affected by airport and aircraft operations must have full control over the development, expansion and airport access at local airports. Full consideration must be given to developing alternative means of mass transport and, if needed, building remote airports (Wayports, or Megaports) away from the urban population with a seamless high or fast rail connection into the urban area.

3. The FAA must abandon the Day-Night Level noise standard of 65 dB DNL.

Many critics of aircraft noise and the scientific community have raised serious objections to the use of averaging when addressing the aircraft noise problem. One individual has suggested averaging distorts the real nature of noise events with the analogy: "Dropping a feather on someone's head every minute for one hour, followed by a large brick would result in the conclusion that, on average, the total impact is equal to dropping a ping pong ball every minute for one hour."

Averaging hides the true impact of noise on individuals. The FAA has unjustifiably accepted the 65 dBA DNL as the standard for determining "significant" noise impact. In reality, substantial impacts occur to millions of people well below the 65 decibel level. The 65 DNL standard is inadequate for many reasons.

From a scientific perspective, the 65 decibel level standard is supposed to correlate to individuals being "highly annoyed" by the noise level. But this is subjective, not scientific. The annoyance level between individuals differs greatly, and it is not responsible, nor fair, to apply the same arbitrary "highly annoyed" standard to everyone. Substantial impact occurs well before people become highly annoyed. Research has shown that that "high annoyance" occurs around 57 decibels, not 65 (Journal of the Acoustical Society of America, Dec. 1998). The EPA had earlier identified 55 dBA DNL as a more appropriate noise level. But, the 55 dBA DNL value remains inadequate for reasons that have more to do with the metrics, or noise descriptors, than a particular value.

The DNL refers to a "day-night level" AVERAGE. Averages, however, do not adequately account for the REAL impacts of aircraft noise on individuals. Averages understate "single events" and it is these single loud noises as the airplanes fly overhead that can disrupt sleep, and adversely impact an individual's well-being. Being awakened at 3 a.m. or 6 a.m. and not getting a full night's sleep can negatively affect the individual's activities throughout the day - at work, traveling, and at home. Aviation noise impact on wildlife has been observed as disruptions to feeding and mating patterns. Loud "single noise events" also intrude on conversations, television viewing, reading, and speaking on the telephone. These "single events" rob people of a decent quality of life and potentially could have lasting health effects. Many communities restrict single noise events to 55-65 dBA in residential areas. The World Health Organization recommends maximum outdoor daytime/evening noise impacts of 50-55 dB LAeq and 30 dB LAeq (with a minimum number of peaks at 45 dB LAm<sub>ax</sub>) in bedrooms (see section 3).

4. The FAA must cease its reliance on "A" weighting in noise measurements.

The World Health Organization cites the potential impact and health hazards of low frequency noise in their 1995 and 1999 community noise documents. The 1995 document (section 3.5.3) calls into question the validity of "A" weighting: "...both in the laboratory and in the field, evidence has accumulated that A-weighting predicts the loudness and annoyance of community noise rather poorly."

Using dBA or the "A" weighting scale does not adequately account for low frequency noise. The "A" weighting discounts low frequency noise (50 Hertz and below) by 30 to 70 or more decibels, depending on the frequency. Like all large machines, aviation noise spectra are substantial...down to invasive vibrotactile frequencies below 20 Hertz. A standard that measures low frequencies, using the "C" weighting, is necessary to reflect the impact of low frequency noise. In the 1995 Community Noise document published by the World Health Organization, it was logically proposed that when the difference between dBC and dBA is 10 dB or more, a penalty of 5 dBA should be added to the Leq of less than 60 dBA, and a penalty of 3 dBA for an Leq of 60 dBA or more. An important advantage of incorporating C weighting into the new standards is that almost all sound levels meters have this weighting as a standard feature, in addition to the more commonly used A weighting.

5. Regulate helicopters as well as recreational, experimental and ultra-light aircraft the same as other aircraft.

Unregulated helicopters have become a modern-day form of urban blight and have decimated urban, suburban, and wilderness areas. The major contributors to the helicopter noise problem are the media and sight-seeing (tourist) operations. Helicopters are virtually unregulated by the FAA today. These aircraft are allowed to fly at any altitude (that the pilot deems safe), use any route (except in regulated airspace), fly at any hour of the day or night, with any frequency, and are permitted to hover or circle over one location, without limit.

Helicopters and recreational aircraft often land and take off in or near residential areas, and are not required to use new quieter technology. As a result of this lack of oversight by the FAA, helicopters and other small aircraft destroy the health and well being of hundreds of thousands of residents living near airports, heliports and freeways.

The FAA must establish new noise standards for helicopters and all other small aircraft, and require new craft to be at least 10 dBA quieter than the current fleet. The FAA must mandate a phase-out of the noisiest craft to be completed by 2005. Restrictions need to be put in place to preclude heliport and/or small aircraft operations within 10 miles of residential areas, national parklands and designated wilderness areas, unless their presence is needed for emergencies.

Freeways should not be arbitrarily defined as helicopter and small aircraft routes. The FAA must establish mandatory minimum impact flight paths over all metropolitan areas, and require a preference for industrial routes rather than residential routes.

6. The FAA must establish a 3,000-foot minimum (above ground level) height requirement for all aircraft not taking off or landing.

Aircraft that are nearer the ground are significantly louder than those at higher altitudes. As a general rule, noise decreases by 6 decibels for each doubling of the distance between source and receiver (although atmospheric conditions and topography can significantly

affect noise propagation). Therefore aircraft at 3,000 feet AGL are about half as loud as the same aircraft at 1,000 feet. A 3,000-foot minimum altitude rule primarily would reduce noise from helicopters, small aircraft, and air tourism, since commercial passenger aircraft generally fly substantially higher. Of course, emergency aircraft should be exempt from this minimum height regulation.

The rule would require strict enforcement including greater use of the Automatic Dependent Surveillance - Broadcast (ADS-B) transponders with Global Positioning (GPS) capability. The FAA must change its policy to allow conventional radar to be used for enforcement. Transponders that can record altitude and location of an craft should be used to determine violations of the minimum altitudes. Also, use of Visual Flight Rule (VFR) flights should be greatly restricted over urban areas, so as to induce greater reliance upon Instrument Flight Rule (IFR) operations.

7. Ban nighttime flights.

One of the greatest shortcomings of the FAA's draft Noise Abatement Policy is that night operations and sleep disturbance are almost totally neglected. This is a glaring omission in the draft policy document. Sleep disturbance is mentioned only four times in the approximately 25,000 word document, and then, in a tangential manner. Yet it is one of the most devastating aviation noise impacts.

Nighttime flights repeatedly wake citizens. This leads to sleep deprivation and its resulting health effects, causing billions of dollars in lost productivity, thousands of automobile and workplace accidents, and strained family and community relations. Noise induced sleep loss can be caused by noise spikes of 8-10 dBA above ambient noise levels (Griefahn, B., 1990, Research on Noise and Sleep: Present State, Noise as a Public Health Problem, Vol. 5, Swedish Council for Building Research, Stockholm). It is not uncommon for aircraft to cause sleep interference, when single event aircraft noise exceeds 55 decibels. Sleep interference without awakenings reduce the quality of sleep by shifting sleepers out of deeper levels of sleep.

Communities typically adopt noise ordinances to protect against nighttime sleep interference. The 50 dBA nighttime maximum is often selected as the noise limit. The World Health Organization recommends an LAeq of 30 dB inside bedrooms. The same limit should apply to aircraft noise. For most domestic airports, this would require a curfew. Many world-class airports around the world use curfews to provide nighttime peace and quiet for their residents. The FAA should establish a nationwide nighttime curfew from 10 PM to 7 AM at airports, exempting only emergency, delayed, and diverted flights. This curfew should apply to all aircraft, including jets under 75,000 lbs., and all helicopters, except in emergency service.

8. The FAA must ban national park and wilderness overflights.

The draft noise policy statement currently states that, "The overarching goal is to identify how best to provide access to the airspace over national parks while ensuring all park visitors a quality experience and protecting park resources" (Policy Element 6).

Non-emergency access to airspace over national parks is inappropriate, causes a great deal of concern to park visitors and destroys the natural ambiance of the parks. More studies are needed to determine what noise levels are detrimental to wildlife and the natural quiet in parks and wilderness areas. Any aircraft noise interferes. The World Health Organization Guidelines for Community Noise recommends that the "natural quiet" of parklands and wilderness areas should be preserved. Our country's Wilderness Act of 1964 acknowledges the importance of this as well when it states that these protected areas must exist "...with the imprint of man's work substantially unnoticeable." Therefore, aircraft should not be allowed to fly within 10 miles of non-urban national parks, wilderness areas, national monuments, national seashores, and other sensitive and pristine public lands. The National Parks and designated wilderness areas airspace should be under the exclusive control of the Secretary of Dept. of Interior, not the FAA.

9. The FAA must ban the allowance of "hushkitted" stage 2 aircraft, unless it can be proven that the modified aircraft's noise level is at least the same as that of a manufactured stage 3.

Commercial airliners were required to bring their fleets into compliance with stage 3 engine noise performance at the end of 1999. In order to skirt this requirement and continue using noisy older aircraft to save the aviation industry money, the FAA has allowed the use of so-called retrofitted engine "hushkits". These mechanical modifications to engine air flow (and in some cases, only a template and operational procedure are called "hushkits") have been found to be ineffectual. Citizen observations and studies by the Natural Resources Defense Council have found that a manufactured stage 3 aircraft is 10 dB quieter (half as loud) than a stage 2 aircraft. The addition of hushkits results in minimal 2 to 3 dB quieting at best. This fact is clearly substantiated by the European Community's refusal to allow unchecked and unlimited access to their air space by hushkitted stage 2 aircraft. The US must recognize that aviation noise pollution is a GLOBAL problem, and that as members of a world community, we must behave responsibly and with respect for other nations that desire to protect the health and well being of their citizens.

10. The FAA and Congress must revise the Airport Noise and Capacity Act (ANCA) and phase-out noisy Stage 2 jet aircraft under 75,000 lbs.

Many communities near general aviation (GA) airports are plagued by Noisy Stage 2 jet aircraft, under 75,000 lbs. ANCA failed to address this class of aircraft that is now a major part of the noise problem. At many of the nation's GA airports, it is the Gulfstreams, Lears and other Stage 2 aircraft that the FAA has allowed to continue to operate. To date, the FAA has no phase-out plan in place.



ANCA has placed an unfair and unreasonable burden on airport operators and communities. The fact that not a single Part 161 Study has been completed is true testimony to ANCA's failure over the last 10 years. The FAA must begin a phase-out program for aircraft weighing less than 75,000 pounds that do not meet Stage 3 noise standards. Voluntary "Fly Friendly" agreements by aircraft owners have been an abysmal failure. There is little incentive for these operators to buy quieter equipment. (See Section 5.4 of the Draft Policy, discussing Stage 1 and Stage 2 phase-outs). Regulations are needed for craft less than 75,000 pounds, just like those for craft more than 75,000 pounds, requiring at least a 10 dB decrease from existing noise levels.

11. The FAA must establish local community control over airports.

Current FAA noise abatement policy is driven by those who benefit from airports and not by those adversely impacted by airport operations and pollution. This injustice can be corrected by giving back more local control to communities. What is lacking is a procedure to ensure that airport decisions are made in such a way that they reflect the health and well being of citizens as well as pro-aviation interests. What is needed is an increased voice for people who are negatively impacted by airports, REGARDLESS OF PROXIMITY.

12. The FAA must acknowledge that airport noise impacts have INCREASED, not decreased in the last 30 years.

The FAA claims that the number of people "significantly impacted" by aircraft noise is 7% of what it was 30 years ago. (See Noise Abatement Policy, Section 1: Introduction.) We believe that this is not true. The FAA claims that they have substantially reduced the airport noise problem to "only 500,000 people" who are "significantly impacted", mostly near the very largest airports in Chicago, New York, and New Jersey. Furthermore, there is quantitative evidence, based on actual community monitoring, that over 600,000 residents alone are affected by just one airport, O'Hare. This is even using the FAA's poor, unscientific 65 DNL metric and averaging and only monitoring a few communities. In all probability, well over 1.6 million people are affected by O'Hare operations at 65DNL. Clearly, the FAA has grossly understated to Congress the seriousness of this issue.

Airport noise is a GROWING problem, not a decreasing one. The FAA's claims are misleading for several reasons:

1. The FAA inaccurately calculates the number of people affected, by relying on average noise levels that do not reflect the increase in individual noise impacts resulting from more flights. Significant noise impact occurs well below the 65 day-night level that the FAA uses. In disputing the averaging approach to noise measurement, the World Health Organization states in section 3 of this paper that this technique "...does not fully agree with common experience on how environmental noise is experienced, or with neurophysiological characteristics of the human receptor system."

2. Nighttime cargo and passenger flights have greatly increased, resulting in more people being awakened, but according to the FAA, awakenings are not a significant impact. Noise complaints data from any major airport can easily substantiate our claim.
3. New airports, expansions, new runways, and new flight paths are exposing people, who have never been exposed before, to airport and airplane noise. The country's largest and newest airport, Denver International Airport has headed the national list of noise complaints since it opened in February, 1995, with many of the complaints against DIA coming from citizens living 50+ miles away from the airport.

13. Airports and airlines must pay the full and REAL cost of air travel.

Federal subsidies that promote the growth of aviation must be redirected to the research and development of quieter and cleaner aircraft engines, and the development of other forms of mass transit such as high speed rail. Landing fees must reflect the extent individual aircraft pollute the environment (air, water, ground and acoustic). Fees and fuel taxes must be increased to account for environmental damage, health effects, annoyance, sleep disturbance, loss of productivity, diminished property values and the consumption of nonrenewable fossil fuels.

14. A moratorium must be enacted on all new airport construction and expansion, until such time as adequate and ENFORCEABLE environmental impact studies can be conducted by an unbiased government agency that places the welfare of the citizens and the environment ahead of commerce.

**WE URGE YOU TO SUPPORT THE HALTING OF AIRPORT EXPANSION UNTIL THE FULL HEALTH AND ENVIRONMENTAL EFFECTS OF AIRPORTS ARE KNOWN AND PROPERLY MITIGATED.**

It is obvious from recent news of airplane accidents, crowded airspace, shortage of pilots, labor disputes, antiquated air traffic control technologies, flight cancellations and delays, and mounting evidence of environmental degradation that the aviation industry and the FAA cannot manage what they already have. And yet, subsidized new airport construction and expansions continue. Is the airline industry simply trying to give "the people" what they want...the freedom to travel by air whenever they please? In every OTHER aspect of the travel industry, accommodations are made available ONLY as space permits. (For example, if the hotel one wishes to stay at is booked for the desired weekend, two choices remain: try another hotel or try another date). This "inconvenience" might cause some people to reconsider their plans, and/or plan ahead. Either way...the demand on airports and the airlines would decline. The FAA and the airlines must say "ENOUGH" until they can provide safe, reliable and high quality services...with the resources they have NOW.

15. Environmental Impact Statements/Studies (EIS) and associated contracts must be legally enforceable.

On page 13 of the FAA Proposed Policy Document the following statement appears: "Changes in air traffic procedures that have potentially significant noise impacts on communities surrounding an airport require preparation of an environmental assessment or impact statement." As acutely demonstrated by Denver International Airport, these EIS are often based on educated guesses and groundless assertions as evidenced by the many lawsuits that local communities and organizations have brought forth. Promises/assurances made to local communities through the EIS are broken everyday and the citizens and local governments are left with no recourse as they discover that these documents are not considered "legal contracts". When legal contracts DO exist (as in the case with Adams County, Colorado) and violations occur, the court battles rage on for years at great financial cost to the citizens. Invariably, the airlines and lawyers win...and the public and our environment loses.

16. Until the United States and its agencies fund unbiased research into the harmful effects of aviation noise pollution, they must look to the global community for guidelines.

The FAA often supports its position by pointing to the paucity of research in the field of noise pollution. In 1995 and 1999, the World Health Organization published respectively, Community Noise and Guidelines for Community Noise that provide a clear and comprehensive review of recent international research on the negative health effects of noise pollution, and relevant guidelines and recommendations pertaining to noise exposure and future research. The data and guidelines presented in these two documents should be studied by all federal agencies that are concerned with the health and well-being of this country's citizens and environment. Until further research occurs, new US noise policies should derive their noise exposure values from these two documents. The following section contains excerpts from the 1999 document.

(see: [http://www.who.int/environmental\\_information/Noise/Commnoise4.htm](http://www.who.int/environmental_information/Noise/Commnoise4.htm) )

### III: World Health Organization Recommendations

What follows in this section is an excerpt from the Guidelines for Community Noise published in 1999 without copyright by the World Health Organization, Geneva, Switzerland. This text presents the essential content of the document that we believe should form the basis of new noise pollution regulations in our country. Also included are the organization's recommendations for the implementation of guidelines and future research.

(see: [http://www.who.int/environmental\\_information/Noise/Comnoise6.htm](http://www.who.int/environmental_information/Noise/Comnoise6.htm))

The reader is advised to seek out the complete document (<http://www.who.int/peh/noise/noiseindex.html>) in order to better understand the full content of the materials and to have access to all bibliographical references to the many research studies that are discussed in the report.

## ADDENDUM TO WORLD HEALTH ORGANIZATION GUIDELINE VALUES

At the time of this writing (October, 2000), the World Health Organization has taken under advisement the following additions to the guidelines published in 1999:

1. State L<sub>Amax</sub> values where currently NOT indicated as 15 dB higher than respective L<sub>Aeq</sub> values.
2. Include the following C weighting correction:  
  
If  $LeqC - LeqA > 10\text{dBA}$  and  $LeqA < 60\text{dBA}$ : ADD 5dBA to LeqA and L<sub>Amax</sub> values  
  
If  $LeqC - LeqA > 10\text{dBA}$  and  $LeqA > 60\text{dBA}$ : ADD 3dBA to LeqA and L<sub>Amax</sub> values
3. Under "outdoors in parkland and conservation areas", state time base as 24 hours.
4. The number of allowable L<sub>Amax</sub> values are being considered by advisors to the World Health Organization, with total of ONE being proposed under the specific and extremely sensitive environment of "inside bedrooms at night" with time base of 8 hours. Under the environment "outdoors in parkland and conservation areas", ONE L<sub>Amax</sub> of 15 dBA above the normal quiet ambient level per hour, with time base of 24 hours, is being proposed.

c: Multiple recipients