



## **Enforceable Aviation Noise Standards Are Needed in the Aviation Innovation, Reform and Reauthorization Act of 2016**

Recognizing that aviation noise is a public health issue that can no longer be ignored, the Aviation Innovation, Reform and Reauthorization Act of 2016 (AIRR) contains several provisions that seem to address the problem of aviation noise. Section 614, for example, will increase community involvement in processes that may increase aviation noise. Section 604 requires the FAA to review the relationship between aircraft noise exposure and its effects on communities around airports. And Sections 137 requires the FAA to revisit its methodology for assessing aviation noise, while Section 138 requires the FAA to revisit certain actions for which a categorical exclusion was taken. These are steps forward in setting up a more responsive aviation noise regulatory framework. However, without enforceable aviation noise standards, these provisions mean very little.

### **How We Got to Where We Are.**

The Aviation Safety and Noise Abatement Act (ASNA), in conjunction with the previously enacted Noise Control Act, were intended to reduce the amount of aircraft noise experienced by residents who live near airports. The Noise Control Act contains the finding that “The Congress declares that it is the policy of the United States to promote an environment for all Americans free from noise that jeopardizes their health or welfare.” 42 U.S.C. § 4901(b). The plan was to give airports a method of creating a buffer around the airport such that the airport could develop, while getting rid of “incompatible uses” near airports. These Acts gave rise to both the establishment of 65 DNL threshold (49 U.S.C. § 47502) and the “Part 150 Program” (that is, Part 150 of Title 14 of the Code of Federal Regulations).

The 65 DNL threshold is primarily used in two different ways. First, it is used when the FAA is assessing the environmental impact of a project on the human environment pursuant to the National Environmental Policy Act (NEPA). This assessment process is set in FAA Orders, primarily FAA Order 1050.1F and FAA Order 5050.4B. After establishing



the current “noise contours” surrounding an airport, usually in 5 DNL increments, the FAA then determines if the project will increase noise by 1.5 DNL or more for a noise sensitive area that is exposed to noise at or above the 65 DNL noise exposure level, or that will be exposed at or above the 65 DNL level due to a 1.5 DNL or greater increase, when compared to the current situation. If the noise would increase by 1.5 DNL, then the FAA deems the increase to be “significant” and the project proponent must develop a mitigation plan. While the development of a mitigation is mandatory, the provisions of that mitigation plan, however, are not enforceable against the project proponent.

The second way the 65 DNL threshold is used is in the development of Part 150 programs. The problem here is that airports are not required to develop a Part 150 Program. Rather, ASNA stated that airports “may” develop noise exposure maps and “may” develop noise compatibility programs (NCP) based on those noise exposure maps (NEM) that would be approved or disapproved by the FAA. *See* 49 U.S.C. §§ 47503 and 47504. The Environmental Protection Agency in its role as advisor to the FAA recommended that the Part 150 Program be mandatory and be included in the airport certificate program. The FAA rejected that idea and came up with a program that is voluntary.

Because of the voluntary nature of the program, the results have been mixed. While most major airports have developed both noise exposure maps and noise compatibility programs, some have not. For example, LaGuardia Airport, JFK International Airport and Newark International Airport are just now beginning to develop their first Part 150 noise exposure maps and noise compatibility programs. [http://www.panynj.gov/press-room/press-item.cfm?headline\\_id=2107](http://www.panynj.gov/press-room/press-item.cfm?headline_id=2107). Other airports have completed one part of the program, but not the other. This is the case with Chicago O’Hare International Airport, which has noise exposure maps, but has not developed a noise compatibility program. Finally, there are airports with noise exposure maps and noise compatibility programs, but have not updated either in long time. Because of the failure of some airports to undertake noise compatibility planning or follow through with the plans that FAA has already approved, residents of the neighborhoods and communities surrounding airports are not treated equally. Some are afforded protection. Others are not.



Apart from the issue of the program being voluntary, Congress also failed to include any enforcement mechanism to ensure that once approved, the noise compatibility program is followed. However, once approved by the FAA, there is no specific mechanism to ensure that the airport will take any action to implement the noise compatibility program and protect people from the substantial harm presented by aircraft noise. Atlanta Hartsfield-Jackson International Airport is a good example. When the airport wanted to build a fifth runway, the FAA required Atlanta to update its noise compatibility program. That was in September, 2001. It was not until after the fifth runway was built and operating that Atlanta got around to updating its noise compatibility program, which was finally approved by the FAA in January, 2008 – almost seven years after the FAA had stated in its Record of Decision that it must undertake the project and two years after the fifth runway was opened. But the story does not end there. Atlanta has made only tentative steps to implement its noise compatibility program that the FAA demanded almost 14 years ago. It is Atlanta’s position that because the program is “voluntary,” if a homeowner does not accept its “take it or leave it” offer for acquisition or sound insulation, it will take the homeowner off of the list of properties to receive acquisition or sound insulation. And there is nothing the resident or homeowner can do about it.

**New Research Shows Aviation Noise Is More Than Just an “Annoyance,” It Is a Public Health Risk.**

In the meantime, there is mounting research showing that aircraft noise has severe physiological effects on humans. Previously, it was only believed that noise was a “nuisance” or “annoyance,” and that the extent of the physiological effects stemmed from sleep disturbance rather than the noise itself. However, after years of intensive research in Europe, in October, 2013, two studies on cardiovascular disease associated with aircraft noise were published in the British Medical Journal. The first was done in the United Kingdom around Heathrow Airport in London, and the second was done in the United States as part of a multi-airport retrospective study led by researchers from Boston University and the Harvard School of Public Health as part of the Partnership for Air



Transportation Noise and Emissions Reduction (PARTNER) program sponsored by the FAA. The U.S. study focused on Medicare patients and the British study was based on the total population living around Heathrow.

Both studies came to the same conclusion: aircraft noise cause physiological harm on humans. Harm that is beyond “annoyance,” “nuisance” or sleep disturbance. The British study concluded in part:

**Main outcome measures** Risk of hospital admissions for, and mortality from, stroke, coronary heart disease, and cardiovascular disease, 2001-05. (Abstract, Page 1)

**Conclusion** High levels of aircraft noise were associated with increased risks of stroke, coronary heart disease, and cardiovascular disease for both hospital admissions and mortality in areas near Heathrow airport in London. As well as the possibility of causal associations, alternative explanations such as residual confounding and potential for ecological bias should be considered. (Abstract, Page 2)

Our results suggest that high levels of aircraft noise are associated with an increased risk of stroke, coronary heart disease, and cardiovascular disease. (Conclusions Section, Page 5)

Likewise, the U.S. study concluded:

**Results** Averaged across all airports and using the 90th centile noise exposure metric, a zip code with 10 dB higher noise exposure had a 3.5% higher (95% confidence interval 0.2% to 7.0%) cardiovascular hospital admission rate, after controlling for covariates.

**Conclusions** Despite limitations related to potential misclassification of exposure, we found a statistically significant association between exposure to aircraft noise and risk of hospitalization for cardiovascular diseases among older people living near airports. (Abstract, Page 1)

**Conclusions and future research** We found that aircraft noise, particularly



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characterized by the 90th centile of noise exposure among census blocks within zip codes, is statistically significantly associated with higher relative rate of hospitalization for cardiovascular disease among older people residing near airports. This relation remained after controlling for individual data, zip code level socioeconomic status and demographics, air pollution, and roadway proximity variables. Our results provide evidence of a statistically significant association between exposure to aircraft noise and cardiovascular health, particularly at higher exposure levels. (Conclusions and Future Research Section, Page 6).

These very recent British and U.S. studies provide more correlation linking aircraft noise to cardiovascular disease. The studies follow a series of reports from Europe that support the hypothesis that cardiovascular effects are linked to noise exposure. Because the evidence shows that aircraft noise is deleterious to human health and safety, its mitigation and ensuring that U.S. residents do not live in affected areas ought not to “voluntary,” but mandatory. Moreover, because those health effects residents and landowners should have recourse to ensure that their health and property are protected or compensated for the effects of aircraft noise on their lives and property.

## **Issues Created by the Lack of Enforceable Aviation Noise Standards.**

### **Lack of Aviation Noise Standards Damage People and Their Property Away from Airports.**

Right now the lack of enforceable aviation noise standards is causing harm to many citizens in Phoenix, Arizona, Santa Cruz, California, San Diego, California, Boston, Massachusetts, Chicago, Illinois, Minneapolis, Minnesota, Charlotte, North Carolina, and Seattle, Washington. Citizens in these cities, and the surrounding communities, are not close to the airport and are outside the 65 DNL contour, but are experiencing a harmful increase in aviation noise due to shifts in flight paths. They are experiencing aviation noise when they had experienced none, or very little, before.

The cities listed above provide examples of the problems experienced by citizens on



the ground and the failure of the FAA to account for the damage done by their poor planning. In Charlotte, one of the primary issues is the fact that new “RNAV” (area navigation using satellite technology) flight paths concentrated flights into a narrower corridor. Previously, the flight path corridor was three to six nautical miles wide. The RNAV corridor is approximately 0.5 nautical miles wide. Thus, you have the same number of flight operations in a much smaller airspace that concentrates the noise over the ground.

In other cases, this has been due to unintended consequences of the implementation of NextGen in general, and the institution of Performance Based Navigation. Because the FAA rushed through the implementation of new flight paths, it used “categorical exclusions” instead of performing a complete environmental assessment failing to take into account the effect on the surrounding community. Or, if an environmental assessment has been completed, the flight paths chosen are drawn to reduce CO2 emissions and reduce fuel burn while not raising the noise over 1.5 DNL within the 65 DNL contour. This is the case in Santa Cruz, San Diego, Phoenix, Boston, Seattle and Minneapolis. These changes, however, often come at the expense of increasing noise over areas that have not experienced noise before (or experienced very little). In examining the economics of the situation, the FAA has concluded that because there is no “significant” increase in noise as a result of the changed flight paths, or because a categorical exclusion was used, there is no economic impact on the citizens below the changed flight path. This position ignores the reality of the situation.

Finally, there flight paths that have been changed to accommodate changes in runways. This is the case in Chicago. Historically, the primary runways at O’Hare ran northwest to southeast. As the airport developed and the surrounding area developed, the areas to the northwest and southeast of the airport were primarily commercial and industrial. Then Chicago built new runways that run east-west in order, among other things, to provide less interference with other airports to the north and south of O’Hare. The neighborhoods to the east and west of the airport, where airport had been less, are primarily residential. Thus, there was a substantial increase in aviation noise in these neighborhoods. Because the levels were below 65 DNL, however, they were deemed not significant and therefore no mitigation was proposed.



In all of these cases, the FAA told the residents that because the noise they experience is not deemed “significant,” the FAA believes it has no duty to mitigate. But damages from aviation noise, even if they are not “significant” by FAA’s standards, are damages nonetheless. And because of the lack of enforceable aviation noise standards, it is much more difficult for the FAA carry out its statutory duty to protect the citizens on the ground from aviation noise. Moreover, the citizens affected by aviation noise have little or no recourse against the airlines, the airports, or the FAA for failing to protect them and their families from aviation noise.

**Because of the “Voluntary” Nature of Part 150 Programs, Thousands of People Are Left Unprotected from Aviation Noise Through No Fault of Their Own.**

As a result of the Noise Control Act, the EPA proposed the creation of mandatory noise abatement programs. Pursuant to the Noise Control Act, the EPA submitted its proposed regulation to the FAA in September, 1979. About a month afterwards, the Aircraft Transportation Association submitted a Petition for Rulemaking to the FAA with its proposed regulation. Instead of making noise abatement programs mandatory, the ATA sought to have existing and future noise abatement programs be approved by the FAA. However, before the FAA took any action with regard to either the EPA’s or the ATA’s proposed regulation, the Congress passed ASNA (signed by the President on February 18, 1980), which included the permissive language rather than the mandatory language sought by the EPA.

When the FAA drafted its interim rules for Part 150, it explained its use of permissive language instead of mandatory language by stating:

The EPA recommended that submission of those plans be mandatory by means of requiring them for new or continued certification of the airport. This interim rule, in consonance with the ASNA Act, makes voluntary the development and submission of noise compatibility programs but prescribes the standardized methodology for those programs that are developed for submission to the FAA under the program



prescribed in the regulation.

46 Fed.Reg. 8316 (Jan. 26, 1981). In essence, the FAA stated when it first developed the Part 150 Program that its hands were tied by Congress when it enacted ASNA: “[t]hus, in many respects, the ASNA Act dictates, or significantly influences, the substantive response to both the EPA's recommended rule and the ATA's petition for rulemaking.” *Id.*

However, there has been one major change since the promulgation of the Part 150 program. When the Part 150 Program was first proposed, “the statutory duty of the FAA to promote, encourage and develop civil aeronautics” and *not* to protect the residents and landowners near airports from the ill-effects of aircraft noise. Since noise abatement would not allow airports to expand as much as they want, the Part 150 Program was made voluntary. There is no requirement anywhere in federal, state or local law that mandates an airport owner/operator must address the aircraft noise created by the airport. Although the statutes have shifted the focus somewhat from developing air commerce to promoting aviation safety (*cf. Federal Aviation Act of 1958* § 102, with 49 U.S.C. § 40101), it still emphasizes the economic aspects of aviation, rather than the protection of lives and property of people on the ground. The FAA still believes that its mission is to develop, promote and encourages civil aeronautics, even at the expense of the lives and property of people on the ground.

The sole provision referring to the FAA’s duties with respect to people and property on the ground comes in 49 U.S.C. § 40103 which states that the FAA shall prescribe regulations governing air traffic that protect “individuals and property on the ground.” 49 U.S.C. § 40103(b)(2). This provision, however, refers more generally to protecting the public from aircraft crashes than it does mitigating the harm created by aviation. *See e.g. Ditto v. American Airlines*, 1995 U.S. LEXIS 4425, 10 I.E.R. Cas. BNA 1628 (N.D. Ill., April 6, 1996)(“[a]s many courts have already recognized the whole purpose in creating the Federal Aviation Act was to promote safe air travel and to protect the lives and property of people on the ground as well as air travelers”) *citing National Organization For Reform of Marijuana Laws (NORML) v. Mullen*, 608 F. Supp. 945 (D.C. Cal. 1985), *remanded on other grounds*, 796 F.2d 276 (9th Cir. 1986); *Seiler v. U.S.*, 655 F. Supp. 452, 454 (D.D.C. 1987); *Himmler v. U.S.*, 474 F.



Supp. 914, 916 (D.C. Pa. 1979); *In Re Crash Disaster near Silver Plume, Colorado, on October 2, 1970*, 445 F. Supp. 384, 400 (D. Kan. 1977).

Either the FAA needs to take the lead in protecting the lives and property of people on the ground who are severely impacted by the presence of airports, or Congress needs to give that power to another agency who will. The Part 150 Program needs to be made mandatory for all certificated airports.

**Lack of Enforceable Aviation Noise Standards Has Stopped the FAA from Carrying Out Its Statutory Duty to Protect People on the Ground.**

The FAA has claimed that it cannot enforce the noise compatibility programs that it approves because they are “voluntary” in the sense that what is and is not included in the noise compatibility program is up to the airport, not the FAA. FAA’s approval of a Noise Compatibility Program does not, according to the FAA, carry any authority to ensure that the FAA-approved provisions of the Noise Compatibility Program are carried out by the airport.

FAA claims that it can only enforce noise standards through its enforcement of grant assurances. Specifically, Grant Assurance 21:

**21. Compatible Land Use.**

It will take appropriate action, to the extent reasonable, including the adoption of zoning laws, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft. In addition, if the project is for noise compatibility program implementation, it will not cause or permit any change in land use, within its jurisdiction, that will reduce its compatibility, with respect to the airport, of the noise compatibility program measures upon which Federal funds have been expended.

Which has its basis in statute 49 U.S.C. § 47107(a):



(10) appropriate action, including the adoption of zoning laws, has been or will be taken to the extent reasonable to restrict the use of land next to or near the airport to uses that are compatible with normal airport operations;

49 U.S.C. § 47107(a). This, according to the FAA, is the only way it can enforce the noise standards in Part 150 and the mitigation programs that an airport agreed to perform in its Noise Compatibility Program. However, the FAA believes that the airport has completed its duty under this grant assurance if the airport simply *develops* a Noise Compatibility Program. The FAA believes that the airport has not violated the grant assurance if the airport fails to implement the provisions of the Noise Compatibility Program.

It is not our intent to give more work to the FAA to do. However, the FAA is unwilling or unable to ensure that the Noise Compatibility Programs that it has approved for airports are carried out. By making Part 150 programs mandatory, it would be clear that Congress' intent is that the FAA ensure that the Noise Compatibility Programs are implemented. And, if the FAA fails to carry out its statutory duty, the power should be given to the citizens – to the people and landowners who are severely affected by aircraft noise – ensure that their rights are protected. Although we would argue that there is already a mechanism in place that gives citizens the right to ensure that airport operators are complying with federally approved noise standards, this method of enforcement already exists, it is implicit and is subject to the scrutiny of the courts. Thus, the law needs to be changed so that there is no doubt that citizens can enforce federally approved noise compatibility programs in order to get some relief from airport noise.

This type of program is not without precedent in the United States. Under the Clean Air Act, State Implementation Plans (SIP) are developed by the state and local air quality management agencies as to how they will meet a National Ambient Air Quality Standard. These SIPs are then submitted to the EPA for approval. Once approved by the EPA, they become enforceable federal law and subject to the citizen's suit provision of the Clean Air Act. The Part 150 Program could use the SIP program as an example on how programs developed locally can still be enforced federally.

**Proposed Legislation.****Standards for Communities Away from Airports, But Still Impacted by Aviation Noise.**

The FAA should establish a standard for all commercial aircraft, wherever they might be flying, using the FAA's authority under 49 U.S.C. § 40103(b)(2) and 49 U.S.C. § 44715. If an aircraft exceeds this standard, the owner of the aircraft would be subject to a fine. The penalty should increase with multiple violations. This standard would be classified as a "noise control requirement" under 42 U.S.C. § 4911(f).

**Make Part 150 Noise Exposure Maps and Noise Compatibility Programs Required as Part of the Airport Certificate Process.**

Amend Chapter 475 of Title 49 of the United States Code, section 47503 to read: "an airport operator shall submit to the Secretary of Transportation a noise exposure map . . ." and section 47504 to state that an airport operator "shall submit a noise compatibility program to the Secretary of Transportation . . ." The intent is to include Part 150 noise compatibility planning as part of the airport certificate process.

**Ensure that Both the Standards Set for Aviation Noise Away from Airports and in Noise Compatibility Programs Are Enforceable by Both the FAA and Affected Citizens.**

Amend Chapter 475 of Title 49 of the United States Code, which deals with aircraft noise and sets up the statutory authority for the FAA to issue regulations that became Part 150. In particular, amend § 47504 to add subsection (b)(5) that states "A program approved by the Secretary under this section shall be deemed a 'noise control requirement' under 42 U.S.C. § 4911(f)." 42 U.S.C. § 4911 is the citizen's suit provision of the Noise Control Act. What this would do is make that section explicitly apply to Part 150 Noise Compatibility Programs.

