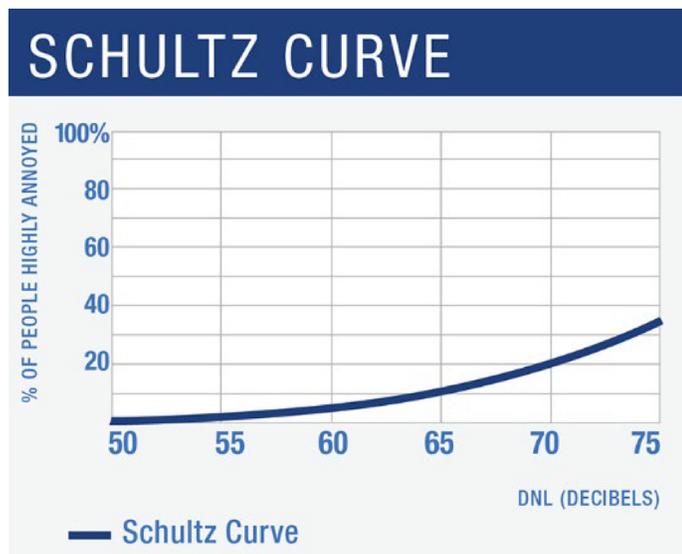


The Federal Aviation Administration's Neighborhood Environmental Survey



On January 13, 2021, the Federal Aviation Administration (FAA) released the results of its long-awaited Neighborhood Environmental Survey (NES). The results showed that communities are substantially more annoyed by aircraft noise than the FAA's current noise policy suggests.



The Schultz curve forms the foundation of current FAA noise policy and was last reviewed in 1992. Source: FAA

The Purpose of the Study

The FAA's current noise policy is based on a curve relating Day-Night Average Sound Level (DNL) to community annoyance, produced by T.J. Schultz in the 1970s. This "Schultz curve" was last reviewed and validated in the year 1992 by the Federal Interagency Committee on Noise (FICON).

Several years ago, the FAA launched a multi-year research effort to quantify the relationships between aircraft noise exposure and community annoyance around commercial service airports in the United States. The goal of the effort was to improve the FAA's understanding of community annoyance due to aircraft noise and to help the FAA determine if it needs to update its 40-year-old aircraft noise policy.

Rate each on a scale of 1-5, with 5 meaning **"most annoying."**

Thinking about the last 12 months or so, when you are here at home, how much does each of the following **bother, disturb, or annoy you?**

a. Noise from cars, trucks or other road traffic	b. Smells or dirt from road traffic	c. Smoke, gas or bad smells from anything else	d. Litter or poorly kept up housing
e. Noise from aircraft	f. Your neighbors' noise or other activities	g. Any other noises you hear when you are here at home. If this bothers or annoys you, what is the noise?	
h. Undesirable business, institutional or industrial property	i. A lack of parks or green spaces	j. Inadequate public transportation	
k. The amount of neighborhood crime	l. Poor city or county services	m. Any other problems that you notice when you are here at home. If this bothers or annoys you, what is the problem?	

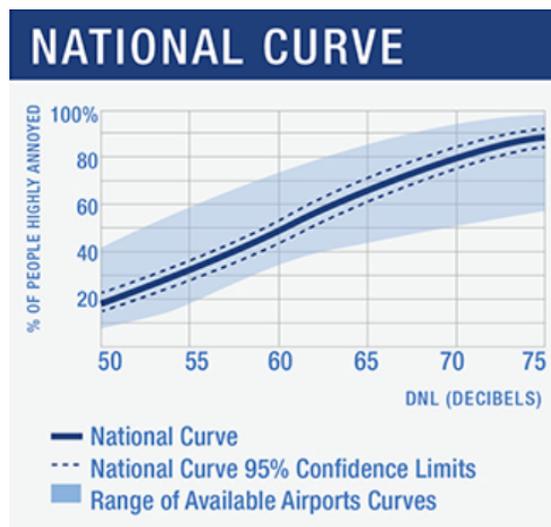
Survey participants answered a variety of questions on environmental annoyance. Source: FAA

As part of the research, the FAA surveyed 10,000 people near 20 airports across the contiguous U.S. in the years 2015 and 2016. The FAA used a variety of factors to select these communities and control for biases, with the intention of producing a representative sample of nationwide U.S. community response to aircraft noise. Each survey participant submitted responses to a variety of questions on different types of environmental annoyance; one of these questions concerned aircraft noise. Airport operators were not notified of their airports' presence in the FAA's NES.

The FAA used the NES results to produce a new national curve relating aircraft noise exposure to community annoyance. This curve shows that substantially more people are “highly annoyed” at a given DNL compared to historical data.

- 66% of respondents were highly annoyed at 65 DNL in the NES national curve, compared with 12.3% in the Schultz curve.
- 20% of respondents were highly annoyed at 50 DNL in the NES national curve, compared with 1.7% in the Schultz curve.

The NES national curve does not represent a new aviation noise policy. The existing noise metrics and thresholds used for FAA National Environmental Policy Act and 14 CFR Part 150 studies are still in effect.



The NES national curve, along with the range of available airport curves in the NES. Source: FAA

Next Steps

The FAA has a long-standing history of performing noise research and is continuing to study noise impacts to health and welfare as well as noise abatement and mitigation techniques. The agency has indicated that it intends to carefully consider stakeholder input before updating its noise policy.

The FAA has released a Federal Register Notice requesting comments on the NES results until April 14, 2021. [Comments can be submitted to the Docket Number FAA-2021-0037](#). In particular, the FAA is seeking comments on:

- Effects of aircraft noise on individuals and communities
- Noise modeling, noise metrics, and environmental data visualization
- Reduction, abatement, and mitigation of aircraft noise
- Factors that may be contributing to the increase in annoyance vs. the Schultz curve

ESA's Take

The dramatic increase in community annoyance shown in the NES vs. the Schultz curve may be due to a variety of factors such as:

- Increasing environmental expectations nationwide
- FAA implementation of Area Navigation (RNAV) flight procedures, which concentrate larger numbers of aircraft operations over fewer people
- The change in the balance between aircraft noise and overflight frequency reflected in DNL as aircraft have gotten quieter
- The rising use of social media as a tool for community coordination and communication

The NES results are a snapshot in time, representing views around the time of 2015-2016. If the survey were performed today, the results may very well be different. The FAA has not communicated any timeline for updating its noise policy.

ESA encourages airport operators to consult with their stakeholders to identify specific areas of interest that should be considered for future research in order to guide future federal policy around noise, and submit comments to the federal docket before the April 14 deadline. Please contact [Mike Arnold](#) at (407) 312-1294 for more information.