

# Federal Aviation Administration Neighborhood Environmental Survey

The Federal Aviation Administration (FAA) undertook a multi-year research effort to quantify the impacts of aircraft noise exposure on communities around commercial service airports in the United States. The goal of the research was to provide an updated and nationally representative curve showing the relationship between aircraft noise exposure and community annoyance for the US. HMMH conducted the study for the FAA, with Westat, Inc. providing statistical support.

**The Neighborhood Environmental Survey (NES) Report is available here:**

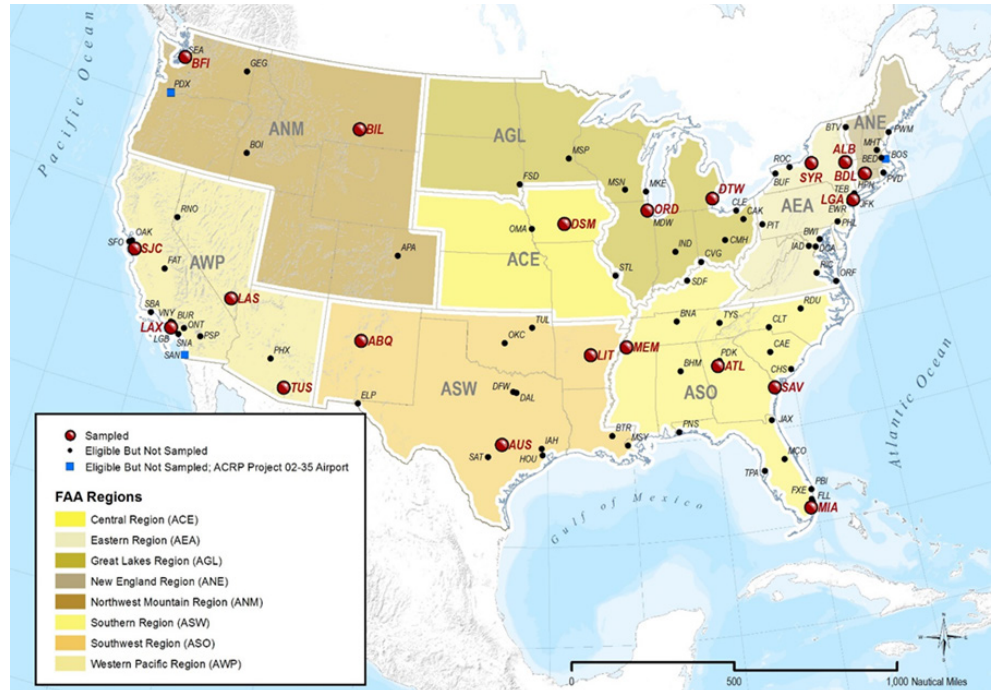
[www.faa.gov/regulations\\_policies/policy\\_guidance/noise/survey](http://www.faa.gov/regulations_policies/policy_guidance/noise/survey)

The survey included 10,000 people near 20 airports across the US — See Section 3 of NES Report for airport selection criteria.

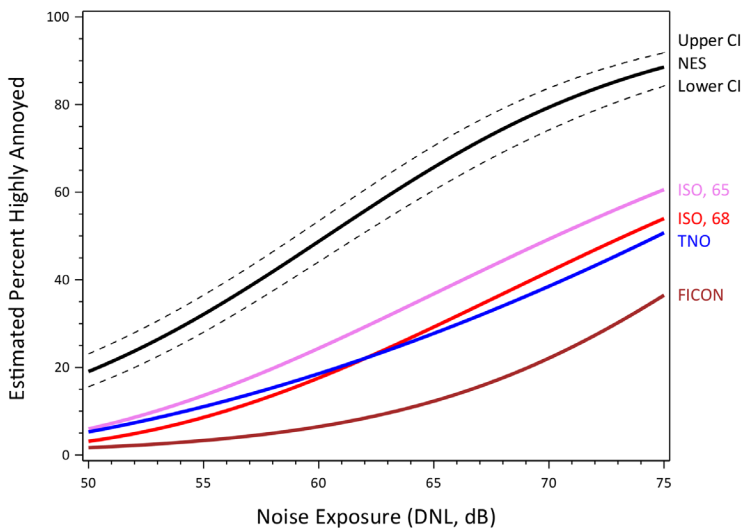
- The survey began in 2015 and was provided in English and Spanish — See Appendix A of NES Report
- The survey asked the respondent how much they were annoyed by aircraft noise and given the choices of: Not at all, Slightly, Moderately, Very, or Extremely
- If they answered “very” or “extremely”, they were classified as being “highly annoyed”
- A follow-up phone survey, which included 2,000 responses, may provide additional direction for further research

Day-Night Average Sound Level (DNL) was modeled with the FAA’s Integrated Noise Model (INM) — See Section 7 of NES Report.

- Flight track data from 2012-2013



Map of Airports Eligible for the Survey and Sampled Airports (Figure 3-1 of NES Report)



National Dose-Response Curve (NES), with 95 Percent Confidence Intervals (CI) on Annoyance for a given DNL. TNO, FICON and ISO Curves with Constants 65 and 68 are Shown Below the National Curve. (Figure 8-4 of NES report)

NES results show more people are “highly annoyed” at a given noise exposure level compared to historical data — See Section 8 of NES Report.

- ~66% of respondents were highly annoyed at 65 DNL
- ~20% of respondents were highly annoyed at 50 DNL

The full text of the NES report, including a detailed description of the methodology and findings, as well as additional background material to help inform readers, is available at: [www.faa.gov/go/aviationnoise](http://www.faa.gov/go/aviationnoise)

The final technical report is available at: <https://www.airporttech.tc.faa.gov/Products/Airport-Safety-Papers-Publications/Airport-Safety-Detail/>

**Federal Register Notice:** [federalregister.gov/d/2021-00564](http://federalregister.gov/d/2021-00564)

Comment on this notice using Docket Number FAA-2021-0037 at [www.regulations.gov](http://www.regulations.gov) by March 15, 2021.

Email questions to: [NoiseResearchFRN@faa.gov](mailto:NoiseResearchFRN@faa.gov).