Comment to FAA REDAC Committee

October 16, 2024 Meeting

AICA
AVIATION-IMPACTED
COMMUNITIES ALLIANCE

In June 2024, the FAA presented a paper at NOISE-CON titled "Aviation Noise in the United States: The Current State of Federal Aviation Administration Research on Community Response." To further investigate the N-Above metric, the FAA commissioned Westat to conduct a follow-up study using data from the NES to determine whether N-Above could improve high-annoyance modeling compared to the traditional Day-Night Average Sound Level (DNL). The study analyzed seven thresholds of the N-Above metric, ranging from NA50 Lmax to NA80 Lmax in 5-dB increments, with data from 10,322 NES respondents. N-Above values were compared against mean high annoyance for both NA50 Lmax and DNL. The results showed a clear, increasing relationship between the number of events and high annoyance, with correlation coefficients between N-Above and DNL ranging from 0.6 to 0.8 for the seven thresholds. The highest correlation was observed with NA70 Lmax.

Westat concluded that "using NA in high-annoyance dose-response modeling generally did not improve upon DNL-only models, and replacing DNL with any (of the seven studied) NA Lmax measures is unwarranted". However, this conclusion does not appear to be fully substantiated by the data provided and seems inconsistent with the work done by additional researchers, in particular Dr. Hansman and team at MIT. Furthermore, 13% (643) of the comments submitted for the FAA Noise Policy Review Federal Register Notice endorsed the Aviation-Impacted Communities Alliance (AICA) comment, highlighting the inadequacies of the DNL metric and strong support for noise metrics such as N-Above and the Peak Day methodology, which better capture the lived experiences of those affected by NextGen. This community feedback aligns with MIT's research, reinforcing the need to reevaluate current noise metrics. While the FAA has referenced Westat's study details in a companion technical report, that report is still pending publication.

All follow-up Noise Policy studies should undergo peer review by experts in the field, such as REDAC and Dr. Hansman, given MIT's extensive work on N-Above, DNL, and noise impact methodologies like Peak Day analysis. Isaac Newton's quote, "If I have seen further, it is by standing on the shoulders of giants," highlights the importance of building on previous research with scientific rigor—ensuring thoroughness, transparency, and objectivity to uphold the integrity and value of these studies. The REDAC remit emphasizes "ensuring FAA aviation research is coordinated with similar activities outside the FAA," underscoring the importance of collaboration and expert oversight.

MIT's research aligns closely with the Westat study and other FAA follow-up efforts for the Noise Policy Review. Established in 1989, REDAC was created to advise and recommend "to the FAA administrator on the needs, objectives, plans, approaches, content, and accomplishments of the aviation research portfolio". With the substantial FAA Noise Policy Review underway, I hope REDAC has taken a broad perspective—considering both its existing portfolio and relevant external studies—to provide informed, comprehensive recommendations to the FAA. It is

crucial that REDAC's guidance addresses not only the ASCENT research but also other FAA-funded studies to ensure a balanced and rigorous approach.

My second topic concerns REDAC's role under the Federal Advisory Committee Act (FACA). FACA mandates that committee memberships be "fairly balanced in terms of the points of view represented and the functions to be performed." In achieving balanced representation, agencies must consider a cross-section of those directly affected, interested, and qualified, as appropriate to the committee's purpose.

However, I have not seen representation from those directly affected, the community stakeholder group on REDAC, and I strongly encourage you to consider representatives to balance the current stakeholder makeup, especially the Environment and Energy Subcommittee. When the FAA and Professor Victor Sparrow invited me to speak at NOISE-CON as part of the FAA Noise Policy Review session, I appreciated their inclusion of a directly affected community stakeholder—representing the Aviation-Impacted Communities Alliance—alongside key speakers from A4A, ACI-NA, the FAA, and Dr. Sparrow. This panel demonstrated a strong example of balanced stakeholder representation, and I urge REDAC to adopt a similar approach in its work.

My final point is about the need for research at additional airports beyond those in the NES, particularly at lower DNL levels. San Francisco International Airport (SFO) and the Stanford MONA group, part of the ASCENT research network, have extensive noise monitoring data that should be leveraged for both ongoing and future research. This monitoring data can provide valuable insights for studies related to NextGen, arrivals, departures, noise metrics, ambient noise levels, Peak Day, and more. Utilizing such resources would strengthen the breadth and accuracy of research on aviation noise impacts.

In closing, REDAC should play a vital role in ensuring the FAA's Noise Policy Review is thorough, transparent, scientifically sound, and informed by a broader range of research. With REDAC's guidance, future aviation noise policies can better reflect the lived experiences of impacted communities, driving meaningful improvements in addressing noise impacts while advancing the science behind these policies.

Thank you for your time.

Respectfully submitted,

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