

# Comment to FAA REDAC Committee

April 12, 2023 Meeting



The Noise Research slide in the Environment and Energy Findings and Recommendations presentation, September 2022 states "Aviation noise is and continues to be one of the biggest environmental impacts related to the aviation industry and it requires ongoing research in order to address the concerns of the citizens." The Subcommittee recommended continued prioritization of noise research. We agree and advocate for specific and additional recommendations to the R&D portfolio.

At the October 5, 2022 meeting we made [six recommendations](#) including extending the previous research, "Aircraft Noise Models of Dispersed Flight Tracks and Metrics for Assessing Impacts" by Yu and Hansman. At the November 18, 2022 meeting we shared [seven recommendations](#) for Advanced Air Mobility research. Today, in response to the [March 17, 2023 Federal Register Notice](#), we share an additional five recommendations to address the concerns of citizens directly and substantially affected by aviation noise impacts.

## 1. A Process Study of the FAA's Noise Policy Review

The FAA's Noise Policy review will likely be the most consequential review regarding noise policy in the 21st century. The FAA affirms the process will be "robust, data-driven, and inclusive". We ask that REDAC be involved to provide independence, rigor, and data. We want to avoid the previous FAA Report to Congress (April 2020) on DNL Metric and 65 DNL Standard for Airplane Noise, where the Quiet Skies Caucus press release asserted "The FAA's report is unacceptable...The FAA failed to meet its mandate because it didn't evaluate alternative noise metrics, standing by standards that don't fully capture noise impacts. The FAA must go back to the drawing board and write a new report."

The FAA's 2-year Interagency Agreement with the Federal Mediation Conciliation Services ends in FY2023. This proposed administrative study will assess the effectiveness, inclusiveness, timeliness, thoroughness, rigor, and use of best administrative practices of the FAA's Noise Policy Review. The study will identify procedural flaws and causes. Most of the research will be qualitative and will benefit from best business practice guidance from non-government and academic sources.

## 2. Impacts of Quiet Sonic Booms over Land Study

A study of the expected noise on the ground and public health effects caused by supersonic aircraft.

## 3. Family of RNAV Dispersion Study

On January 13, 2016, when discussing procedures to disperse aircraft, Dr. Tom G. Reynolds of the Air Traffic Control Systems Group at MIT Lincoln Laboratory described a Family of RNAVs as a way to disperse aircraft. The study assesses the feasibility, benefits, and barriers for implementing ""RNAV-family"" or ""multi-RNAV"" procedures to disperse concentrated flight paths in areas that are not adjacent to major airports but that are disproportionately impacted by aviation noise events from Performance Based Navigation procedure implementation.

#### **4. Quiet Descent Requirements Study**

A study to design and implement existing and future arrival procedures and approaches that allow aircraft to fly in a clean configuration all the way to final approach at least 90% of the time. This includes design criteria for instrument arrival procedures and approaches that enable aircraft to fly idle and in a clean configuration all the way to the Final Approach Fix (FAF), and to increase slightly the in-trail separation between aircraft to avoid the need for Air Traffic Control to speed up or delay arriving aircraft before final approach because of air traffic or airport congestion.

#### **5. NextGen Reduction in Fuel Study**

This study is designed to answer the question: Is there scientific evidence that NextGen met its goal to reduce aviation pollution by reducing fuel usage? The primary aim is to estimate and compare pre/post-NextGen fuel usage of all operations at least 10 major US airports (separately) using airport fuel data. The comparison will adjust for pre/post-differences in enplanement, aircraft, cargo, destination, operation counts, and weather. If fuel usage per flight is available, researchers will use airport enplanement, aircraft, cargo, weather and fuel data to estimate flight-path fuel usage for short- and long-haul departure operations between paired airports in pre/post-NextGen RNAV implementation time periods.

#### **Additional Note**

We hope that REDAC will take a balanced, independent, and inclusive research perspective to sufficiently represent the local community stakeholders who could be substantially and negatively affected by aviation noise and pollution.

What will REDAC do to ensure this? How can we support you?

Respectfully submitted,

[Aviation-Impacted Communities Alliance](#)

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