

DC METROPLEX BWI COMMUNITY ROUNDTABLE
c/o Maryland Department of Transportation Aviation Administration
991 Corporate Boulevard
Linthicum, Maryland 21090

March 15, 2021

**SUBJECT: Overview of FAA Aircraft Noise Policy and Research Efforts: Request for
Input on Research Activities to Inform Aircraft Noise Policy**

Request for Comments

Docket No: FAA-2021-0037

Submitted by the D.C. Metroplex BWI Community Roundtable (“BWI Roundtable”)

The BWI Roundtable was formed in March of 2017 at the request of the FAA and is hosted by the Maryland Department of Transportation Aviation Administration (MDOT MAA or MAA). The BWI Roundtable’s membership represents the majority of both Anne Arundel and Howard Counties which are home to over 900,000 residents.¹ The BWI Roundtable has worked with the FAA, while utilizing technical and other support provided by the MAA, to seek solutions to harmful noise pollution that resulted from the D.C. Metroplex project implemented under the FAA’s NextGen modernization program.

The BWI Roundtable works to provide the FAA, MAA and the Maryland General Assembly a concise picture of the significant negative impacts that the NextGen/D.C. Metroplex program has inflicted upon unsuspecting Maryland residents who currently live under the resultant flight paths as well as at-risk residents who may live under future flight paths due to the likelihood and reality that additional concentrated flight paths will continue to result from the FAA’s current rules of management of the airspace and the planned growth of Baltimore/Washington Thurgood Marshall Airport.

The BWI Roundtable was briefed by the FAA about its noise policy and research efforts at its February 9, 2021 meeting. At this meeting the results of the concluded community noise survey conducted between October 2015 and September 2016 were presented. Below are the BWI Roundtable’s comments on that study.

GENERAL COMMENTS

- a. Generally, this notice focuses on discrete issues affecting communities. The BWI Roundtable’s observation over the past five years is the existence of a need for a

¹ 2019 Estimated numbers from the U.S. Census Bureau:
<https://www.census.gov/quickfacts/fact/table/annearundelcountymaryland,howardcountymaryland,MD/RHI425219>

formalized interactive process for the FAA to deal with noise pollution. The FAA forces controversial noise issues to be considered only through Roundtables, yet there is no recognition of Roundtables by the FAA in statute. This warrants a formal policy change in the FAA's enabling legislation to formalize the process by which the FAA will interact with Roundtables and the public. This directly applies to the FAA's work to change its community involvement practices as described in this notice which states, "The FAA has since developed and begun implementing a comprehensive and strategic approach to transform and enhance FAA community involvement practices, including working through airport community roundtables, to equitably discuss opportunities to shift or, when possible, reduce aircraft noise exposure."

- b. The FAA uses the Aviation Environmental Design Tool (AEDT). This is a model that uses numerous inputs with many assumptions. To date, the FAA has never validated this model. Airports like BWI Marshall have noise monitoring stations that could provide the quality, amount and duration of data needed to sufficiently validate the noise contours developed for Airport Noise Zones by the AEDT model as required under the FAA Part 150 process. The FAA could easily provide guidance on the acceptable type and minimum capabilities required of noise monitors so as to standardize the process for validating the AEDT model across different airports. As an interim measure, the FAA should immediately start collecting and relying on actual noise data from monitors rather than from models that are not validated and do not adequately capture the real impacts to people on the ground.
- c. The DNL thresholds currently used were developed in 1974 and are still the current standard set by the FAA in spite of major changes in airport operation. After 1983, airlines switched aircraft operations from a point-to-point system to pulse-based systems (hub and spoke) creating peak hour operations which resulted in peak noise hours for residents around airports. For highways and other forms of transit, peak hour noise above certain thresholds requires mitigation by noise walls. Peak hour noise must be considered in alternatives and/or a replacement to DNL in order to accurately and fairly assess and address noise pollution impacts. So long as the FAA continues to use DNL, the DNL threshold should be lowered significantly, and the agency should begin using/providing metrics that would improve understanding of noise impacts such as N-Above.
- d. Previous studies (Schultz curve, FICON study)² underestimated aircraft annoyance because they included all transportation noise (e.g. road and rail), and used a mix of older, less robust methodologies. The Neighborhood Environmental Survey (NES) specifically addresses aircraft noise annoyance and used state-of-the-art methodologies for its design and modeling. The study is sound in its findings and indicates the need to take action to address the effects of aircraft noise pollution is urgent. No further study is needed before meaningful action must be taken.

² https://www.faa.gov/airports/environmental/airport_noise/

- e. The study does not provide any analysis to address concerns of environmental justice regarding the disproportionate impacts of aviation noise on low-income communities.
- f. The NES published January of 2021 draws conclusions based on DNL contours at twenty airports. The survey was scientifically rigorous and provides reliable new evidence that must be incorporated into current FAA aircraft noise policies. Although the NES was conducted prior to NextGen Performance Based Navigation (PBN), it represents a solid baseline from which to work. Experienced annoyance with aviation noise has only worsened from the timeframe when the NES was completed. Therefore, the conclusions of this study, while possibly not entirely representative of the current operating environment, are still valid and only begin to indicate the true extent of the problem.
- g. Any comparative claims of mitigation of aviation noise impacts on communities due to the introduction of quieter aircraft over time have been rendered obsolete by the extreme concentration of flight paths caused by the implementation of NextGen PBN. Residents in the communities around BWI Marshall did not object to occasional pre-NextGen random noise events from aircraft vectored over their communities. There must be an accelerated development of an algorithm or return to vectoring that safely disperses aircraft while emulating previous radar vectoring in the airspace historically assigned to airports like BWI Marshall. This should include testing and implementation of new technologies and procedures that will allow aircraft to use existing PBN/RNAV technology to systematically and safely disperse jet aircraft rather than force them to travel in the same channelized flight paths. Additionally, within immediate proximity of the airport, restoration of flight paths to long established noise zones is critical.
- h. The NES analyzed noise contours in 5 DNL increments from 50 DNL up to 75+ DNL. We suggest that all Part 150 Noise contours show these same contours. Communities now report annoyance with aircraft noise starting around 40 DNL. A truth in transparency map is needed to depict 40 to 75+ DNL around airports to inform communities, many of which may be well outside of current noise abatement zones and considerable distance from any airport. The NES results did show that a *much* greater proportion of people are highly annoyed by aircraft noise across all levels of DNL than was previously thought.

RECOMMENDATIONS

- a. The FAA should immediately recognize the communities around airports as stakeholders in the airspace and the agency's procedure design process. This recognition can be demonstrated by the inclusion of formal working groups, like the BWI Roundtable, that have been appropriately appointed by state and local


governments to be part of all design processes to include, but not limited to, the PBN working group process.

- b. The NES results should trigger a sea change in aviation noise policy because they refute the long-standing Schultz curve and FICON which have been the foundations of existing aviation noise policy.
- c. The FAA has an ethical obligation to change regulations that are detrimental to the public, that are under its authority, and that do not require new legislation.
- d. The FAA should provide a timely roadmap for changing its noise regulations and use the NES results as the new basis for decision-making on community impacts, including in the FAA's Environmental Review Process and Part 150.³
- e. The FAA should use additional, existing metrics, notably "N-Above," which counts the number of aviation noise events over a certain location and decibel level, to better reflect noise impacts on communities. New noise metrics do not have to be developed or researched before changing noise policy.
- f. As a sign of goodwill, the FAA should immediately start reporting N-Above in addition to DNL. Communities should not have to wait for new FAA regulations when such data can be reported now.
- g. We urge the FAA to appoint an independent "Blue Ribbon Commission" of multi-disciplinary experts (such as environmental scientists, public and medical health professionals, engineers, etc.), to be tasked with identifying metrics and thresholds that will define "significant impact" based on the NES results as well as the actual experiences of people, local noise environments, nighttime noise, and current scientific knowledge.
- h. The FAA should commission the National Academies to:
 1. Form an independent committee within the Division of Medicine to produce a consensus report on the health effects of noise and pollution.
 2. Form an independent committee within the Division of Sciences to produce a consensus report on ultrafine particles. Both committees would use existing scientific studies and knowledge.

Both Committees would use existing scientific studies and knowledge.

³ https://www.faa.gov/airports/environmental/airport_noise/

Submitted March 15, 2021



Mary Reese
Chair
DC Metroplex BWI Community Roundtable

cc: The Honorable Benjamin L. Cardin
The Honorable Christopher Van Hollen, Jr.
The Honorable Andrew P. Harris, M.D.
The Honorable C.A. Dutch Ruppersberger
The Honorable John P. Sarbanes
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