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April 13, 2021

Docket Operations, M-30
United States Department of Transportation
1200 New Jersey Avenue, SE
Room W12-140, West Building, Ground Floor
Washington, DC 20590-0001

RE: Docket Number FAA-2021-0037

Submitted electronically via <http://www.regulations.gov>

Dear Administrator Dickson:

On behalf of all Arlington County residents and workers impacted by aircraft noise, as well as my colleagues on the County Board, we thank the FAA for the opportunity to provide comment on the historic, long-awaited Neighborhood Environmental Study (NES), released in January 2021. While we use the term “annoyance” throughout these comments for consistency with the findings of the NES results, that word does not well express the extreme distress aircraft noise causes to our communities, especially during the hours that people usually sleep, between 10 PM and 6 AM. Over the past several years, aircraft noise has become more and more distressing to our communities, especially after the implementation of NextGen procedures.

Arlington County has lived in the shadow of Ronald Reagan Washington National Airport (DCA) for nearly eight decades since DCA opened for business in June 1941. Over those 80 years, DCA has grown to become the most centrally-located airport of Metropolitan Washington’s three-airport regional system, all three of which (DCA, BWI, and IAD) were within the top 30 large hub airports in the country for calendar year 2019, the last full year of normal, pre-pandemic flight operations. During 2019, DCA served nearly 11.6 million enplaned passengers. The 2019 Air Passenger Survey conducted by the Metropolitan Washington Council of Governments (COG) reported that DCA was the region’s most overall preferred airport, favored by 44 percent of respondents.

But while the County’s economy greatly benefits from its proximity to DCA, that proximity over time, combined with increased flight operations, the prevalence of commercial jet aircraft serving the airport, and, since 2015, the increased use of performance-based navigation (PBN) procedures, has exposed areas of our community to long-term, repeated exposure to annoying and unhealthy levels of aircraft noise. To that end, the release of the NES and its primary finding that an increased percentage of people are highly annoyed by aviation noise is merely echoing what the County Board has been hearing from impacted communities for many years. The noise

exposure is not limited to the commercial flights to and from DCA; the County's proximity to the Nation's Capital and nearby military and civilian first-responder air operations also exposes areas of our community to long-term, repeated noise impacts from helicopters.

The results of the NES clearly demonstrate that the FAA has been underestimating the impact and level of annoyance caused by aircraft noise for decades and that the long-used federal metric of Day-Night Average Sound Level (DNL) of 65 decibels (dB) based on the so-called "Schultz Curve" is an inadequate descriptor of community and individual experiences of long-term repeated exposure to aircraft noise. This historic result of poor metrics leading to poor policies also underscores at a national level the concerns that we have heard from our noise-impacted communities for many years. The FAA must act now to reform both its noise metrics and noise policies to bring tangible relief to impacted communities. The reform process must not be delayed nor impeded for further research efforts into alternatives to DNL; there are several viable alternatives to DNL, such the number of noise events over 50 dB, that can be implemented now on their own or as components to a composite noise measure for use in future noise monitoring and policy.

Arlington County is also a standing member of the National Organization to Insure a Sound Controlled Environment (N.O.I.S.E.), America's only nationwide, community-based organization committed to reducing the impact of excessive aviation noise on local communities. My colleague Libby Garvey is serving on the N.O.I.S.E. Board this year. The County is dedicated to working with our community, airport, and the FAA to find reasonable solutions to the impacts of aviation noise. We believe the release of the NES and its findings are a vital first step in that important task. Below are the County's specific comments on the three focus areas highlighted in the Federal Register notice:

Factors that may be contributing to the increase in annoyance shown in the survey results

The greatest contributing factor to the increase in annoyance shown in the survey results is self-inflicted from FAA's existing policy: the failure of the 65 DNL metric as a reliable indicator of aircraft noise impacts on people. While the level of annoyance has increased for many communities due to the higher concentration of flights in areas and airports using PBN procedures, in other areas it is simply the case that previous studies grossly underestimated the level of annoyance. The increase in annoyance shown in the difference between the areas under the original Schultz Curve from the 1970s or the 1992 curve update following the Federal Interagency Committee on Noise (FICON) review and the curve based on the NES data illustrates that underestimation.

Two other interrelated factors contributing to the increase in annoyance in our communities are the increased concentration of flights over certain neighborhoods due to the increased use of PBN procedures, and a longer duration of high flight volumes in any given 24 hour period, a phenomenon characterized in surface highway transportation as "peak spreading." In surface highway operations, peak spreading occurs when vehicle throughput over time is limited by constrained capacity. When travelers can no longer reach their destination during a peak hour or peak period, the summit of the peak flattens out as traffic is redistributed over the day, resulting in peak hours lasting longer than one hour and peak periods lasting five to six hours or longer.

The capacity constraints in the Washington, D.C. Metroplex are not only the highly congested and highly regulated airspace, but also the terminal capacity of DCA itself and the long-standing slot regulations. The resulting diurnal distribution of flight activities (in normal pre-pandemic conditions) at DCA reveals a morning peak period of geographically concentrated flight operations beginning at 5:00 AM and some days lasting until 12 noon with little variability, followed by another peak period beginning at 2 PM leading up to the peak of the peak in the late afternoon and early evening. Please note that the County is not advocating for changes to the slot rules; however, they must be acknowledged as a capacity constraint at DCA that is contributing to the operating conditions that are a contributing factor to the increase in annoyance with aircraft noise impact. Flights are geographically concentrated under the PBN procedures, and temporally concentrated due to peak spreading. It is no surprise that our community members who live or work underneath these “freeways in the sky” created by FAA policy are experiencing and reporting higher levels of annoyance due to aircraft noise. Meanwhile, both BWI and IAD have available capacity for more flights, as well as the ability to expand; DCA is surrounded by water on three sides.

Additional investigation or analysis on (a) Effects of aircraft noise on individuals and communities; (b) Noise modeling, noise metrics, and environmental data visualization; (c) Reduction, abatement, and mitigation of aircraft noise

The County understands the need to improve the efficiency and capacity of the national airspace while decreasing emissions and the impact on our environment. However, with increased air traffic volume over the last decade as well as the enhanced navigational capabilities that enable aircraft to fly more precisely, the resulting concentrated traffic corridors have a more noticeable effects on the ground and in our community that must be considered thoroughly and as a priority concern.

Aviation noise impacts are a health and an economic issue. In order to adequately understand and address the impacts of aviation noise on communities, the FAA must first establish adequate metrics to measure those impacts. DNL does not represent and account for additional factors resulting from today’s aircraft operations that add to annoyance. It appears that residents today are more sensitive to average noise (as measured by DNL) when the NES results show they are also reacting to new annoying factors.

The following types of metrics should be evaluated by the FAA to truly measure noise impacts. As DNL is an average and humans do not perceive noise in averages but rather as individual events, it is time to investigate alternative metrics that could measure impacts such as:

- The length of each period of frequent, regular noise spikes (peak periods) due to over-flights
- The number of peak periods per day
- The average dB of a peak period or peak hour noise—not day-night average
- The intensity of spikes above the ambient dB level during peak hour noise
- The intensity and number of spikes above the ambient sound level for overnight hours from 10 PM to 5 AM

- The psychological impact of concentrated, extended noise
- The physiological /cardiovascular impact of infrequent, significant noise spikes during nighttime hours
- Impact of less audible low frequency noise resulting in vibration-induced audible noise

Investigating a more appropriate metric to measure aviation noise impacts is crucial and will supplement efforts to greater engage the community to understand their concerns. However, the investigation needs to be completed as quickly as possible and must be undertaken in parallel with the early steps of noise policy reform. Our noise-impacted communities cannot wait more years and years for relief from the harm caused to them by the shift to PBN that was rubber-stamped under the 65 DNL metric. We cannot let perfect become the enemy of the good.

Additional categories of investigation, analysis, or research that should be undertaken to inform FAA noise policy

Arlington County strongly recommends that the FAA include ground level noise in and around airports and heliports as part of future noise measurement and evaluation. The FAA must also provide a framework and funding for mitigation and abatement of the ground level noise impacts of airports and heliports as part of future noise policy and program reform. Noise-impacted communities near an airport but not necessarily under the airport flight paths must be given future consideration in noise measurement and noise policy.

The County also recommends that the FAA move immediately to implement regulations that sharply restrict or limit flight operations over noise-sensitive areas between the hours of 12 midnight and 6 AM and vigorously enforce those regulations with heavy fines for airport and airline violators. The fines must be set at a financial level where violators cannot simply absorb them or pass them on to consumers as the cost of doing business. These policy changes can be implemented without further study and will bring tremendous relief to our communities. Practically speaking, no one should need research to be convinced that loud noise when you are trying to sleep is a bad thing.

Finally, the County recommends that FAA include research into the noise impacts of both Unmanned Aircraft Systems (UAS) not only in noise measure and policy reform, but also in future rulemaking proceedings on UAS. This provision should also be extended to future research on electric propulsion of manned fixed-wing and rotary aircraft. While all of these emerging technologies show great promise for new and emerging uses of our national airspace and potentially quieting some of our skies, their noise impact is not zero, and consideration of that noise impact on communities needs to be considered along with all other potential impacts as these vehicles move from cutting-edge to the state of the practice in aviation.

The public comment period ending on April 14, 2021 should represent the first step in a public engagement process. The County understands that the FAA sees value in communicating with airport noise roundtables, and we continue our active participation in the DCA Community Working Group (CWG) organized by the Metropolitan Washington Airports Authority (MWAA), despite MWAA's continued outlier status as one of the only major airport operators in the country that refuses to fund a dedicated subject matter expert on airspace and procedure

design to work directly with its community roundtables. The FAA should invest resources and transparent communication practices with healthy roundtables and empower communities through direct engagement with those communities (not just to the roundtables) to create frameworks that represent the real needs of their unique local dynamics and experiences. Direct community engagement will be critical to the success of FAA's future efforts on aircraft noise policy.

We know our National Airspace System is very large and complex and understand that the study, testing, and implementation of new metrics to measure noise impact and resulting noise policy reform is a large-scale, expensive undertaking. We do not ask lightly that this be the FAA's focus now and beyond because we believe that now is the time to shape the future of federal policy that includes noise mitigation and abatement as a strong pillar. The agency, USDOT, and the stakeholder community should not miss this opportunity to address this very serious need.

Arlington County looks forward to actively partnering with the FAA in this endeavor. We believe that communication and transparency will only aid this effort, not slow it down. We understand and are ready to advocate to our local congressional delegation to fully fund future study and use of new metrics as well as the immediate implementation of changes to standard instrument departures (SIDs), standard terminal arrivals (STARs), and standard instrument approach procedures (SIAPs) that can be justified based on existing metrics. Arlington County looks forward to a meaningful partnership as the FAA proceeds with the next steps of this policy change.

Sincerely,

A handwritten signature in cursive script that reads "Matthew de Ferranti". The signature is written in black ink and is positioned above a horizontal line.

Matt de Ferranti, Chair

cc: Senator Tim Kaine
Senator Mark Warner
Representative Don Beyer
Katie Cristol, Vice Chair
Christian Dorsey, Board Member
Takis Karantonis, Board Member
Libby Garvey, Board Member
Mark Schwartz, County Manager