

February 15, 2022

SUBJECT: 2021 Annual Report of the D.C. Metroplex BWI Community Roundtable (the Roundtable)

EXECUTIVE SUMMARY

- 1.** The Roundtable has worked effectively with its partners, especially Southwest Airlines, the Maryland Aviation Administration, and the Federal Aviation Administration. New flight paths and procedures are finally under review at the FAA after a nearly 2-year delay caused by the FAA's disengagement resulting from lawsuits filed by the State of Maryland and due to the global pandemic. However, the Roundtable has requested, but has not received substantial updates on the process. Late 2021 information indicates that if the path changes are approved by the FAA, implementation can occur no earlier than 2023. These flight paths are small, incremental changes that will help at the margins, but will not solve the noise pollution problem that results from NextGen at BWI Marshall airport.
- 2.** The Roundtable evaluated the MAA's study for the Airport Noise Zone. We identified serious problems with the current methods used to establish the ANZ considering NextGen's disruptions and made recommendations for possible changes that are beyond the Roundtable's expertise or writ to analyze for possible implementation.
- 3.** The Roundtable has been focused on the need for better noise monitoring and analysis to create consistent baseline data against which to measure noise created by any flight changes. Howard County has offered technical assistance through a contract it has with ABCx2, a national consulting firm, to create a region-wide virtual noise monitoring system, in cooperation and coordination with the MAA. Anne Arundel County has expressed an interest in also participating in the ABCx2 contract to benefit the Roundtable's work.
- 4.** Identified and unresolved problems are:
 - a. The FAA has no plan to address the larger noise pollution problem caused by NextGen
 - b. The FAA's design process failed to consider communities as stakeholders because they have no legislative mandate to do so
 - c. Elected leaders need to balance economic growth with emerging literature on the total range of negative effects of commercial aviation pollution
 - d. The expansion of BWI Marshall will worsen the noise crisis in the region unless there are significant changes to NextGen, and
 - e. The volunteer-directed Roundtable may not be able to continue to operate at a high level for the period of time necessary to address the problem.
- 5.** Recommendations for the Maryland General Assembly are:
 - a. Determine how best to achieve modernization of COMAR in light of NextGen.
 - b. Incorporate cost-benefit analysis into legislation or budget actions for the airport.
 - c. Create a means to re-balance community interests and commercial aviation interests that were disrupted by NextGen.

INTRODUCTION

The D.C. Metroplex BWI Community Roundtable (“BWI Roundtable”) hereby submits its fifth annual report. This report was approved by the Roundtable on February 15, 2022. This report is required by the BWI Roundtable charter with the Maryland Department of Transportation Aviation Administration (MDOT MAA or MAA). This report includes the following topics: History, 2021 Roundtable Meeting Dates, Roundtable Work with FAA and MAA, Other Roundtable Actions, Identified and Unresolved Problems and Risks, Recommendations and Conclusion.

HISTORY

The BWI Roundtable was formed at the request of the FAA and is hosted by the MAA. Through its meetings, the BWI Roundtable has worked with the FAA utilizing technical and other support provided by the MAA and by Southwest Airlines to seek solutions to harmful effects brought about by the implementation of the DC Metroplex project implemented under the NextGen program.

During its first meeting, held on March 21, 2017, the BWI Roundtable unanimously adopted the following resolution as a priority:

The DC Metroplex BWI Community Roundtable requests and recommends that the FAA immediately revert to flight paths and procedures that were in place prior to the implementation of NextGen and the DC Metroplex plan. Such reversions will provide urgent relief to residents adversely affected by these new flight paths and procedures while a more deliberate and public-facing process to develop and implement NextGen and the DC Metroplex plan is undertaken.

The BWI Roundtable has acted consistently with this request to the FAA and acknowledges that successful reversion and relief may not be achieved using current technology.

The BWI Roundtable works to provide the FAA, MAA, our federal elected officials and the Maryland General Assembly a concise picture of the significant negative impacts the NextGen/D.C. Metroplex program has inflicted upon unsuspecting Maryland residents. Especially impacted are residents living under the resultant flight paths. These same residents are also facing the likelihood/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 (“BWI Marshall”)

2021 ROUNDTABLE MEETING DATES

The BWI Roundtable met as a working body on the following dates in 2021: January 19, February 9, March 9, April 13, June 15, July 13, September 14, October 19, and December 14. An additional meeting was held on April 27 to elect new leadership. Due to the continuing global pandemic, meetings were held virtually until July 13 when in-person meetings were resumed with a virtual option to accommodate everyone during the continuing global pandemic. The Roundtable appreciates the technical support for these virtual/in-person hybrid meetings provided by MAA.

The monthly meeting agendas, presentations and minutes of the meetings can be found on the MAA's website, see: <https://marylandaviation.com/environmental/environmental-compliance-sustainability/dc-metroplex-bwi-community-roundtable/>

ROUNDTABLE WORK WITH FAA AND MAA

Much of the BWI Roundtable's effort from its inception through 2019 was focused on developing and submitting a package of proposed flight procedure changes to the FAA Performance Based Navigation 7100.41A (PBN)¹ Working Group.

The proposed changes were developed by the MDOT MAA, the MDOT MAA's contractor Harris, Miller, Miller and Hanson, Inc. (HMMH) and industry representatives from Southwest Airlines (SWA) and were developed in response to the FAA's proposed procedure changes presented to the BWI Roundtable on April 24, 2018. The Roundtable's proposed flight procedure change package was submitted to the FAA in December 2019 so the proposed procedural changes could be included in the 2020 PBN Working Group process. However, delays due to the FAA's disengagement after the State of Maryland filed a lawsuit, followed by the pandemic, postponed the PBN Working Group design and analysis process until 2021.

Throughout 2021, the BWI Roundtable has requested but has not received substantial updates from the PBN Working Group, nor has the Roundtable received any feedback indicating that the new flight paths would differ from those proposed. The Roundtable understood the FAA's process consisted of a full design and analysis, followed by the environmental review process, and completed with test flights, training, and publication of procedures. However, as of early 2021, the Roundtable was under the impression the FAA expected this process to be completed by the summer of 2022, with the understanding that there are many factors which could contribute to delays.

¹*The Performance Based Navigation 7100.41A process is the process by which the FAA makes procedural and other changes to the use of airspace.

In 2021, Roundtable discussions and public comments reflected frustration and impatience with the lack of progress or promise of any relief as flight traffic began to return to pre-pandemic levels. In November 2021, members of the Roundtable were made aware of a September 2021 Report to the Maryland General Assembly in which the MAA stated proposed revisions to FAA’s published procedures submitted in December 2019 to the FAA “will run into 2023 before implementation of any feasible changes can occur.”

There were suggestions and pleas for incremental changes to relieve the most acute situations where possible. However, the FAA requires the BWI Roundtable’s proposal be treated as a single package for environmental review, which limits the FAA’s ability to implement some parts of the proposal more quickly than others.

OTHER ROUNDTABLE ACTIONS

While the BWI Roundtable waited for updates on the progress of the PBN Working Group, attention and efforts turned to the need for better noise monitoring and analysis. The January 2021 Roundtable meeting had two member-directed presentations on ANOMS (Airport Noise and Operations Monitoring System) and the ANZ (Airport Noise Zone). The BWI Roundtable’s expertise and interest in these two topics was invaluable in several notable actions taken by the BWI Roundtable in 2021:

1. 2020 Airport Noise Zone (ANZ) Study Response

The MDOT MAA develops and certifies the BWI ANZ pursuant to the Maryland Environmental Noise Act of 1974. The ANZ for BWI Marshall is required to be updated every five years (see Transportation Article, §§5-805, 5-806, and 5-819, Annotated Code of Maryland). In 2019 the BWI Roundtable chairperson and vice chairperson were included in the ANZ re-certification process as members of the MAA’s Stakeholder Advisory Committee (SAC).

In February 2021, the BWI Roundtable evaluated the MAA’s ANZ Study. The Roundtable identified serious problems with the current methods used to establish the ANZ in light of the significant hitherto unknown noise pollution resulting from NextGen. The Roundtable submitted comments and recommended significant changes to the ANZ update process and proposed numerous changes to the Noise Abatement Law (the ANZ Study Comments). The ANZ Study Comments provide a strong beginning towards changing COMAR regulations for the ANZ process in the future. However, the Roundtable is not the appropriate forum for analyzing those possible changes. The process is incredibly important to future efforts to mitigate noise pollution in Maryland. The full comment paper can be found on the Roundtable’s webpage on the MAA’s website, see: https://marylandaviation.com/wp-content/uploads/2021/03/0209_ANZ-Study-Comment.pdf.

2. Virtual Airport Noise and Operations Monitoring System (V-ANOMS)

Currently, BWI Marshall's Airport Noise and Operations Monitoring System (ANOMS) consists of only 24 permanent noise monitors, which do not cover the entire area subjected to NextGen noise pollution. Given BWI's lack of a region-wide ANOMS, the BWI Roundtable has prioritized obtaining comprehensive, independent, and transparent noise monitoring and analysis for the region. Such a system would provide many advantages and would augment the current ANOMS. For example, this data could be used to create region-wide baseline metrics to compare noise levels before and after FAA's changes to flight paths, generate noise data to validate models used to create NextGen flight paths, and create robust and more complete metrics to assist with Maryland's modernization of the ANZ process.

In August 2021, Howard County's Executive Office contacted the BWI Roundtable to offer technical consulting assistance through a Howard County Office of Transportation contract with ABCx2, using funds provided by the Howard County Executive and the Howard County Council. ABCx2 is a community-focused company capable of providing solutions to airport noise issues through community and industry engagement. After initial meetings to obtain a general idea of the capabilities offered by ABCx2, the Technical and Legislative committees of the Roundtable formed the Joint Technical and Legislative committee to evaluate and recommend the most effective way to proceed. Of particular interest was ABCx2's expertise in generating noise data based on actual and modeled flight paths through system-defined virtual noise monitors. Deployment of a region-wide network of virtual noise monitors would help to overcome a major limitation of current noise monitoring, which is the inadequate number of physical noise monitors and the resulting lack of comprehensive noise data.

To proceed, the Joint committee presented a resolution which was passed unanimously by the Roundtable on September 14th, 2021. The resolution authorized the Joint committee to work with Howard County and ABCx2, in coordination and cooperation with the MAA and HMMH, Inc., to design a workplan to be presented to the Roundtable for consideration. The full resolution can be found on the Roundtable's webpage on the MAA's website, see: <https://marylandaviation.com/wp-content/uploads/2021/09/Resolution-to-investigate-HoCo-tech-assistance.pdf>.

In December 2021, Anne Arundel's County Executive office agreed to be a contributing partner with Howard County and provide funding for the proposed ABCx2 work.

Work will continue toward presenting the ABCx2 ANOMS work plan to the Roundtable in February or March of 2022. It is our hope that the V-ANOMS system will become operational during calendar year 2022 and begin providing baseline data to be used for pre- and post-intervention analysis of noise pollution across the region generated by NextGen flight path changes.

3. FAA Noise Survey Response

In March 2021 the BWI Roundtable submitted comments in response to the FAA Neighborhood Environmental Survey (NES) published January 2021. Although the Roundtable critiqued many aspects of the NES, it was concluded that despite these shortcomings, the survey results were “*still valid and only begin to indicate the true extent of the problem.*”

The full response of the BWI Roundtable to FAA-2021-0037 can be found on the Roundtable’s webpage on the MAA’s website, see: <https://marylandaviation.com/wp-content/uploads/2022/01/2021-03-15-Roundtable-Letter-to-FAA-in-Response-to-Neighborhood-Environmental-Survey-NES.pdf>

4. Maryland General Assembly

In 2020, the BWI Roundtable adopted a resolution in support of SB0184/HB0310 University of Maryland, Baltimore – Study on the Health Effects of Air Traffic Noise. The legislation received bipartisan support and passed both chambers but was vetoed by Governor Hogan due to pandemic-induced fiscal concerns. In response to continued bipartisan support, Governor Hogan provided funding for the study which commenced in 2021 and is expected to be completed by September 2022.

5. BWI Noise Complaints

The global pandemic resulted in a decrease in noise complaints in 2020 followed by subsequent increases in 2021 as flight operations at BWI returned to previous levels. A more comprehensive analysis of the effects of pandemic-induced changes to flight operations at BWI is not possible with the technical analysis provided by the MAA at the time of this report.

Through comments at BWI Roundtable meetings and email communication, members of the public have expressed confusion and frustration with the noise complaint process. Citizens have been reporting the noise pollution impacting them and their families for years without seeing any reduction in noise. Many have expressed their wonder why they should continue to report the continuous and increasing frequency of noise pollution to which they and their families are exposed. Furthermore, the mechanism for filing noise complaints is not readily available or adequately publicized, especially for those further from the airport where NextGen introduced unexpected noise pollution.

IDENTIFIED AND UNRESOLVED PROBLEMS AND RISKS

- 1) Any changes implemented by the FAA during the current PBN process at BWI Marshall are meaningful and necessary; however, the FAA has no plan to address the remaining significant and crippling noise pollution being experienced, including:
 - Airplanes flying in low and highly concentrated arrival routes over Anne Arundel County causing major noise pollution, unnecessary health/stress, and negative monetary impacts for its residents. These altitudes are significantly lower than arrival altitudes flown pre-NextGen.
 - Continued overconcentration of nearly all BWI departures over Howard County. This problem will only grow worse with any increase in operations at BWI.
- 2) The FAA's process for designing and managing flight patterns in the national airspace fails to consider (or de-prioritizes) the presence of, or effects on, densely populated areas, historic areas, local established noise abatement areas, etc. From our experience, communities subjected to noise pollution resulting from NextGen technology are not considered to be stakeholders by the FAA, which has no primary legislative mandate to protect the environment from the harmful effects of commercial aviation.
- 3) Congressional and state leadership may consider the presence and growth of the airport as an economic boon in error. A growing body of international scientific research has linked aviation noise pollution to billions of dollars in healthcare costs over relatively short periods of time, measurable increases in childhood illness and learning deficits, loss of productivity and depreciation of real estate values among other fiscal impacts.
- 4) The composition of visibly settling aviation exhaust particulate and invisible exhaust pollution created by the low and concentrated paths of commercial aircraft is unknown. The components and effects of the physical pollution need to be determined and assessed to their impact on human, wildlife and environmental health.
- 5) The ten-year planned expansion of BWI Marshall and subsequent increases in flight operations will worsen the noise and particulate pollution crisis in Maryland so long as there is no solution to NextGen nor a demonstrated ability of the MAA or Maryland leadership to protect Maryland residents from the FAA's administration of the airspace.
- 6) The BWI Roundtable has become the de facto locus for airport noise pollution- related concerns and possible source for solutions in the region. However, the BWI Roundtable is composed of citizen volunteers who have spent considerable amounts of personal time becoming proficient in aviation noise and airport operational issues. This structure is a high to medium-term risk as volunteer committees find it difficult to maintain hard-gained institutional knowledge, especially in such a highly technical undertaking such as this. In the absence of dedicated funding, administrative and legal support, the Roundtable may

not be able to continue at a high level of activity for the amount of time required for long-term governmental and technical processes to achieve results.

RECOMMENDATIONS

The FAA's NextGen program not only revolutionized the regional and national airspaces, but it also disrupted all prior State of Maryland environmental and public policy frameworks for commercial aviation impacts. Maryland's commercial aviation-related public policy needs to be modernized in light of NextGen's disruptive aspects. Since BWI Marshall is owned by the State of Maryland, we believe that the General Assembly is the appropriate representative body to balance competing interests through legislation. The Roundtable has recently commented on certain possible changes to COMAR and the ANZ recertification process, identifying possible upgrades reflecting the radically changed noise and particulate pollution environment.

We urge the General Assembly to review our comments on proposed changes to COMAR and the ANZ recertification process and determine how best to achieve an upgrade and modernization of COMAR before the next ANZ recertification process begins.

NextGen was implemented nationally by the federal government without any comprehensive cost/benefit analysis and little, if any, research into the physical and mental health effects of the new technology on human beings. The results have been extremely unpleasant for our communities, debilitating for many individuals and do not promote the long-term acceptance of commercial aviation growth in the State.

We urge the General Assembly to incorporate cost/benefit analysis into all BWI-Marshall-related legislation and budget actions and create a more focused means beyond the Roundtable to advance that goal.

NextGen dramatically unbalanced the interests of central Maryland communities and commercial aviation. That balance, which existed for decades without controversy, needs to be restored.

We urge the General Assembly to create through legislation the means for the equally compelling, but competing, interests of airport-related economic growth and citizens' rights to health, happiness and a reasonable quality of life to be weighed and decided before decisions are rendered.

CONCLUSION

As was stated by BWI Marshall's Office of Real Estate and Noise in the early days of the Roundtable, BWI did not have a noise problem before NextGen. We certainly have one now. It is clear after nearly five years of steady work, that the BWI Roundtable has not made a significant impact on the commercial aviation noise pollution generated by NextGen-directed operations at BWI. While the BWI Roundtable has worked effectively with our partners, especially Southwest Airlines and the MAA, and the FAA to redesign some NextGen flight paths, our efforts will only have a positive effect at the margins. For any appreciable improvement to occur in the "quality of life" of the large number of residents in the region who have been subjected to dramatic increases in commercial aviation noise and particulate pollution, the FAA must improve its industry requirements, technology, or procedures to re-create the "status quo ante" in the region. That is not something the BWI Roundtable has any control or influence over. Without that, or action by the State, the future of the region appears to be one of increasing commercial aviation noise and environmental pollution, with its attendant resulting negative outcomes for communities and potential to create political conditions unfavorable to aviation growth.