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September 10, 2024

The Honorable Rebecca Tepper, Secretary
Executive Office of Energy and Environmental Affairs
Attn: Massachusetts Environmental Policy Act ("MEPA") Office
Jennifer Hughes, EEA No. 3247
100 Cambridge Street, Suite 900
Boston, MA 02114

Re: Comments of the Town of Milton on the Boston Logan International Airport 2022 Environmental Status and Planning Report (2022 ESPR)

Dear Secretary Tepper:

The Select Board of the Town of Milton ("Milton") is pleased to provide the following comments in response to the Boston Logan International Airport 2022 Environmental Status and Planning Report ("2022 ESPR"), which was submitted to you by the Massachusetts Port Authority ("Massport") on May 31, 2024.

1. **Request for Assistance and a Meeting with the Secretary**

As you will see from (a) our November 14, 2019 comment letter to your predecessor, Secretary Kathleen A. Theoharides, on the Boston Logan International Airport 2017 Environmental Status and Planning Report (the "2017 ESPR"), attached hereto as Exhibit A, and (b) our March 12, 2021 comment letter to Secretary Theoharides on the Boston Logan International Airport 2018-2019 Environmental Data Report (the "2018-2019 EDR"), attached hereto as Exhibit B, neither the Federal Aviation Administration ("FAA") nor Massport has addressed the serious environmental and public health concerns about airplane noise and pollution that we and many other overflight communities[1] affected by air traffic to and from Logan raised in response to the 2017 ESPR, the 2018-2019 EDR, and prior ESPRs and EDRs during the past decade. At this time, Milton and other overflight communities need assistance from State officials,

[1] In its "Request for Comments on the Federal Aviation Administration's Review of the Civil Aviation Noise Policy" issued on May 1, 2023, the FAA defined "overflight communities" as "communities located under the flight paths of aircraft and vehicles that are distressed by aircraft noise and are located outside of the DNL 65 dB contour." *See* 88 Fed. Reg. 26,641 (May 1, 2023), footnote 28.

including the EOEEA and the Massachusetts Department of Public Health ("DPH"). We urge the EOEEA and the DPH to engage with Massport, the FAA, and the affected overflight communities to achieve meaningful solutions to the public health issues that the FAA's concentration of flight paths has created for overflight communities such as Milton.

The noise from Logan operations impacts citizens of the Commonwealth across municipal boundaries, but, just like climate change, no one community is empowered to find a solution on its own. In fact, municipalities that have sought solutions on their own have been criticized for acting at the expense of others. Milton and the entire Logan overflight area need our leaders at the State level, including the EOEEA, for oversight, empowerment, and solutions to this significant cross-boundary problem.

For the reasons detailed herein and in Exhibits A and B, we make the following requests of the Secretary and EOEEA:

a. Not to certify the 2022 ESPR, and to direct Massport to prepare a supplemental ESPR which fully and realistically addresses projected increases to Logan operations and airport throughput, and the resulting environmental impacts.
b. Direct Massport to demand that the FAA test and implement all of the recommendations in Block 1 and Block 2 of the recent MIT Study, and specifically those relating to Runways 4R and 27.
c. Work with the FAA, Massport, and Milton to develop and implement late-night aircraft overflight restrictions which are protective of Milton and its residents, including consideration of an 11:00 PM to 6:00 AM landing prohibition on Runways 4R and 4L.
d. Direct Massport and the Massport Community Advisory Committee ("MCAC") to promptly develop a system for the fair and equitable distribution of aircraft overflights that provides real relief to the highly impacted surrounding communities, especially those that are under multiple RNAVs (defined herein).
e. Direct Massport to collaborate with DPH and DEP to develop and conduct noise and air pollution studies in highly impacted surrounding communities, especially those that are under multiple RNAVs.
f. Direct Massport to consider off-airport noise and pollution impacts, including but not limited to the health impacts from increased and concentrated arrival and departure operations due to RNAVs, in all communities under any RNAV, in all future EDRs and ESPRs.
g. Direct Massport to include all of the points made above in the scope of the 2022 ESPR. This includes impacts to health from noise and pollution from: off-airport impacts of growth, cumulative impacts of RNAV overflights, increased nighttime operations, moving to updated noise measurements which are more protective of human health and which account for acute impacts more realistically than the DNL standard; and working directly with impacted communities to more fully understand and evaluate the human health effects from Logan operations.
h. Include the hours from midnight to 7:00 AM in the dwell and persistence calculations to provide a clearer indication of the noise burden being borne by communities subject to nighttime operations.
i. For future public health existing conditions reviews and future ESPRs and EDRs, direct Massport to include impacts to environmental justice ("EJ") populations that are located in overflight communities.

j. Direct Massport to consider, for future ESPRs and EDRs, the impacts of emerging advanced air mobility ("AAM") technology on communities overburdened by operations at Logan.

In addition to the above, we request a meeting with you and your staff to discuss in person the concerns that we have outlined here, as well as our specific requests for assistance. Our Town Administrator, Nicholas Milano, will follow up with your office to schedule a meeting. Please confirm your office's receipt of this comment letter.

2. Executive Summary

Like the two years that preceded it, 2022 was an anomaly due to the COVID-19 pandemic. As Massport noted in its May 31, 2024 letter to you, "[i]n 2022, Logan Airport continued to progress towards a recovery to pre-pandemic passengers and aircraft operations activity levels, but passenger activity still remained 15 percent less than 2019 levels and aircraft operations were 11 percent less than 2019." Section 1.1.1 of the 2022 ESPR further states that "[i]n 2020 and 2021, the pandemic caused a significant reduction in Airport activity." Because of the pandemic, data pertaining to operations at Boston Logan International Airport ("Logan") during the early years of this decade does not describe the true impacts that concentrated air traffic has had, pre-pandemic and post-pandemic, on overflight communities, including Milton.

Milton is overburdened by excessive aircraft noise and pollution from four (4) concentrated flight paths that bring airplanes arriving on Runways 4R and 4L and airplanes departing Runways 27 and 33L over our town. It is common for Milton to experience many consecutive days with several hundred airplanes flying over homes, schools, parks, playgrounds, and senior communities. Residents continue to complain to us about the adverse health and quality of life impacts from excessive airplane noise and pollution, including sleep disruption, the inability to work or to have a conversation in one's own home or yard, anxiety, and the inability to enjoy the outdoors. Milton residents continue to file a substantial number of noise complaints with Massport. A recent community health assessment conducted by our Health Department identified air traffic as one of the public health challenges facing Milton.

Like its predecessor ESPRs and EDRs, the 2022 ESPR does not address the many issues that we have raised in years past. The 2022 ESPR fails to address the impact of Logan's operations, and the cumulative effects of concentrated flight paths, on overflight communities. It relies on an outdated noise metric (DNL 65 dB) that cannot adequately measure the noise from several hundred airplanes a day on homes, schools, parks, playgrounds and senior communities. The 2022 ESPR fails to adequately address nighttime operations, dwell and persistence, and air pollution caused to overflight communities. Massport's forecast of a substantial increase in the number of future operations and passenger throughput at Logan requires immediate solutions to existing noise and air pollution problems. Although we are pleased that the 2022 ESPR analyzes Logan's operations on EJ populations in parts of Boston, such analysis does not go far enough because it ignores EJ populations living in overflight communities.

During the past dozen years, Milton engaged in extensive outreach to, and communication with, the FAA and Massport, but has received no relief from the noise and pollution burden caused by the FAA's implementation of performance-based navigation ("PBN"),

including area navigation ("RNAV"), at Logan. At the request of the FAA and Massport, the Massachusetts Institute of Technology ("MIT") studied many of Logan's flight paths and, in 2022, recommended three flyable alternatives for Runway 4R that, if used in rotation, would reduce some of the noise burden on Milton. However, Massport and the FAA have not even tested, let alone implemented, MIT's alternative paths. It is long past time for the Commonwealth to direct Massport and the FAA to test and implement these alternatives, and for the EOEEA and the DPH to acknowledge the serious public health and environmental consequences that PBN/RNAV has had on overflight communities like Milton. We demand that the Commonwealth work with Massport and the FAA act to solve the problems that the FAA created.

3. **Background**

For the past dozen years, Milton has engaged in extensive communication with Massport and the FAA with respect to the FAA's PBN systems, including RNAV. PBN placed four (4) RNAVs over Milton. These RNAVs bring arriving airplanes over Milton on their approach to Runways 4R and 4L. They also bring airplanes departing Runways 27 and 33L over Milton. The most significant noise and pollution impacts to Milton come from the arrivals to Runways 4R and 4L, overburdening Milton residents by all too often placing several hundred airplanes a day at low altitudes over the same homes, schools, parks, playgrounds, senior communities, and other densely populated areas.

As noted in Section 2.2.3.4 of the ESPR, in 2022, MIT concluded its study of PBN/RNAV systems that the FAA had implemented during the prior decade (the "MIT Study"), with the goal of identifying opportunities to reduce noise impacts from concentrated flight paths. Block 2 of the MIT Study recommended three (3) feasible alternative flight paths for arrivals to Runway 4R. These alternative 4R flight paths would move some, but not all, of the arrivals to 4R from Milton to neighboring communities that were, prior to PBN, overflown by such arrivals. The multiple paths for 4R would be used in rotation, so that no one community would be overburdened, as Milton currently is. Milton has consistently advocated for such flyable 4R alternatives to be further studied and implemented. However, the FAA and Massport have failed to take any action on the Block 2 recommendations for Runway 4R.

The 2022 ESPR notes, at pages A-21 and A-55, that, despite the FAA's initial determination that no Block 2 procedures would be recommended, two procedures for Runways 22L and 22R were subsequently modified and Massport has recommended them to the FAA for implementation. It is completely unacceptable that Massport has not recommended that the FAA test and implement Block 2 procedures for Runway 4R. We will continue to advocate that the three alternative flight paths deemed flyable by MIT be implemented. We seek your help in addressing the serious public health impacts that Logan's operations have caused to Milton by, among other things, advocating for Massport to recommend, and the FAA to test and implement, the Block 2 procedures for Runway 4R.

The Milton Health Department recently completed a two-year Community Health Assessment (Summer 2024) ("Milton Community Health Assessment"). It identified several overall health challenges affecting residents of our town, including concern about air traffic noise and air pollution. The Milton Community Health Assessment notes, in part, the following:

"Decades of scientific evidence show that noise may contribute to hearing loss, annoyance, sleep disruption, cardiovascular disease, metabolic disturbances, and exacerbation of anxiety and depression. It also has adverse impacts on communication, activities, learning, productivity, and quality of life. (American Public Health Assn, Policy Statement 202115, Oct. 26, 2021).

Noise and air pollution generated by tens of thousands of aircraft using the 4L/R flight paths over Milton each year is a significant public health concern expressed by many Milton residents in our qualitative interviews. Noise pollution arising from Boston Logan International air traffic in certain areas of Milton has also raised environmental health concerns among residents. Residents have voiced that these health issues may disproportionately affect specific segments of the community, while others remain relatively unaffected.

Besides noise, some residents have also expressed concern about trace metal soil contamination from fuels. One study, conducted by environmental health graduate students at Boston University found not soil contamination, but they recommended further study."

One of the top ten recommendations from the 410 respondents who took part in a Community Health Survey (which comprised one portion of the community health assessment process) was "less airplane traffic."

The findings of the Milton Community Health Assessment relating to air traffic impacts come as no surprise to us. Members of the Milton Select Board have been receiving complaints about airplane noise and pollution on a regular basis since the FAA implemented the RNAV for Runway 4R arrivals close to a decade and a half ago. The FAA's and Massport's inaction and failure to mitigate the impacts of PBN/RNAV on overflight communities has caused us and, we suspect, our colleagues on Select Boards in other towns, to spend considerable time and resources advocating for the public health interests of our constituents.[2] Overflight communities need much more help from State agencies, including the EOEEA and its MEPA Office, than we have received to date.

We implore you to take action to resolve the inequity and injustice that exists with respect to air traffic. Residents of all cities and towns in Greater Boston benefit from Logan; all should bear some of the noise and pollution burdens of Logan's operations. No community should experience hours and hours, let alone consecutive days, of constant airplane noise from several hundred airplanes, while neighboring communities experience little to no airplane noise. Justice demands a solution, and active engagement by EOEEA, the DPH, the Attorney General, and the Governor. A good starting point would be to

[2] Municipal leaders, including elected volunteers as well as salaried employees, confront many challenging issues on a daily basis: budgets with Proposition 2 ½ constraints, public safety, public works, and school issues, zoning, the creation of affordable housing, senior services, transportation challenges, and quality of life issues, to name a few. The FAA's implementation of PBN, with little or no planning for how PBN would affect communities subjected to excessive noise from concentrated RNAV flight paths, has created an exorbitant amount of work for municipal governments and has diverted precious time and resources from traditional municipal services.

demand that the FAA and Massport test and implement all of the recommendations in Block 1 and Block 2 of the MIT Study.

The following detailed comments are directed primarily to Chapter 7 of the 2022 ESPR, which addresses noise from air traffic operations at Logan. However, we begin by noting one new comment (on a new topic in the 2022 ESPR) and some of our prior comments on earlier ESPRs that Massport and the FAA still have not addressed.

4. New Comment

We applaud Massport's consideration, at the Secretary's direction, of the impact of Logan's operations on EJ populations, which are discussed in Chapter 2, entitled *Sustainability, Outreach and Environmental Justice*. However, the 2022 ESPR's EJ analysis is woefully inadequate because the designated geographic area ("DGA") that Massport studied is much too small. Massport ignored the adverse impact that PBN operations has had on EJ populations that live several miles away from Logan.

According to the 2022 ESPR, Massport's consideration of EJ populations is limited to those located within a one (1) mile or five (5) mile radius of Logan. *See* Section 2.3.4 and Figure 2-4. As requested by the Secretary, Massport conducted "a public health existing conditions review for communities surrounding Logan Airport, with a focus on EJ communities." *See* Section 2.4. That review was limited to communities and EJ populations within only one (1) mile of Logan. Section 2.5 acknowledges that "[t]he municipalities within the DGA included in the existing conditions review are Boston, Chelsea, Revere and Winthrop."

Milton has EJ populations that are overburdened by noise and pollution impacts caused by arrivals to Runways 4L and 4R and departures from Runways 27 and 33L. Our neighbors in Mattapan, Dorchester, and Hyde Park (all located within Boston, but not within one mile of Logan) are also adversely affected by some of these flight paths. We suspect that several other cities and towns on the North Shore and the South Shore that are affected by PBN/RNAV have EJ populations. They, too, have been ignored by Massport's public health existing conditions review.

Massport's claim, in Section 2.3, that it "has demonstrated a consistent commitment to engaging with nearby communities and enhancing the quality of life of Massport's neighbors" rings hollow. Perhaps it is true for communities that are adjacent to, or immediately surround, Logan. But, despite knowing, for a dozen or more years, that the FAA's implementation of PBN/RNAV has imposed new noise and pollution burdens on overflight communities, Massport has shown very little interest in mitigating the burden on overflight communities. We urge you to require Massport, in future ESPRs and EDRs, to cast a much wider net in reviewing impacts on EJ populations and overflight communities generally.

5. Unresolved Prior Comments

We reiterate, and update, many of the comments that we made in response to the 2017 ESPR and the 2018-2019 EDR:

A. Inadequate Scope of 2022 ESPR

Like its predecessors, the 2022 ESPR is focused on the environmental impact of operations at Logan, rather than around Logan. Failing to fully address off-airport impacts ignores the robust science that demonstrates that airport operations can impact communities as far as 10 miles beyond the airport location, particularly where those communities are overflown by multiple RNAVs and the aircraft traffic is concentrated and persistent.

One of the many significant concerns is increased noise and annoyance due to the early deployment of landing gear for arrival into Logan. Lowered landing gear makes up a significant amount of the noise created by arriving planes. Milton has provided observer data that demonstrates that it is now commonplace for pilots to deploy an aircraft's landing gear over Milton, earlier than necessary (prior to the waypoint), which makes the noise burden on Milton and other overflight communities even worse.

B. Failure to Consider Cumulative Effects

There is no analysis of the cumulative impacts that multiple RNAVs have on some overflight communities. Milton is affected by four (4) RNAVs for Runways 4R, 4L, 27 and 33L. Looking at the impacts of each RNAV in isolation does not provide an actual assessment of on-the-ground, real-life impacts. We incorporate herein by reference the comments we provided in our 2021 comment letter on the 2018-2019 EDR.

C. Outdated, Inadequate Noise Metric

We reiterate our prior comment that the FAA's civil aviation noise policy (the "Noise Policy"), which relies on DNL 65 dB as its sole noise metric, is outdated and wholly inappropriate to measure noise in the PBN/RNAV context. As you may know, since 2023, the FAA has been engaged in a review of its Noise Policy. Last year, Milton joined thousands of other commenters from across the country in providing comments and recommendations on the Noise Policy. A copy of our September 28, 2023 detailed comment letter on the Noise Policy is attached hereto as Exhibit C.

Section 7 of the 2022 ESPR states the following:

> "Noise levels are calculated using the Day Night Average Sound Level (DNL) metric and presented as a series of contours of equal sound levels that are measured in decibels (dB). This *2022 Environmental Status and Planning Report* (ESPR) presents annual noise contours in 5 dB intervals between 60-75 dB, and also calculates the population within those areas. FAA currently considers DNL 65 "A"-weighted decibel (dBA) as 'the threshold of significant noise exposure' and therefore much of the noise discussion in this chapter focuses on the DNL 65 contour and populations within that contour. The FAA noise model acknowledges that nighttime noise can be more impactful than daytime noise; to adjust for quieter nighttime background noise, the model multiplies the noise of each individual nighttime operation (between 10 PM and 6 AM) by a factor of ten."

The DNL 65 dB standard must be discontinued for overflight communities such as Milton, which experience noise and pollution from several hundred aircraft in a given day. The logarithmic nature of the DNL standard, which has been widely criticized, combined with the fact that this calculation is most often calculated on an annual basis masks the acute impacts that several hundred aircraft flying over a home has on the occupants. It also masks the acute impacts felt in a community when it is overflown for hours on end, with little break in the incoming aircraft.

Massport has the ability to calculate DNL on a much more frequent basis, and is supposed to be calculating this figure monthly but chooses not to do so. Calculating DNL across shorter time periods (e.g., monthly, weekly), would provide a more accurate indication of the suffering that Milton residents are enduring as a result of concentrated flightpaths and long hours of overuse, and would compel Massport to act to reduce airplane noise in Milton and other communities.

D. Lack of Collaboration and Meaningful Engagement by Massport and FAA

We continue to urge real and substantive collaboration between Massport, the Secretary, the FAA, and the communities impacted by Logan overflights. Multiple communities surrounding Logan (not just Milton) take the brunt of the impact of the operations of Logan, and the situation has worsened substantially in the years since the FAA implemented PBN/RNAV. These communities should have direct and regular access to Massport and the Secretary, and both agencies should be willing to work on real and meaningful solutions to address the problems from airport operations – especially noise and pollution – occurring in those communities. While we understand that some of that work must be done via the MCAC, the large size and the organization of the MCAC has the unintentional effects of diluting the voices of the most affected communities and creating a zero-sum game.

E. Increased Airport Operations and Impacts on Surrounding Communities

It is important that Massport's forecasting of the number of airline operations and passenger throughput at Logan in its ESPRs be correct, because that forecast becomes the basis for planning and mitigation of the impacts of Logan operations for the next five years (at least). However, as we noted in our 2019 comment letter on the 2017 ESPR, Massport has consistently underestimated the increased number of airline operations and passenger throughput at Logan.

For example, Massport's forecasting of growth as set forth in its ESPR for 2011 was off by as much as 300%. According to that document, Logan throughput would grow by approximately 1.5% per year, and Logan would handle 38.9 million passengers by 2030. Instead, the 2017 ESPR reported that Logan surpassed 38.9 million passengers in 2017, 13 years ahead of forecasts. Passenger counts (and increased environmental impact from those passengers on the airport and off of the airport, including in the surrounding communities overflown by airport operations) increased by 12 million passengers, to 40.9 million in 2018.

Now, despite the pandemic-related decrease in operations at Logan from 2020 to 2022, the 2022 ESPR states that the 2017 ESPR's long-range (10 to 15 years) planning forecast

underestimated the number of passengers and operations significantly. Section 3.5.7 of the 2022 ESPR states, in relevant part:

> "The current *2022 ESPR* forecast of 53.5 million passengers is higher by about 3.4 million, or 7.0 percent, than the previous *2017 ESPR* forecast of 50.1 million passengers. The current *2022 ESPR* forecast of 495,000 aircraft operations is higher by about 8,600, or 2.0 percent, than the previous *2017 ESPR* forecast of 486,400 aircraft operations. The *2022 ESPR* planning forecast has an average of 108 passengers per aircraft operation compared to 103 passengers per aircraft operation in the *2017 ESPR* forecast."

If Massport's new forecast is correct, then the number of passengers traveling through Logan will increase from 38.9 million in 2017 to 53.5 million over the 10 to 15 year period following 2022 (*i.e.*, 2032 to 2037). Such a substantial increase in passengers and operations will exacerbate the noise and pollution over communities such as Milton that are already overburdened by airplane noise. Yet Massport provides no analysis or recognition that these increased operations come with a significant cost to overflight communities.

Additionally, we found no reference to, or discussion of, the emerging technology known as AAM in the 2022 ESPR. On May 17, 2023, the United States Department of Transportation ("DOT") published a "Request for Information on Advanced Air Mobility" that sought public input to help inform DOT's development of a national strategy for AAM. DOT defined AAM as "an emerging field in which novel aircraft currently in design and testing could provide new levels of accessibility, convenience, and connectivity for people and cargo – and thus transform our nation's transportation system to provide enhanced mobility for the traveling and shipping public."[3] AAM is expected to include electric-powered or hybrid aircraft that can takeoff and land vertically. Obviously, communities that are already overburdened by traditional aircraft operations at Logan have reason to be concerned about the additional noise impacts that AAM will have on them. Future ESPRs and EDRs must take into account AAM as it moves from the design stage to the testing and implementation stages.

While Logan plays a role in the economic development of New England, that development cannot come at the price of the right of citizens to peacefully co-exist within their homes. There must be a better balance between the economic success of the region, on the one hand, and the duty of Massport and the airlines to protect the neighbors and communities underneath the publicly owned airspace through which they travel, on the other hand. EOEEA, DPH, the Attorney General, and the Governor must lead the mitigation effort at the State level.

Given Massport's persistent understatement of the growth of its Logan operations, we believe the Secretary should not accept the 2022 ESPR as an accurate baseline planning tool without further scrutiny, and should require Massport to justify and explain why its ESPR projections consistently fall short of foreseeable growth rates.

F. Other Comments

[3] *See* 88 Fed. Reg. 31,593 (May 17, 2023).

1. Noise Complaints

Table 7-17 shows a substantial decrease in the number of complaints and the number of callers from Milton and many other communities from 2019 to 2022. That is not surprising, given the significant decrease in air travel during the COVID-19 pandemic. The pandemic years were an anomaly. The trend in recent years is far more significant. We reiterate our 2019 comment about noise complaints documents in Massport's 2017 ESPR:

> "Table 6-22 demonstrates that no single community made as many complaints on the Noise Complaint Line as Milton, although the numbers for other communities are catching up. Overall, and in Milton, both the number of complaints and the number of callers has increased. In 2016 Massport received 21,796 complaints from 466 callers. Those numbers increased to 23,940 complaints from 486 individual callers in 2017. For reference, the 2014 EDR reported 2,669 complaints and 4,991 were reported in the 2015 EDR. That represents almost a 900% increase in the number of complaints filed. Overall, Massport reports an 89% increase in the number of individual complainers on the noise complaint line, from 2016 to 2017 in all 15 reported overflown communities. Complaints on the Massport complaint line from Milton have continued to increase since 2012, coinciding with and increasing as the use of performance-based navigation at Logan has been implemented."

Like the 2017 ESPR, the 2022 ESPR does not discuss the importance of noise annoyance as a factor of environmental impact and harm. Noise annoyance in the Logan overflight communities – which includes lack of sleep, disrupted and interrupted sleep, interrupted conversation, and impacts on use of outside spaces such as decks and yards, playgrounds, parks, and civic spaces – is growing. This noise annoyance is not simple NIMBYism. It is a public health issue, as further discussed below. These are real impacts, suffered by real people, who live in nearby communities. It is outrageous that Massport virtually ignores these complaints in the 2022 ESPR, and still has no plan in place to address impacts on these citizens. The closest analogy is climate change, which impacts the day-to-day lives of many citizens. Further, like climate change, the noise from Logan operations impacts citizens across town boundaries, yet no one community is empowered to find a solution. Instead, we must turn to our leaders at the State level, including the EOEEA, for oversight, empowerment, and solutions.

2. Nighttime Operations

Nighttime operations at Logan are defined as flights between 10:00 P.M. and 7:00 A.M. Massport notes that, in 2022, Logan had approximately 137 commercial nighttime operations per night. That represents a 27% decrease from 2019, in which there were 186 commercial nighttime operations per night. *See* Table 7-4. That decrease is irrelevant, because it relates to the slow recovery of air travel from the COVID-19 pandemic.

Table 7-4 shows an upward trend in commercial nighttime operations between 1990 and 2019. Total commercial nighttime operations increased by more than 141% from 1990 to

2019. Half of that increase occurred during the nine (9) years before 2019. From 2010 to 2019, the increase was almost 73%.

Although the noise complaint data is not broken down by time of day, it follows that some portion of the complaints in Milton and other communities is driven by increased nighttime operations. Data continues to be developed which indicates airplane noise in overflown communities disrupts sleep patterns, which has been shown to result in adverse human health impacts. Many Milton residents continue to complain about noise from airplanes flying over their homes both after midnight and before 5:00 A.M.

Information from Milton residents indicates that the noise from airplanes in Milton is clearly heard above background noise in both commercial and residential areas. As elected officials, we hear frequently from Milton residents who suffer from interrupted sleep, anxiety and a reduced quality of life because of the noise pollution caused by very frequent – and some days continuous – flights over Milton at low altitudes. We cannot overstate the seriousness of the health problems that these RNAVs cumulatively pose for Milton residents, and the adverse cumulative environmental impact that the RNAVs and the low flying planes have on our entire community. Noise from airplane overflights can also negatively impact property values.

We request that the Secretary work with the FAA, Massport, and Milton to implement late night aircraft restrictions, similar to those set forth in 740 CMR 24.04, which are protective of Milton and its residents, as well as EJ populations in and around Milton. In particular, it is important to discuss restrictions on RNAV usage and routes that overfly residential neighborhoods, including spreading the routes further so that the nighttime noise is less concentrated in residential neighborhoods, or moving routes over the ocean during certain periods of time. Specifically, as there are already nighttime restrictions on arrivals to Runway 4L, we request the same restrictions (no arrivals between 11:00 PM and 6:00 AM) for Runway 4R. *See* Massachusetts Port Authority Noise Rules and Regulations I.1(b), Summary of Runway Use Restrictions, Boston Logan International Airport (May 2, 2016) (also referenced in FAA BOS ATCT Noise Abatement Order 7040.1H).

3. Air Pollution and Public Health

The 2022 ESPR only discusses air pollution from airport operations in the context of the actual operations of Logan airport, on Logan property. We repeat our comments to the 2014, 2015 and 2018-2019 EDRs and the 2017 ESPR that this perspective is overly and conveniently narrow. A study of Los Angeles International Airport ("LAX") (Hudda, *et al.*, May 2014) found ultrafine particle ("UFP") counts as far as ten miles from heavily used arrival runways at LAX. UFPs are believed to have negative effects on respiratory and cardiovascular health in humans. Massport does not dispute that UFP pollution is an issue at Logan[4]. As we were in 2019, we are disappointed that the 2022 ESPR did not consider the developed science on this important environmental impact to the citizens living in the Logan overflight area. The health of our residents, employees, and visitors depends upon policy and operational procedures that takes this data into account.

[4] https://www.wgbh.org/news/local-news/2019/09/24/air-pollution-from-logan-airport-harms-surrounding-communities-research-shows

We request that the Secretary direct Massport, in conjunction with DPH and the Department of Environmental Protection ("DEP"), to conduct noise and air pollution studies in Milton and other overflight communities that receive a substantial number of low-flying arrival aircraft. This work would be consistent with the evolving science on this point, and protective of the residents in these communities. We further request that (a) the scope of future ESPRs and EDRs be expanded to consider the health impacts from increased and concentrated arrival and departure operations due to RNAVs, and (b) pollution data be measured for every community under any of the many Logan RNAVs.[5]

4. Dwell and Persistence

Dwell and persistence relate to the length of time that noise impacts occur. As defined by Massport, dwell is a daily measure while persistence is calculated over a period of 3 days. Both measures define exceedance as being more than a set number of hours of operation between 7:00 AM and midnight (7 hours for dwell, 23 hours for persistence), meaning that the nighttime operations that Milton is often subjected to are not counted towards this measure. Also, in contrast to the annual Preferential Runway Advisory System ("PRAS") goals,[6] Massport uses the number of hours the runway is in operation, not the actual number of operations that take place on that runway, creating a misleading and inaccurate picture of what is happening on the ground.

The omission of night-time operations from the dwell and persistence calculations harms communities like Milton because it discounts the negative impact that constant operations have on daily life by ignoring the existence of sleep interruption created by these nighttime flights. This forecasted rise in air traffic means that more flights will be overhead when residents are trying to sleep at a time when Massport regularly fails to optimize over-water operations during nighttime hours.

6. Conclusion

Thank you for your attention to and consideration of our comments on the 2022 ESPR. The MIT Study and its recommendations with respect to Runways 4R and 27 demonstrate that there are solutions available to remedy and mitigate the ongoing impact of Logan operations on the residents of Milton and other overflight communities. We request that the Secretary work with Massport, Milton, the MCAC, and other affected communities to help remedy the multiple impacts discussed above.

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[5] In our comment letter on the 2017 ESPR, we asked the EOEEA to ensure that no new RNAV overflight paths be put into use until such study is complete and all parties agree that no additional detrimental effects will be experienced by residents in communities bearing the brunt of low-flying airplane overflight. Notwithstanding this, and our opposition to the FAA's 4L RNAV, the FAA implemented the 4L RNAV over Milton in 2022.

[6] As noted above, although PRAS was abandoned many years ago, Massport continues to use PRAS for public reporting purposes. *See* 2022 ESPR, page 7-18.

As noted above, we seek a meeting with you and your staff to personally discuss the concerns we have outlined here, as well as our specific requests for assistance. Our Town Administrator, Nicholas Milano, will follow up with your office to schedule a meeting.

Sincerely,

Select Board of the Town of Milton

Richard G. Wells, Jr., Chair

Roxanne F. Musto, Vice Chair

John C. Keohane, Secretary

Erin G. Bradley, Member

Benjamin D. Zoll, Member

cc: U.S. Representative Stephen F. Lynch
U.S. Representative Ayanna S. Pressley
U.S. Senator Elizabeth A. Warren
U.S. Senator Edward J. Markey
State Senator Walter F. Timilty Jr.
State Representative William J. Driscoll Jr.
State Representative Brandy Fluker Oakley
Milton Board of Health
Milton Airplane Noise Advisory Committee
Town Administrator Nicholas Milano
Assistant Town Administrator Nicholas Connors
Town Counsel Karis North

Exhibit A

Milton's November 14, 2019 comment letter re: 2017 ESPR

See attached.

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MEMBER
RICHARD G. WELLS, JR.
MEMBER

November 14, 2019

The Honorable Kathleen A. Theoharides, Secretary
Executive Office of Energy and Environmental Affairs
Attn: Massachusetts Environmental Policy Act ("MEPA") Office
Anne Canaday, EEA No. 3247
100 Cambridge Street, Suite 900
Boston, MA 02114

Re: Comments of the Town of Milton on the Boston Logan International Airport 2017 Environmental Status and Planning Report (2017 ESPR)

Dear Secretary Theoharides,

The Select Board of the Town of Milton ("Milton") is pleased to provide the following comments in response to the Boston Logan International Airport 2017 Environmental Status and Planning Report ("2017 ESPR"):

1. **Scope of the 2017 ESPR**

In Milton's January 2017 comments to Massport's 2015 Environmental Data Report ("EDR"), we noted several concerns we sought to be addressed in the 2016 ESPR (deferred to 2017):

A. The off-airport impacts of the growth of Boston Logan International Airport ("Logan"), including increased throughput and increased aircraft operations. We were specifically concerned about how the increased demand for airport services impacts the surrounding communities, including increasing the volume and concentration of overflights, and increasing the amount of nighttime operations and nighttime overflights. We noted that each of these impacts must be studied in order to have a true assessment of the environmental impacts resulting from operations at Logan.

We appreciate that the 2017 ESPR does address some off-airport impacts of Logan operations. However, we feel the bulk of the report is still focused on the environmental impact of operations at Logan, rather than around Logan. Failing to

fully address off-airport impacts ignores the robust science that demonstrates that airport operations can impact communities as far as 10 miles beyond the airport location, particularly where those communities are overflown by multiple RNAVs and the aircraft traffic is concentrated and persistent.

B. We were and remain concerned that there is no analysis of the cumulative impacts from increasing numbers of RNAVs flown over surrounding communities. As discussed in numerous other comment letters, there are three RNAVs that overfly Milton, with two others proposed. Looking at these impacts in isolation does not provide an actual assessment of on-the-ground impacts – some of which are reflected in the increasing number of noise complaints filed in these communities.

C. We urged, and we repeat this request, that Massport and the Secretary must move to a more updated method for noise assessment (e.g., N70, which focuses on the number of noise events greater than 70 dB(A)[1]), and either discontinue using the DNL standard, or reduce the threshold at which noise impacts are considered significant, as well as increase the frequency with which it is calculated. The logarithmic nature of the DNL standard, which has been widely criticized, combined with the fact that this calculation is most often calculated on an annual basis "masks" the acute impacts a succession of aircraft flying over a home has on the sleeping residents within, and also masks the acute impacts felt in a community when it is overflown for hours on end, with little break in the incoming aircraft. Massport has the ability to calculate DNL on a much more frequent basis, and is supposed to be calculating this figure monthly but chooses not to do so. Calculating DNL across shorter time periods (e.g., monthly, weekly), would provide a more accurate indication of the suffering that Milton residents are enduring as a result of concentrated flightpaths and long hours of overuse, and would compel Massport to act to reduce airplane noise in Milton and other communities.

D. We continue to urge real and substantive collaboration between Massport, the Secretary, and the communities impacted by Logan overflights. Multiple communities surrounding Logan (not just Milton) take the brunt of the impact of the operations of Logan, and the situation has worsened substantially since the FAA implemented NextGen. These communities should have direct and regular access to Massport and the Secretary, and both agencies should be willing to work on real and meaningful solutions to address the problems from airport operations – especially noise and pollution -- occurring in those communities. While we understand some of that work must be done via the Massport Community Advisory Committee ("MCAC"), the large size and the organization of the MCAC has the unintentional effect of diluting the voices of the most affected communities. With respect to the MIT study, three years after it began, Milton's requests for specific analysis and relief through that study have not yet been acted upon.

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[1]https://www.infrastructure.gov.au/aviation/environmental/airport_safeguarding/nasf/files/1.3_Guideline_A_attachment1.pdf

2. Increased Airport Operations and Impacts on Surrounding Communities

Massport consistently undersells the increased number of airline operations and passenger throughput at Logan, by comparing aircraft operation numbers to pre-2000 data. This comparison is no longer valid, as airlines have significantly changed their modes of operation in the intervening 15 years, by relying on progressively larger airplanes, with progressively larger, more powerful, and louder jet engines. Further, the implementation of the FAA's RNAV systems has also changed how aircraft arrive and depart over surrounding communities.

It is important that Massport's forecasting through its ESPR be correct, as that forecast becomes the basis for planning and mitigation of the impacts of Logan operations for the next five years (at least). Massport's forecasting of growth as set forth in the 2011 ESPR was off by as much as 300%. According to that document, Logan throughput would grow by approximately 1.5% per year, and Logan would handle 38.9 million passengers by 2030. Instead, the 2017 ESPR reports that Logan surpassed 38.9 million passengers in 2017, 13 years ahead of forecasts. Passenger counts (and increased environmental impact from those passengers on the airport and off of the airport, including in the surrounding communities overflown by airport operations) increased by 12 million passengers, to 40.9 million in 2018.

This is hardly surprising. In our 2015 EDR comments we indicated that we believed the growth in airport passenger traffic and airport operations would continue to increase. As set forth in the text above, the 2017 ESPR proves our beliefs to be correct. What is missing from the analysis, however, is recognition that these operations come with a cost -- the impacts to Milton and other communities continue to increase. While we understand and support Logan's role in the economic development of New England, we believe that development cannot come at the price of the right of citizens to peacefully co-exist within their homes. There needs to be a better balance between the economic success of the region and the duty of Massport and the airline community to protect the neighbors and communities underneath the publicly owned airspace through which they travel.

Such rapid growth is only going to continue, but once again, Massport under-projects growth. The 2017 ESPR growth forecasts predict 50 million passengers within the next 10-15 years. However, with the present 5% annual growth,[2] increasing operations of JetBlue and Delta which

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[2] According to the 2017 ESPR (p. 2-3):

Logan Airport is an important origin and destination (O&D) airport both nationally and internationally and is one of the fastest growing major U.S. airports in terms of number of passengers over the past five years. From 2016 to 2017, U.S. passenger traffic grew by 3.5 percent, whereas Logan Airport experienced a passenger growth of 5.9 percent. In 2017, passenger activity levels reached an all-time high of 38.4 million passengers and aircraft operations totaled 401,371, in direct response to the strong national and regional economies. In 2018, passenger activity levels reached 40.9 million and aircraft operations totaled 424,024. Despite the increase in passengers, aircraft operations at Logan Airport for both 2017 and 2018 remained well below the 487,996 operations in 2000 and the historic peak of 507,449 operations reached in 1998 (Figure 2-1 and Figure 2-2). This has been the result of a steady increase in aircraft size at the Airport and improving aircraft load factors (passengers/available seats). Note also, as mentioned above, that JetBlue and Delta are building hubs at Logan.

are building competing hubs at Logan,[3] and the improvements to Terminal E bringing in even more international flights, 50 million passengers will be reached by 2022, or 8-12 years ahead of the 2017 ESPR forecasts. Given Massport's persistent understatement of the growth of its Logan operations, we believe the Secretary should not accept the 2017 ESPR as an accurate baseline planning tool without further scrutiny, and should require Massport to justify and explain why its ESPR projections consistently fall short of foreseeable growth rates.

3. Increased Noise Complaints Reported

Table 6-22 demonstrates that no single community made as many complaints on the Noise Complaint Line as Milton, although the numbers for other communities are catching up. Overall, and in Milton, both the number of complaints and the number of callers has increased. In 2016 Massport received 21,796 complaints from 466 callers. Those numbers increased to 23,940 complaints from 486 individual callers in 2017. For reference, the 2014 EDR reported 2,669 complaints and 4,991were reported in the 2015 EDR. That represents almost a 900% increase in the number of complaints filed. Overall, Massport reports an 89% increase in the number of individual complainers on the noise complaint line, from 2016 to 2017 in all 15 reported overflown communities. Complaints on the Massport complaint line from Milton have continued to increase since 2012, coinciding with and increasing as the use of performance-based navigation at Logan has been implemented.

The 2017 ESPR does not discuss the importance of noise annoyance as a factor of environmental impact and harm. Noise annoyance in the Logan overflight communities -- which includes lack of sleep, disrupted and interrupted sleep, interrupted conversation, and impacts on use of outside spaces such as decks and yards, playgrounds, and civic spaces – is growing. This noise annoyance is not simple NIMBYism, it is a public health issue, as further discussed below. These are real impacts, suffered by real people, who live in nearby communities. It is outrageous that Massport virtually ignores these complaints in the 2017 ESPR, and still has no plan in place to address impacts on these citizens. The closest analogy is climate change, which impacts the day-to-day lives of many citizens. Further, like climate change, the noise from Logan operations impacts citizens across boundaries, yet no one community is empowered to find a solution. Instead, we must turn to our leaders at the state level, including the EOEEA for oversight, empowerment, and solutions.

4. Increased Nighttime Operations

Nighttime operations at Logan – defined as from 10:00 P.M. to 7:00 A.M. – continue to increase. Nighttime operations increased by 15% from 2016 to 2017 (Table 6-4). Total nighttime operations have increased by almost 100% since 1990.

Although the noise complaint data is not broken down by time of day (either that the complaint was filed, or that the complaint concerned), it follows that some portion of the increase in complaints in Milton and other communities is driven by increased nighttime operations. Data

[3] https://www.forbes.com/sites/tedreed/2019/07/23/jetblue-to-delta-in-boston-come-and-get-us/#556512660cc8

continues to be developed which indicates airplane noise in overflown communities disrupts sleep patterns, which has been shown to result in adverse human health impacts.

Information from Milton residents indicate that the noise from airplanes in Milton is clearly heard above background noise in both commercial and residential areas. As elected officials, we hear frequently from Milton residents who suffer from interrupted sleep, anxiety and a reduced quality of life because of the noise pollution caused by very frequent – and some days continuous – flights over Milton at low altitudes. Indeed, this is one of the two most common requests for relief we receive from residents. We cannot overstate the seriousness of the health problems that these RNAVs cumulatively pose for Milton residents, and the adverse cumulative environmental impact that the RNAVs and the low flying planes have on our entire community. The noise from airplane overflights can also negatively impact property values. Fewer buyers are willing to purchase a home in an area with known noise impacts, and prices can be suppressed. Meanwhile, recent buyers have been vocal on social media that they would not have purchased a home in Milton had they been aware of the amount of airplane noise in the town.

We request that the Secretary work with the FAA, Massport, and Milton to implement late night aircraft restrictions, similar to those set forth in 740 CMR 24.04, which are protective of Milton and its residents. In particular, it is important to discuss restrictions on RNAV usage and routes that overfly residential neighborhoods, including spreading the routes further so that the nighttime noise is less concentrated in residential neighborhoods, or moving routes over the ocean during certain periods of time. Specifically, as there are already nighttime restrictions on arrivals to runway 4L, we request the same restrictions (no arrivals between 11:00 PM and 6:00 AM) for runway 4R. See Massachusetts Port Authority Noise Rules and Regulations I.1(b), Summary of Runway Use Restrictions, Boston Logan International Airport (May 2, 2016) (also referenced in FAA BOS ATCT Noise Abatement Order 7040.1H). In addition, early-morning departures from runway 27 also routinely overfly Milton and the other communities under the runway 27 RNAV.

5. Air Pollution and Public Health.

The 2017 ESPR only discusses air pollution from airport operations in the context of the actual operations of Logan airport, on Logan property. We repeat our comments to the 2014 and 2015 EDRs that this perspective is overly and conveniently narrow. Recent studies at LAX (Hudda, et al., May 2014) found ultrafine particle (UFP) counts as far as ten miles from heavily used arrival runways. Although study of the negative effects of UFPs are ongoing, UFPs are believed to have negative effects on respiratory and cardiovascular health in humans, and Massport does not dispute that UFP pollution is an issue at Logan[4]. We are disappointed that the 2017 ESPR did not consider the developed science on this important environmental impact to the citizens living in the Logan overflight area. The health of our residents, employees, and visitors depends upon policy and operational procedures that takes this data into account.

We request that the Secretary direct Massport, in conjunction with the Department of Public Health ("DPH") and the Department of Environmental Protection ("DEP"), to conduct noise and

[4] https://www.wgbh.org/news/local-news/2019/09/24/air-pollution-from-logan-airport-harms-surrounding-communities-research-shows

air pollution studies in communities like Milton which receive a substantial number of low-flying arrival aircraft. This work would be consistent with the evolving science on this point, and protective of the residents in these communities. We further request that the scope of the future EDRs be expanded to consider the health impacts from increased and concentrated arrival and departure operations due to RNAVs, and that pollution data be measured for every community under any of the many Logan RNAVs, and that no new RNAV overflight paths be put into use until such study is complete and all parties agree that no additional detrimental effects will be experienced by residents in communities bearing the brunt of low-flying airplane overflight.

6. Dwell and Persistence

Dwell and persistence relate to the length of time that noise impacts occur. As defined by Massport, dwell is a daily measure while persistence is calculated over a period of 3 days. Both measures define exceedance as being more than a set number of hours of operation between 7:00 AM and midnight (7 hours for dwell, 23 hours for persistence), meaning that the nighttime operations that Milton is often subjected to are not counted towards this measure. Also, in contrast to the annual Preferential Runway Advisory System ("PRAS") goals, Massport uses the number of hours the runway is in operation, not the actual number of operations that take place on that runway, creating a misleading and inaccurate picture of what is happening on the ground.

For example, Figure 6-17, creates the false impression that dwell and persistence exceedance is a relatively small issue for people living under the 4s even though the 4s typically see the plurality of operations annually.[5] The reason for this is two-fold:

1. As defined, the period from midnight to 7:00 AM is not counted in these figures. Therefore, Milton could – and does – see constant air traffic through the night but not have this traffic count towards dwell and persistence exceedance counts.
2. Some runways are given "credit" towards dwell and persistence exceedance counts because they are available for use but are not experiencing any flight operations.[6]

This omission of night-time operations from the dwell and persistence calculations harms communities like Milton because it discounts the negative impact that constant operations have on daily life by ignoring the existence of sleep interruption created by these nighttime flights. This rise in air traffic means that more flights will be overhead when residents are trying to sleep at a time when a) Massport's calculations are demonstrably understated (in Table 6-20, Massport predicts that nighttime flights will only reach 167.75 per day for the Future Planning Horizon –

[5] 2017 was an anomalous year as Runway 4R/22L was closed from May 15 - June 23, 2017 and had reduced availability through September 15th for 4R arrivals because of construction at Logan. In comparison, arrivals to 4R and 4L totaled (57,899 to 4R and 7,274 to 4L) in 2018, or 35.3% of all arrivals for the year. Also – please note that Table 6-6 erroneously notes this anomalous decline as an improvement in effective usage for 4R/L under PRAS.

[6] Logan will often report that 15R is available for arrivals when 4R is in use, giving 15R "credit" towards dwell and persistence calculations. However, arrivals on 15R are rarely if ever observed at times when 4R is in use, as demonstrated by the disparity in arrival numbers. In the anomalous 2017, 4R saw 21.6% of arrivals compared to 15R's 4.4%. The 2018 figures are more indicative of a typical year as 4R saw 31.4% of arrivals and 15R saw but 0.4%.

an increase of 0.15% despite double-digit growth in the years prior), and b) Massport regularly fails to optimize over-water operations during nighttime hours.

7. Conclusion and Request for Assistance.

Thank you for your attention to and consideration of our comments on the 2017 ESPR. We believe that there can be solutions available to remedy and mitigate the ongoing impact of Logan operations on the residents of Milton. We request that the Secretary work with Massport, Milton, the MCAC, and other affected communities to help remedy the multiple impacts discussed above. Specifically, the requests made are as follows:

a. Not to certify the 2017 ESPR and to direct Massport to prepare a Supplemental ESPR which fully and realistically addresses projected increases to Logan operations and airport throughput, and the resulting environmental impacts;
b. Work with the FAA, Massport, and Milton to develop and implement late-night aircraft overflight restrictions which are protective of Milton and its residents, including consideration of an 11:00 PM to 6:00 AM landing prohibition on runway 4R;
c. Direct Massport and the MCAC to promptly develop a system for the fair and equitable distribution of aircraft overflights that provides real relief to the highly impacted surrounding communities, especially those that are under multiple RNAVs;
d. Direct Massport to collaborate with DPH and DEP to develop and conduct noise and air pollution studies in highly impacted surrounding communities, especially those that are under multiple RNAVs;
e. Direct Massport to consider off-airport noise and pollution impacts, including but not limited to the health impacts from increased and concentrated arrival and departure operations due to RNAVs, in all communities under any RNAV, in all future EDRs
f. Direct Massport to include all of the points made above in the scope of the 2017 ESPR. This includes impacts to health from noise and pollution from: off-airport impacts of growth, cumulative impacts of RNAV overflights, increased nighttime operations, moving to updated noise measurements which are more protective of human health and which account for acute impacts more realistically than the DNL standard; and working directly with impacted communities to more fully understand and evaluate the human health effects from Logan operations.
g. Include the hours from midnight to 7:00 AM in the dwell and persistence calculations to provide a clearer indication of the noise burden being borne by communities subject to nighttime operations.

We would appreciate a time to meet with you and your staff to personally discuss the concerns we have outlined here, as well as our specific requests for assistance.

Sincerely,

Select Board of the Town of Milton

Michael F. Zullas, Chair

Melinda A. Collins, Vice Chair

Anthony J. Farrington

Kathleen M. Conlon

Richard G. Wells, Jr.

cc: Representative Stephen F. Lynch
Representative Ayanna Pressley
U.S. Senator Elizabeth A. Warren
U.S. Senator Edward J. Markey
State Senator Walter F. Timilty
State Representative William Driscoll
State Representative Daniel Cullinane
Milton Board of Health
Milton Airplane Noise Advisory Committee Chair Andrew Schmidt
MCAC Representative Thomas Dougherty
Town Counsel Karis North

Exhibit B

Milton's March 12, 2021 comment letter re: 2018-2019 EDR

See attached.

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RICHARD G. WELLS, JR.
MEMBER
MICHAEL F. ZULLAS
MEMBER

March 12, 2021

The Honorable Kathleen A. Theoharides, Secretary
Executive Office of Energy and Environmental Affairs
Attn: Massachusetts Environmental Policy Act ("MEPA") Office
Anne Canaday, EEA No. 3247
100 Cambridge Street, Suite 900
Boston, MA 02114

via EMAIL to env.internet@mass.gov and anne.canaday@mass.gov

Re: Comments of the Town of Milton on the Boston Logan International Airport 2018-2019 Environmental Data Report (2018-2019 EDR)

Dear Secretary Theoharides,

The Select Board of the Town of Milton ("Milton") is pleased to provide the following comments in response to the Boston Logan International Airport 2018-2019 Environmental Data Report (2018-2019 EDR).

We understand that this combined 2018-2019 EDR was prepared during the ongoing COVID-19 pandemic and includes updates through the fall of 2020. We note that the dramatic reduction in passengers and flight operations has provided some respite to the ongoing airplane noise and pollution issues experienced in Milton, but still no real solutions have been proposed to successfully insulate the on-the-ground impacts from increasing airplane overflights on the Logan Airport surrounding communities. We urge Massport and the FAA to use this period of respite to continue to consider the impacts noise and pollution has on your neighbors and customers.

1. Scope of the 2018-2019 EDR

Milton summarizes and repeats its comments on the 2017 ESPR concerning scope of Massport's review of environmental impacts, as we are specifically concerned about how the increased demand for airport services impacts the surrounding communities, including increasing the

volume and concentration of overflights, and increasing the amount of nighttime operations and nighttime overflights.

As is typical with these EDRs and the ESPR, the focus remains on environmental impact of operations at Logan, rather than around Logan. Failing to fully address off-airport impacts ignores the robust science that demonstrates that airport operations can impact communities as far as 10 miles beyond the airport location, particularly where those communities are overflown by multiple RNAVs and the aircraft traffic is concentrated and persistent.

2. Cumulative Impacts Analysis and PRAS

We repeat the need for an analysis of the cumulative impacts from increasing numbers of RNAVs flown over surrounding communities. As discussed in numerous other comment letters, there are three RNAVs that overfly Milton, with two others proposed. Looking at these impacts in isolation does not provide an actual assessment of on-the-ground impacts – some of which are reflected in the increasing number of noise complaints filed in these communities. Neither the EDRs, the ESPRs, nor the proposed rulemaking for the 4L RNAV approach appropriately analyzes cumulative impacts – and such analysis is required by law.

As defined in the FAA's own guidance (Order 1051.1F), cumulative impacts are those that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, whether Federal or non-Federal. The Massachusetts Environmental Protection Act (MEPA) also requires that projects be analyzed together, and segmentation to evade analysis of cumulative impacts is prohibited. While not directly applicable to the EDR analysis, the same theory applies -- when analyzing the environmental impacts of Massport operations, the off-premises operations must be analyzed in toto, and not evaluated in separate boxes.

When cumulative impacts are analyzed appropriately, then those impacts may be appropriately distributed among the impacted communities. This was the concept behind the Preferential Runway Advisory System (PRAS), which was unfortunately abandoned in 2012. PRAS was established "to provide an equitable distribution of Logan Airport's noise impacts on surrounding communities." The two primary objectives of the PRAS goals are: (1) to distribute noise on an annual basis; and (2) to provide short-term relief from continuous operations over the same neighborhoods at the ends of the runways. See EDR, page 6-19.

While no other guidelines are in place, Massport still reports runway usage with respect to the PRAS goals (Table 6-6). The PRAS goals offer at least some picture of what a fair distribution of aircraft traffic might look like using one particular tool, i.e. differential runways (being mindful that these PRAS goals were created well before RNAV concentrated flight routes were implemented). Thus, at this stage, only achieving balanced runway usage would not be sufficient to relieve those under the RNAVs, although it would be a step in the right direction.

Ultimately, a fair resolution of these ongoing noise issues in Milton will require further dispersion of the aircraft traffic from the concentrated RNAVs.

Milton continues to be ready to work on these equity issues, either via the MCAC, or directly with Massport and the EEA agencies. The 2018-2019 EDR's response to Milton's prior comments concerning equitable runway use, and a fair allocation of noise distribution, as set forth in section 7-2 to 7-4 of the Appendix is wholly insufficient. The response simply throws up its hands and shifts the burden of developing a procedure to the MCAC. As we all know, leaving it to the communities is unproductive, and pits neighbors against each other. We again request that the Secretary direct Massport and the EEA agencies, with the support of the MCAC, to promptly develop a system for the fair and equitable distribution of aircraft overflights that provides real relief to the highly impacted surrounding communities.

3. Evaluation and Updating of Noise Metric

We urged, and we repeat this request- Massport and the Secretary must move to a more updated method for noise assessment using currently available noise measurements (e.g., N70, which focuses on the number of noise events greater than 70 dB(A)[1] or Lmax[2]), and either discontinue using the DNL standard, or supplement its use with these additional metrics. The logarithmic nature of the DNL standard, which has been widely criticized, combined with the fact that this calculation is most often calculated on an annual basis "masks" the acute impacts a succession of aircraft flying over a home has on the sleeping residents within, and also masks the acute impacts felt in a community when it is overflown for hours on end, with little break in the incoming aircraft. Massport has the ability to calculate DNL on a much more frequent basis, and is supposed to be calculating this figure monthly but chooses not to do so. Calculating DNL across shorter time periods (e.g., monthly, weekly) would provide a more accurate indication of the suffering that Milton residents are enduring as a result of concentrated flightpaths and long hours of overuse, and would compel Massport to act to reduce airplane noise in Milton and other communities.

Massport's responses to Milton's comments from the 2017 ESPR are not encouraging. It simply notes, vaguely, that Massport uses a variety of noise metrics and measurements. This is not enough. There is significant evidence that the DNL significantly under-measures noise and annoyance. FAA has recognized this in the 1050.1F guidelines, and suggests that DNL can be supplemented. The guidance states:

> DNL analysis may optionally be supplemented on a case-by-case basis to characterize specific noise impacts. Because of the diversity of situations, the

[1]https://www.infrastructure.gov.au/aviation/environmental/airport_safeguarding/nasf/files/1.3_Guideline_A_attachment1.pdf

[2] The Lmax measurement measures "maximum sound level" during a single event. This measurement is successfully used by the Federal Highway Administration (FHA), a DOT agency just like FAA.

variety of supplemental metrics available, and the limitations of individual supplemental metrics, the FICON report concluded that the use of supplemental metrics to analyze noise should remain at the discretion of individual agencies.

In comments we are also submitting this month on the Neighborhood Environmental Survey (NES), we make a similar point. DNL under-measures noise and annoyance, because it dilutes measurement of noise annoyance during in-use runway days by inclusion of days not in-use, and it fails to take into account the noise disturbance contribution of peak-time continual short-interval overflight aircraft separation. Supplemental metrics (which already exist) lower the measurement threshold for particular hours (like overnight), or take into account the short interval between noise events, are necessary to make the noise and sound measurement real and useful, in working with impacted overflight communities. We urge the Secretary to require Massport to update its measurements to use these supplemental metrics, when evaluating the impacts of airplane noise on the communities surrounding Logan.

4. Collaboration

We continue to urge real and substantive collaboration between Massport, the Secretary, and the communities impacted by Logan overflights. Multiple communities surrounding Logan (not just Milton) take the brunt of the impact of the operations of Logan, and the situation has worsened substantially since the FAA implemented NextGen. While, as noted above, the pandemic has lessened these impacts, the respite is temporary and now is the time to build better communications and collaboration for a region-wide approach to overflight noise, annoyance, and pollution. Direct and regular access to Massport and the Secretary/all EEA agencies may help develop real and meaningful solutions to address the problems from airport operations – especially noise and pollution -- occurring in those communities. While we understand some of that work must be done via the Massport Community Advisory Committee ("MCAC"), the large size and the organization of the MCAC has the unintentional effect of diluting the voices of the most affected communities. With respect to the MIT study, four years after it began, Milton's requests for specific analysis and relief through that study remains incomplete.

3. Increased Noise Complaints Reported

Table 6-16 demonstrates that no single community made as many complaints on the Noise Complaint Line as Milton, although the numbers for other communities are catching up. Overall, and in Milton, both the number of complaints and the number of callers continues to increase. Table 6-16 reports a total increase in calls from Milton in 2018 - 10,962 and total a further increase in calls in 2019 - 6,673. Total calls in 2018 were 34,902, and in 2019 were 41,575. For reference, the 2014 EDR reported 2,669 complaints and 4,991were reported in the 2015 EDR. That represents over a 1000% increase in the number of complaints filed. Overall, Massport reports more than a 400% increase in the number of individual complainers on the noise complaint line, from 2017 to 2019 in all 15 reported overflown communities. Complaints

on the Massport complaint line from Milton have continued to increase since 2012, coinciding with and increasing as the use of performance-based navigation at Logan has been implemented.

The 2018-2019 EDR continues to ignore the importance of noise annoyance as a factor of environmental impact and harm. Noise annoyance in the Logan overflight communities -- which includes lack of sleep, disrupted and interrupted sleep, interrupted conversation, and impacts on use of outside spaces such as decks and yards, playgrounds, and civic spaces – is growing. This noise annoyance is not simple NIMBYism, it is a public health issue, as further discussed below. These are real impacts, suffered by real people, who live in nearby communities. It is outrageous that Massport virtually ignores these complaints in the 2018-2019 EDR, and still has no plan in place to address impacts on these citizens. The noise from Logan operations impacts citizens across boundaries, yet no one community is empowered to find a solution. Instead, we must turn to our leaders at the state level, including the EOEEA for oversight, empowerment, and solutions.

4. Increased Nighttime Operations

Nighttime operations at Logan – defined as from 10:00 P.M. to 7:00 A.M. – continue to increase steadily. Nighttime operations increased by 15% from 2016 to 2017 increased again, by another 5.1% from 2018-2019 (Table 6-4). Total nighttime operations have more than doubled since 1990.

Although the noise complaint data is not broken down by time of day (either that the complaint was filed, or that the complaint concerned), it follows that some portion of the increase in complaints in Milton and other communities is driven by increased nighttime operations. Data continues to be developed which indicates airplane noise in overflown communities disrupts sleep patterns, which has been shown to result in adverse human health impacts.

Information from Milton residents indicate that the noise from airplanes in Milton is clearly heard above background noise in both commercial and residential areas. As elected officials, we hear frequently from Milton residents who suffer from interrupted sleep, anxiety and a reduced quality of life because of the noise pollution caused by very frequent – and some days continuous – flights over Milton at low altitudes. Indeed, this is one of the two most common requests for relief we receive from residents. We cannot overstate the seriousness of the health problems that these RNAVs cumulatively pose for Milton residents, and the adverse cumulative environmental impact that the RNAVs and the low flying planes have on our entire community. The noise from airplane overflights can also negatively impact property values. Fewer buyers are willing to purchase a home in an area with known noise impacts, and prices can be suppressed. Meanwhile, recent buyers have been vocal on social media that they would not have purchased a home in Milton had they been aware of the amount of airplane noise in the town.

We repeat the request we made in our comments to the 2017 ESPR, which were not sufficiently addressed in Appendix 7 to the 2018-2019 EDR, that the Secretary work with the FAA,

Massport, and Milton to implement late night aircraft restrictions, similar to those set forth in 740 CMR 24.04, which are protective of Milton and its residents. In particular, it is important to discuss restrictions on RNAV usage and routes that overfly residential neighborhoods, including spreading the routes further so that the nighttime noise is less concentrated in residential neighborhoods, or moving routes over the ocean during certain periods of time. Specifically, as there are already nighttime restrictions on arrivals to runway 4L, we request the same restrictions (no arrivals between 11:00 PM and 6:00 AM) for runway 4R. See Massachusetts Port Authority Noise Rules and Regulations I.1(b), Summary of Runway Use Restrictions, Boston Logan International Airport (May 2, 2016) (also referenced in FAA BOS ATCT Noise Abatement Order 7040.1H). In addition, early-morning departures from runway 27 also routinely overfly Milton and the other communities under the runway 27 RNAV.

5. Air Pollution and Public Health.

Once again the 2018-2019 EDR only discusses air pollution from airport operations in the context of the actual operations of Logan airport, on Logan property. We repeat our comments to the 2014 and 2015 EDRs, and the 2017 ESPR, that this perspective is overly and conveniently narrow. Recent studies at LAX (Hudda, et al., May 2014) found ultrafine particle (UFP) counts as far as ten miles from heavily used arrival runways. Although study of the negative effects of UFPs are ongoing, UFPs are believed to have negative effects on respiratory and cardiovascular health in humans, and Massport does not dispute that UFP pollution is an issue at Logan[3]. We are disappointed that the 2018-2019 EDR did not consider the developed science on this important environmental impact to the citizens living in the Logan overflight area. The health of our residents, employees, and visitors depends upon policy and operational procedures that takes this data into account.

We repeat the request we made in our comments to the 2017 ESPR, which were not sufficiently addressed in Appendix 7 to the 2018-2019 EDR, that the Secretary direct Massport, in conjunction with the Department of Public Health ("DPH") and the Department of Environmental Protection ("DEP"), to conduct noise and air pollution studies in communities like Milton which receive a substantial number of low-flying arrival aircraft. This work would be consistent with the evolving science on this point, and protective of the residents in these communities. We further request that the scope of the future EDRs be expanded to consider the health impacts from increased and concentrated arrival and departure operations due to RNAVs, and that pollution data be measured for every community under any of the many Logan RNAVs, and that no new RNAV overflight paths be put into use until such study is complete and all parties agree that no additional detrimental effects will be experienced by residents in communities bearing the brunt of low-flying airplane overflight.

7. Conclusion and Request for Assistance.

[3] https://www.wgbh.org/news/local-news/2019/09/24/air-pollution-from-logan-airport-harms-surrounding-communities-research-shows

Thank you for your attention to and consideration of our comments on the 2017 ESPR. We believe that there can be solutions available to remedy and mitigate the ongoing impact of Logan operations on the residents of Milton. We request that the Secretary work with Massport, Milton, the MCAC, and other affected communities to help remedy the multiple impacts discussed above. Specifically, the requests made are as follows:

a. Direct Massport to prepare a Supplemental EDR which fully and realistically addresses projected increases to Logan operations and airport throughput, and the resulting environmental impacts;
b. Work with the FAA, Massport, and Milton to develop and implement late-night aircraft overflight restrictions which are protective of Milton and its residents, including consideration of an 11:00 PM to 6:00 AM landing prohibition on runway 4R;
c. Direct Massport and the MCAC to promptly develop a system for the fair and equitable distribution of aircraft overflights that provides real relief to the highly impacted surrounding communities, especially those that are under multiple RNAVs;
d. Direct Massport to collaborate with DPH and DEP to develop and conduct noise and air pollution studies in highly impacted surrounding communities, especially those that are under multiple RNAVs;
e. Direct Massport to include all of the points made above in the scope of the 2018-2019 EDR and in all future EDRs. This includes impacts to health from noise and pollution from: off-airport impacts of growth, cumulative impacts of RNAV overflights, increased nighttime operations, moving to updated noise measurements which are more protective of human health and which account for acute impacts more realistically than the DNL standard; and working directly with impacted communities to more fully understand and evaluate the human health effects from Logan operations.
f. Direct Massport to utilize supplement metrics when measuring sound and annoyance from airplane overflights in Milton and all other communities.

We would appreciate a time to meet with you and your staff to personally discuss the concerns we have outlined here, as well as our specific requests for assistance.

Sincerely,

Melinda A. Collins, Chair

Kathleen M. Conlon, Vice Chair

Arthur J. Doyle, Secretary

Richard G. Wells, Jr.

Michael F. Zullas

Milton Select Board

cc: Representative Stephen F. Lynch
Representative Ayanna Pressley
U.S. Senator Elizabeth A. Warren
U.S. Senator Edward J. Markey
State Senator Walter F. Timilty
State Representative William Driscoll
State Representative Brandy Fluker Oakley
Milton Board of Health
Milton Airplane Noise Advisory Committee Chair Andrew Schmidt
MCAC Representative Thomas Dougherty
Town Counsel Karis North

Exhibit C

Milton's September 28, 2023 comment letter re: FAA's Civil Aviation Noise Policy

See attached.

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MEMBER

BENJAMIN ZOLL,
MEMBER

September 28, 2023

Docket Operations, M-30
U.S. Department of Transportation (DOT)
1200 New Jersey Avenue SE
Room W12-140, West Building Ground Floor
Washington, DC 20590-00001

Re: Docket No. FAA-2023-0855

Dear Sir or Madam:

The Town of Milton, Massachusetts ("Milton" or the "Town"), through its Select Board, is pleased to provide comments in response to the FAA's "Request for Comments on the Federal Aviation Administration's Review of the Civil Aviation Noise Policy" (the "Request for Comments").

As background, Milton is significantly overburdened with overflights to and from Boston's Logan International Airport ("Logan"). The noise and pollution burden has only increased during the past dozen years. The fleet mix has changed, with an increase in larger jets in operation; the volume of flights at Logan was increasing before the COVID-19 pandemic and is currently climbing back to pre-pandemic levels; and aircraft are overflying Milton at lower altitudes than they had previously, creating more and louder noise. However, the root of the problem is the FAA's implementation of Next Generation Air Transportation System ("NextGen") Performance-Based Navigation ("PBN"), which has caused flight paths to the Nation's airports, including Logan, to be concentrated over a fewer number of people. Prior to NextGen and PBN, air traffic was dispersed over wide geographic areas.

PBN has produced inequitable, unbearable and dangerous results for some neighborhoods, placing hundreds of loud, low-flying planes a day over the same people, disrupting sleep, creating anxiety, and increasing health risks for people exposed to concentrated airplane noise[1] and

[1] Residential exposure to aircraft noise and hospital admissions for cardiovascular diseases: multi-airport retrospective study *BMJ* 2013;347:f5561 doi: 10.1136/bmj.f5561 (Published 8 October 2013); Aircraft noise and cardiovascular disease near Heathrow airport in London: small area study *BMJ* 2013;347:f5432 doi: 10.1136/bmj.f5432 (Published 8 October 2013); Airport noise and cardiovascular disease *BMJ* 2013;347:f5752 doi:

pollution.[2] The noise burden has caused some residents to sell their homes. Post-pandemic, many people work from home full-time or part-time, but their work is interrupted by incessant airplane noise from the "highways in the sky" over their homes. We hear from residents of Milton who are not only annoyed by days of constant airplane noise, but are unable to sleep, work, enjoy being outdoors in their own backyards, and engage in conversation with neighbors because of the noise burden. In addition to residential neighborhoods, numerous public and private elementary schools and high schools, senior living communities, and a college are located under, and overburdened by, loud aircraft noise from concentrated RNAV arrival and departure flight paths at Logan. For the past decade, this Board and many of our employees and appointees have spent an exorbitant amount of time and resources battling the noise burden that the FAA's actions have imposed on our community.

Our comments herein respond to the numbered topics and questions raised by the FAA in Part II of its Request for Comments with respect to the civil aviation noise policy (the "Policy").[3]

Preliminarily, we make three important observations. First, we are not, nor should we be expected to be, noise experts. We are elected local government officials writing to you on behalf of our Town and on behalf of the approximately 28,000 residents of Milton. We believe our role is to identify existing noise conditions and problems with the FAA's current sole noise metric and suggest alternative noise measures for the FAA to evaluate and consider. The FAA employs many aviation specialists, noise experts, analysts, and scientists, and is in a much better position than most commenters will be to propose and analyze new noise metrics, particularly those of a technical nature. In our view, the FAA should consult with both the United States Congress and the United States Environmental Protection Agency ("EPA") about the relevance today of its decades-old Policy, the concerns raised by commenters, and proposed changes to the Policy. We urge you to do so.

Second, Milton is located approximately ten (10) miles southwest of Logan and, as such, would be characterized, for purposes of your Request for Comments, as an overflight or corridor community rather than as a community in the vicinity of an airport. Accordingly, our comments are directed at the FAA's Policy *as it relates to overflight communities*. As set forth below, we believe that both (a) the Day-Night Average Sound Level ("DNL") metric and (b) the FAA's use of DNL 65 dB as the level for determining whether noise impacts on overflight communities are significant are outdated, irrelevant and grossly inadequate in the age of NextGen/PBN aviation

10.1136/bmj.f5752 (Published 8 October 2013). *See also* Soumya Karlamamgla, "How Noise Can Take Years Off Your Life," *The New York Times*, June 14, 2023.

[2] Although this comment letter addresses only noise because that is what the FAA's Civil Aviation Noise Policy governs, we note that air traffic generally, and PBN in particular, raise significant pollution-related public health concerns. Aircraft noise and pollution must be addressed by the FAA through both policy and its regulation and oversight of the Nation's air traffic.

[3] The Request for Comments states that the "policy is set forth in various agency regulations, orders, guidance and policy statements."

operations. We leave to other commenters suggestions for the Policy as it relates to communities that are adjacent to or in the vicinity of an airport.

Third, in addition to the comments provided herein, we support and endorse the comment letter filed or soon to be filed by the Massport Community Advisory Committee ("MCAC"). Among other things, we agree with the MCAC's summary of existing noise conditions in overflight communities; its call for the FAA to treat aircraft noise as a public health issue; its recommendation that the National Academies of Medicine prepare a consensus report on the public health issues caused by aviation noise; and its call for strict enforcement of violations of new noise metrics through noise-based landing fees, noise surcharges, and other mitigation methods.

Executive Summary

Mr. Don Scata, Manager of the Noise Division in the FAA's Office of Environment and Energy, summarized the problem well in his introduction to each of your four (4) Noise Policy Review webinars:

> "Historically noise issues were airport-centric, [the] result of infrequent operations and dispersed flight paths, and very loud jet aircraft. Noise concerns were raised primarily by communities immediately adjacent to airports. In communities[,] lived experience included low cadence of relatively loud aircraft noise events separated by long intervals. Our current noise problem is an airspace or overflight noise problem resulting from frequent operations, concentrated flight paths, relatively quiet aircraft, and noise concerns raised primarily by corridor communities further from airports. Communities['] lived experience includes a high cadence of daily, relatively quiet aircraft noise events separated by short intervals."[4]

For overflight or corridor communities such as Milton, DNL 65 dB is a wholly inadequate and outdated noise metric, and must be abandoned. A revised Policy must apply to commercial jets and all new entrants into the National Air Space, and create a system of metrics that captures noise burden by vehicle type, location and purpose. Such metrics should be companion, not supplemental, metrics. The FAA's Neighborhood Environmental Survey has shown that the Schultz Curve is outdated and not an appropriate method for representing community response to aircraft noise. We urge the FAA to revise its Policy to implement Number Above ("NA") 45 dB as an alternative noise metric for overflight communities.

As it revises the Policy, the FAA has an opportunity to reverse the public's negative perception and mistrust of the FAA, but that will happen only if the new Policy actually solves the noise problems that NextGen foisted upon overflight communities with no meaningful notice or public input. It is imperative that changes to the Policy, including the establishment of one or more noise metrics, be applied retroactively as well as prospectively. That is, a revised Policy must address

[4] FAA's Noise Policy Review Webinar #1 at 8:38 through 9:25, and Transcript, page 5. FAA's Noise Policy Review Webinar #2 at 8:37 through 9:25, and Transcript, pages 5-6.

current noise problems; it *cannot* be limited to only future decision-making and future environmental reviews. The FAA must collaborate with, and be much more responsive to, state and local government officials than it has been if it wishes to solve the serious public health issues caused by concentrating aircraft noise (and pollution) over residential and other populations.

Detailed Comments

1. Vehicle Type

Currently, the aviation noise that plagues Milton stems primarily from commercial jet arrivals to, and departures from, Logan. Helicopter activity (including but not limited to helicopter traffic over I-93 in East Milton) also contributes to the noise problem. We anticipate that, for the foreseeable future, these will remain the most significant causes of the noise burden on the Town. However, some areas of Milton have been impacted by noise from drones. Moreover, news reports and the Request for Comments indicate that advanced air mobility ("AAM") is an emerging system of automated transportation that is expected to carry passengers and cargo between relatively short destinations. As such, AAM, including but not limited to air taxis, can be expected to impose a substantial noise burden on communities across the country in the not too distant future.[5]

We urge the FAA to modify its Policy to apply to all current and future air vehicle activity. In addition to airplanes (commercial, private and governmental), the Policy should apply to drones, AAM and other future air vehicle activity. As required by the Aviation Safety and Noise Abatement Act of 1979 ("ASNA"), the Policy must use a system of metrics. The FAA now realizes that the system must capture noise burden by vehicle type, location (*i.e.*, in the vicinity of airport or vertiport or away from airport or vertiport (such as an overflight community)), and purpose (*e.g.*, for purposes of compliance with the National Environmental Policy Act of 1969 ("NEPA") or noise mitigation eligibility).

Your Request for Comments specifically mentions supersonic activity. In 2019, we provided comments to the United States Department of Transportation in response to the FAA's proposed revised regulations for "Special Flight Authorizations for Supersonic Operations" (Docket No. FAA-2019-0451). A copy of our comment letter dated August 21, 2019 is attached hereto as Exhibit A. In that letter, we objected to the proposed regulations, noting that until the FAA resolves the noise and pollution burdens that PBN has imposed on Milton and many other communities across the Nation, the FAA must not permit supersonic testing (let alone supersonic air travel) to occur. We also urged the FAA to seek guidance from the United States Congress and the EPA on the wisdom (or lack thereof) of permitting supersonic testing and travel. Our position with respect to supersonic activity has not changed since 2019. We reiterate the comments contained in our August 21, 2019 letter, and strongly oppose any consideration of supersonic activity by the FAA, whether through the Policy or any other means.

[5] Please see our comments on AAM in our letter to the U.S. Department of Transportation ("DOT") dated August 8, 2023 and submitted to Docket No. DOT-OST-2023-0079. Our comment letter was posted on August 10, 2023 with ID No. DOT-OST-2023-0079-0103.

2. Operations of Air Vehicles

As noted above, Milton would be characterized as an overflight community rather than a community in the vicinity of an airport. (Request for Comments, Part II.2.b and Part II.2.c) However, as drone activity continues to grow and AAM operations emerge, it is possible, and perhaps even likely, that Milton could eventually fall within the FAA's categories of communities that are in the vicinity of vertiports or "in the vicinity of UAS (drone) package delivery or other newly emerging technology operations." (Request for Comments, Part II.2.e)

For current subsonic fixed-wing commercial overflight operations, we are concerned about noise from flights en route to and from Logan and, in particular, flights that are making their final descent and approach to Logan. In our view, the FAA's revised noise metric(s) should be used for both the FAA's decision-making and its public disclosure of noise impacts. A system of noise metrics should allow for different metrics and thresholds for the FAA's Part 150 regulations and decision-making with respect to land compatibility, Part 161 determinations of eligibility, and NEPA reviews.

Arrivals to Logan's closely spaced parallel Runways 4R and 4L are (1) flying over Milton at altitudes that are too low and (2) far too often deploying landing gear over Milton, sooner than is necessary for safety purposes. Deployment of landing gear contributes to the noise that is heard by residents. Additionally, the Town is impacted by noise from concentrated flight paths for aircraft departing Runways 27 and 33L at Logan.

As discussed below, for overflight communities, DNL is an outdated and grossly inadequate noise metric and must be replaced by one or more alternative noise metrics. Companion metrics, not supplemental metrics,[6] are required to address the multi-level matrix of noise exposure by vehicle type, location and regulation. Additionally, runway use restrictions (especially at nighttime) should be imposed, and the FAA should impose monetary penalties on commercial and private airlines that violate the restrictions. Noise complaint data can and should help inform the FAA's revision of the Policy as well as its future rulemaking and decision-making.

At this time, we are not in a position to comment on the type(s) of noise metric(s) that should apply to drones or AAM operations. AAM technology is too new and emergent for us to have sufficient knowledge of it to comment. However, for the reasons stated below, at a minimum, DNL should not be the metric for determining acceptable levels of noise from drones and AAM. We expect that, similar to the problems created by PBN flightpaths, the frequency of drone/AAM noise events, not the loudness/intensity of the event, should be the primary factor captured by the noise metrics used for decision-making about drone/AAM noise exposure. Additionally, we encourage the FAA to use C-weighted measurements and estimates.

[6] Our understanding, based on the Request for Comments and the FAA's Noise Policy Review Webinars, is that supplemental metrics would not be used by the FAA in connection with decision-making under NEPA, but that companion metrics would be so used.

3. DNL

The Request for Comments concedes that the Policy is "based on research conducted many decades ago." In response to the ASNA, the FAA established, and continues to use, a single metric – DNL – to measure and analyze how aircraft noise is experienced by people on the ground. According to the Request for Comments, ASNA

> "requires the FAA to develop a single system for analyzing aircraft noise exposure; however, the system does not have to be composed of a single metric. Rather the system must have a high degree of correlation between the projected noise exposure levels and the surveyed reactions of people to those noise levels and must account for the intensity, duration, frequency, and tone of noise-producing activity, as well as the time of occurrence."

Pursuant to FAA Order 1050.1F, the FAA considers aviation noise impacts significant only if they are DNL 65 dB or greater.[7]

DNL has long been criticized as an adequate measure of aviation noise impacts. DNL is a flawed metric because it measures sound and averages it over a 24-hour period (a so-called "representative day") on an annual basis. Therefore, DNL dilutes actual noise impacts by averaging noise data over a daily basis and an annual basis. For communities like Milton, DNL's flaws also include the fact that, because of input assumptions, the software used to estimate DNL (AEDT) does not adequately capture noise events resulting from deployment of an aircraft's landing gear. Regardless of whether DNL was ever an appropriate metric for aviation noise, the FAA's reliance on DNL as its sole measure of noise is obsolete and irrelevant in the age of NextGen and PBN.

By diluting overflight noise over a 24-hour period and on an annual basis, DNL does not accurately measure the real life noise impacts to people on the ground. PBN causes overflight communities like Milton to experience, on some days, flyovers from several hundred airplanes and, on other days, zero flyovers. Averaging them on an annual basis dilutes the true level of annoyance, sleep deprivation, work and school interruption,[8] conversation interruption, and adverse health impacts that are suffered by people on the ground in Milton on days on which hundreds of aircraft fly overhead, separated by very short time intervals (i.e., a minute or two). No citizen of the United States lives in the FAA's model DNL world or experiences a "representative

[7] ASNA requires that the FAA's single system for assessing aviation noise is one "which includes noise intensity, duration, frequency, and time of occurrence", which is different than accounting for frequency as stated in the above quotation. "Including" frequency means that the metric distinguishes aviation noise burdens from, say, one hundred 94.4dBA SEL noise events close to an airport compared with one thousand 84.4 dBA SEL noise events in overflight communities, both of which would have a DNL of 65 dBA despite the 10-fold difference in frequency. Although DNL "accounts" for frequency in its logarithmic average, it does not "include" frequency in its representation of noise burden.

[8] With more people working from home post-pandemic, PBN has caused greater work interruptions in overflight communities than it did even a few years ago.

day" of airplane noise. People live in the real world and, all too often, the unlucky ones in overflight communities suffer the ill effects of hundreds of airplanes flying over them in an 18-hour period or longer.

The DNL metric also underrepresents the noise impacts attributable to the deployment of landing gear. When landing gear is being lowered, an airplane emits a loud whistling sound that is highly audible and disturbing to people on the ground. The deployment of landing gear only increases the noise annoyance that is already caused by the overflying aircraft. Our community has substantial experience with this issue, because pilots routinely deploy landing gear earlier than they need to, adding to the noise burden wrought by NextGen. At a minimum, the Policy should recognize early deployment of landing gear as a contributing factor to the noise burden in overflight communities, and take it into account in establishing one or more new noise metrics.

By the FAA's own admission, most overflight communities have DNL levels below 65 dB, yet still experience noise and disturbance at a level much greater than the DNL reveals.[9] During the FAA's Noise Policy Review Webinar #2, Ryan Weller, an environmental protection specialist with the FAA's Western Service Center, explained that DNL 65 dB is usually the level of noise experienced at an airport itself or by a community in the vicinity of an airport, whereas DNL contours for overflight communities are typically at lower levels (e.g., DNL dB ranges in the 40s and 50s). Mr. Weller observed that the FAA is considering and seeking comment on, among other things, whether "DNL is the right metric for addressing those communities that are farther away or, as we call them now, overflight communities, in the lower DNL levels, and does the DNL as a metric adequately address the impacts that those communities … are experiencing…."[10] During the same webinar, Andrew Brooks, Regional Environmental Program Manager for the FAA's Eastern Region Airports Division, referenced a presentation slide that showed both DNL contours for Logan and noise complaints filed by residents along Logan's arrival and departure RNAV corridors. Mr. Brooks acknowledged that

> "one of the things that we've realized, especially through the implementation of NextGen and precision based navigation, as these procedures come forward, is that the effects that communities are experiencing from these procedures are being experienced much farther afield than what our current Policy considers. And certainly seeing how those complaints have grown at farther areas, that's kind of our attempt to capture those concerns, those complaints, into a noise policy analysis to develop methods for analyzing those changes, disclosing those changes,

[9] In 2012, Milton residents filed 102 noise complaints with the Massachusetts Port Authority ("Massport"), which operates Logan. In 2016 and 2019, Milton residents filed 21,796 noise complaints and 41,575 noise complaints, respectively. Other communities that are impacted by departures and arrivals from and to Logan also experienced a significant increase in the number of noise complaints filed by residents.

[10] FAA's Noise Policy Review Webinar #2 at 1:02:50 through 1:04:45.

> informing communities underneath those changes, and determining how those would influence future decisions moving forward."[11]

We applaud the FAA for acknowledging what citizens and elected officials across the country have been arguing to it for years: that NextGen, PBN, and concentrated RNAV corridors have called into serious question the legitimacy and relevance of the FAA's use of DNL 65 dB as a valid measure of noise exposure in overflight communities. For residents of these communities, it is possible that none of the hundreds of aircraft flying over them in a single stream, hour after hour for most of a day, will produce noise at a level of 65 dB. However, that does not mean that the noise generated by those hundreds of planes, separated by only a minute or two from each other, is insignificant. To the contrary, the concentration of flight paths traveled by hundreds of planes per day produces near-constant noise and a much greater level of annoyance, sleep deprivation, speech interference, and other adverse health risks than would a single overflight with a noise level of 65 dB.[12]

We believe that, for overflight communities, DNL must be either lowered significantly, *i.e.*, from DNL 65 dB to DNL 45 dB, or replaced with one or more alternative metrics that will accurately measure the noise that is experienced by people under concentrated RNAV corridors. The FAA's use of DNL 65 dB as the measure of significant noise exposure for overflight communities is in no way reflective of current conditions on the ground.

The FAA's framing paper entitled "The Foundational Elements of the Federal Aviation Administration Civil Aircraft Noise Policy: The Noise Measurement System, its Component Noise Metrics, and Noise Thresholds" (the "Framing Paper") identifies various other noise metrics. Among those metrics identified as "Single Event/Operational" on pages 12 and 13 of the Framing Paper are NA[13] and Time Above ("TA"). NA is defined as "[a] metric that presents the number of noise events that exceeds a specified noise level over a set time interval." TA is defined as "[a] metric that presents the total duration of noise events above a specified noise level over a set time interval." Examples provided for NA and TA in the Framing Paper use 60 dB as a threshold.

We believe that NA and TA are potential alternative metrics to DNL, but only if a reasonable dB level is used as the threshold. In our view, 60 dB is too high a threshold for overflight communities like ours, which is ten miles from the airport and, post-RNAV, is overflown by several hundred large aircraft at low altitudes when Logan's Runways 4R/4L are in use. NA and TA would have to be measured at a much lower level than 60 dB because the noise

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[11] FAA's Noise Policy Review Webinar #2 at 1:04:45 through 1:06:06.

[12] During the FAA's Noise Policy Review Webinar #2, Mr. Weller acknowledged, with respect to NextGen, that "it would be probably fairly annoying to have an aircraft fly over your house on a consistent basis where you only used to have one every so often…", and invited comments on alternative metrics. *See* FAA's Noise Policy Review Webinar #2 at 1:52:05 through 1:53:00. We agree with Mr. Weller except for his use of the word "fairly." We have been telling the FAA for years that hundreds of planes flying over Milton residents in an 18-hour period or longer is not only *extremely* annoying but unbearable and dangerous to public health.

[13] As noted above, NA means Number Above.

is virtually constant for 18 hours or more. An appropriate level would be 45 dB, because ambient noise levels in communities like ours tend to be in the 40s range.[14] The threshold should be *no more than* 50 noise events per 24-hour period. Additionally, we believe the FAA should use C-weighted measurements and estimates or, at a minimum, study whether both A-weighting and C-weighting are appropriate tools for new noise metrics and a new Policy.

Lastly, we note that noise complaint data can help the FAA identify where noise problems exist in corridor communities. We believe such data should be considered in the FAA's decision-making processes for determining whether noise impacts are significant. The United States Court of Appeals for the District of Columbia Circuit has held that noise complaints, in and of themselves, constitute substantial evidence of a noise problem regardless of whether DNL is above 65 dB. *See Helicopter Assoc. Int'l, Inc. v. F.A.A.*, 722 F.3d 430, 435-37 (D.C. Cir. 2013). Indeed, in that case, the FAA itself based its decision-making on noise complaint data.

In *Helicopter Assoc.*, the FAA, seeking to abate helicopter noise over residential populations on Long Island, mandated a specific route for helicopters traveling between New York City and Long Island. 722 F.3d at 432. The FAA modeled the noise impacts and concluded that the sound levels were below DNL 45 dB. *Id.* at 433. Despite the fact that DNL was well below 65 dB, the FAA "relied on a host of externally generated complaints from elected officials and commercial and private residents of Long Island" and decided to mandate a new helicopter route. *Id.* at 435-436. The Court of Appeals noted that DNL 65 dB

> "was established for use in mapping noise exposure within the vicinity of airports, not residential areas far removed from an airport environment (citation omitted). It serves as a reference point from which the FAA can reasonably deviate when determining whether a particular noise reduction intervention is in the public interest (citation omitted)."

Id. at 436. Accordingly, the Court of Appeals concluded that the petitioning helicopter association failed to meet its burden of proving that the FAA used an incorrect methodology. *Id.* at 437.

Noise complaints filed by residents in overflight communities such as Milton have increased dramatically.[15] The *Helicopter Assoc.* decision established the validity of noise complaints as a measure of significant noise impacts and annoyance to overflown residents, and affirmed the FAA's use of such data for decision-making purposes. In addition to establishing an alternative noise metric to DNL 65 dB, the FAA should take into account noise complaint data when making decisions that will impact overflight communities.

[14] The World Health Organization recommends 45 dB (Lden) for aircraft noise exposure (and 40 dB (Lnight) for nighttime aircraft noise exposure). *See* https://cdn.who.int/media/docs/default-source/who-compendium-on-health-and-environment/who_compendium_noise_01042022.pdf?sfvrsn=bc371498_3.

[15] See footnote 9.

4. Averaging

For the reasons stated above, the FAA's use of DNL to model a representative day (referred to in the Request for Comments as an Average Annual Day ("AAD")) is outdated and irrelevant in the age of NextGen/PBN. Averaging dilutes the true level of annoyance, sleep deprivation, work interruption, and adverse health impacts that are suffered by people on the ground on days on which hundreds of aircraft fly overhead. Therefore, DNL, AAD and averaging are not appropriate ways to describe noise impacts for overflight communities burdened by NextGen. We do not believe that any other alternative averaging scheme is appropriate. For the reasons stated above, we recommend that NA 45 dB be used in place of any averaging for purposes of both decision-making and public disclosure of noise.

5. Decision-making Noise Metrics

With the implementation of NextGen/PBN beginning at least a dozen years ago at some airports, the FAA's decision-making metric for actions that are subject to NEPA and airport noise compatibility planning studies pursuant to 14 CFR part 150 is long overdue for an overhaul. DNL makes absolutely no sense as the FAA's metric when flight paths are concentrated over fewer people who experience hundreds of overflights on days that an RNAV path is in use. We reiterate that Milton often experiences overbearing, incessant noise from several hundred airplanes from early in the morning (i.e., approximately 5:00 a.m.) until well after midnight. On such days, there is no relief whatsoever. Yet DNL averages the 18 or more hours of constant noise on such days with the lack of noise that the same people experience when there are no overflights. The average result is misleading and in no way reflects the reality that people on the ground experience.

It has been disingenuous for the FAA, more than a dozen years after it began to implement NextGen, to cling to DNL as its sole noise metric when making decisions or taking any action. Increased noise complaint data from affected communities nationwide demonstrates how irrelevant and obsolete DNL has become. Moreover, elected officials at the federal, state, and local levels of government have, for years, brought to the FAA's attention serious public health concerns related to PBN's concentrated flight paths. Concerns and comments expressed by governmental officials on behalf of the people they represent should also be accorded weight by the FAA in its decision-making processes.

We identified above NA 45 dB as the noise metric that we believe should be used for overflight communities. Part II.5.b of the Request for Comments asks whether the FAA should "use a noise metric other than DNL to evaluate noise exposure in quiet settings, such as national parks, national wildlife and waterfowl refugees, etc." Our answer is yes, but the FAA's example is woefully inadequate. The FAA should use a noise metric other than DNL to evaluate noise exposure in all settings in overflight communities, and particularly those in which residential homes, schools, hospitals, senior living facilities, business districts, recreational facilities and the like are situated. Often, these areas are already subjected to noise from motor vehicle traffic, buses, trains, commercial and industrial operations, and everyday life. Residential populations should be accorded as much, if not greater, consideration than wildlife populations.

6. Communication

First, the FAA can improve communication regarding changes in noise exposure by meeting in person (and not solely via Zoom or other online platforms) with elected officials and members of the public in communities that bear the burden of the FAA's actions. Such corridor communities are easily identifiable; they are the communities that have been pleading for relief from aviation noise and concentrated flight paths caused by NextGen/PBN for the past decade. Noise complaints in unaffected communities are non-existent or minimal, whereas residents and elected officials in affected communities file many complaints and continue to seek relief from the FAA and airport operators. Therefore, it is reasonable for affected communities to expect the nine (9) regional FAA offices to host regional meetings to provide information about changes in noise exposure and actions that the FAA plans to take.

Second, we urge the FAA to listen to, and take seriously, the public health concerns voiced by residents and elected officials, engage in meaningful dialogue, and propose real-world, workable solutions to noise problems. For far too long, public perception has been that the FAA acts in a manner that is dismissive of both noise complaints and requests for relief from NextGen. If safety truly is at the core of the FAA's mission, vision, and values (as its mission statement on its website states), then the FAA must give serious consideration to the safety (*i.e.*, the public health) of people on the ground whose daily lives and well-being have been adversely impacted by the FAA's decision-making and abolish DNL as the noise metric for overflight communities. For overflight communities, DNL 65 dB should be replaced with NA 45 dB.[5]

In response to Part II.5.c of the Request for Comments, we suggest that the FAA hold regional public information sessions about emerging AAM trends and how the FAA will regulate drones, AAM and the noise that they will generate. We suspect that most U.S. citizens are not well informed on the topic of AAM generally. The public will benefit from proactive educational outreach by the FAA.

7. NEPA and Land Use Noise Thresholds Established Using DNL or for Another Cumulative Noise Metric

We were not surprised to read in the Request for Comments that the FAA's "Neighborhood Environmental Survey results show [a] higher percentage of people who self-identify as 'highly annoyed' by aircraft noise across all DNL levels studied in comparison to the Schultz Curve." That study demonstrates that, as a result of PBN, the Schultz Curve is outdated as a method for representing community response to aircraft noise. The Schultz Curve should be replaced by the National Curve.

8. FAA Noise Thresholds Using Single-Event or Operational Metrics

The FAA notes in the Request for Comments that its Neighborhood Environmental Survey demonstrated that "people are bothered by individual aircraft noise events, but their sense of annoyance increases with the number of those noise events." This is hardly surprising. NextGen has placed hundreds of aircraft over Milton on many days of the year. The incessant loud noise

produced by hundreds of overflights at low altitudes substantially increases both the burden on Milton and its residents and results in increased noise complaints that Milton residents file with Logan's operator, Massport. The FAA must adopt a noise metric that takes into account the fact that, thanks to NextGen, some residential populations are exposed to hundreds of "single events" a day, while others rarely or never experience any aircraft noise.[16]

As noted above, we recommend that the FAA consider NA and TA as potential alternative metrics to DNL, but only if a reasonable dB level, such as 45 dB, is used as the threshold. We believe that an alternative noise metric of NA 45 dB makes the most sense for overflight communities such as ours.

9. FAA Noise Thresholds for Low-Frequency Events

The Request for Comments identifies as an example of a low-frequency event "the launch and reentry of commercial space transportation vehicles authorized by the FAA Office of Commercial Space Transportation." As there are no spaceports (launch/reentry sites) in the New England area, we offer no comments on this issue.

10. Miscellaneous

In response to part II.10 of the Request for Comments, we make two important comments.

A. Retroactive Application of Revised Policy

Any changes to the Policy, including but not limited to the establishment of one or more alternative noise metrics for overflight communities, must be accompanied by the FAA's commitment to revisit (and, more importantly, to resolve the noise and pollution problems associated with) extant RNAV flight paths. Changes to the Policy must *not* be applied only prospectively to future decision-making and actions by the FAA; they must address current problems.

When NextGen and PBN were first implemented, the serious public health risks to people in overflight communities could not have been known by the public, but could and should have been anticipated and known by the FAA. Over the past decade, the FAA has continued to roll out more RNAV paths at airports nationwide despite the outcry from affected communities and elected officials at all levels of government. Notwithstanding that the FAA has had at least ten (10) years' notice of serious public health issues stemming from NextGen, the FAA has stubbornly clung to its obsolete DNL 65 dB metric and resisted, until now, considering any alternative noise metric.

[16] In addition to the weaknesses described above, utilization of DNL pits communities against each other, and makes it more challenging to find community-based solutions to overflight noise. Utilizing a more accurate measure of noise and annoyance would help communities assist the FAA and local airport operators in identifying real solutions to noise complaints.

Through your various Noise Policy Review Webinars, FAA employees have stated that any revisions to the Policy will be applied only to future decision-making, and will not change existing noise exposure, existing flight paths, or completed or ongoing environmental reviews.[17] That position cannot stand the test of time. It would be unconscionable for the FAA not to use a revised Policy to solve serious, foreseeable, and existing public health problems that the FAA itself created when it implemented NextGen and PBN. The ongoing damage done to corridor communities across the country by the federal government only ensures the continuance of noise complaints, public outcry, and public pressure on Congress and the Executive Branch to act. The FAA would be wise to commit itself to using a revised Policy, among other measures,[18] to provide short-term and long-term relief to overflight communities.

B. FAA's Opportunity to Reverse Public Perception and Solve Problems

When reviewing comments and the Policy, the FAA should consider the adverse public perception of itself and its wholly inadequate response to community concerns about NextGen. In general, public trust in the federal government has declined in recent decades.[19] Specifically, the FAA's failure to abate civil aviation noise impacts on residential populations has created mistrust of the FAA, and will make it harder for the FAA to regulate AAM. It is imperative that the FAA relieve the noise burden on overflight communities in an expeditious, diligent manner and with a sense of urgency.

We cannot emphasize to you enough that Milton, and many other communities in Massachusetts and around the country, have been overburdened by aircraft noise (and pollution) for more than a decade. Despite substantial efforts since 2013 by Milton's local officials (including but not limited to this Board and our employees and appointed representatives to the Massport Community Advisory Committee and a volunteer advisory committee), State Senators, State Representatives, U.S. Senators, U.S. Representatives, and tax-paying residents, neither the FAA nor Massport has done *anything* to provide permanent or temporary relief to noise and pollution problems that the FAA created by implementing NextGen/PBN at Logan.

A multi-year study conducted by the Massachusetts Institute of Technology ("MIT") and funded pursuant to a joint agreement between the FAA and Massport produced, among other things, recommendations for regional dispersion of overflights arriving to Runway 4R at Logan (*i.e.*, three flyable alternative RNAV paths that would be used in rotation with the existing RNAV path) and the relocation of a waypoint for departures from Runway 27 at Logan. Both recommendations would help to reduce the substantial aviation noise burden on Milton. MIT delivered its recommendations to the FAA more than two years ago, but, to date, the FAA has

[17] *See, e.g.*, FAA's Noise Policy Review Webinar #3 at 46:48 through 48:20; FAA's Noise Policy Review Webinar #4 at 1:53:53 through 2:00:02.

[18] PBN technology itself can be used to disperse air traffic. The below-referenced MIT study of operations at Logan demonstrated that it is possible to use multiple flight paths for arrivals to a single runway in rotation with each other to disperse air traffic and noise more equitably.

[19] *See* https://www.pewresearch.org/politics/2022/06/06/public-trust-in-government-1958-2022/.

failed to implement them, even on a trial basis. Despite the fact that Milton engaged extensively with the FAA, Massport and MIT during the study, the FAA has had zero proactive communication with Milton about MIT's recommendations during the past two years. Therefore, it should come as no surprise that the perception many people have of the FAA is that it does not take seriously the valid public health concerns that were first brought to its attention a decade ago. Sadly, the perception is that the FAA cares more about efficiency and fuel cost savings for commercial airlines than it does about the safety and health of people on the ground. However, the FAA now has an opportunity to change that perception and to take a leadership role on a critical environmental and health issue. We urge you to do so.

As an agency of the federal government, the FAA should engage with elected officials at the federal, state and local levels with respect to the Policy in a collaborative and meaningful way. Local government officials are your colleagues in government, and represent some of the same people that the FAA and the DOT serve. We offer these comments on the Policy in good faith and in the spirit of collaboration. We desire to work with you to achieve solutions that will benefit the people we represent and others similarly situated while at the same time being workable for the FAA.

11. Literature Review

We call to your attention the health studies (one of which is cited in Appendix 1 to the Framing Paper) and the recent article published in *The New York Times* that are cited in footnote 1 to this comment letter.

Thank you for the opportunity to comment on the Policy and for your consideration of our recommended modifications.

Sincerely,

MILTON SELECT BOARD

Michael F. Zullas, Chair

Erin G. Bradley, Vice Chair
Roxanne Musto, Secretary
Richard G. Wells, Jr., Member
Benjamin Zoll, Member

cc: U.S. Secretary of Transportation Pete Buttigieg
U.S. Senator Edward J. Markey
U.S. Senator Elizabeth Warren

Docket Operations, M-30
U.S. Department of Transportation (DOT)
September 28, 2023

Representative Stephen F. Lynch
Representative Ayanna Pressley
Attorney General Andrea Campbell
State Senator Walter F. Timilty
State Representative William Driscoll, Jr.
State Representative Brandy Fluker-Oakley
Milton Airplane Noise Advisory Committee
Milton Community Advisory Committee Representative
Milton Town Counsel

Exhibit A

Town of Milton Select Board's August 21, 2019 letter to the U.S. Department of Transportation
(re: FAA's proposed revised regulations for
"Special Flight Operations for Supersonic Operations")

See attached.

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August 21, 2019

Docket Operations, M-30
U.S. Department of Transportation
1200 New Jersey Avenue SE
Room W12-140, West Building Ground Floor
Washington, DC 20590-00001

Re: Docket No. FAA-2019-0451

Dear Sir or Madam:

The Town of Milton, Massachusetts, through its Select Board, hereby objects to the FAA's proposed revised regulations for "Special Flight Authorizations for Supersonic Operations," to be codified as 14 C.F.R. § 91.818.

Supersonic civil flights are prohibited without the FAA's express authorization. 14 C.F.R. § 91.817. This little-used FAA regulation dating back to 1973 allows the FAA to authorize supersonic flights for the purpose of testing and developing new aircraft. Currently, application requirements are found in Appendix B to 14 C.F.R. Part 91. In its June 28, 2019 notice of proposed rulemaking (the "Notice"), the FAA states that it has received only "a handful of inquiries since 1973" and has granted only three (3) authorizations for supersonic flight testing, two (2) of which related to the testing of an experimental space vehicle attached to an airplane. Notwithstanding this, according to the Notice, the FAA "expects that renewed interest in the development of supersonic aircraft will lead to increased requests to authorize flights in excess of Mach 1."

As a preliminary matter, we note that, in the four decades since the FAA promulgated 14 C.F.R. § 91.817 and Appendix B, there have been material changes in aviation operations both in the United States and internationally. For example, today there are more airlines than there were

in the 1970s; the fleet mix has changed, with an increase in larger (and louder) jets in operation; and the volume of flights has increased. Perhaps most significantly, in recent years, the FAA has implemented NextGen precision-based navigation, causing a concentration of flight paths at airports around the country. NextGen has produced inequitable, unbearable and dangerous results for some neighborhoods, placing hundreds of loud, low-flying planes a day over the same people, disrupting sleep, creating anxiety, and increasing health risks for people exposed to concentrated airplane noise and pollution.[1] For years, communities located near airports around the United States have been sounding the alarm about NextGen, raising serious public health concerns and seeking relief from the FAA. Yet the FAA has failed to address the noise and pollution problems wrought by NextGen.[2] After several years, no solutions to this FAA-created problem have been forthcoming from the FAA.

As leaders of a community with neighborhoods that are already significantly overburdened with overflights to and from Boston's Logan International Airport, we are very concerned about what the FAA described in the Notice as "renewed industry interest in developing new civil supersonic aircraft." The Notice makes clear that the FAA's revisions to Appendix B to Section 91.817 "are intended to support the growth of the civil supersonic industry." The Notice further states that technological advances as well as renewed industry interest "have prompted the FAA to consider policy and regulatory changes to enable the domestic certification and operation of [supersonic] aircraft." The Town of Milton strongly objects to the FAA's supporting or in any way fostering the advent of supersonic flights to, over or from the United States. Unless and until the FAA resolves the very significant NextGen-related airplane noise and pollution concerns that we and so many other communities have raised, the FAA should take no action to further the aviation industry's apparent recent interest in supersonic air travel. No supersonic testing, let alone supersonic air travel, should be performed until the FAA has fully addressed the problems caused by NextGen.

By the FAA's own admission, in the four decades since the FAA promulgated its existing regulations on supersonic aircraft, the airline industry has shown little commercial interest in supersonic air travel. Indeed, Concorde, the only supersonic commercial jet ever to be placed in service, ended operations in 2003. The combination of NextGen and supersonic air travel would have a disastrous environmental impact on our town and other communities around the country. Therefore, we believe that, before the FAA takes any action to "support the growth of the civil supersonic industry," the United States Congress and the United States Environmental Protection Agency (the "EPA") should weigh in on whether, as a matter of public policy, the encouragement and development of supersonic aircraft is in the Nation's best interest. We are sending copies of this letter to our Congressional delegation with a request that they consider the wisdom of permitting supersonic aircraft to fly over the United States as well as its regulation by

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[1] Residential exposure to aircraft noise and hospital admissions for cardiovascular diseases: multi-airport retrospective study *BMJ* 2013;347:f5561 doi: 10.1136/bmj.f5561 (Published 8 October 2013); Aircraft noise and cardiovascular disease near Heathrow airport in London: small area study *BMJ* 2013;347:f5432 doi: 10.1136/bmj.f5432 (Published 8 October 2013); Airport noise and cardiovascular disease *BMJ* 2013;347:f5752 doi: 10.1136/bmj.f5752 (Published 8 October 2013).

[2] In Boston, a study being performed by the Massachusetts Institute of Technology for the FAA and the airport operator is now in its third year. No interim relief has been provided to the affected communities, and none of the first round of recommendations has yet been implemented.

a federal agency that has thus far failed to resolve the serious damage that its NextGen program has caused to communities.

In addition to the foregoing general objection to the FAA's pursuit of supersonic air operations at this time, we offer the following comments on the specific text of the proposed revised regulation. The FAA proposes, in part, to move application criteria from Appendix B to 14 C.F.R. § 91.817 to a newly created Section § 91.818. While we do not object to a mere reorganization of existing application requirements, we do object to certain revisions to, and the substance of, portions of the proposed regulation. Additionally, in response to the FAA's request for comments on removing or retaining Section 91.818(b), we urge the FAA to remove such provision.

1. Time of Day

Proposed Section 91.818(a)(5) would require an applicant to include "the time of day the flights would be conducted." Section 91.818(a)(5) would make clear that "[p]roposed night operations may require further justification for their necessity." The increased noise from supersonic flights would be unduly burdensome during daytime hours, and even worse at night when people are trying to sleep. Under no circumstances should nighttime testing of supersonic aircraft be permitted. Communities that are already adversely affected by NextGen cannot and should not be subjected to the noise of supersonic jets, either during daytime or nighttime hours.

2. Additional Reason for Authorization

Currently, the FAA may authorize supersonic flights for only four (4) reasons: to show compliance with airworthiness requirements; to determine the sonic boom characteristics of an aircraft; to establish a means of reducing or eliminating the effects of sonic boom; and to demonstrate the conditions and limitations under which a supersonic flight will not cause a measurable sonic boom to reach the ground. To this list, the FAA proposes to add, through Section 91.918(a)(8)(v), a fifth reason: to measure the noise characteristics of an aircraft to either demonstrate compliance with noise requirements or determine limits for operation. The Notice describes this new reason for authorization as "forward-looking" because it may help establish noise limits for supersonic air travel, which do not currently exist. As stated above, unless and until the FAA adequately responds to and resolves the significant harm it has already imposed on communities as a result of its NextGen implementation, we object to any action that may add to the noise and pollution burden imposed upon people on the ground.

3. "Overocean" Testing

Section 91.818(a)(9) would require an applicant to show "why its intended operation cannot be safely or properly accomplished over the ocean at a distance ensuring that no sonic boom overpressure reaches any land surface in the United States." While the revised language is clearer and better than the existing text, we believe that the FAA must go further than requiring an applicant to justify its request for testing supersonic jet capability over land. Instead, the FAA should mandate that future supersonic testing be conducted over the ocean (in such a manner that no sonic boom overpressure reaches land) successfully before any testing over land is authorized.

4. Duration of Authorizations

Section 91.818(e)(1) would authorize the Administrator to determine the length of time that is necessary for supersonic flights to be flown in a test area, presumably on a case-by-case basis. The Notice states that Appendix B does not currently specify a maximum time period for testing supersonic flights. We believe that a bright line test must be provided in the regulation. A maximum allowable testing duration, which may be shortened but not lengthened by the Administrator, must be stated. We further believe that the FAA should seek the input of the EPA in determining the maximum allowable testing duration.

We agree with the FAA that an applicant should submit separate applications for testing supersonic flights for different phases of a project. However, we believe that the FAA must do more than "encourage" such separate applications; the regulation should be revised to mandate separate applications for distinct phases of a project.

5. Test Areas

The Notice provides that:

> "[t]o support the current development efforts of the industry, the FAA seeks to provide supersonic flight test applicants with the broadest opportunity to request an appropriate flight test area, consistent with applicable regulations. Whether an applicant chooses to request an area already used for non-civil supersonic flights or an area in another location would be up to the applicant. The ability to request a flight test area appropriate for an applicant's needs would allow the applicant to control the costs and benefits of various options, and to develop its business plan accordingly. The requirement to submit the environmental impact information remains, which allows the FAA to determine the acceptability of the location and the effect on the environment of the proposed flights as well as its duty to determine the level of review required under NEPA."

This paragraph makes clear that the FAA prioritizes the airline industry's business purposes and costs, not the need to protect either the health of people on the ground who would be affected by supersonic test flights or the environment. Section 91.818(a)(6) should not leave it up to aviation industry applicants to designate a test area to be overflown. If overland flights are to be considered, the regulation must designate as a test area either an area that is unpopulated or, at worst, one of the military test ranges (the locations of which are not disclosed in the Notice) that the FAA approved for three (3) previous applicants. According to the Notice, environmental impact statements have already been approved for such military test ranges. The Notice also points out that using these military sites will be "more efficient and less costly" than establishing a new test area. Therefore, these sites, not residential areas, should be the approved test areas. Specifically, we object to any testing of supersonic aircraft at or near Boston's Logan International Airport.

6. Supersonic Operations Outside Test Area

The Notice invited public comment on whether the FAA should maintain or remove a provision (Appendix B, section 2(b)) of the existing regulation that allows an applicant to request supersonic non-test flights outside of a test area. For the reasons stated in the Notice, we strongly urge the FAA to remove Section 91.818(b) from the proposed regulation. According to the Notice, the "prerequisites for this supersonic operation are considerable" and would be "difficult" to satisfy, and "the FAA knows of no aircraft that can meet the 'no overpressure' provision." Forty-five years after the existing regulation was promulgated, "no operator has applied for an authorization to demonstrate a supersonic flight capable of producing no measurable sonic boom overpressure such as to qualify for this operating allowance." Lastly, the Notice points out that "speeds slightly above Mach 1 are often the least fuel-efficient and may have the most negative effects on an aircraft."

We submit that removal of Section 91.818(b) from the proposed regulation will have no measurable consequence upon any aircraft that may be under development. Testing is a necessary prerequisite to commercial flight operations and would continue to be governed by the re-codified regulation. If at some point in time, the aviation industry is able to successfully test a supersonic flight first over the ocean and then over an appropriate overland test area, the FAA will have adequate time to write a new and suitable regulation to govern flights outside of a test area. Such a regulation would be informed by current aviation practice and conditions, not aviation practice and conditions that existed in the 1970s.[3] We believe that the FAA must seek current guidance from the EPA and the United States Congress on the critical issue of whether supersonic air travel is in the Nation's best interest and, if so, under what conditions and limitations it should be authorized. Removing Section 91.818(b) and crafting an appropriate new regulation only after successful testing is demonstrated and Congressional, EPA and other governmental and public input is obtained, is in the best interests of the people we represent and, in our opinion, the entire Nation.

[3] We submit that the Notice itself provides the obvious answer to the question of whether Section 91.818(b) should be included in the final regulation. The Notice states that "[t]he records of the adoption of this provision in 1973 contain no discussion of how these flights would be included in the overall operation of the national airspace system (NAS). The sheer volume of increased activity in the NAS since 1973 would demand a more comprehensive consideration of the impact of supersonic flights. Moreover, in the event that some level of supersonic boom or other noise generated by supersonic flight is determined to be consistent with the FAA's statutory authority to protect the public health and welfare, the FAA would consider all available regulatory tools . . . to allow such flights, *rather than rely on a 45-year-old standard that was included in a regulation designed primarily to approve test flights* (emphasis added)."

Lastly, as noted above, our position is that unless and until the FAA adequately resolves the significant noise and pollution burden it has imposed on our town and other communities through its implementation of NextGen's precision-based navigation, the FAA should pursue no new technology or measures that would add to that burden.

Thank you for your consideration of our comments.

Sincerely,

MILTON SELECT BOARD

Michael F. Zullas, Chair

Melinda A. Collins, Vice Chair

Anthony J. Farrington, Secretary

Kathleen M. Conlon

Richard G. Wells, Jr.

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