

Rebecca Tepper, Secretary
Executive Office of Energy and Environmental Affairs (EEA)
Attn: MEPA Office

April 18, 2024

Alexander Strycky, MEPA Analyst for the Project
100 Cambridge Street, Suite 900
Boston MA 02114

Dear Secretary Tepper and Mr. Strycky,

Thank you for the opportunity to submit public comments on the Draft Environmental Impact Report (DEIR) for the proposed North Airfield Development at L.G. Hanscom Field in Bedford, EEA No. 16654.

Overview

HFAC has represented the residents of Hanscom Field's four adjoining towns and airport users for 43 years as provided by its charter from the Commonwealth of Massachusetts. Attendees commenting publicly at our meetings have expressed deep concerns about the proposed expansion of jet hangar infrastructure at Hanscom Field. They believe this project will increase aviation activity which in turn will cause negative health effects in their communities due to increased air pollution and noise. There is also concern about the potential to disrupt cleanup of several existing Superfund sites on or near the project area and the loss of forest land in developing the new buildings. The people we represent also believe the project will exacerbate the global climate crisis by expanding fossil fuel usage at a time when the state and our towns are working hard to decrease its use in every way possible.

The DEIR should present a comprehensive view of environmental impacts, but is incomplete and depends on a poorly substantiated prediction of how aviation activity would be affected by the project. The DEIR minimizes rather than clarifies some risks, and only addresses currently regulated risks. Risks associated with building and operating the facility are not counterbalanced with any significant services that benefit the general public. National Environmental Policy Act (NEPA) guidelines from the Council on Environmental Quality from January 2023 on the evaluation of greenhouse gas emissions (GHGs) do not appear to have been used¹. The DEIR makes frequent references to Hanscom Field's Environmental Planning and Status Report (ESPR), but rely on the 2017 edition, while the new edition (2022) is scheduled to be released in May of this year and should be the basis for the proponent's analyses.

Level of aviation activity

The DEIR projections of reduced aviation activity are poorly substantiated. The DEIR claims that the "...project is anticipated to reduce impacts from aviation activity through a reduction in empty planes that currently fly to and from Hanscom to meet passenger demand." [DEIR 1-1] However, the methodology used to support this claim is weak. This poorly supported prediction undermines many of the claims made throughout the document about project impact (See Appendix A). The DEIR relies on proxy data about length of flight, time on the ground, and whether a plane is hangared at Hanscom to infer whether a flight is a ferry flight. While the use of a model composed of proxy data is an accepted approach to predictive modeling, the first step in determining if the model is plausible is to compare the modeled data with confirmatory, real-world data. No evidence of confirming the accuracy of the model is shown. Nor is any reference cited to support the model from research or industry best practices. As it stands, predictions of how hangar construction would affect the prevalence of ferry flights cannot be relied upon. Finally, not

¹<https://www.federalregister.gov/documents/2023/01/09/2023-00158/national-environmental-policy-act-guidance-on-consideration-of-greenhouse-gas-emissions-and-climate>

considered in the DEIR is the possibility that the project will induce reverse ferry flights from customers who wish to fly from other nearby airports but can't obtain hangar space there.

We note the independent analysis undertaken by the firm Industrial Economics, Inc, prepared for The SPJE Coalition, comprising over 80 citizens, climate, and social justice groups. The IEC found that there were only three aircraft regularly ferrying to Hanscom, which was extrapolated to approximately 75 flights per year, in stark contrast to the DEIR's estimate of 3500 ferry flights per year.² The proponents need to redesign their model of ferry flight activity based on validated data before they can begin to predict the effects of providing increased jet storage space.

Another methodological problem concerns the prediction that providing new infrastructure will satisfy existing demand but not increase demand. An equally plausible prediction is that increased supply will induce new demand. We believe the business case for investing in the project is that it would not only satisfy existing private jet users but would itself attract new users. The expectation of increased demand for fuel is built into the proponent's plan to replace one existing fuel storage tank with four new 20,000-gallon jet fuel tanks and one 5,000-gallon AvGas underground storage tank. The DEIR uses the FAA's forecasted growth model of private jet travel as the basis for their claim that there will be no additional operations. However, residents are concerned that any new aviation activity over the status quo will exacerbate the climate crisis and do not accept the FAA projection as a valid baseline for comparison.

We want plausible predictions of the range of possible changes to aviation activity this project is likely to cause. The proponents need to provide a systematic, multipronged approach based on well-established research methods, both quantitative and qualitative. Studies need to include not only better detail about current private jet usage at Hanscom, but also the effects similar projects have had at other airports.

Increased risk associated with the project

Residents of the towns we represent believe the project will increase the likelihood of health risks due to aviation and construction activity; and will exacerbate the global climate crisis. Our concerns span a wide variety of risks that have significant scientific documentation of harm, but only some of which have been incorporated into aviation-associated regulations to date. The proponents discount the impact of regulated risks on the basis of their claim that aviation activity would not increase and generally skip discussion of those risks which are not currently regulated. MEPA needs to demand that all scientifically documented risks associated with the project, whether they are currently regulated or not, be fully enumerated. When this information is provided in combination with more realistic predictions of changes to private jet travel, the public and relevant government agencies will be better able to comprehend the magnitude of increased risk the project entails.

The Environmental Protection Agency recently finalized their findings that lead from aviation can be anticipated to endanger public welfare³. But, these established facts have not yet propagated to all aviation regulations. Some aircraft still use leaded AvGas and the proponents plan to store and sell it, despite this being a long-standing concern for HFAC^{4 5}. Unleaded AvGas that has been approved for all

²[https://saveourheritage.com/WP/Hanscom%20Impact%20Report%20\(04.05.24\).pdf](https://saveourheritage.com/WP/Hanscom%20Impact%20Report%20(04.05.24).pdf)

³<https://www.epa.gov/newsreleases/epa-determines-lead-emissions-aircraft-engines-cause-or-contribute-air-pollution>

⁴ <https://thebedfordcitizen.org/2021/04/hfac-focused-on-environmental-issues-in-april/>

⁵<https://thebedfordcitizen.org/2020/11/concerns-about-lead-in-aviation-fuel-raised-at-hanscom-field-advisory-commission>

piston engine aircraft (G100UL) is now available from Vitol⁶. “Vitol-produced G100UL AvGas is available to any airport or aviation fuel distributor” and should be deployed for all new aircraft fuel facilities, including this project. Noise, which is still treated as “an annoyance” by the Federal Aviation Authority, has been found in large public health studies to be a contributor to heart disease and physical stress^{7 8}. The health risks associated with ultrafine particles^{9 10} while alluded to in the DEIR are not included in projections, and governments have not yet established safe standards. HFAC itself has commissioned a baseline study of ultrafine particles in the vicinity of Hanscom Field ¹¹. Perhaps most seriously, we are coming to learn that private jet travel is the largest contributor per passenger mile of any form of transportation to the global climate crisis.¹² Aviation regulations have not yet caught up, and only address greenhouse gas emissions (GHGs) associated with takeoff and landing—which is a small percentage of their impact. The NEPA guidance from January 2023 provides a framework to properly disclose these impacts.

The project site contains or is close to a number of contaminated sites including three Superfund sites. The Air Force and Navy are working to clean up these sites, but the process is complex and not complete. The DEIR should explain how this project can be completed without disturbing contaminated earth or ground-water and be compatible with all anticipated cleanup actions.

Summary

This project—which dramatically increases capacity for storing and servicing private jets at Hanscom Field—also presents the likelihood of increasing health and climate risk. These risks are not counterbalanced with any significant services that benefit the general public. The DEIR itself is inconsistent, does not support its claims, contradicts state climate policy and ignores relevant scientific research. As such, the DEIR should not be accepted by MEPA as an adequate description of the environmental impacts of the proposed Hanscom North Airfield expansion project. HFAC requests that MEPA return the DEIR to the proponents in order that they may:

1. Base analyses and projections on the 2022 edition of the ESPR;
2. Correct or remove the discussion of ferry flights frequency;
3. Provide a rigorous analysis of how this expansion could affect the absolute number of private jet flights in and out of Hanscom Field based on established, validated methods;
4. Correct the invalid inferences detailed in Appendix A and the concerns in Appendix B;
5. Expand reporting to include all potential health and climate consequences regardless of their regulatory status;
6. Fully explain how this project will avoid disrupting Superfund cleanup efforts;

⁶ <https://www.vitol.com/first-unleaded-octane-avgas-now-commercially-available/>

⁷ <https://apha.org/Policies-and-Advocacy/Public-Health-Policy-Statements/Policy-Database/2022/01/07/Noise-as-a-Public-Health-Hazard>

⁸ <https://pubmed.ncbi.nlm.nih.gov/33245107/>

⁹ <https://www.nationalacademies.org/our-work/health-risks-of-indoor-exposures-to-fine-particulate-matter-and-practical-mitigation-solutions>

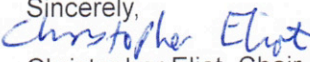
¹⁰ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7156741/>

¹¹ <https://theconcordbridge.org/index.php/2024/01/05/concord-joins-towns-studying-hanscom-field-hangar-expansion/>

¹² https://www.faa.gov/sites/faa.gov/files/2021-11/Aviation_Climate_Action_Plan.pdf

7. Reconcile any claims that the project will not increase operations with the need to dispense 15,000 gallons of jet fuel per day;
8. Incorporate use of G100UL, now produced by Vitol¹³, in place of leaded AvGas or provide a satisfactory explanation why this is not feasible
9. Better explain why the project goals cannot be met by other regional airports;
10. Require GHG analysis following the January 2023 NEPA guidelines.

When this work is complete the proponents should resubmit the DEIR for reevaluation by the community and MEPA.

Sincerely,

Christopher Eliot, Chair
Hanscom Field Advisory Commission

¹³ <https://www.vitol.com/first-unleaded-octane-avgas-now-commercially-available/>

APPENDIX A

The disputed claims about ferry flights pervasively affect the DEIR analysis. Removing the discussion of ferry flights will not correct the DEIR; the entire text must be revised to eliminate claims dependent on the disputed claims about ferry flights. Many specific examples from the text are listed here, but this listing may not be complete. Typos in DEIR text are quoted without correction.

- DEIR 1-3 “Based upon input from existing users, aircraft owners and operators waitlisted to store their aircraft at Hanscom, there are currently numerous operators that fly empty aircraft into Hanscom to pick up passengers and fly empty aircraft out of Hanscom after dropping off passengers.”
- DEIR 1-3 “Under the 2030 Build Condition, the Project has the potential to reduce a portion of the estimated 3,543 annual ferry flights, which would result in a two to three percent reduction in overall flight operations at BED. “Here the claim softens to “a portion of the estimated 3,543” flights, not all of them. There is no analysis of what portion. Under questioning at the Feb 20, 2024 HFAC meeting Kate Larson, from HMMH agreed that this portion was something between 0% and 100%, which is an inadequate analysis to properly understand the impact of this project.
- DEIR 1-9 “By providing the facilities needed to accommodate the existing demand, the Project is expected to result in a reduction in ferry flight operations and reduced associated air emissions, including GHG emissions, and no significant change in noise (Section 1.5.2).” Here the logic changes again, and the DEIR is claiming full credit for the unverified reduction in ferry flights.
- DEIR 2-4 “A notable difference in the 2030 Build Condition forecast is the reduction in flight operations, which the analysis shows is due to the Project’s ability to reduce the necessity of ferry flights by providing aircraft storage at Hanscom.”
- DEIR 4-1 “Potential elimination of ferry flights as a result of the Project would reduce regional air emissions and noise impacting EJ populations within the vicinity of the Project Site currently.”
- DEIR 4-9 “The air quality analysis shows that the Project will result in a decrease in criteria pollutant emissions for all pollutants from aircraft operations compared to the No-Build Condition except PM10 and PM2.5, which can be attributed to the expected reduction in ferry flights.”
- DEIR 8-1 “As discussed further in Chapter 2 – Aviation Activity Levels, while the Proponent cannot control Hanscom flight activity, the analysis shows the Project is expected to reduce overall annual aircraft activity by two to three percent.”
- DEIR 8-1 “Due to the anticipated reduction in ferry flights aircraft most air emissions studied are anticipated to be lower when compared to the 2030 No-Build Condition, including GHG emissions from aircraft operations due to a reduction in ferry flights.”
- DEIR 8-6 “The 2030 Build Condition is based on the 2030 No-Build Condition, but assumes a decrease in the number of ferry flights and ground activity from the Project, as depicted in Figure 8.2.”
- DEIR 8-10 “Importantly, the Project will result in lower emissions of criteria pollutants from aircraft operations due to reduction in ferry flights compared to the No-Build Condition.”
- DEIR 8-11 “Table 8-5 shows a slight increase in overall operational GHG emissions compared to the No-Build Condition. The greatest decrease in GHG emissions are expected to be associated with the aircraft operation emissions, which are attributed to a decrease in expected ferry flights.”
- DEIR 8-12 “As Table 8-6 shows, the Project is expected to result in a net reduction in CO, VOC, NOx, SO2 and Lead emissions, and a very small net increase in PM10 and PM2.5 emissions — all of which fall well below the established maintenance area de minimis thresholds for all pollutants. Therefore, the net change in operational emissions would not result in a significant air quality impact.”

- DEIR 9-25 “The Project is not subject to a full transportation impact analysis, so a full mobile source emissions analysis consistent with the MassDEP Guidelines for Performing Mesoscale Analysis of Indirect Sources was not possible.” If the disputed ferry flight claim is removed, the project might be subject to a full transportation impact analysis.
- DEIR 11-9 “As described in Section 8.2 of Chapter 8 – Noise and Air Quality, future aircraft noise levels with the Project Site in place are expected to remain comparable to current and future No-Build operations.”
- DEIR 11-9 “As described in Section 8.3 of Chapter 8 – Noise and Air Quality, due to an anticipated reduction in ferry flights, the Project is not expected to result in an increase in aircraft air emissions; aircraft air emissions are anticipated to be lower than the 2030 No-Build Condition.”

Appendix B

There are numerous inconsistencies, unclear or questionable claims in the DEIR, listed below, which have not been included in the primary narrative of this letter.

Page	Claim	Rebuttal
1-3	All three FBOs have reported to Massport that the demand exceeds hangar capacity and have been forced to place customers seeking hangar space for their aircraft on waiting lists.	This indicates the project will facilitate an increase in operations.
1-3	It is important to note, based on operations projections, Massport anticipates that business air travel will continue to use Hanscom whether the Project is constructed.	Which makes it seem that the airport capacity is already adequate. If true, why is the expansion required?
1-12	That existing storage tank will be removed and replaced with four new 20,000-gallon Jet A Fuel/SAF and one 5,000-gallon AvGas underground storage tanks. These fuel tanks have been sized to address the demand of existing flight operations and will have capacity to meet projected demand based on FAA forecasted growth models.	The sizing of fuel tanks is based on projected growth models, contradicting the claim that this project will not facilitate increased operations. The AvGas tank should only be used for unleaded AvGas, which is now commercially available: https://www.vitol.com/first-unleaded-octane-
1-12	Once the Project becomes operational, a significant portion of current fueling operations on the south side of the Airport will shift to the Project on the north side.	There is no evidence given in support of this claim.
1-13	While the emissions from the direct burning of SAF are similar to that of existing conventional jet fuel, the impact from the production, transportation, and distribution of SAF represents a much smaller environmental footprint than conventional jet fuel. SAF can also reduce direct emissions of particulate matter (PM) and sulfur (SOX), when compared to combustion of conventional jet fuel.	None of this is proven to be possible at scale.
2-7	The Proponent consulted with Massport and the FAA on the methodology to estimate the number of ferry flights. The analysis relied on data from the FAA System Wide Information Management (SWIM) data feed integrated into Massport's NOMS, which is also reported in the Hanscom Field ESPRs. Hanscom flight operations data from January 1, 2022 to June 30, 2023 were	HFAC requests access to this dataset so we can verify the computations.

2-8	Regarding GA hangar space at other locations off-site that may vacate and relocate to the Project, the Proponent is unable to predict the outcome of these facilities as it depends on the decisions of other airport managers and/or hangar owners and, therefore, is not accounted for in the environmental impact assessment for the Project.	There must be a range of likelihood. Just because the DEIR cannot precisely quantify this effect does not justify assuming it is zero.
Figure 2-4	Fractional ownership accounts for 45% of ferry flights.	Fractional ownership systems do not have a home base and do not engage in ferry flights. They are "roving" aircraft that go where they are needed. They will not put these planes in a hangar anywhere so none of these will be reduced by adding hangar space. This statement alone shows that the DEIR overstates the number of ferry flights by at least
3-2	A discussion on the feasibility of mandating that all hangars within the development house only fossil fuel-free aircraft. (Section 3.2.3)	Section 3.2.3 does not discuss this alternative in a meaningful way.
3-9	The increase in overall aircraft activity at Hanscom Field due to the Preferred Alternative (which represents the Reduced Build Alternative) is considered de minimus with or without consideration of ferry flights	The DEIR does not provide a justification for this claim.
4-4 4-5	Per the requirements stated under Section II of the Public Involvement Protocol, "Measures to Enhance Public Involvement Prior to Filing ENF," the Proponent has made a meaningful effort to engage with the community through expanded outreach. A high-level project overview was presented at the June 22, 2021 meeting of the Hanscom Field Advisory Commission (HFAC), which serves as a liaison between Massport and the towns surrounding Hanscom Field. Project updates were provided at each subsequent monthly HFAC	There was no HFAC meeting on June 22, 2021. The June 29 HFAC (which had been rescheduled from June 15th) included two brief statements about the land swap and the potential North Apron bidding. (Minutes of the meeting were mislabeled as June 22). The full scope of the project was not disclosed at this time. Contrary to the claim that the Proponent made a meaningful effort to engage with the community, the project was presented piecemeal and the scope was kept secret until disclosure was required by the ENF filing.

4-8	No adverse impacts from noise are anticipated as a result of the Project (see Section 8.2.3 of Chapter 8 - Noise and Air Quality, for more information).	The FAA's 65 dBA DNL is not a safe noise exposure level for the American public < https://pubs.aip.org/asa/poma/article/50/1/040007/3268631/The-FAA-s-65-dBA-DNL-is-not-a-safe-noise-exposure?searchresult=1&mc_cid=d65010b251 > The Federal Aviation Administration's (FAA) 65 A-weighted decibel (dBA) day-night average sound level (DNL) is not a safe noise exposure level for the American public. In response to the 1976 Aviation Noise Abatement Policy, using annoyance as the measure of aviation noise effects on the public, the FAA adopted 65 dBA as the threshold of significant noise exposure, below which residential land uses are compatible. The Environmental Protection Agency, however, calculated that the safe noise levels for the public are DNL =<55dB to prevent outdoor activity interference and annoyance and =<45 dB to prevent indoor activity interference and annoyance. Noise has both auditory and non-auditory health effects. Commercial and general aviation noise exposure have not been shown to cause auditory disorders in the public, but do have non-auditory health effects. Noise exposure is stressful and nighttime noise disrupts sleep. The associations between aviation noise exposure and its adverse health effects are well
4-11	The planned temporary construction truck route (via I-95, Exit 49B, onto Route 4/225 then turning onto Hartwell Road to access the Project Site) does not run adjacent to the EJ block groups within the DGA.	This route is impossible. Route 4/225 does not connect with Hartwell Road. It requires a leg along route 62 or Hartwell Ave. The difference between these possible routes is important.
4-14	The Town of Lincoln, which falls within the one-mile radius but does not contain any EJ block groups within the one-mile radius and does not meet the Vulnerable Health EJ criteria for heart attack, elevated blood lead, low birth weight, or pediatric asthma.	Air Force housing located within the Town of Lincoln is considered an EJ block.
7-1	The Proponent is committed to reducing outdoor water use by 50 percent, and will maximize water efficiency within buildings to reduce the burden on the municipal water supply and wastewater systems.	Reduce 50 percent from what?

9-4	The Secretary has determined that the Commonwealth's economy-wide emissions interim goal will be a 33 percent reduction from 1990 levels in 2025, and a 50 percent reduction in 2030. It is the intent of the Project to advance the Commonwealth's climate agenda through sustainable design and the implementation of enabling infrastructure to support future green	This claim seems to be inconsistent with the intention to dispense 15,000 gallons of jet fuel per day.
9-27	The Project is not expected to be a substantial source of vehicle trips and consequently is not expected to be a substantial source of landside mobile source emissions. The Project is only estimated to produce 194 vehicle trips per day, of which only 2 trips are estimated to	There will be more than 2 trucks per day. There will be 1-2 fuel delivery trucks, one UPS truck, trash pickup, plus food vendor deliveries.
11-1	The Project Site currently does not contain any National or State Register-listed properties.	However, it is adjacent and will affect Great Meadows National Wildlife Refuge and Minuteman National Park.