A. MEPA Certificate and Responses to Comments

This Appendix includes the follow Secretary Certificates and Responses to Comments:

Full versions of filings and additional Secretary Certificates can be found on Massport's website through the following link: https://www.massport.com/environment/project-environmental-filings/boston-logan.

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Secretary of the Executive Office of Energy and Environmental Affairs Certificate on the Logan Airport 2022 Environmental Status and Planning Report (ESPR) and Massport's Responses to Comments Raised in the Certificate

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October 18, 2024

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
2022 LOGAN AIRPORT ENVIRONMENTAL STATUS AND PLANNING REPORT

PROJECT NAME	: 2022 Environmental Status and Planning Report (ESPR)
PROJECT MUNICIPALITY	: Boston/Winthrop
PROJECT WATERSHED	: Boston Harbor
EOEA NUMBER	: 3247
PROJECT PROPONENT	: Massachusetts Port Authority
DATE NOTICED IN MONITOR	: June 7, 2024

As Secretary of Executive Office of Energy and Environmental Affairs (EEA), I hereby determine that the Environmental Status and Planning Report (ESPR) submitted on this project **adequately and properly complies** with the Massachusetts Environmental Policy Act (MEPA; M.G.L. c. 30, ss. 61-62L) and Section 11.06 of the MEPA regulations (301 CMR 11.00). However, as described below, I am directing Massport to participate in a work group process to consider supplemental community mitigation measures for environmental justice neighborhoods surrounding the Airport, with the goal of forming recommendations for specific actions within one year. Massport should report on the status of these work group discussions in its next Environmental Data Report (EDR) submission. A-1 A-2

Logan Airport Environmental Review and Planning

EDR and ESPR Reporting Process

The environmental review process for Logan Airport (the "Airport"), first established in the 1970s, has been structured to occur on two levels: airport-wide and project-specific. The

Environmental Status and Planning Report (ESPR) has evolved from a largely retrospective status report on Airport operations to a broader analysis that also provides a prospective assessment of long-range plans. It has thus become, consistent with the objectives of the MEPA regulations, part of the Massachusetts Port Authority's (Massport) long-range planning process. The ESPR provides a "big picture" analysis of the environmental impacts associated with current and projected activity levels, and presents a comprehensive strategy to avoid and minimize impacts. The ESPR analysis is supplemented by (and ultimately incorporates) the detailed analyses and mitigation commitments of project-specific Environmental Impact Reports (EIRs). The ESPR is generally updated on a five-year basis. The previous ESPR for the year 2017 (2017 ESPR) was filed in August of 2019. The Scope for the 2022 ESPR was included in the Certificate on the 202/2021 EDR which was issued on January 30, 2023.

EDRs are filed in the years between ESPRs. The EDR is a retrospective document that is generally filed annually and identifies environmental impacts based on actual passenger activity and operations. The EDR provides opportunities to compare activity levels and impacts against the prior year's EDR, as well as projections set forth in the five-year ESPR. In more recent years, the EEA Secretary has allowed the filing of combined EDRs (e.g., 2018/2019 EDR and 2020/2021 EDR). The 2020/2021 EDR responded to the Certificate on the 2018/2019 EDR. I note that recent delays in the filing of EDRs have led to concerns about data lags, as each EDR is sometimes filed up to a year after the end of the time period over which the EDR is required to report data. With extended comment periods necessitated by the increasing complexity of these filings, lengthy MEPA reviews of EDR filings have also delayed scoping for future EDRs and ESPRs. As discussed below, given that this 2022 ESPR is again being issued towards the end of 2024 (almost a full two years after the close of 2022), I am allowing the filing of another combined 2023/24 EDR (to be filed sometime in 2025) to alleviate concerns about a further lag between the time when data become available and when they are reported in public disclosures. I am also instructing Massport, as part of the 2023/24 EDR, to propose innovative solutions to address this issue, for instance, by making real-time data available to the public through a public-facing portal. As the availability of real-time data could reduce the need and public demand for multiple complex MEPA filings and associated reviews on an almost-annual basis, Massport could consider a simplified format for future EDRs and ESPRs. Alternatively, one ESPR could be submitted on a five-year cycle with one EDR as an interim update in year 2 or 3, provided that real-time data and key metrics (e.g., on a dashboard with certain agreed-upon metrics) are made available with more frequent updates on the Massport website. Further input should be gathered through the work group on community mitigation referenced below.

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As reiterated in prior ESPR certificates, these EDR and ESPR reports are intended to subject Logan Airport to comprehensive and regular MEPA review, including opportunities for public comment on cumulative impacts from all aspects of Airport operations. As stated in a companion Certificate issued on October 11, 2024 for Hanscom Field (EEA #5484/8696), I acknowledge that Logan EDRs and ESPRs are not intended to analyze the impacts of specific projects proposed at Hanscom. However, these documents themselves are a form of environmental review, and are prepared to comply with the overarching directive of MEPA that Agencies, including state authorities such as Massport, review and evaluate the impact on the natural environment of all works, projects or activities conducted by them, and to "use all practicable means and measures to minimize damage to the environment." To that end, ESPRs

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and EDRs should include, in addition to a cumulative inventory of all Airport operations and associated impacts, a description of all practicable measures planned to avoid or minimize, and where appropriate, to mitigate such impacts within the confines of Massport's legal authority. Consistent with the 2021 Act Creating a Next-Generation Roadmap for Massachusetts Climate Policy ("Climate Roadmap Act"), St. 2021, c. 8, §§ 55-60, these measures should also consider environmental justice (EJ) principles by fostering the equitable distribution of environmental benefits and burdens in impacted neighborhoods, while considering any identified unfair or inequitable environmental burdens borne by surrounding EJ populations. More specific analysis required for future EDRs and ESPRs will be set forth in formal scoping documents, including the Scope below for the 2023/24 EDR. A-6 A-7

2022 ESPR

At the time of the 2017 ESPR filing, it was projected that Logan Airport would reach 50 million annual passengers in the next 10 to 15 years (the Future Planning Horizon) until 2028 to 2032. As noted in the 2018/19 EDR Certificate, the 2019 passenger activity level represented an all-time high of 42.5 million, an increase of 3.9 percent over 2018 (40.9 million) and future trends were on track to exceed the 50 million annual passengers projected in the 2017 ESPR much sooner than the previously identified 10-15 year time frame. The 2022 ESPR is based on a Future Planning Horizon ending 2032 to 2037, and projects an increase to 53.5 million annual passengers in that time frame, seven percent greater than the projection in the 2017 ESPR. The 2022 ESPR reports that a return to 2019 passenger levels is expected by 2025. While the number of aircraft operations is projected to increase by a lesser amount (reported as 2% increase over 2017 ESPR projections, largely due to so-called "load factors" or the number of passengers per flight), total operations are still projected to exceed 2019 levels over the Future Planning Horizon and show a 31 percent increase over 2021 levels.

These trends in passenger and flight activity levels demonstrate that, while activity levels still remain below the all-time highs in 2019, they show clear recovery from COVID-19 conditions and a trajectory of exceeding 2019 levels by as early as 2025. I note that associated GHG and air emissions, while also showing an upward trend, are projected to increase at a slower rate; specifically, GHG emissions are projected remain below 2019 levels over the Future Planning Horizon, though other air pollutants, notably NOx, are predicted to increase markedly. The slower pace of GHG and air emissions increases appears to be due to the variety of measures in place and planned to reduce emissions impacts of Airport operations, and Massport should be applauded for striving to reduce all "Scope 1" emissions (albeit a small percent of total) to 0 by the Future Planning Horizon. Consistent with the Scope issued in the 2020/2021 EDR, the 2022 ESPR indicates that Massport has taken concrete steps to implement planned capital projects or programs that were deferred from 2018-19 due to pandemic conditions. These include several planned capital projects that were asserted to provide environmental benefits and reduce impacts associated with Airport operations, such as: the Logan Airport Parking Project (EEA# 15665) (5,000 new parking spaces, solar photovoltaic system, and electric vehicle charging stations), Phase 2 of Terminal E Modernization (EEA# 15434) (3 new terminal gates), several high-occupancy-vehicle investments (addition of 1,000 new spaces to Framingham Logan Express Garage (EEA# 16168), opening a new Logan Express suburban location, and implementing a

2nd urban Logan Express Service at North Station. The specific emissions reductions associated with these projects are not identified in the 2022 ESPR.

The Scope issued with the 2020/2021 EDR also required that Massport consider a framework and planning process for community mitigation, in collaboration with surrounding EJ populations and other community stakeholders. Both the 2017 ESPR Certificate and the 2018/2019 EDR Certificate indicated that Massport should ensure that community benefits are being provided commensurate with increased growth and associated impacts, and strongly urged that additional mitigation measures be considered if actual growth at the Airport exceeds projections in the ESPR. Prior Certificates have noted Massport's efforts, in response to a Department of Public Health (DPH) study conducted in 2014, to support public health services in the surrounding neighborhoods, including contributions to Chronic Obstructive Pulmonary Disease (COPD) treatment at a local health center. In the 2022 ESPR, Massport indicates that it conducted more intensive community engagement during preparations for this filing, and it has participated in small group discussions led by the MEPA Office since December 2023. In additional correspondence with the MEPA Office, Massport commits to undertaking the following improvements beyond existing measures to further minimize impacts and improve transparency:

- Report on Massport's Net Zero Plan accomplishments and progress on an annual basis A-8
- In accordance with the Secretary's Plan and the Report of the Climate Chief on SAF, report on Massport's work in establishing a Commonwealth multi-agency working group to expedite the adoption of SAF at Massport and Massachusetts' airports, including production and delivery. A-9
- Provide updates on ongoing FAA sponsored ultrafine particulate (UFP) research. Incorporate and report on Massport funded MCAC study that is measuring UFPs around Logan Airport A-10
- Provide details on Massport's Residential Sound Insulation Program (RSIP). A-11
- Create a new Logan ESPR/EDR landing page on Massport's website. The new webpage will include links to existing ESPR/EDR documents, public notices, and links to available data resources A-12
- Continue to work with MEPA to refine and improve the Environmental Justice and public health analysis included in the ESPR A-13
- Continue to monitor and report on idling at Logan Airport's terminal curbs. Establish a curb idling reduction plan with input from the MEPA Office and stakeholders. Present updates to MEPA and stakeholders at regularly scheduled briefings A-14
- Include additional details in the ESPR on implementation and tracking of project-specific environmental benefits and mitigation (e.g., project related VMT reductions, GHG reductions, etc.) A-15
- Continue to meet with MEPA and stakeholders on data requests, accessibility, and availability, including ways to improve ESPR/EDR format A-16

I note that comments received on the 2022 ESPR continue to criticize Massport's outreach efforts and urge a stronger mitigation program to address impacts on surrounding communities commensurate with the increase in flight and passenger activity levels. As discussed below, while the 2022 ESPR included preliminary information related to

Environmental Justice (EJ) Populations in accordance with new MEPA EJ protocols released in January 2022, it did not provide comprehensive analysis of potential impacts to these neighborhoods. As further described below, Massport should continue its efforts to strengthen and improve relations with surrounding communities, especially those representing EJ populations located in close proximity to Logan Airport. Even a preliminary review of environmental and public health screening indices shows that these indicators are substantially elevated in areas directly adjacent to Logan Airport. I am also aware that the U.S. Environmental Protection Agency (EPA) is leading a stakeholder effort to consider the "cumulative impacts" of historic and current activities on overburdened communities in Chelsea, including from the ongoing impacts of Logan Airport operations. Massport should report on any findings and action items that may result from that effort. A-17 A-18

As noted, the 2022 ESPR shows recovery trends post-COVID and flight and passenger activity levels are projected to exceed 2019 levels as early as 2025, with commensurate (though somewhat smaller) increases in GHG and air emissions. In light of these trends, and the increased focus on EJ considerations during MEPA reviews since 2022, I am also directing Massport to participate in a work group, facilitated by MEPA and the EEA EJ Office, to consider supplemental mitigation measures to address public health impacts of Airport operations on surrounding EJ populations. The work group should engage public health experts to advise on effective intervention strategies to address air quality impacts and aim to form recommendations within one year for specific actions to be taken by Massport within the scope of its legal authority. Such actions could include partnerships with local or municipal organizations interested in HEPPA filters, establishment of a curb idling reduction plan, enhanced community air monitoring in partnership with MassDEP and other air pollution sources, or other similar interventions to directly address the public health impacts of degraded air quality around the Airport. The work group should also consider improvements to Massport's EDR and ESPR reporting process, including through availability of real-time data and abbreviated formats for future filings. Massport is directed to provide administrative support and facilitate the convening of work group meetings, in consultation with the MEPA Office. The 2023/2024 EDR should report on the results of this work group process. In addition, consistent with the approach set forth in the 2017 EPSR, if actual growth in passenger and/or aircraft operations outpace forecasts during a reporting period, I expect that additional mitigation and policies and strategies will be considered to address the proportional growth in impacts. A-19 A-20 A-21 A-22 A-23 A-24

Review of the 2022 ESPR and Scope for the 2023/2024 EDR

While the 2022 ESPR is generally responsive to the Scope, comments from stakeholders highlight several key areas where the document does not fully respond to specific items in the Scope on the 2020/2021 EDR and fails to provide substantiating data to back up more general claims. While the 2022 ESPR introduced a new, more focused format with emphasis on current updates on existing initiatives, new programs and planning, and future forecasting, rather than prior initiatives and accomplishments, comments from stakeholders continue to cite the difficult of reviewing filings due to their length and format. The 2022 ESPR included a new chapter (Chapter 2) which reports on Massport's Environmental Justice (EJ) practices, community outreach and sustainability including initial data from Massport's "Roadmap to Net Zero"

introduced in March of 2022.[1] The 2022 ESPR describes public involvement activities conducted prior to filing. It discusses the continued progress towards a recovery to pre-COVID-19 pandemic activity levels and operations and the status of future projects and programs including those put on hold during the pandemic. The technical studies (included as a separate Technical Appendices document) in the 2022 ESPR included reporting and analysis of key indicators of airport activity levels, the regional transportation system, ground access, noise, air and water quality, environmental management, and project mitigation tracking.

As noted in the 2020/2021 EDR Certificate, prior Massport filings indicated a rapid increase in passenger activity levels and aircraft operations during the years 2018 and 2019 due to strong economic conditions at that time. By 2019, air passenger activity levels at Logan Airport had reached an all-time high of 42.5 million and were on track to exceed the 50 million annual passengers projected in the 2017 ESPR much sooner than the previously identified 10-15 year time frame. However, in March 2020, flights in and out of Logan Airport were dramatically reduced and passenger levels dropped by over 90 percent at the peak of the COVID-19 pandemic in the spring and summer of 2020. The 2018/2019 EDR indicated that total flight operations remained reduced by approximately 50 percent, and passenger levels by approximately 70 percent, during the reporting period as compared to January through October 2019, though strong signs of recovery were evident as of the end of 2021 to early 2022 as documented in the 2020/2021 EDR and corresponding Certificate.

The 2022 ESPR updated the cumulative impacts of passenger growth and associated ground and aircraft operations based on revised forecasts, documented trends, and environmental impacts. It reviewed methodologies and metrics related to growth projections and associated impacts and mitigation and provided a comparison to the FAA Terminal Area Forecast (TAF) on which Massport's projections are based. The next EDR will analyze calendar years 2023/2024 and as directed above, should propose a simplified format that could be accompanied by more frequent updates of available data through the Massport website. This reporting format is in response to several comments which have noted the complexity and length of the reporting documents and difficulty in responding to lengthy, data-heavy analyses. Due to the lag in reporting noted above, stakeholders have expressed a need for more real-time data for environmental factors (air, noise, traffic, flights) to provide communities in close proximity to the Airport with information necessary to educate and contribute to the analysis of cumulative impacts. Massport has indicated that this information (to the extent is available) will be part of an EDR/ESPR webpage which is being developed to provide community stakeholders and the public a better understanding of future filings and access to collected environmental data in one location. The 2023/2024 EDR should report on the status of this website or dashboard and the data that is/will be available.

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The 2023/2024 EDR must include information on the environmental policies and planning that form the context of environmental reporting, technical studies, and environmental mitigation initiatives against which projects at Logan Airport can be evaluated. This should include identification of the cumulative effects of Logan Airport operations and activities,

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[1] The most current Massport Sustainability, Net Zero, and Resiliency Reports can be found at: https://www.massport.com/sustainability. Massport's next sustainability and resiliency report covering 2022 and 2023 will be published in late 2024.

compared to previous years, as appropriate. Review of the 2022 ESPR reveals that some reports/data summarized in the 2022 ESPR are not yet available for review, including the results of the 2022 Air Passenger Ground-Access Survey and the 2022/2023 Sustainability and Resiliency Report. The 2023/2024 EDR should include timely reporting of related environmental data to ensure a full picture of the information summarized in the report. The 2022 ESPR also includes updated timelines for implementation of deferred mitigation projects to ensure that mitigation efforts keep up with increasing rates of travel as pandemic restrictions ease and travel resumes. The 2023/2024 EDR should provide information on EJ populations in proximity to the Airport and summarize relevant information on community health data and outreach as discussed further below. A-27 A-28 A-29

The 2023/2024 EDR must include copies of all ESPR and EDR Certificates and a distribution list for the 2023/2024 EDR. Supporting technical appendices should be provided as necessary. As noted previously, the 2023/2024 EDR should propose a streamlined process for environmental reporting, which may be supplemented through real-time data and other metrics made available with more frequent updates through the Massport website. A-30 A-31

Public Comments

I received comments from two municipalities (Boston and Milton) and other individuals and organizations that identified impacts associated with operation of the Airport on surrounding areas, and expressed concern that impacts will increase with the anticipated growth in passengers and aircraft operations. Many of the commenters took issue with the format and complexity of the ESPR and with the lag in time between filings which results in a lack of real-time data for understanding current impacts. Among the key issues and requests identified in comments are the following:

- Coordinate with stakeholders to revamp the ESPR format to reduce the non-relevant information; condense information into smaller discrete subject sections, and make them more readable
- EJ outreach should include an opportunity for community input on form and content of future EDR/ESPRs prior to their preparation
- Provide language interpretation services for languages spoken by at least five percent of a census tract's population who have Limited English Proficiency (LEP)
- Mitigation measures should be linked to actual passenger and flight activity levels rather than relying on forecasts which, according to commenters, have historically underestimated this growth
- Provide more real-time, monthly data to reflect current trends related to operations and passenger growth
- Make data available to the public in a format that is easily accessible, and which allows impacted community members to ask questions of the data (excel or similar format)
- Include a stand-alone chapter on climate resilience focused on plans and projects that actively address the risks of extreme heat, intense precipitation, and coastal flooding, including efforts focused on employees, guests, operations, assets and adjacent properties

- Recommendation for improved Logan Express service including a new Logan Express site at the former I-90 toll plaza and consideration of remote TSA security screening locations for Logan Express passengers
- Provide more data, methodology and quantified impacts/benefits when reporting TDM and HOV information including RideApp
- Implement measures to reduce curbside idling by vehicles waiting to pick up passengers
- Provide the results of the Ground Access Survey to inform recommendations to improve TDM and HOV programs
- ESPRs should measure emissions of ultrafine particulates (UFP) and provide a comprehensive assessment of UFPs building upon the methodologies and results of studies under way by Tufts University
- Massport should be required to file an Environmental Notification Form (ENF) with MEPA for each new service route added at Logan
- The 65 decibel (dB) Day-Night Sound Level (DNL) (detailed below) noise standard is antiquated and does not reflect actual impacts to area residents, including human health impacts, and Massport should adopt a lower standard to assess impacts of the airfield
- 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 (Area Navigation)
- Adoption of a ground level air quality monitoring system using a high resolution network of sensors to inform air quality mitigation, strategies, and policies
- Address lead pollution impacts in future EDR/ESPRs. Massport should discuss the availability of unleaded aviation fuel and its usage

Massport should consider these comments and suggestions in preparing the 2023/2024 EDR. I encourage Massport to provide responses as part of the subject matter sections of the 2023/2024 EDR, to provide context to commenters on this document, and to explain how recommendations have been incorporated into the Scope. I encourage Massport to evaluate feasible suggestions for increased analysis and monitoring of air emissions, noise and traffic impacts, and to actively consider ways to make real-time tracking data available to the public. A-32 A-33

Environmental Justice

Logan Airport is within two EJ populations designated as Minority and is within one mile of 62 EJ populations characterized as Minority, Income and English Isolation (8); Minority and English Isolation (14); Minority and Income (7); Minority (30); and Income (3). Within the census tracts containing the above EJ populations, within one mile of the project site Spanish/Spanish Creole, Chinese, Korean and Arabic are identified as those spoken by 5% of more of residents who also identify as not speaking English very well. Within 5 miles of the site, six additional languages were identified including Haitian Creole, Portuguese, Vietnamese, Russian, and Mon-Khmer.

Public Engagement

As noted in 2022 ESPR, since 2013, Massport has been advised by the Massachusetts Port Authority Community Advisory Committee (MCAC) (see St. 2013, c. 46, §§ 55, 82, as amended), which consists of representatives from 35 communities potentially impacted from Airport operations and located within 5 or more miles around the Airport. Massport relies on input from the MCAC as a government representative for the 35 communities surrounding Massport facilities. Meetings of the MCAC are open to the public through both remote and in-person participation. Meetings are posted in advance of the meeting date and recordings and meeting minutes are available on the MCAC website.[2] Chapter 1 of the 2022 ESPR including the *Introduction and Executive Summary* was translated into Spanish, Portuguese, Simplified Chinese and Haitian Creole. In addition, the 2022 Massport provided a "Babel Notice" for five additional languages. A Babel Notice informs readers, in English and other languages, how to access language translation services and how to request project materials in a specific language. The additional languages included Vietnamese, Russian, Mon-Khmer, Arabic, and Korean. At public meetings, Massport offered online interpretation services for Spanish (without advance request), and additional languages were available upon request.

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The 2022 ESPR indicates that the "designated geographic area" (DGA) (as defined in 301 CMR 11.02) should be defined as one mile for future filings. Because ESPRs are distinct from standard project reviews, it is not necessary to define a formal DGA. However, to be consistent with other MEPA reviews, I find it appropriate for Massport to continue public engagement efforts, at minimum, over a 1-mile radius around the outer perimeter of Logan Airport. As noted below, analysis of noise impacts provided in the ESPR shows that potential impacts over the Future Planning Horizon could extend out to over 2 miles from the runway ends, when considering the most conservative 60dB DNL and TA contours. In addition, Massport has noted the existence of ongoing studies of UFP around the Airport, and preliminary findings from related studies at Hanscom Airport are stated to show high levels of UFP around the Airport. Consistent with the approach taken at Hanscom Airport, Massport should identify any potential areas of additional impact around the Airport based on these and other ongoing studies, and conduct additional focused outreach to such areas. Massport should continue to engage with the MCAC and local organizations, and take recommendations for additional methods and areas of public engagement for future ESPRs and EDRs.

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As required by the Scope, the 2022 ESPR included a public engagement plan which provided opportunities for early input on the development of the filing as well as opportunities for comment once the ESPR was filed. Outreach efforts were summarized in Appendix E of the filing and included the following:

[2] Massport CAC | Massachusetts | The Library

Table E-1 Environmental Justice and Community Outreach

Date	Meeting/Outreach Type
Prior to the Filing of the ESPR	
6/26/2023	Public Information Session – Technical Analyses Methodologies and Forecasts[1]
11/28/2023	MEPA Comment Review Meeting
12/12/2023	MEPA and Advocacy Group Meeting
1/17/2024	Public Information Session – Preliminary Findings[1]
3/19/2024	MEPA Meeting
Following the Filing of the ESPR	
6/26/24	Public Post-filing Meeting
Massport-wide, Ongoing	
Regular Meetings with the Massport Community Advisory Committee (CAC)	
Regular Meetings with City of Boston Officials	
Regular Meetings with the Winthrop Town Council	
Regular Meetings with the Harborview Neighborhood Association	
Regular Meetings with the Jeffries Point Neighborhood Association	
Regular Meetings with the Orient Heights Neighborhood Council	
Regular Meetings with the Piers Park Advisory Committee (PierPAC)	

1 Indicates a copy of this presentation is included in the following section.

The Certificate on the 2020/2021 EDR indicated that the public engagement plan should reflect community-based strategies beyond formal public hearings; however, comments from stakeholders on the 2022 ESPR note that the public meetings were held in a similar format to prior EDR/ESPR meetings with the focus being Massport's presentation of information and data followed by an open comment period. The 2023/2024 EDR should prioritize engagement strategies that meet the community where they are, especially by holding meetings in more publicly accessible locations within the EJ communities most impacted by Airport activities. As previously stated, Massport should also explore alternative methods of involvement beyond formal public hearings, such as hosting "open house"[3] style public meetings, organizing small group discussions with stakeholders, or distributing community surveys to collect feedback. Additionally, Massport is encouraged to meet EJ community members where they already gather by hosting pop-up informational sessions at existing community events (e.g., community celebrations, farmer markets, and cultural events). Given the large percentage of households identified as having limited English proficiency (LEP) (almost half of EJ block groups within 1 mile of the Airport have over 20% of households who report limited English proficiency), the 2023/2024 EDR should also report on specific events planned/attended and strategies enacted to intensify engagement with members from these LEP populations.

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[3] Open house-style public meetings differ from traditional public meetings by offering a more flexible schedule. Instead of a fixed one- to two-hour agenda, the meeting space is made available for four to five hours, allowing residents to drop in to ask questions, share feedback, and receive updates at their convenience.

Baseline Assessment

The 2022 ESPR included a baseline assessment of existing "unfair or inequitable Environmental Burden and related public health consequences" impacting EJ populations in accordance with 301 CMR 11.07(6)(n)(1) and the MEPA Interim Protocol for Analysis of EJ Impacts. The baseline assessment included a review of the data provided by the Department of Public Health (DPH) EJ Tool regarding "vulnerable health EJ criteria"; this term is defined in the DPH EJ Tool to include any one of four environmentally related health indicators that are measured to be 110% above statewide rates based on a five-year rolling average.[4] According to the 2022 ESPR, the data surveyed indicate that 15 census tracts within one mile of Logan Airport exhibit rates of high childhood blood lead levels that exceed 110% of the statewide average; these 15 census tracts are within the municipalities of Boston, Chelsea, Revere and Winthrop. In addition, ten census tracts within one mile exhibit rates of low birth weight that exceed 110% of the statewide average; these census tracts are within Boston, Chelsea and Winthrop. At the municipal level, the following communities within one mile exceed 110% of the statewide averages for the noted of the four vulnerable EJ health criteria:

- Boston: low birth weight, pediatric asthma
- Chelsea: heart attack, elevated blood lead levels, low birth weight and pediatric asthma
- Revere: none
- Winthrop: elevated blood lead levels

The 2022 ESPR indicated that the following sources of potential pollution exist within 1 mile of the Airport, based on the mapping layers available in the DPH EJ Tool:

- Major air and waste facilities: 49
- M.G.L. c. 21E sites: 27
- "Tier II" toxics use reporting facilities: 52
- MassDEP sites with Activity and Use Limitations (AULs): 81
- Wastewater treatment plants: 10
- Underground storage tanks (USTs): 60
- EPA facilities: 3
- Road infrastructure: not identified
- MBTA Bus and rapid Transit: not identified
- Energy generation and supplies: 2 power plants

The 2022 ESPR also surveyed environmental indicators tracked through the U.S. EPA's "EJ Screen," which shows the indicators measured at the following percentiles for the identified EJ populations as compared to the MA statewide average. The 2022 ESPR indicates that the following indicators are elevated at 80th percentile or higher of statewide average within the identified EJ populations: Diesel Particulate Matter (DPM), Risk Management Plan (RMP) Proximity, Traffic Proximity, Hazardous Waste Proximity, and the Wastewater Discharge

[4] See https://matracking.ehs.state.ma.us/Environmental-Data/ej-vulnerable-health/environmental-justice.html. Four vulnerable health EJ criteria are tracked at the municipal level in the DPH EJ Viewer (heart attack hospitalization, childhood asthma, childhood blood lead, and low birth weight); of these, two (childhood blood lead and low birth weight) are also available at the census tract level.

Indicator. At least two of these indicators (DPM and Traffic Proximity) are directly related to air quality. The full list of 13 environmental burden indicators presented in the ESPR and their reported percentiles compared to the statewide average is provided in the table below. I note that, while PM2.5 and Ozone are not elevated above the 80th percentile, they are reported at the 74th and 73rd percentile, respectively.

Indicator	Exposure v. Risk	Percentile as Compared to MA Statewide Average
NATA Air Toxics Cancer Risk (lifetime exposure)	Risk/Hazard	3
NATA Respiratory Hazard Index Ratio	Risk/Hazard	49
NATA Diesel PM (DPM)	Potential Exposure	90
Toxic Releases to Air	Potential Exposure	60
Particulate Matter (PM2.5) (annual average)	Potential Exposure	74
Ozone (summer seasonal average, daily 8-hr max)	Potential Exposure	73
Lead Paint (% of housing built before 1960)	Potential Exposure	64
Traffic Proximity and Volume Count of vehicles (average annual)	Proximity/Quantity	86
Proximity to RMP (Risk Management Plan / hazardous waste cleanup) Sites	Proximity/Quantity	81
Proximity to TSDFs (Hazardous waste Treatment, Storage, and Disposal Facilities)	Proximity/Quantity	90
Proximity to NPLs (National Priority List / Superfund sites)	Proximity/Quantity	23
Underground Storage Tanks (count/km^2)	Proximity/Quantity	71
Wastewater Discharge Toxicity (based on NPDES permitted discharge locations)	Proximity/Quantity	96

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The 2023/2024 EDR should present an updated analysis of existing environmental conditions and public health risk within EJ populations. This updated analysis should present data on all air quality and climate indicators presented in MassDEP's Cumulative Impact Analysis framework (which overlap in large part with EJ Screen data).[5] Indicators above the 80th percentile as compared to statewide averages should be reported for each individual census tract (not for entire 1-mile radius) containing EJ populations within 1 mile of the Airport. In addition,

[5] MassDEP finalized regulations related to a CIA framework for certain air permits. The regulations and associated guidance are available here: https://www.mass.gov/info-details/cumulative-impact-analysis-in-air-quality-permitting.

these data should be reported for any EJ populations located within the largest geographic area associated with documented impacts from the Airport, most notably, the largest sound contours (e.g., 60 DNL) documented in the 2022 ESPR. Moreover, because pediatric asthma prevalence is elevated above 110% in Boston and Chelsea at the municipal level, the 2023/2024 EDR shall present asthma prevalence for kindergarten through 8th grade (K-8) schools using the MassDEP CIA methodology to analyze asthma prevalence at a finer scale for each EJ census block identified as described above. All requested data can be downloaded on the MassDEP CIA website (Indicator Data for Cumulative Impact Analysis) and all pre-kindergarten to twelfth grade (PK-12) public schools can be identified on the online MassDEP CIA Mapping Tool.[6] The 2023/2024 EDR should contain a section on Environmental Justice to present this analysis, which should be separate from discussions of sustainability efforts or other distinct topics. A-39 A-40 A-41

Community Mitigation

While the 2022 ESPR acknowledges that Logan Airport activities and operations might be contributing source of some of these forms of pollution, it asserts that the data and technology needed to differentiate each of the pollution sources affecting EJ populations are not available. As discussed further below and summarized in prior filing, the ESPR details environmental initiatives undertaken to lessen the Airport's environmental impacts from Airport controlled sources, including a High-Occupancy Vehicle (HOV) Strategy, RideApp Management, Long-Term Parking Management Plan, Noise Abatement and Sound Insulation, Alternative Fuel Vehicles Program, Electric Ground Services Equipment, and Energy Planning. As noted, these various measures appear to have slowed the rate of increase in GHG and air emissions, as compared to corresponding increases in flight and passenger activity levels. Nonetheless, with increased activity levels, associated impacts, including air emissions, noise, and traffic, show an upward trend over the Future Planning Horizon.

As required by the Scope, the 2022 ESPR reported on methodologies for growth projections and included Appendix F, *Activity Levels Supporting Documentation*, in response to comments received during meetings with MEPA and community stakeholders. The 2022 ESPR also included relevant metrics for assessing Airport impacts which are discussed further below and include noise, air quality and greenhouse gas (GHG) emissions and include review of emerging research around ultrafine particles (UFPs), the use of alternative jet fuels, and dispersion models of nitrogen oxide (NO_2) and sulfur dioxide (SO_2) and the public health impacts of aviation-related air pollution. Massport continues to work with the FAA and research institutions including the Massachusetts Institute of Technology (MIT), Boston University (BU), and Tufts University to expand research including on UFP and black carbon.

As part of the FAA-affiliated Center of Excellence for Alternative Jet Fuels and Environment, also known as the Aviation Sustainability Center (ASCENT), Massport is supporting a BU research effort to assess Community Measurements of Aviation Emission Contributions to Ambient Air Quality. The primary goal of this project is to conduct a new air pollution monitoring campaign beneath flight paths to and from Logan Airport, using a protocol specifically designed to determine the magnitude and spatial distribution of UFPs in the vicinity of arrival flight paths. Data were collected to assess whether aircraft emissions, particularly

[6] MassDEP CIA Mapping Tool

arrival emissions, significantly contribute to UFP concentrations at appreciable distances from the Airport.[7] The ESPR also references a 2022/2023 study conducted by BU which evaluated the impact of arrival aircraft on UFP concentrations using particle number concentrations (PNC)[8] as a proxy. The study found that that arrival aircraft contributes significantly but intermittently to ambient PNC at six sites near Logan Airport (Chelsea, Revere, South Boston and Winthrop) during high aircraft activity hours. According to the 2022 ESPR, research is ongoing in East Boston, South Boston, and the Chelsea area. The 2023/2024 EDR should continue to report on the studies' findings and additional mitigation measures implemented in response to new findings. The 2023/2024 EDR should provide updates and implications from continuing institutional research on UFP, black carbon, the public health impacts of aviation-related air pollution. A-42 A-43

The 2022 ESPR reviewed ongoing community giving conducted through the Massport Charitable Contribution Program, funded through Massport's operating budget and appropriated by a seven-member board which reviews grant requests and makes funding recommendations to organizations in Massport's neighboring communities that serve predominantly people of color. Other programs include a Community Summer Jobs Program (275 youth summer employment positions in Massport's neighboring communities); the East Boston, South Boston and Winthrop Foundations ($600,000 to local organizations helping to improve quality of life for area residents); the East Boston Neighborhood Health Center to expand the efforts of its Pediatric Asthma and Chronic Obstructive Pulmonary Disease (COPD) Prevention and Treatment Program in East Boston and Winthrop;[9] and the Diversity STEM and Memorial Scholarships to six local students as well as annual scholarships to high school students in Charlestown, Chelsea, East Boston, South Boston, Revere, and Winthrop.

As noted above, while studies on air quality impacts are ongoing, the 2022 ESPR clearly shows recovery from COVID-19 conditions and upward trends in Airport activity levels and associated impacts. Consistent with other MEPA reviews conducted under MEPA EJ protocols, the baseline conditions assessment above supports a conclusion that surrounding EJ populations within 1 mile of the Airport may be subject to existing unfair or inequitable burdens due to the cumulative impact of historic and current activities in and around Logan Airport. In light of these trends, and as stated above, I am directing Massport to participate in a work group, facilitated by MEPA and the EEA EJ Office, to consider supplemental mitigation measures to address public health impacts of Airport operations on surrounding EJ populations. The work group should engage public health experts to advise on effective intervention strategies to address air quality impacts, and aim to form recommendations within one year for specific actions to be taken by Massport within the scope of its legal authority. Such actions could include partnerships with local or municipal organizations interested in HEPPA filters, establishment of a curb idling reduction plan, enhanced community air monitoring in partnership with MassDEP and other air pollution sources, or other similar interventions to directly address the public health impacts of degraded air quality around the Airport. The work group should also consider improvements to

[7] For more information: https://s3.wp.wsu.edu/uploads/sites/2479/2022/10/ASCENT-Project-018-2021-Annual-Report.pdf

[8] Particle number concentration (PNC) and particle number size distribution (PNSD) are used as metric to quantify ambient UFPs (Kumar et al., 2010, 2016).

[9] Massport entered into an agreement with the East Boston neighborhood health center beginning in 2014 in response to the Logan Airport Public Health Study.

Massport's EDR and ESPR reporting process. Massport is directed to provide administrative support and facilitate the convening of work group meetings, in consultation with the MEPA Office. The 2023/2024 EDR should report on the results of this work group process. In addition, consistent with the approach set forth in the 2017 EPSR, if actual growth in passenger and/or aircraft operations outpace forecasts during a reporting period, I expect that additional mitigation and policies and strategies will be considered to address the proportional growth in impacts.

Activity Levels

Air traffic activity levels at Logan Airport are the basis for the evaluation of noise, air quality, and ground access conditions associated with the Airport. In this section, current activity levels at the Airport are compared to prior-year levels, and historical passenger and operations trends at Logan Airport dating back to 2000, which is the year Massport approved an Environmental Management Policy.

In 2017, air passenger activity levels at Logan Airport reached 38.4 million, an increase of 5.9 percent from 2016. At the time of the 2017 ESPR filing, it was projected that Logan Airport would reach 50 million annual passengers in the next 10 to 15 years (the Future Planning Horizon) until 2028 to 2032. As noted in the 2018/19 EDR Certificate, the 2019 passenger activity level represented an all-time high of 42.5 million, an increase of 3.9 percent over 2018 (40.9 million) and future trends were on track to exceed the 50 million annual passengers projected in the 2017 ESPR much sooner than the previously identified 10-15 year time frame. The 2022 ESPR is based on a Future Planning Horizon (until 2032 to 2037) and projects an increase to 53.5 million annual passengers in that time frame, seven percent greater than the 10 to 15-year projection in 2017. The 2022 ESPR reports that a return to 2019 passenger levels is expected by 2025. Table 3-11 of the ESPR illustrates these projected trends in passenger levels, showing an estimated 48 percent growth over the Future Planning Horizon as compared to 2022 levels (26 percent growth as compared to 2019 all-time high numbers):

Table 3-11 Actual and Forecast Logan Passengers, 1990, 2019, 2022, and Future Planning Horizon

Passengers	1990	2019	2022	Future Planning Horizon	% Change 2019-Future	% Change 2022-Future
Scheduled/Charter						
Domestic	19,519,247	34,098,788	29,527,910	41,826,300	+23%	+42%
International	3,358,944	8,317,993	6,450,000	11,556,000	+39%	+79%
Europe / Middle East / Africa	N/A	5,003,881	4,124,245	6,586,920	+32%	+60%
Canada	N/A	985,051	602,835	1,617,840	+64%	+168%
Latin America / Caribbean	N/A	1,727,057	1,573,468	2,311,200	+34%	+47%
Asia	N/A	602,004	149,452	1,040,040	+73%	+596%
Total Scheduled / Charter	22,878,191	42,416,781	35,977,910	53,382,300	+26%	+48%
General Aviation	N/A	105,630	112,806	117,700	+11%	+4%
Total Passengers	22,878,191	42,522,411	36,090,716	53,500,000	+26%	+48%

Source: Massport and InterVISTAS Logan Airport Forecast

In 2022, Logan Airport handled 378,613 aircraft operations, which represents a 31 percent increase from 2021 (266,034 operations), but still 11.4 percent less than the 427,176 aircraft operations reported in 2019. Passenger aircraft operations account for the largest share of aircraft operations (89.9 percent) followed by general aviation (GA) (8.1 percent) and all cargo (2.1 percent). The 2022 ESPR reports that total passenger operations of 340,311 increased by 45.3 percent over 2021 (234,219), though still remaining 13.1 percent below 2019 levels (391,424). However, the ESPR indicates that air cargo business has rebounded and operated close to pre-pandemic levels returning to 93.9 percent of 2019 volumes and 3.8 percent over 2021 volumes. The ESPR notes that commercial passenger airlines' share of cargo (carried as "belly" cargo underneath the plane) was 44.3 percent, or 298 million pounds, compared to 375 million pounds flown on exclusively cargo carriers.

According to the 2022 ESPR, the average number of passengers per flight at Logan Airport was returning to pre-pandemic levels at 95.3 passengers per flight as compared to 99.5 passengers per aircraft in 2019 and well above the 85.2 number in 2021. This is a slight change in trends noted in the 2018/2019 EDR, which indicated an increase in operational efficiency and "aircraft load factors."[10] The increase in average passengers per operation prior to the COVID-19 pandemic was attributed to the introduction of newer and larger aircraft at Logan Airport like the Airbus 350 and Boeing 787, in addition to flights operated by Boeing 777 and Airbus A380 superjumbo jets, especially for international long-haul flights, many of which were reinstated in 2022 after the pandemic. This trend is expected to continue, and means that, even while passenger numbers are projected to increase over the Future Planning Horizon (7 percent over the 2017 ESPR projections), the corresponding increase in flight operations is projected to be less (reported as 2% increase over 2017 ESPR projections). However, as noted, cargo operations have rebounded significantly and are projected to increase by 34% over the 2017 ESPR projections in the Future Planning Horizon.

Table 3-13 of the ESPR illustrates these projected trends in flight operations, showing an estimated 31 percent growth over the Future Planning Horizon as compared to 2022 levels (though 16% growth as compared to 2019 all-time high numbers):

[10] The load factor is the percentage of actual passengers on a flight relative to the number of seats potentially available on the aircraft of the given flight.

Table 3-13 Actual and Forecast Operations, 1990, 2019, 2022, and Future Planning Horizon

Category	1990	2019	2022	Future Planning Horizon	% Change 2019-Future	% Change 2022-Future
Passenger						
Jet	N/A	296,514	244,971	344,223	+16%	+41%
Regional Jet	N/A	49,417	60,891	67,939	+37%	+12%
Non-jet	N/A	45,492	34,449	40,763	-10%	+18%
Subtotal	N/A	391,423	340,311	452,925	+16%	+33%
Cargo	N/A	6,830	7,798	9,900	+45%	+27%
General Aviation	24,976	28,922	30,504	32,175	+11%	+5%
Total Operations	424,568	427,175	378,613	495,000	+16%	+31%

Source: Massport and Inter*VISTAS*.

The 2022 ESPR indicates that forecast methodology relies on widely accepted aviation industry guidance[11] for aviation demand forecasting, and relies on economic data which are analyzed in in different combinations and for different historical time periods to assess the statistical relationships between these drivers and annual growth in Logan Airport passenger levels, and to produce ranges of statistical factors for forecasting future passenger levels. The 2022 ESPR uses this information to update the Logan Airport long-term forecasts for passengers, Airport operations, and fleet mix.

The 2023/2024 EDR should continue to report passenger and activity levels and consider planning/mitigation commensurate with the anticipated return to pre-pandemic levels in 2025; in particular, air, noise, and traffic reduction measures should be a significant emphasis of future EDR and ESPR reporting. As discussed, prior Certificates, including the 2017 ESPR and 2018/19 EDR Certificates, urged caution as flight and passenger levels in 2019 reached all-time highs and were on track to exceed Massport's own forecasts over the Future Planning Horizon. While COVID-19 conditions drastically reduced flight activity after that time, the 2022 ESPR unequivocally shows a return to pre-COVID conditions and projects a return to 2019 activity levels as early as 2025. In light of these trends, and consistent with the approach set forth in the 2017 EPSR, the 2023/2024 EDR should continue to track flight and passenger levels and specifically note whether these levels have reached 2019 levels as of the reporting year; it should also indicate whether trends are on track to exceed projections based on actual activity levels gathered by the reporting year. If actual growth in passenger and/or aircraft operations outpace forecasts, I expect that additional information will be provided in future EDRs and ESPRs to demonstrate that additional mitigation and policies and strategies will be implemented to address the proportional growth in impacts.

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Planning

In prior filings, Massport indicated that several capital improvement projects that were asserted to have emissions benefits by reducing the number of vehicular trips to and from the Airport would be deferred due to the COVID-19 pandemic. In light of data showing early

[11] A list and web links to all forecasting documents can be found on page 3-32 of the 2022 ESPR.

recovery to pre-pandemic conditions by 2020, the 2020/2021 EDR Certificate directed Massport to describe a decision making process and timetable for implementation of planned capital projects or programs that were deferred due to pandemic conditions. These include several planned capital projects that were asserted to provide environmental benefits and reduce impacts associated with Airport operations as activity levels recover, such as: the Logan Airport Parking Project (EEA# 15665) (5,000 new parking spaces, solar photovoltaic system, and electric vehicle charging stations), Phase 2 of Terminal E Modernization (EEA# 15434) (3 new terminal gates), several high-occupancy-vehicle investments (addition of 1,000 new spaces to Framingham Logan Express Garage (EEA# 16168), opening a new Logan Express suburban location, and implementing a 2nd urban Logan Express Service at North Station.

The Airport Planning section of the 2022 ESPR describes the status of projects underway or completed at Logan Airport through the end of 2022. Planning projects fall into the following categories: Ground Transportation (including HOV) improvements and Parking; Terminals; Airside Planning, Service Areas; Airport Buffers and Open Space; and Energy, Sustainability, and Resiliency. The 2022 ESPR provided updates on over twenty projects as shown in the table below, including the capital projects noted above. As indicated by Massport, projects in the planning phases are discussed as short-term (expected by 2028) or long-term (expected by 2035).

Table 4-1 Logan Airport Short- and Long-Term Planning Initiatives

ID	Project	Status as of December 31, 2022	Construction	
			Short-Term By End of 2028	Long-Term By End of 2035
Airport Ground Transportation/Parking Projects and Planning Concepts				
1	Logan Airport Parking Project in front of Terminal E (approximately 4,300 spaces)	Permitted	✈	
2[1]	Logan Airport Parking Project: Parking Freeze Studies (Airport-wide)	Complete (2019)		
3	Airport-wide RideApp Infrastructure Improvements and Policy	Complete (2022)		
4[1]	Logan Express Route and Facility Expansions (off-Airport)	Feasibility / Planning	✈	✈
Terminal Area Projects and Planning Concepts				
1	Terminal E Modernization (Phase 1 – 4 gates / Phase 2 – 3 gates)	Phase 1 – Complete (2023) Phase 2 – Permitted		✈
2	Terminal B Optimization	Complete (2022)		
3	Terminal C Canopy, Connector, and Roadway Projects	Complete (2023)		
4	Terminal A to B Airside Connector	Feasibility / Planning		✈
5	Central Heating Plant Conversion	Feasibility		✈
Airside Projects and Planning Concepts				
1	Runway Incursion Mitigation (RIM) Study and Comprehensive Airfield Geometry Analysis and Mitigation	Feasibility / Planning	✈	✈
2	Runway 9-27 Runway Safety Area (RSA) Improvement Project	Planning / Permitting	✈	
3	Runway 15-33 Rehabilitation Project	Complete (2023)		
4	Taxiway B North Rehabilitation	Construction (2024)	✈	
Service Area Projects and Planning Concepts				
1	Logan Airport, Equipment Storage and Maintenance North Service Area (NSA)	Planning / Permitting	✈	
2	Jet Fuel Storage Addition (NSA)	Under construction	✈	
3	Green Bus Depot Relocation – Southwest Service Area (SWSA) Redevelopment	Feasibility		✈
4	Governors Island Equipment Storage	Feasibility		✈
5[1]	Relocated Compressed Natural Gas (CNG) Station – North Cargo Area (NCA)	Planning	✈	
6[1]	Cargo Through-put Facility	Feasibility / Planning		✈
7[1]	Replacement Cargo Facilities (NCA)	Feasibility		✈
8[1]	Joint Operations Center (JOC)	Feasibility / Planning		✈

Notes: Anticipated completion dates and status as of December 31, 2022, as denoted by ✈.
Short-term projects are anticipated to be constructed by 2028 and long-term projects are anticipated to be constructed by 2035. Details of each project or planning concept are provided in the sections that follow.
1 Not applicable; project and initiative is either Airport-wide or a location has yet to be identified.

The 2022 ESPR provides additional detail about the emissions reductions and other benefits that are anticipated through deferred capital projects as highlighted below:

- *Logan Airport Parking Project*: Construction of the Parking Garage Project in front of Terminal E was deferred during the pandemic, but as passenger demand has rebounded, the demand for commercial parking has again increased. The updated program for the project now calls for approximately 4,300 commercial revenue spaces, which would be built in a new garage in front of Terminal E; however, no parking spaces will be constructed atop the Economy Garage. As stated in the 2022 ESPR, long-term parking reduces vehicle trips as passengers would make one trip to the Airport and one trip to leave, rather than two trips for drop-off and two trips for pick-up. The updated Garage in front of Terminal E will continue to comply with the Logan Airport Parking Freeze and will allow Massport to recover 2,000 spaces that were formerly located in Central Garage and in Terminal B Garage, but were lost due to HOV and RideApp initiatives at Terminals C and B.

- *RideApp (formerly Transportation Network Company (TNC)) Infrastructure and Policy (Airport-wide*): In 2022, more than a quarter of on-Airport traffic was from activities related to RideApp operations, which contributed to congestion on Airport roadways. In 2022, Terminal B RideApp pick-up and drop-off operations from the ground floor of the Central Garage were moved to the second floor of the Terminal B Garage. The shift provided approximately 60 more parking spaces, including three ADA accessible and four EV spaces in the Central Garage.

- *Logan Express Route and Facility Expansion (Off-Airport):* As noted above, postponed construction of additional parking at Framingham Logan Express: Project resumed and is in the design phase with construction currently estimated to begin in 2024. Peabody Logan Express at the new North Shore Mall location opened in 2022. Additional priority initiatives include improvements to Wonderland employee parking, better service offerings for Silver Line 1, and enhancing Back Bay Logan Express. Danvers Logan Express is expected to open towards the end of 2024 (the ESPR is not clear if this facility will replace the new Peabody location or is in addition to).[12]

- *Terminal E Modernization Project*: Construction of the first phase of the Terminal E Modernization Project which added four gates[13] to the international terminal was completed in October 2023. Phase 2 will ultimately add three additional gates, for a total of seven gates. Mitigation for the project included a 20 percent reduction in building energy use below the MA Energy Code, reduced operational-related GHG by a minimum of 30 percent, included 25,000 sf of rooftop solar PV. Once completed the project is expect to result in a decrease in carbon monoxide (CO) emissions in the area of Terminal E and the associated aircraft apron by approximately 9 percent, nitrogen oxide (NO_x) emissions by approximately 44 percent, and sulfur oxides (SO_x) emissions by approximately 33 percent and a decrease of Volatile Organic Compounds (VOCs) in the project area by approximately 6 percent and particulate matter (PM_{10} and $PM_{2.5}$) by approximately 9 percent and 25 percent, respectively.

[12] Page 6-12 indicates that the larger facility in Davers will be used to temporarily relocate the Peabody Logan Express.
[13] The Terminal E Modernization Project will add the three gates approved in 1996 as part of the International Gateway West Concourse project (EEA # 9791), but never constructed, and add an additional four gates.

- *Central Heating Plant (CHP)* Massport is studying the feasibility of converting the CHP from fossil fuel to electricity or another alternative source of energy. The study will consider not only the CHP, but also the connections and equipment serving the terminals and other Airport buildings.

- *Runway 9-27 RSA Improvement Project*: The FAA has approved the use of an Engineered Materials Arresting System (EMAS) for construction of a runway safety area for aircraft overrun protection. The RSA improvements will include a pile-supported deck over Boston Harbor at the approach-end of Runway 27. Construction is currently projected for 2025 and 2026.

- *Green Bus Depot – Southwest Service Area (SWSA)*: Massport is studying the relocation of the functions of the green bus depot from NSA to the SWSA to support the transition to an electric fleet, as part of Massport's Net Zero by 2031 plan. The depot building would be reused. As part of this effort, Massport will assess the existing ground transportation uses in the SWSA as well as future needs such as net zero requirements of other alternative-fueled ground transportation modes

- *Piers Park Phase II*: Completed in 2023, Piers Park II, an addition of 4.5 acres to Piers Park, features a central lawn area, children's playground, climbing structure, music garden, spray fountain, and a multigenerational fitness area. Upgrades included resiliency landscape features, elevated for flood protection, and a new community sailing center building. Piers Park II was one of the high-impact community benefit projects identified by both the City of Boston and members of the Logan Impact Advisory Group (LIAG) through their review of the Terminal E Modernization Project.

The 2023/2024 EDR should continue to assess planning strategies for improving Logan Airport's operations and services in a safe, secure, more efficient, and environmentally sensitive manner. As owner and operator of Logan Airport, Massport must accommodate and guide tenant development. The 2023/2024 EDR should describe the status of planning initiatives for the following areas: A-47

- Roadways and Airport Parking;
- Terminal Area;
- Airside Area;
- Service and Cargo Areas;
- Airport Buffers and Landscaping;
- Energy, Sustainability, and Resiliency.

The 2023/2024 EDR should update the timeline of long-range planning activities identified in the table above and should indicate a clear commitment to return to prior environmental commitments relative to capital projects intended to minimize air emissions impacts. The ESPR should identify the status and assess effectiveness of ground access changes, including roadway, parking projects, and transit projects that consolidate and direct Airport- A-48 A-49

related traffic to centralized locations and minimize Airport-related traffic on streets in adjacent neighborhoods. A-49

Ground Access to and from Logan Airport

The 2022 ESPR notes that the effects of ground transportation are measured in two ways; the number of vehicles that enter the Airport (via gateway roadways[14]) and the vehicle miles traveled (VMT) by those vehicles while on Airport roadways. The Airport's gateway roadways are equipped with permanent traffic count stations, which are part of the Airport-wide Automated Traffic Monitoring System (ATMS). The 2022 ESPR reports that annual average daily traffic (AADT) entering and departing the Airport via its gateway roadways increased by 26.1 percent between 2021 and 2022 but was 18.9 percent less than the 2019. Similarly, the average VMT in 2022 was lower than in 2019 by 21.6 percent.

As reported, ridership numbers in 2022 (for all applicable surface transportation modes, including HOV) rebounded to align with the Airport passenger numbers more closely, although both the number of riders and passengers in 2022 were still less than reported 2019 levels. The ESPR states that Massport continues to plan for the recovery of air passenger activity and remains committed to implementing the broad range of ground access and trip reduction strategies aimed at increasing the number of passengers arriving by transit or other HOV mode. According to the 2022 ESPR, Massport set a target to reach a 35.5 percent HOV mode share by 2022 and 40 percent by 2027. A summary of the *2022 Air Passenger Ground-Access Survey*[15] found HOV mode share reached 38.4 percent, which exceeds the 2022 target and indicates Massport is also on track to meet the 2027 target. Comments from the City of Boston note that the survey methodologies and results are not fully disclosed in the ESPR which raises questions about how these numbers were derived. The ESPR provides a discussion of ground access modes and trip generation associated with each mode including: (1) transit and shared-ride HOV services; (2) drive to Logan Airport and park; or (3) drop-off/pick-up mode, which can involve a private vehicle, taxi, limousine, or RideApp/TNC.[16]

According to the 2022 ESPR, parking freeze limits were not exceeded in 2022. The Logan Airport Parking Freeze sets an upper limit on the supply of commercial and employee parking spaces at Logan Airport. The ESPR provides a review of Massport's Long-Term Parking Management Plan including completed and proposed efforts to manage the supply, pricing and operation of parking including:

- Add 4,300 commercial spaces in a new garage in front of Terminal E
- Adding 1,000 additional spaces to the Framingham Logan Express site
- Offering reduced parking at Logan Express facilities (previously $11 now $7)
- Economy Parking was raised to $32.00 per day; terminal-area garage and lot rates are $41.00 per day

[14] Gateway roadways are defined as access points to and from Logan Airport, which include Route 1A from the north, Sumner and Callahan Tunnels (Route 1A to and from the south), Interstate 90 Ted Williams Tunnel ramps, Frankfort Street to Service Road to and from the northeast.
[15] The 2022 Air Passenger Ground-Access Survey is currently in draft format and is not currently posted. The survey is administered every 3 years.
[16] Transportation Network Companies (TNCs) are now referred to as RideApp companies (e.g., Uber and Lyft).

- Massport continues to sponsor free outbound (from Logan Airport) Silver Line bus service and Back Bay Logan Express service
- Massport provides employee parking in Chelsea with free shuttle bus transportation to the Airport (reopened in 2022)
- Massport offers reduced employee rates to encourage the use of Logan Express facilities. Additional early morning and late-night bus service has been added to Logan Express sites to encourage use and better serve Logan Airport employee schedules.

As noted above, Logan Airport is anticipated to reach 53.5 million annual passengers in the next 10-15 years and is committed to promoting and supporting public and private HOV and shared-ride services aimed at serving air passengers, Airport users, and employees. According to the ESPR, in the Future Planning Horizon, daily on-Airport VMT is estimated to be 212,022,[17] which is 1 percent more than the 2019 daily VMT of 209,900 and 29 percent more than the 2022 daily VMT of 164,625. The increase in VMT is primarily attributed to the forecasted increase in air passenger activity.

Key initiatives implemented in 2022 or planned for the immediate future to promote sustainable transportation mode usage and alleviate traffic congestion and parking constraints include:

- Promoting Logan Express ridership by:
    - Increasing capacity for air passengers at Braintree Logan Express service in the short-term by relocating commuters to a new dedicated employee park and ride lot in nearby Quincy
    - Adding approximately 1,000 additional spaces to the Framingham garage
    - Investing in a new, larger facility in Danvers to temporarily relocate the Peabody Logan Express
    - Identifying at least one new urban Logan Express location (North Station or similar location), and potential additional locations west of Boston
    - At Back Bay Logan express: Provided discount one-way fare from $7.50 to $3.00, and free service from Logan Airport and piloted priority Airport passenger security line status for riders
- Ongoing and future improvements to Blue Line access to Logan Airport, including direct service to Terminals and future investments in better integration of Airport Station to Terminal E; and
- Continued partnership with private bus companies to support multi-state and regional transit access to Logan Airport.

Other infrastructure modifications implemented in the next 10 to 15 years may include:

- Construction of a new parking garage near Terminal E;
- Reconstruction of the terminal area roadways between Terminals C and E (arrivals and departures);
- RideApp Lot relocations, pick-up and drop-off modifications, and routing changes;

[17] Estimated using the VISSIM model of Logan Airport: PTV America. 2021. Verkehr In Städen Simulationsmodell – VISSIM version 2021 [computer software].

- Terminal A curbside optimization.

I note comments from Airport Impact Relief, Inc. (AIR, Inc), the City of Boston, and Conservation Law Foundation (CLF), which indicate that, without tracking data related to some of these initiatives (such as Logan Express, HOV, and TMA usage, Uber/Lyft matching program), it is difficult to see the efficacy of these programs in actually reducing VMT in and around the Airport. Comments from AIR, Inc. also specifically criticize Massport's lack of effort in controlling curbside idling, which Massport commits to consider through future initiatives. The 2023/2024 EDR should report on any improvements made in these areas, and Massport should proactively consider ways to make tracking data available on a more frequent basis. A-50

The 2023/2024 EDR should continue to address the following topics:

- Target HOV mode share and incentives including a review of how the reported % by mode share is calculated and the methods used to incentivize; A-51
- Impact of RideApps on Logan Airport landside operations and effectiveness of the RideApp management plan including information on how Massport quantifies the improvement in congestion and any related drop in GHG emissions; A-52
- Update on parking conditions including the status of construction of the new parking garage and project associated GHG and air quality mitigation commitments; A-53
- Non-Airport through-traffic; A-54
- Cooperation with other transportation agencies to increase transit ridership to and from Logan Airport via the Blue Line, Silver Line, Water Transportation, and Logan Express; A-55
- Report on efforts to increase capacity and use of Logan Express and improvements to and expansion of service; A-56
- The expansion of piloted projects including the priority Airport passenger security line status for Logan Express riders; A-57
- Progress on enhancing water transportation to and from Logan Airport; • A-58
- Results and recommendations of the most recent ground access survey including links to the most recent report; A-59
- Results and recommendations of the Long-term Parking Management Plan required by the Parking Freeze amendments; and A-60
- Reporting of data (and comparison to prior years (2019-2022)) associated with the Logan Transportation Management Association (TMA) including number of employees participation in the various strategies (transit pass, shuttle services, etc.) and strategies for enhancing services and increasing employee membership in the Logan Airport TMA. A-61

To the extent feasible, the 2023/2024 EDR should report on specific reductions in VMT that could be achieved through these measures, and indicate how such goals can be tracked over time. A-62

Noise

As required by the Scope, Massport modeled 2022 noise conditions of aircraft operations and compared the findings to those for 2019 and 2021. 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). The 2022 ESPR provides noise modeling results from the FAA's Aviation Environmental Design Tool (AEDT) (version 3d). The model requires detailed operational data as inputs for noise calculations, including numbers of operations per day by aircraft type and by time of day, which runway is used for each arrival and for each departure, and flight track geometry for each track. The ESPR indicates that the 2022 DNL contours are similar in shape to the 2019 contours which is a result of fewer aircraft operations as well as changes in the aircraft fleet mix, with the phasing out of some nosier, less-efficient aircraft that were in the 2019 fleet. As shown in the table below, the number of people residing within the modeled 2022 DNL 65 dB contour (8,185 people) was 7 percent below the 2019 level (8,665 people) but 228 percent greater than the 2021 level (2,497) primarily because air operations in 2022 were 42 percent greater than in 2021.

Population Exposed to DNL 65 dB or Greater

Year	> 75 DNL	70-75 DNL	65[3]-70 DNL	Total (65+)[3] DNL
All Communities				
1990 (INM)	676	2,989	40,477	44,142
1998	577	2,102	20,617	23,296
2000 (INM)	247	1,304	16,194	17,745
2010 (INM)	0	130	3,700	3,830
2019	0	103	8,665	8,768
2020	0	0	804	804
2021	0	0	2,497	2,497
2022	0	27	8,158	8,185

The 2022 ESPR also compared DNL values modeled using the AEDT to measure noise levels at 30 permanent monitoring located in communities around the Airport (Table 7-8 in the ESPR). The ESPR notes that the differences between the average measured and modeled DNL have narrowed over the years and of the 30 monitor locations, 16 of the sites recorded higher measured noise levels than the corresponding model-computed noise levels with the difference between measured and modeled DNL within 1 dB at 11 of the sites. Three of the sites had equipment malfunctions on some days which is being addressed by the vendor.

Massport also tracks operations occurring during the DNL nighttime period of 10:00 PM to 7:00 AM, when each modeled flight is weighted tenfold in calculations of noise exposure. According to the 2022 ESPR, nighttime operations represented approximately 14 percent of total operations for 2022 at Logan Airport as compared to 17 percent in 2019. The majority of 2022 nighttime operations (between 10:00 PM and 7:00 AM) occurred either before midnight or after 5:00 AM, to accommodate connecting flights and international time zones. The proportion occurring in the "shoulder hours" between 10:00 PM and midnight or between 5:00 AM and 7:00 AM was approximately 81 percent of total nighttime operations in 2019, 76 percent in 2021, and 83 percent in 2022.

The 2022 ESPR included projected DNL contours for the Future Planning Horizon for when annual passenger counts reach 53.5 million and annual aircraft operations reach 495,000. The modeling assumptions include an increase in total operations from 1,040 per day in 2022 to over 1,350 per day and the forecast fleet is expected to primarily consist of jet aircraft, resulting in the continued use of the highest-capacity runway configurations. Departures for the Future Planning Horizon on Runways 9 and 27 would be higher than in 2022, while departures on Runways 22R and 33L would be lower. Arrivals for the Future Planning Horizon on Runways 4L and 33L are predicted to be higher than for 2022, while use of Runways 22L and 27 is expected to decrease. Utilizing these assumptions, the 2022 ESPR presents a comparison between the 2022 DNL contours and the Future Planning Horizon DNL contours which shows that the area contained within the forecast contours is larger than the area within the 2022 contours due to the expected growth in number of aircraft operations. The total number of nighttime operations for the Future Planning Horizon is expected to increase approximately 35 percent from 2022 levels, while the daytime operations are expected to increase by 30 percent. The ESPR includes a detailed description of the forecasted contours for each impacted community. The number of people exposed to noise levels greater than 65 DNL is expected to increase from 8,185 people in 2022 to 9,325 people in the future forecast (an increase of 15.2 percent). Massport notes that the aircraft in the future forecast fleet are likely to have quieter and more efficient engines than older aircraft in the current fleet, and thus this forecast is conservative. The noise modeling relies on an extensive database of aircraft noise and performance (ANP) profiles within AEDT and must use current versions of aircraft as "substitutes" for future types. Therefore, the future forecast DNL contours presented in this chapter are a conservative estimate of the future noise levels.

Comments from the Town of Milton expressed detailed concerns regarding the impact of noise on communities as far as 10 miles beyond the Airport. Comments indicate that the FAA's civil aviation Noise Policy with relies on DNL 65 dB as its sole noise metric, is outdated and most often calculated on an annual basis, masking the acute impacts that several hundred aircraft flying over a home has on the occupants. According to the Town, there are four RNAV's for runways 4R, 4L, 27 and 33L which fly over the community resulting in lack of and disrupted sleep. The 2023/2024 EDR should address Milton's concerns and the feasibility of implementing Block 1 and Block 2 recommendations from the recent MIT Study and specifically those relating to Runways 4R and 27. A-63

The 2022 ESPR provides a review of noise abatement goals associated with the Noise Abatement Management Plan. While no additional dwelling units were insulated in 2022,

Massport restarted its residential sound insulation program (RSIP), applying for and receiving an initial grant to fund the beginning phase of the new program. The 2023/2024 EDR should report on the progress, timeline and insulation goals of the new program. Other mitigation plan elements include the voluntary use of reduced-engine taxiing (shutting one engine off) but no data is provided to show use of the recommended measure.[18] According to the ESPR, the Massport Noise Abatement Office received 272,943 noise complaints from 80 communities, an increase of about 1.4 percent as compared to the 268,929 complaints received from 86 communities in 2019. Of note, the community of Winthrop generated about 31 percent of the complaints in 2022 (but only 3.5 percent in 2019). A summary of the noise complaint line data is included in table 7-17 of the ESPR. A-64

Massport also notes collaboration with ASCENT on two research projects focused on aircraft noise and flight procedures and continues to provide technical assistance and analysis using noise monitoring systems to support the FAA and others in monitoring jet departure tracks from Runway 27 and Runway 33L. Massport and the FAA completed an Area Navigation (RNAV) evaluation project in 2021 designed to identify ways to reduce noise from the RNAV procedure (which concentrates flights). As a result of the RNAV project, Massport submitted a request to the FAA for review and implementation of two procedures at Logan Airport. These include modifying the existing RNAV Standard Instrument Departures (SID) from Runway 15R to shift departures further north over water away from Hull, and a new over-water Required Navigational Performance (RNP) 38 approach to Runway 33L. The FAA completed development of these procedures and published the procedures in December 2021. Thus, 2022 represents the first full year of use for the procedures. The 2023/2024 EDR should report any data used to measure the effectiveness of these improvements including the number of noise complaints from the previously impacted areas. A-65

The Logan Airport noise mitigation program includes operational restrictions on certain runways, limits to engine runup locations, late night runway preference, and noise abatement turns. The 2023/2024 ESPR should continue to report on the Airport noise mitigation program including summaries of the findings and recommendations of reports and studies focused on reducing community noise levels. A-66

Climate Change

Massport assets and Logan Airport, in particular, are critical infrastructure and play an important role in the economy. Governor Baker's Executive Order 569: Establishing an Integrated Climate Change Strategy for the Commonwealth was issued on September 16, 2016. The Order recognizes the serious threat presented by climate change and directs Executive Branch agencies to develop and implement an integrated strategy that leverages state resources to combat climate change and prepare for its impacts. The urgent need to address climate change was again recognized by Governor Baker and the Massachusetts Legislature with the recent passage of St. 2021, c. 8, An Act Creating a Next Generation Roadmap for Massachusetts Climate Policy, which sets a goal of Net Zero emissions by 2050. I note that the MEPA statute directs all Agencies to consider reasonably foreseeable climate change impacts, including

[18] Mandatory single engine taxiing was also one of the proposed measures in the BLANS but the FAA rejected them due to safety concerns.

additional greenhouse gas emissions, and effects, such as predicted sea level rise, when issuing permits, licenses and other administrative approvals and decisions.

The 2022 ESPR identifies that Massport's sustainability reports highlight efforts to improve and enhance sustainability and climate resiliency across the entire organization. The *2020 and 2021 Sustainability and Resiliency Report*,[19] included new initiatives that Massport explored to be a better community partner through reducing noise and air pollution, improving ground access to Logan Airport, and extending diversity, equity, and inclusion (DE&I) initiatives beyond its operational borders. As discussed further below, the most recent report highlights Massport's net zero commitments including reaching net zero by 2031; however, a review of the report reveals little information that identify the future vulnerabilities of Logan Airport infrastructure or proposed plans to address future sea level rise, extreme precipitation and extreme heat. The ESPR notes that in 2013, Massport launched a comprehensive resiliency initiative to maximize business continuity amidst various human and natural threats. The ESPR lists the goals guiding this process but does not list any identified outcomes of the initiative. According to the ESPR, Massport has been collaborating with regional resiliency efforts including City of Boston initiatives, to protect surrounding communities and points to its open space and Airport edge buffer parks as an example of this district-scale resiliency approach. As described in the ESPR, Massport has worked with communities to develop a system of parks and open spaces encompassing over 30 acres. These green spaces capture GHG emissions, provide relief from extreme heat, and create recreational opportunities, and waterfront parks, like Piers Park I and II and the Navy Fuel Pier Buffer, which establish a buffer area for neighborhoods in the event of extreme flooding.

The 2023/2024 EDR should report on all climate resiliency measures planned or implemented/constructed. It should provide general information on the forecast methodology being used to identify threats and vulnerabilities to Logan Airport facilities and infrastructure and projects that actively address the risks of extreme heat, intense precipitation, and coastal flooding and sea level rise. A-67

GHG emissions

As previously identified in the 2020/2021 EDR, Massport incorporates GHG emissions reporting consistent with that provided in the 2017 ESPR but with a change in methodology. In prior years, GHG emissions were quantified using emission factors and methodologies outlined in the *Greenhouse Gas Emissions Policy and Protocol* issued by EEA and the Transportation Research Board's *Guidebook on Preparing Airport Greenhouse Gas Emissions Inventories* (Airport Cooperative Research Program (ACRP) Report 11, Project 02-06). The 2020/2021 GHG reporting utilized additional guidance from the Airports Council International (ACI) and the Airports Carbon Accreditation Program (ACA) which separates emissions based on ownership/control: Scope 1/Direct – emissions that are controlled by Massport; Scope 2/Indirect - emissions associated with the generation of electricity consumed but generated off-site at public utilities; Scope 3/Indirect and Optional – GHG emissions that are associated with the activities of the reporting entity (Massport), but are associated with sources that are owned and

[19] Massport Sustainability & Resiliency Report 2020 & 2021 Massport's next sustainability and resiliency report covering 2022 and 2023 will be published in 2024.

controlled by others (aircraft-related emissions, tenant activities, and ground transportation). The 2022 ESPR quantifies and reports GHG emissions for all three scopes and provides forecasts for the Future Planning Horizon. The 2022 ESPR and future GHG inventory is based on this same guidance.

The 2022 ESPR provides GHG data by scope and provides a comparison to data from 2017 through 2022, noting that 2020 and 2021 were influenced by the pandemic and were not representative. The analysis showed that total GHG emissions in 2022 increased by about 60 percent over 2021 levels but decreased by 27.5 percent from 2019 levels. However, as shown in the table below, despite an increase in activity levels, Scope 1 emissions decreased from 2021 to 2022 which is generally attributable to Logan Airport facilities and equipment operating more efficiently over time as Massport is shifting to cleaner fuel sources for fleet vehicles and other Massport-controlled equipment. In 2022, Massport-controlled emissions and purchased electricity, Scope 1 and 2, represented 12.7 percent of Airport-wide GHG emissions and Scope 3 emissions, which are public and tenant-owned and controlled, represent the remaining 87.3 percent of GHG emissions.

Table 8-9 Comparison of Estimated Total Greenhouse Gas (GHG) Emissions (MT CO2e) by Scope at Logan Airport – 2017 through 2022

Scope	2017	2018	2019	2020	2021	2022
Scope 1 Emissions	49,305	47,493	51,360	32,764	33,067	31,415
Scope 2 Emissions	48,448	44,716	43,226	39,949	38,711	42,853
Scope 3 Emissions	607,794	685,465	713,539	247,530	321,388	511,452
Total Emissions[1]	**705,547**	**777,674**	**808,125**	**320,242**	**393,166**	**585,720**
Percent of State Totals[2]	**<1%**	**1%**	**1%**	**<1%**	**<1%**	**<1%**

Source: Massport and CMT, 2024.

Notes: Totals may not add exactly due to rounding.

MT – metric tons of CO_2 equivalents (1 MT = 1.1 Short Tons). CO_2 equivalents (CO_2e) are bases for reporting the three primary GHGs (e.g., CO_2, N_2O, and CH_4) in common units. Quantities are reported as "rounded" and truncated values for ease of addition.

1 Total Emissions = Scope 1 + Scope 2+ Scope 3.

2 Percentage based on most recent relative amount of total emissions to statewide total from MassDEP, MassDEP, 2nd Addendum to the Statewide Greenhouse Gas Emissions Level: 1990 Baseline Update, June 2022, available at https://www.mass.gov/doc/2nd-addendum-to-statewide-ghg-level-proposed-1990-baseline-update-june-2022/download.

The 2022 ESPR reports on updates to ongoing initiatives to reduce emissions including:

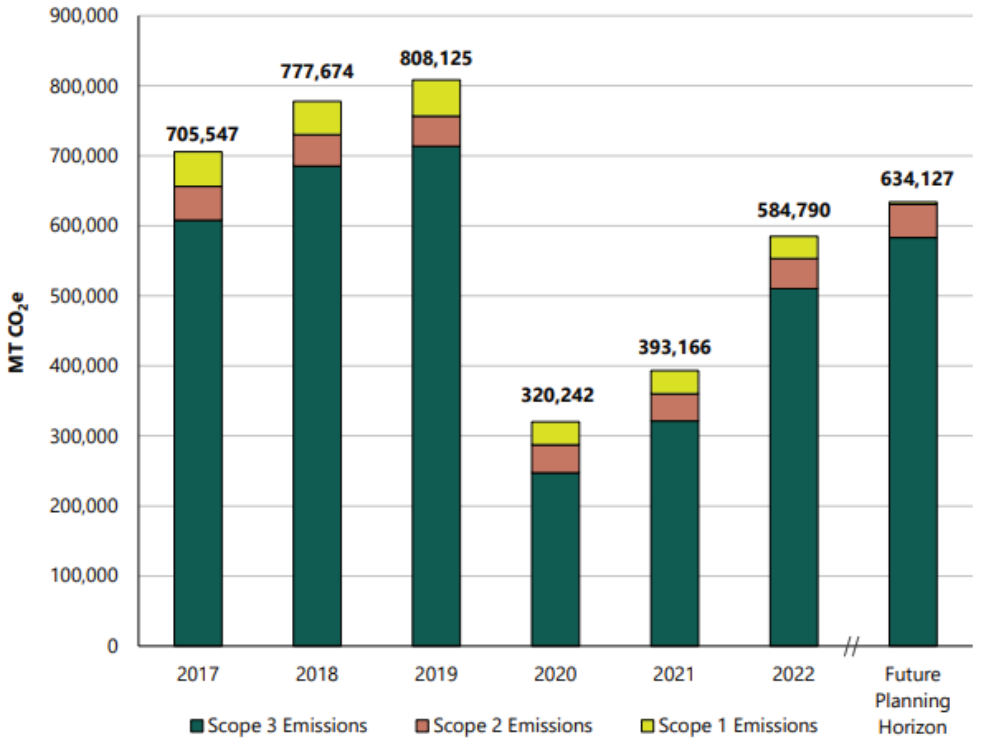
- Initiated a fleet decarbonization assessment to review the Authority's existing on-road fleet inventory and to identify recommendations for electric vehicle (EV) replacements over a 15-year period beginning in 2024, while looking at the financial and environmental benefits of such transitions. The assessment is also identifying electric alternatives for Massport's off-road equipment.
- By the end of 2022, there were over 70 EV charging ports across Logan Airport available for use by shared-ride companies and the general public, with additional ports owned and proposed by rental car companies at the Rental Car Center (RCC).

- Massport had a goal of reaching 35.5 percent HOV by 2022, and 40 percent HOV by 2027. Massport achieved the 2022 goal with 38.4 percent HOV for the year.
- Massport provides free, clean-fuel shuttle bus service for passengers and employees between the MBTA Blue Line Airport Station, all terminals, the RCC, and the Logan Airport water transportation dock along Harborside Drive.
- Massport published its Roadmap to Net Zero by 2031, an Authority-wide program to achieve net zero GHG emissions by 2031 for the activities under Massport's control.

The Certificate on the 2018/2019 EDR requested that Massport consider comments from the Department of Energy Resources (DOER) which recommend electrification of space and water heating, as well as evaluation of opportunities for distributed renewable energy generation. DOER comments on the 2022 ESPR recommend that the Airport upgrade its new building standards to mandate the Specialized Code with electrification and notes that the Specialized Opt-in Code is already mandatory in Boston. For existing building renovations, Massport should mandate low air infiltration and ventilation energy recovery when renovating. Comments also urge Massport to reassess central plant heating utilization based on the fossil fuel elimination strategy as detailed further in the comment letter. According to the 2022 ESPR, Massport is evaluating net zero options for the Logan Central Heating Plan including electrification. Massport continues to report that on-site photovoltaic (PV) solar development and other distributed energy resources such as battery storage are under consideration; however, this information was previously provided in the 2020/2021 EDR, with no further update included in the 2022 ESPR. Massport continues to maintain existing PV arrays at Logan and notes several additional PV systems planned as part of project mitigation including a 300,000-kilowatt hour (kWh) rooftop solar array at the new Terminal E and a solar PV system at the new garage in front of Terminal E capable of offsetting 50 percent of the facility's total energy consumption. As previously noted in the 2020/2021 EDR, in March 2022, Massport published its Net Zero Roadmap. The 2022 ESPR provides a link to the 2020 and 2021 Sustainability and Resiliency Report but indicates that the report covering 2022 and 2023 will be published in 2024. Future EDR/ESPRs should look to align this reporting to provide a better picture of GHG emissions and efforts to reduce emissions through electrification. A-68

The 2022 ESPR provides the future GHG inventory based on the same methodology used to report the 2022 data and includes data for Scope 1, 2 and 3 Emissions as shown in the graph below. Massport notes that the estimated remaining Scope 1 and Scope 2 emissions presented below will be negated through the use of offsets and renewable energy certificates (RECs), and where possible, Massport will be looking to ensure that the benefits of these economic mechanisms for reducing emissions are accrued in Massachusetts. As shown below, Massport's projections show a clear upward trend in GHG emissions over the Future Planning Horizon, though total emissions are projected to remain below 2019 levels. Notably, all "Scope 1" emissions are projected to be reduced to 0 by the Future Planning Horizon. The 2023/2024 EDR should provide the information requested in DOER's comment letter and further detail its pathway to Net Zero including DOER's recommendations. A-69

Figure 8-12 Emissions of GHG at Logan Airport 2010-2017, Future Planning Horizon



Source: Massport and CMT, 2024
Note: Scope 1 emissions are from sources that are owned or controlled by Massport, Scope 2 emissions are from electrical consumption, which are generated off-Airport at power generation plants, and Scope 3 emissions are from Airport tenants and the ground transportation to and from the Airport.

Air Quality/Emissions Reduction

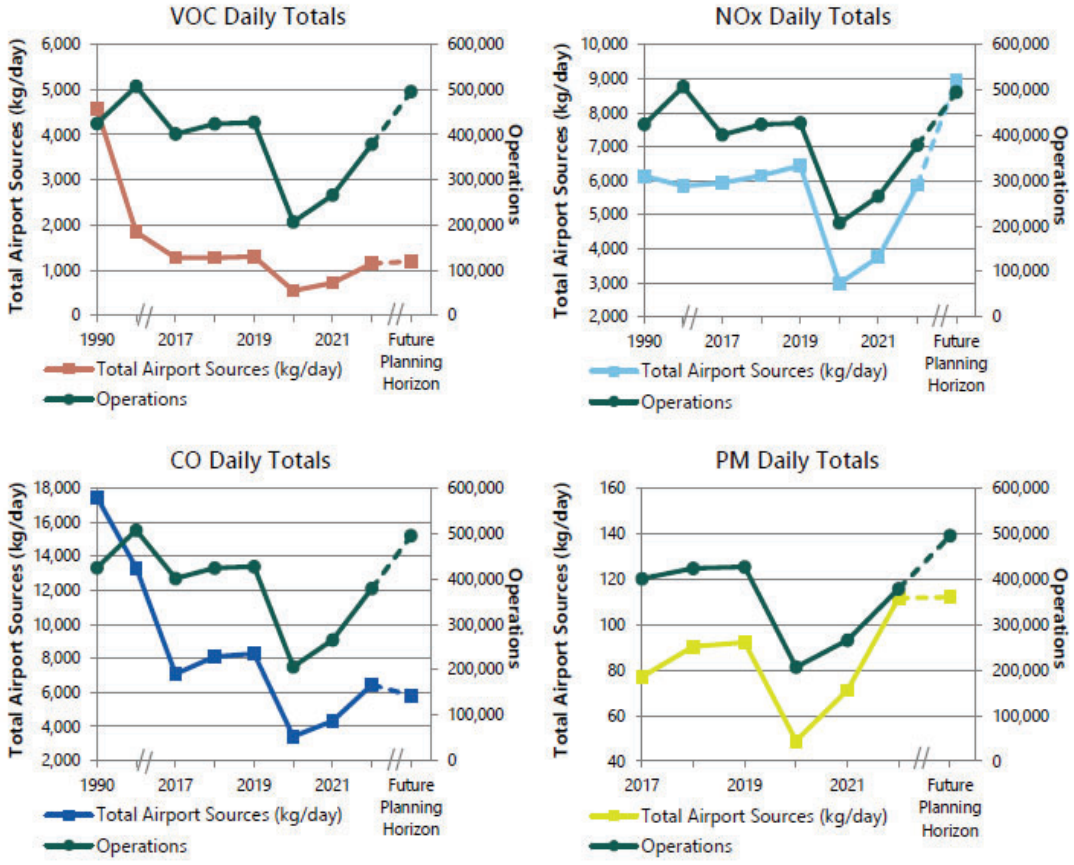
The 2022 ESPR provides an overview of Airport-related air quality factors for 2022 and the efforts to reduce emissions. The air quality modeling is based on aircraft operations, fleet mix characteristics, and airfield taxiing times combined with GSE usage, motor vehicle traffic volumes, and stationary source utilization rates. The 2022 ESPR uses FAA's approved computer model for calculating emissions from aircraft-related sources, the Aviation Environmental Design Tool (AEDT) (model v. AEDT 3e). The 2022 ESPR notes that the 2020/2021 EDR previously reported data using AEDT3d with the primary differences between the two model versions (AEDT3e versus the previous AEDT3d) being the updates to the aircraft fleet inputs. As a result of the differences between available aircraft and engine combination model defaults, the AEDT3e model results with the 2022 aircraft fleet presented in Table 8-1 show a slight increase in aircraft emissions for VOC, CO, and PM10/PM2.5 (1.4 percent, 0.4 percent, and 0.2 percent, respectively), and a negligible decrease in NOX (less than 1 percent) when compared to AEDT3d. These changes are attributable to model updates and refinements, not changes in operations or other factors.

Massport prepared aircraft emissions inventories for 2022 for the criteria pollutants carbon monoxide (CO), particulate matter (PM10/PM2.5), volatile organic compounds (VOCs), and oxides of nitrogen (NOx). Total modeled emissions of volatile organic compounds (VOCs), oxides of nitrogen (NOX), carbon monoxide (CO), and particulate matter (PM10/PM2.5) decreased from 2019 to 2022 by about 12 percent, 8 percent, 22 percent, and 19 percent, respectively. The decrease in all types of pollutant emissions from 2022 (AEDT3e) compared to 2019 (AEDT3c) is primarily attributable to the 13 percent decline in aircraft operations from 2019 to 2022. However, the 2022 total modeled emissions of VOC, NOX, CO, and PM10/PM2.5 increased by about 68 percent, 59 percent, 51 percent, and 45 percent, respectively, from 2021 levels, showing a clear upward trend in these emissions. These increases are primarily attributable to the 42 percent increase in operations between 2021 and 2022.

Figure 8-10 of the 2022 ESPR (below) shows trends in VOC, NOx, CO, and PM10/PM2.5 emissions over the Future Planning Horizon, indicating increases in some cases to above 2019 levels and sometimes above 1990 levels. The ESPR indicates, however, that CO levels are projected to decline from 2022 to future years, primarily due to the use of cleaner passenger vehicles on the roadway network and Massport's commitment to electrifying ground service equipment (GSE). VOCs and PM emissions are projected to increase slightly or remain steady, but NOx emissions are projected to increase markedly by almost 53% from 2022 to the Future Planning Horizon, or 39% from 2019 levels. Massport attributes this increase to the use of quieter airplanes that emit higher levels of NOx. Figure 8-10 shows trends in air emissions as compared to overall activity levels at the Airport, showing that emissions will increase at a slower rate than Airport operations.

Figure 8-10 and associated tables with more granular data are shown below:

Figure 8-10 Emission Trends of VOCs, NOx, CO, and PM[1] at Logan Airport, 1990-Future Planning Horizon



Source: Massport and CMT, 2024.

Notes: The dashed line represents projected values

CO – carbon monoxide; NO_X – oxides of nitrogen; PM – particulate matter; VOC – volatile organic compounds.

1 PM emissions were not estimated until 2005.

Table 8-10 Future Planning Horizon Emission Estimates (in kg/day) at Logan Airport

Source Categories	VOC		NO_X		CO		$PM_{10}/PM_{2.5}$	
	2022	Future	2022	Future	2022	Future	2022	Future
Aircraft Sources								
Air carriers	422	434	4,834	8,095	3,042	3,614	39	44
Commuter aircraft	93	64	322	352	1,849	1,265	3	3
Cargo aircraft	85	93	423	370	393	364	3	3
General aviation (GA)	80	169	71	63	302	341	2	2
Total Aircraft Sources	**681**	**760**	**5,650**	**8,881**	**5,586**	**5,584**	**47**	**52**
Ground Service Equipment (GSE)[2]	**27**	**7**	**123**	**52**	**522**	**63**	**11**	**6**
Motor Vehicles								
Parking / curbside[1]	4	1	2	<1	10	2	1	1
On-Airport vehicles	19	11	5	3	312	164	49	52
Total Motor Vehicle Sources	**22**	**13**	**7**	**4**	**322**	**166**	**50**	**53**
Other Sources								
Fuel storage and handling[2]	410	410	-	-	-	-	-	-
Miscellaneous sources[3]	5	2	86	21	20	5	3	1
Total Other Sources	**415**	**412**	**86**	**21**	**20**	**5**	**3**	**1**
Total Airport Sources	**1,144**	**1,191**	**5,866**	**8,958**	**6,449**	**5,818**	**112**	**112**
Percent Change		**4.1**		**52.7**		**-9.8**		**0.3**

Source: Massport and CMT, 2024.

Notes: Values may reflect rounding.
kg/day - kilograms per day. 1 kg/day is equivalent to approximately 0.40234 tons per year (tpy).
CO – carbon monoxide; NO_X – oxides of nitrogen; $PM_{10}/PM_{2.5}$ – particulate matter with a diameter that is 10 micrometers and smaller (PM_{10}) which is inclusive of particulate matter with a diameter that is 2.5 micrometers and smaller ($PM_{2.5}$); VOCs – volatile organic compounds.

1 GSE emissions include aircraft auxiliary power units (APUs) and vehicles and equipment converted to alternative fuels.

2 Includes the Central Heating Plant, emergency electricity generation, snow melter usage, and other stationary sources.

3 Fuel storage and handling activities do not emit CO and therefore, are not included in the table.

The 2022 ESPR continues to update information on Ultrafine Particles (UFPs) which is particulate matter (PMs) subdivided into categories based on their diameters. UFPs have diameters less than 0.1 micrometers (µm). As previously stated in the 2020/2021 EDR, in December of 2020, the Environmental Protection Agency (EPA) published a final action in the Federal Register detailing the agency's review of the National Atmospheric Air Quality Standards (NAAQS) for PM10/PM2.5. UFP is addressed in the supplemental information of the notice. In their review of the PM10/PM2.5 NAAQS, EPA determined that due to significant uncertainties and limitations, as well as the limited availability of air monitoring data, that the PM2.5 NAAQS would be retained as the indicator for UFP. As discussed above, Massport has been supportive of cooperative research efforts being funded by the FAA and co-led by BU and Tufts, for ASCENT as detailed in the most recent annual report published by ASCENT (2023).[20] As stated in the 2022 ESPR, the primary purpose of the research is the measurement of aviation emissions and aviation's contribution to ambient levels of air pollution. As part of the studies,

[20] ASCENT 2023 Annual Report (wsu.edu). The 2022 ESPR included the annual report for 2020.

ASCENT is measuring UFPs in the vicinity of Logan Airport to determine variations in the contribution of aviation emissions to ground-level air pollutant concentrations by location and over time. The 2023/2024 EDR should provide the most recent updates to this study and its findings as they relate to the study area communities. To the extent that the studies provide measurements of UFPs in adjacent communities (or a methodology to do so), this data should be reported. A-70

The 2023/2024 EDR should continue to provide an overview of the environmental regulatory framework affecting aircraft emissions, changes in aircraft emissions, and the changes in air quality modeling including a mobile sources emissions inventory for CO, NOx, VOCs, and PMs. The 2023/2024 EDR should quantify the emissions reductions associated with Massport's air emissions/GHG reduction initiatives to the extent feasible including the reductions associated initiatives target to reduce emissions and those associated with MEPA reviewed projects where GHG mitigation requirements were made. A-71 A-72

Comments from MCAC note appreciation for the support that Massport has provided to university researchers studying the impacts of air pollution on "near-in" communities and requests that data sharing be made available to MCAC to further development of its data visualization tool which will share information to its constituent communities and allow people to more fully understand the air pollution impacts of Airport operations on their lives and to inform and develop a community mitigation framework. Comments from the City of Boston also suggest the need for more data about how Massport's air quality reduction strategies, especially those not under Massport's direct control, will be implemented to keep operation sources of VOCs, NOx, CO, PM10, and PM2.5 at "similar" levels over the next 10 to 15 years. As discussed herein, to the extent the benefits of mitigation measures can be quantified, these values should be reported and tracked over time. A-73

Water Quality/Environmental Compliance

The 2022 ESPR describes Massport's ongoing environmental management activities including National Pollutant Discharge Elimination System (NPDES) compliance, stormwater, fuel spills, activities under the Massachusetts Contingency Plan (MCP), and tank management. Massport's primary water quality goal is to prevent or minimize pollutant discharges, to limit adverse water quality impacts of Airport activities. According to the 2022 ESPR, Massport performed Stormwater Pollution Prevention Plan (SWPPP) inspections and made recommendations on how to optimize best management practices (BMPs). The Logan Airport SWPPP addresses stormwater pollutants including deicing and anti-icing chemicals, bacteria, fuel and oil, and other sources of stormwater pollutants and includes BMPs specific to aviation activities. Massport also conducted training for personnel responsible for implementing activities identified in the SWPPP. Massport also maintains a Spill Prevention, Control, and Countermeasures (SPCC) Plan for its facilities that store petroleum products. Tenants meeting certain thresholds are required to prepare their own SPCC plans for their facilities. Massport checks for SPCC plans during environmental compliance inspections. Additionally, tenants receive information on Massport BMPs, which focus on spill management and prevention.

As stated in the ESPR, the Logan Airport NPDES Permit regulates stormwater discharges from Logan Airport outfalls, including the North, West, Northwest, Porter Street, Maverick Street, and airfield outfalls. Grab samples are taken monthly from North, West, Porter Street and Maverick Street Outfalls and tested for pH, oil and grease, total suspended solids (TSS), benzene, surfactants, fecal coliform bacteria, and Enterococcus bacteria during both wet and dry weather. Grab samples are also taken quarterly from these four outfalls during wet weather events to analyze for eight distinct polycyclic aromatic hydrocarbons (PAHs), and from the Northwest and Airfield outfalls for pH, oil and grease, TSS, and benzene. Deicing monitoring is also conducted from October/November through March/April, depending on weather conditions. Due to weather conditions, only one deicing sampling event occurred during the 2021-2022 deicing season. The ESPR indicates that over 97 percent of samples were in compliance with standards for pH, oil and grease, and TSS but does not report on compliance with standards for the other listed pollutants. The ESPR points to Appendix K for more details which includes tables of data showing the monitoring reports for each quarter but does not indicate where exceedances exist. Information regarding exceedances, including data on which contaminant and outfall location should be included in future reporting. The 2023/2024 should describe how exceedances are addressed and if community reporting and/or alerts are required. A-74

According to the ESPR, Massport's Facilities Department conducts biannual inspections of the six Stormcepter devices (for stormwater pre-treatment) located throughout the Airport and routinely inspects catch basins located within 100 yards of aircraft, vehicle and equipment maintenance facilities. Catch basins are cleaned on as needed basis. Treated wastewater generated from fire training exercises, which generally occur from April through November, are collected and stored in an above ground holding tank onsite. Wastewater is treated by OW separation and granular activated carbon (GAC) filtration methods to remove fuel contaminants, then reused onsite to recharge the fire training pit for training exercises. As noted in the ESPR, in March 2021, the U.S.EPA issued a minor modification to the NPDES Permit No. MA0032751 to clarify that grab samples should be collected from above ground holding tanks after the water has undergone treatment, but prior to discharge. The ESPR also reports that Massport has eliminated the use of Aqueous film forming foam (AFFF) containing per- and polyfluoroalkyl substances (PFAS) if fire training exercises and indicates that when a PFAS-free AFFF replacement product becomes available, Massport will follow FAA guidance and safety requirements regarding transitioning to the new product and its use.

According to the 2022 ESPR, Massport Fire Rescue maintains records of spills at Logan Airport. As required by regulation, fuel spills of 10 gallons or more are reported to MassDEP. Spills that enter storm drains of any volume must also be reported to MassDEP. Massport maintains records of spills, including those less than the reporting threshold. In 2022, of the oil and hazardous material spills reported to Massport Fire Rescue, only three were reportable quantity spills requiring MassDEP notification. The spills did not enter the storm drains. Of the three reportable spills in 2022, two were due to aircraft malfunctions and the other fuel spill was due to a hydrant truck malfunction.

Mitigation

The 2022 ESPR includes a list of projects previously reviewed by MEPA (several of which were reviewed, permitted and completed 10 to 20 years ago). Projects currently in the planning phases or under construction include the following:

- Terminal E Modernization Project, EEA #15434
- Logan Airport Parking Project, EEA #15665
- Runway 27 End Runway Safety Area Improvements Project, EEA #16433

Of the three projects, only the Terminal E project has proceeded to construction (Phase I) where construction period mitigation measures were implemented. Other implemented mitigation measures include replacement and upgrading of the stormwater management system and reduction of operational-related carbon dioxide (CO2) emissions associated with the project by a minimum of 30 percent. Other mitigation commitments include a building designed to achieve energy efficiencies of a minimum of 20 percent below the current Mass Energy Code. It is unclear in the filing if 25,000 sf solar photovoltaic system has been constructed. The ESPR indicates that Phase I has been completed and that Phase II is being advanced.

As summarized above, the overall trends in passenger and flight activity levels show that, while activity levels still remain below the all-time highs in 2019, they show clear recovery from COVID-19 conditions and a trajectory of exceeding 2019 levels by as early as 2025. I note that associated GHG and air emissions impacts, while also showing an upward trend, are not projected to exceed 2019 levels over the Future Planning Horizon.

To enhance public transparency and tracking of mitigation measures, future EDR and ESPR filings should improve the reporting of mitigation measures and present all applicable measures in a tabular format organized by subject matter (traffic, noise, air quality, GHG emissions, environmental justice, etc.). The table should indicate whether the measures are ongoing or planned (and if the latter, provide am estimated timeframe for implementation). To the extent specific mitigation results from an individual project review, those commitments should be listed separately with a quantification, to the extent documented through the individual review, of the estimated reductions to applicable impacts (e.g., GHG reductions) that would result from the mitigation measure. As noted above, to the extent the benefits of other mitigation measures (e.g., VMT or GHG reduction targets) can be quantified, these values should be reported and tracked over time. If same or substantially same level of reduction was not actually achieved, or mitigation commitments have changed over time, those updates should be reflected in the ESPR and may require a further Notice of Project Change (NPC) filing for the individual project. This type of format aligns more closely with reporting of mitigation commitments for standard MEPA reviews, and would allow for better tracking and public transparency with respect to implementation of mitigation measures.

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Response to Comments

The 2023/2024 EDR should include a copy of this Certificate. It should include copies of all comments received on the 2022 ESPR and provide responses to the comments and to this

A-78

Certificate. In order to ensure that the issues raised by commenters are addressed, the 2023/2024 EDR should include direct responses to comments to the extent that they are within MEPA jurisdiction. A-79

Conclusion

Massport may prepare a 2023/24 EDR for submission consistent with the Scope included in this Certificate. As noted above, I am also directing Massport to participate in a work group, facilitated by MEPA and the EEA EJ Office, to consider supplemental mitigation measures to address public health impacts of Airport operations on surrounding EJ populations. In addition, consistent with the approach set forth in the 2017 EPSR, if actual growth in passenger and/or aircraft operations outpace forecasts during a reporting period, I expect that additional mitigation and policies and strategies will be considered to address the proportional growth in impacts. A-80

October 18, 2024
Date

Rebecca L. Tepper

Comments received:

06/26/2024
& 10/11/2024 Airport Impact Relief Inc. (Air Inc) (including supplemental email comments x 2)
09/10/2024 Town of Milton
10/09/2024 Mother's Out Front (MOF)
10/10/2024 A. Hartnett
10/10/2024 A. McCoy
10/11/2024 Blue Skies Advocates
10/11/2024 City of Boston
10/11/2024 Conservation Law Foundation (CLF)
10/11/2024 Massport Community Action Advisory Committee (MCAC)
10/11/2024 F. Salvucci
10/15/2024 D. Reilly
10/15/2024 R. Marchi
10/16/2024 G. Miller
10/17/2024 Department of Energy Resources (DOER)

RLT/JAH/jah

Massport's Responses to Comments Raised in the 2022 ESPR Certificate

A-1: Logan Airport Environmental Review and Planning

I am directing Massport to participate in a work group process to consider supplemental community mitigation measures for environmental justice neighborhoods surrounding the Airport, with the goal of forming recommendations for specific actions within one year.

Massport is committed to active participation in the MEPA's Logan Airport Work Group (the Work Group), established in collaboration with the Massachusetts Environmental Policy Act (MEPA) and the Office of Environmental Justice & Equity (OEJE). This Work Group, launched in February 2025, includes representatives from state agencies, local officials, and community stakeholders and is co-moderated by MEPA, OEJE, and an independent third-party moderator to promote an inclusive and transparent process.

The Work Group's primary objective is to assess and discuss feasible supplemental mitigation measures that could address environmental concerns associated with Logan Airport operations among environmental justice (EJ) communities in East Boston, Winthrop, and Chelsea. Over the course of the next year, the group will consider supplemental community mitigation measures for EJ neighborhoods within proximity of the Airport with the goal of forming recommendations for specific actions. Scientific expertise from state agencies and researchers who have studied air quality impacts will assist in informing these discussions.

Massport will contribute technical expertise, data, and resources to support this collaborative effort. An update on the status of the MEPA's Logan Airport Work Group up to the time of this document filing is provided in **Section 2.2.4.2 of Chapter 2, *Outreach and Environmental Justice***. The *2025 Environmental Data Report (EDR)* will provide updates on the MEPA's Logan Airport Work Group's progress and process outcomes.

A-2: Logan Airport Environmental Review and Planning

Massport should report on the status of these work group discussions in its next Environmental Data Report (EDR) submission.

As of this filing, the MEPA's Logan Airport Work Group has convened six times. **Section 2.2.4.2 of Chapter 2, *Outreach and Environmental Justice,*** provides an update on the Work Group up to the filing of this EDR. Over the remainder of the year, the group will consider supplemental community mitigation measures for environmental justice (EJ) neighborhoods within proximity of the Airport with the goal of forming recommendations for specific actions. The *2025 EDR* will provide updates on the MEPA's Logan Airport Work Group's progress and process outcomes.

A-3: Logan Airport Environmental Review and Planning

I am instructing Massport to propose innovative solutions to address [document timing], for instance, by making real-time data available to the public through a public facing portal.

Massport improved the *2023/2024 EDR's* usability and reduced its length through several innovative strategies. Prior to drafting, Massport reviewed the main body chapters to keep content focused solely on annual data updates, discussing relevant metrics and trends. The approach reduced chapter size but also enabled more timely document development in future years. Additionally, Massport standardized headings and subheadings in the *2023/2024 EDR*, limiting data to the prior and current reporting years, 2022, 2023, 2024, for this EDR, as well as a chapter-specific benchmark year, which will serve as a progress frame of reference for this EDR and future filings. This approach will achieve the EDR/Environmental Status and Planning Report (ESPR) process's goal of providing annual updates, reducing extraneous content, and concentrating findings, figures, and tables on relevant reporting years.

Complimenting the EDRs and ESPRs, Massport released a User's Guide alongside the *2023/2024 EDR*. The stand-alone document provides detailed overviews of the regulatory framework, methodologies, models, model inputs, programs, and analyses. The User's Guide provides essential background information and context necessary to interpret the data, which had previously been included within the EDR and ESPR chapter text and technical appendices. The User's Guide will be updated approximately every five years to maintain accuracy and relevance. To maintain transparency on regulatory framework, methodologies, models, model inputs, programs, and analyses, the *2023/2024 EDR* has included extensive hyperlinks embedded in chapter text to the relevant sections of the User's Guide where essential contextual information is provided. For more details on the User's Guide, see **Section 1.2.2.1 of Chapter 1, *Introduction and Executive Summary*.**

Prior to filing the *2023/2024 EDR*, Massport developed a new web page specifically for EDR and ESPR filings (https://www.massport.com/environment/boston-logan-edr-espr-data-portal). The website provides links for each chapter of the most recent filings, notices for upcoming meetings, materials from prior meetings, prior filings, the User's Guide, and links to regularly updated data sources (Massport-owned and external) that provide data included within EDRs and ESPRs analysis. Massport continues to make historical data accessible on its environmental filings website. For a detailed overview of document changes in the *2023/2024 EDR*, refer to **Section 1.2.2.1 of Chapter 1.** These improvements enabled Massport to file the *2023/2024 EDR* smoothly in October 2025.

A-4: Logan Airport Environmental Review and Planning

[To consider the time lag in reporting data Massport should consider] Alternatively, one ESPR could be submitted on a five-year cycle with one EDR as an interim update in year 2 or 3, provided that real-time data and key metrics (e.g., on a dashboard with certain agreed-upon metrics) are made available with more frequent updates on the Massport website.

Massport aims to return to an annual schedule by adapting the EDR and ESPR content format and development process to enable more frequent updates, as summarized in the response to Comment A-4. **Section 1.2.2 of Chapter 1, *Introduction and Executive Summary,*** also has an overview of document changes in the *2023/2024 EDR*. Prior to filing the *2023/2024 EDR*, Massport developed a new web page specifically for EDR and ESPR filings (https://www.massport.com/environment/boston-logan-edr-espr-data-portal). The website provides links for each chapter of the most recent filings, notices for upcoming meetings, materials from prior meetings, prior filings, the User's Guide, and links to regularly updated data sources (Massport-owned and external) that provide data included within EDRs and ESPRs analysis. Massport continues to make historical data accessible on its environmental filings website. Collaboration has been on-going with the Massport Community Advisory Committee (Massport CAC) to develop access to available data, and the EDR will report on this effort's progress and anticipated status as of this EDR's filing. For more on the EDR and ESPR website, refer to **Section 1.2.2.2 of Chapter 1**.

Massport is committed to maintaining public transparency of the environmental impacts associated with current operations and forecasted activity levels by publishing ESPRs and the EDRs filed in years between ESPRs, to provide valuable annual updates on key environmental status metrics. Providing data for key metrics on a web-enabled dashboard would not resolve the time lag issue, as substantial time is needed in each cycle to collect the necessary data from multiple sources and departments within Massport, as well as from other external data sources. A significant amount of the data is utilized within models to generate a comprehensive understanding of topics such as ground access, noise, and air quality (see **User's Guide, Sections U6.1, U7.3**, **and U8.3** for a background of vehicle volumes, noise, and air quality models, respectively). Once acquired, the data reported must still undergo data verification and validation before it can be published. These steps represent a substantial amount of effort and time but are essential to the data reporting mission of the EDRs and ESPRs.

A-5: Logan Airport Environmental Review and Planning

Further input should be gathered [on document timing] through the work group on community mitigation.

As discussed in comments A-3 and A-4, Massport has employed multiple strategies to improve document timing and the publication of annual data. These strategies include an in-depth review of existing reporting, the development of the User's Guide, limiting data reported in the *2023/2024 EDR* to applicable years, and the development of the EDR and ESPR website. Massport has been an active participant in MEPA's Logan Airport Work Group meetings as discussed within comment A-1. As a part

of these Work Group meetings, the group has mainly been focused on discussing feasible supplemental mitigation measures that could address environmental concerns associated with Logan Airport operations among environmental justice (EJ) communities in East Boston, Winthrop, and Chelsea. A future Work Group meeting will be dedicated to discussing the current structure and timing of the EDR. In addition, Massport has agreed to begin hosting group stakeholder meetings with participants within the Work Group and other interested parties to discuss the EDR's scope and timing further. An overview of the MEPA's Logan Airport Work Group meetings and stakeholders meetings is included in **Section 2.2.4.2 of Chapter 2, *Outreach and Environmental Justice*.** Further updates on timing will be included in the 2025 EDR.

A-6: Mitigation

ESPRs and EDRs should include, in addition to a cumulative inventory of all Airport operations and associated impacts, a description of all practicable measures planned to avoid or minimize, and where appropriate, to mitigate such impacts within the confines of Massport's legal authority.

Since conception, the purpose of the EDR and ESPR has been to disclose the impact of operations at Logan Airport as well as the impact of long-term growth through ESPRs. As stated by the Secretary in the Certificate on the Terminal E Modernization Project, "The venue for addressing cumulative environmental impacts is through the ESPR and EDR through these reports, Logan Airport is subject to comprehensive and regular Massachusetts Environmental Policy Act (MEPA) review, including opportunities for public comment on the cumulative impacts. This regular updating and reporting on planning and cumulative impacts are unique among State Agencies." Consistent with past ESPRs and EDRs, the *2023/2024 EDR* describes the cumulative effects associated with overall Logan Airport operations and compares these effects to previous conditions in the last reporting year as well as to a benchmark reporting year's conditions for each topic covered. Based off findings from EDRs and ESPRs, Massport continuously assesses on-going and proposed programs and policy for efficacy to reduce Logan Airports impact. The status of these programs and policies is discussed within **Section 2.2 of Chapter 2, *Outreach and Environmental Justice*; Section 6.4 of Chapter 6, *Ground Access*; Section 7.4 of Chapter 7, *Noise*;** and **Section 8.5 of Chapter 8, *Air Quality and GHG Emissions;*** and the new **Chapter 11, *Sustainability and Climate Resilience***. Where data is available, Massport has quantified these beneficial measures and intends to find better methods to quantify the effects of these programs in future EDRs and ESPRs.

EDRs and ESPRs are also used to inform the projects subject to MEPA and serve as a baseline condition against which to assess project-specific impacts. Projects subject to MEPA review are reported on within **Chapter 4, *Airport Planning*,** with the status of associated Section 61 mitigation measures reported in **Chapter 10, *Project Mitigation*.**

Introduced in the *2022 ESPR*, Massport began reporting on public health existing conditions within the communities neighboring the Airport. This assessment was conducted using tools published by the state and the U.S.EPA to identify existing environmental burdens and public health consequences,

however the tools used are unable to differentiate Logan Airport related activities from other surrounding activities and site uses.

Building upon the assessment conducted in the *2022 ESPR*, the *2023/2024 EDR* utilized the newly released Massachusetts Department of Environmental Protection (MassDEP) Cumulative Impact Analysis (CIA) framework for assessment of existing community conditions. The MassDEP CIA tool provides data similar to what was presented within the *2022 ESPR*, but with higher granularity. The results from this assessment were similar to what was presented in the *2022 ESPR* as described in **Section 2.4 of Chapter 2, *Outreach and Environmental Justice*.** As existing tools are updated and new ones become available, Massport will continue to report on existing community conditions. In November 2024, the U.S.EPA released the *Interim Framework for Advancing Consideration of Cumulative Impacts*. This framework provides a foundation of information and resources in support of the development of assessment of cumulative impacts within communities. The U.S.EPA has been conducting a study within Chelsea as a part of this framework.

As discussed in prior comments, Massport is committed to active participation in the MEPA's Logan Airport Work Group (the Work Group), established in collaboration with the MEPA and the Office of Environmental Justice & Equity (OEJE). The Work Group's primary objective is to assess and discuss feasible supplemental mitigation measures that could address environmental concerns associated with Logan Airport operations among surrounding communities.

A-7: Environmental Justice

[Mitigation] measures should also consider environmental justice (EJ) principles by fostering the equitable distribution of environmental benefits and burdens in impacted neighborhoods, while considering any identified unfair or inequitable environmental burdens borne by surrounding EJ populations.

Massport is committed to active participation in MEPA's Logan Airport Work Group, established in collaboration with Massachusetts Environmental Policy Act (MEPA) and the Office of Environmental Justice & Equity (OEJE). The Work Group's primary objective is to assess and discuss equitable mitigation measures that could address environmental concerns associated with Logan Airport operations among environmental justice (EJ) communities in East Boston, Winthrop, and Chelsea. Work Group meetings at the time of filing have focused on covering the scope of the Work Group and hearing presentations from leading experts on air quality impacts from airports. Additional details on the status are available in **Section 2.2.4.2 of Chapter 2, *Outreach and Environmental Justice*.**

The 2025 EDR will provide updates on the Work Group's progress and process outcomes. Throughout 2025, the Work Group will work toward forming recommendations for potential mitigation actions, with the goal of reaching a consensus on feasible and effective strategies that could address environmental concerns associated with Logan Airport operations.

A-8: Climate Change

Massport commits to undertaking the following improvements beyond existing measures to further minimize impacts and improve transparency [including…] Report on Massport's Net Zero Plan accomplishments and progress on an annual basis.

The *2023/2024 EDR* includes a new chapter, **Chapter 11, *Sustainability and Climate Resilience***, which is dedicated to Massport's climate resiliency reporting and initiatives, linking to other Massport sustainability and resiliency resources. The chapter is aligned to report on themes that are a part of *Roadmap to Net Zero by 2031* as discussed in **Section 11.2 of Chapter 11**.

Since 2013, Massport has maintained and continuously enhanced a comprehensive set of climate resiliency measures to protect critical infrastructure and surrounding communities from climate change impacts, including extreme heat, intense precipitation, and coastal flooding and sea level rise. Climate resiliency is an embedded practice in Massport's planning, design, construction, and daily operations. In addition, Massport has prioritized awareness, education, and training on climate resiliency for both internal staff and external stakeholders, reinforcing its commitment to long-term sustainability and preparedness. Massport collaborates with regional organizations, including the Massachusetts EEA, the ResilientMass program, U.S. Army Corps of Engineers (U.S. ACE), and the City of Boston to share knowledge, align goals, and advance initiatives to protect the community.

In addition, Massport's Net Zero website (https://www.massport.com/environment/roadmap-to-net-zero) serves as a central resource for tracking the Authority's progress toward its Net Zero emissions goals. The site provides detailed information on Massport's GHG emissions sources and outlines the pathways being followed to decarbonize its operations. It includes baseline and historical emissions data to illustrate trends over time. The site also features updates on key projects, such as fleet electrification procurements and solar photovoltaic (PV) installations, that support emissions reductions. In addition, it presents relevant KPIs to help evaluate the effectiveness of these efforts and ensure transparency in reporting. The platform is regularly updated to reflect new data, milestones, and developments in Massport's climate action initiatives. Massport will continue to provide updates on these initiatives in future EDR and ESPR filings and via the Net Zero website.

A-9: Air Quality/Emissions Reduction (GHG)

Massport commits to undertaking the following improvements beyond existing measures to further minimize impacts and improve transparency [including…] In accordance with the Secretary's Plan and the Report of the Climate Chief on SAF, report on Massport's work in establishing a Commonwealth multi-agency working group to expedite the adoption of SAF at Massport and Massachusetts' airports, including production and delivery.

Massport is committed to expanding relationships in the area of Sustainable Aviation Fuel (SAF). As a founding member of the MIT-led Zero Impact Aviation Alliance (ZIAA), Massport is advancing the development and implementation of SAF through collaboration with industry leaders and academic

institutions. In 2023, Massport conducted SAF feasibility research and participated in ZIAA workshops focused on decarbonizing air transportation through innovative, research-driven solutions, including SAF production, logistics, and adoption strategies.

Starting in December 2024, Massport participated in bi-weekly meetings with the Massachusetts SAF Working Group, which consists of the Executive Offices of Economic Development (EOED), Energy and Environmental Affairs (EEA), Administration and Finance (A&F), the Office of Climate Innovation and Resilience, Massachusetts Clean Energy Center (MassCEC), the MassDOT Aeronautics Division, and Massport. The group's objective was to bring together policymakers and stakeholders from across the region to explore effective strategies for advancing technology and policies that support the development and deployment of SAF within the region. The workshop concluded in June 2025 with a strategic framework to guide the development of a Regional SAF Hub. **Section 11.2.3.2 of Chapter 11, *Sustainability and Climate Resilience*** includes a discussion on Massport's progress in the area of SAF.

A-10: Air Quality/Emissions Reduction (GHG)

Massport commits to undertaking the following improvements beyond existing measures to further minimize impacts and improve transparency [including…] Provide updates on ongoing FAA sponsored ultrafine particulate (UFP) research. Incorporate and report on Massport funded MCAC study that is measuring UFPs around Logan Airport.

Section 8.6 of Chapter 8, *Air Quality and GHG Emissions*, includes a discussion of mitigation associated with air quality, and updated information regarding recent and on-going research on Airport emissions, including on Ultrafine Particulates (UFPs), by institutions like Boston University and Tufts University. As a part of MEPA's Logan Airport Work Group, researchers funded by the Federal Aviation Administration (FAA), Massport Community Advisory Committee (Massport CAC), and regulatory agencies have presented on air quality monitoring and studies within the vicinity of the Airport and at other airports. **Section 8.6 of Chapter 8** discusses the studies and findings that have been presented on or referenced within MEPA's Logan Airport Work Group. The studies have identified the need for accurate modeling to understand health exposures and comprehensive air quality monitoring to understand UFPs from Airport activities further.

A-11: Noise

Massport commits to undertaking the following improvements beyond existing measures to further minimize impacts and improve transparency [including…] Provide details on Massport's Residential Sound Insulation Program (RSIP).

Massport has initiated a voluntary Residential Sound Insulation Program (RSIP) to mitigate the effects of aircraft noise for eligible properties surrounding Logan Airport. The RSIP's objectives are to help mitigate noise impacts for homes located within the Federal Aviation Administration (FAA) eligible area based on the Day-Night Level (DNL) 65 dB noise contour. The RSIP will help Massport achieve Federal

Aviation Administration (FAA)-required noise reduction goals for Logan Airport by implementing the FAA's program guidelines. Primarily, the RSIP and FAA goals are to achieve an interior noise level less than 45 DNL and reduce the existing interior noise levels by five dB for those homes within the program areas. The prescribed sound insulation treatments will be completed without direct costs to homeowners within the RSIP. The RSIP has been funded through an FAA Airport Improvement Program (AIP) grant for 80 percent of the program's costs, with the remaining 20 percent of necessary funds being provided by Massport.

Massport submits annual Noise Exposure Maps (NEMs) to the FAA based on the DNL contours produced during the EDR and ESPR process. The maps inform the prioritization of homes to be treated. The *2023/2024 EDR* summarizes the RSIP's implementation timeline and progress status from 2023 through the end of 2024. **Section 7.4.2 of Chapter 7, *Noise*** discusses the RSIP's goals and objectives in greater detail and also provides key project milestones with achievement status updates. Background information about the RSIP in general, including FAA requirements, qualification benchmarks for selecting which homes to include, and implementation details are provided in **Section U7.5.2 of the User's Guide**.

A-12: Logan Airport Environmental Review and Planning

Massport commits to undertaking the following improvements beyond existing measures to further minimize impacts and improve transparency [...] Create a new Logan ESPR/EDR landing page on Massport's website. The new web page will include links to existing ESPR/EDR documents, public notices, and links to available data resources.

Prior to filing the *2023/2024 EDR*, Massport developed a new web page specifically for EDR and ESPR filings (https://www.massport.com/environment/boston-logan-edr-espr-data-portal). The website provides links for each chapter of the most recent filings, notices for upcoming meetings, materials from prior meetings, prior filings, the User's Guide, and links to regularly updated data sources (Massport-owned and external) that provide data included within EDRs and ESPRs analysis. Massport continues to make historical data accessible on its environmental filings website. Collaboration has been on-going with Massport Community Advisory Committee (Massport CAC) to develop access to available data. For more on the EDR and ESPR website, refer to **Section 1.2.2.2 of Chapter 1, *Introduction and Executive Summary*.**

A-13: Environmental Justice

Massport commits to undertaking the following improvements beyond existing measures to further minimize impacts and improve transparency [including...] Continue to work with MEPA to refine and improve the Environmental Justice and public health analysis included in the ESPR.

Massport continues to coordinate with Massachusetts Environmental Policy Act (MEPA) independently and through MEPA's Logan Airport Work Group process on refining the environmental justice (EJ) and public health analysis throughout the development of the *2023/2024 EDR*. As discussed in prior

comments, this Work Group, launched in February 2025, includes representatives from state agencies, local officials, and community stakeholders and is co-moderated by MEPA and the Office of Environmental Justice & Equity (OEJE) to promote an inclusive and transparent process. Massport will contribute technical expertise, data, and resources to support this collaborative effort. The *2023/2024 EDR* provides an update on the progress of MEPA's Logan Airport Work Group, including key discussions, expert input, and preliminary recommendations. These updates are outlined in **Section 2.2.4.2 of Chapter 2, *Outreach and Environmental Justice***. The *2023/2024 EDR* developed a separate chapter for the discussion of outreach and environmental justice. The chapter builds upon the work first presented within the *2022 ESPR* of identifying and characterizing environmental justice (EJ) populations within a 1-mile designated geographic area (DGA) according to the 2022 EJ protocols. The *2022 ESPR* assessed existing public health conditions utilizing the Department of Public Health (DPH) EJ Tool and U.S.EPA EJScreen. Furthering the work done in the *2022 ESPR*, the *2023/2024 EDR* presented results on existing health conditions utilizing Massachusetts Department of Environmental Protection (MassDEP)'s Cumulative Impact Analysis (CIA)framework. Massport will continue to work with the MEPA office to improve the EJ and public health analysis within the EDRs and ESPRs as new tools become available. See **Section 2.3 of Chapter 2** for further on EJ populations within the identified DGA and **Section 2.4 of Chapter 2** for the updated existing public health assessment.

A-14: Ground Access to and From Logan Airport

Massport commits to undertaking the following improvements beyond existing measures to further minimize impacts and improve transparency [including …] Continue to monitor and report on idling at Logan Airport's terminal curbs. Establish a curb idling reduction plan with input from the MEPA Office and stakeholders. Present updates to MEPA and stakeholders at regularly scheduled briefings.

Massport is in the process of addressing Airport-wide emissions associated with idling vehicles by collecting representative data samples of vehicle dwell time at each terminal. Massport began collecting dwell time data on representative days and nights at Terminal C in June of 2025. Massport will continue to collect data at each terminal curbside over the coming years when representative samples can be obtained without interference from construction or other operational conditions.

Massport also plans to conduct a similar study to collect dwell-time data from Ride App operations, which make up approximately 27 percent of Logan Airport's ground transportation volume, in designated pick-up areas within Logan Airport's parking garages. The new validated sample of dwell time data will be input into idling emissions models to quantify the air quality impacts from vehicle idling Airport-wide. This analysis will support the development of data-driven policies to minimize curbside idling and also serve as a baseline to evaluate progress towards curb idling reduction goals.

As a part of MEPA's Logan Airport Work Group discussed in prior comments, Massport will present to Massachusetts Environmental Policy Act (MEPA) and stakeholders the results from current dwell time studies and planned or on-going ground access initiatives that influence dwell. For more information on Massport's ground access initiatives, see **Section 6.4 of Chapter 6, *Ground Access***. At the time of

this filing, Massport has initiated an idling signage program and started discussions on curb idling enforcement through video analytics. Massport will continue to report on the development of a forthcoming curb idling reduction program in subsequent filings.

A-15: Mitigation

Massport commits to undertaking the following improvements beyond existing measures to further minimize impacts and improve transparency [including…] Include additional details in the ESPR on implementation and tracking of project-specific environmental benefits and mitigation (e.g., project related VMT reductions, GHG reductions, etc.).

Chapter 10, *Project Mitigation*, includes Logan Airport projects that have on-going Section 61 commitments as a result of Massachusetts Environmental Policy Act (MEPA) review. Where possible, Massport has provided quantification towards achieving full implementation of a Section 61 commitment. Outside of project-specific mitigation commitments, Massport employs a variety of beneficial measures. Based on findings from EDRs and ESPRs, Massport continuously assesses current beneficial measures for efficacy to reduce Logan Airport's impact. The current status of these programs and policy is discussed within **Section 2.2 of Chapter 2, *Outreach and Environmental Justice*; Section 6.4 of Chapter 6, *Ground Access*; Section 7.4 of Chapter 7, *Noise*;** and **Section 8.5 of Chapter 8, *Air Quality and GHG Emissions;*** and the new **Chapter 11, *Sustainability and Climate Resilience***. Where data is available, Massport has quantified these beneficial measures and intends to find better methods to quantify the effects of these programs in future EDRs and ESPRs.

A-16: Logan Airport Environmental Review and Planning

Massport commits to undertaking the following improvements beyond existing measures to further minimize impacts and improve transparency [including…] Continue to meet with MEPA and stakeholders on data requests, accessibility, and availability, including ways to improve ESPR/EDR format.

As discussed in comments A-1 and A-5, Massport remains committed to on-going engagement with Massachusetts Environmental Policy Act (MEPA), Office of Environmental Justice & Equity (OEJE), and other stakeholders to enhance data transparency, accessibility, and the clarity of ESPRs and EDRs. Regular meetings and consultations will continue so that data requests are addressed and that relevant information is presented in a clear and accessible manner. Massport will work with MEPA and stakeholders to refine the structure and presentation of EDRs and ESPRs, improving readability and public comprehension by enhancing summaries, visuals, and key findings. These efforts build upon recent improvements, including the introduction of the User's Guide, the creation of a dedicated EDR and ESPR landing page, and the standardization of formatting to improve document clarity as discussed in **Section 1.2.2 of Chapter 1, *Introduction and Executive Summary***.

A-17: Environmental Justice

Massport should continue its efforts to strengthen and improve relations with surrounding communities, especially those representing EJ populations located in close proximity to Logan Airport.

Massport continues to improve relations with the surrounding communities, especially those representing environmental justice (EJ) populations through the Massachusetts Environmental Policy Act (MEPA) and the Office of Environmental Justice & Equity (OEJE) MEPA Logan Airport Work Group process. As a part of Massport's Department of Community Relations & Government Affairs effort to strengthen relations, outreach for Logan Airport activities is conducted within communities neighboring Logan Airport, which often extends beyond the potentially affected EJ populations and geographic boundaries of surrounding communities. Massport reports updates on ESPR and EDR-specific community outreach and greater community engagement, with a focus on EJ populations in **Section 2.2.4 of Chapter 2, *Outreach and Environmental Justice***.

For *the 2023/2024 EDR and future EDRs and ESPRs, Massport has expanded its EJ outreach to provide translation services in languages spoken by at least 5 percent of the* population located within a 5-mile radius of Logan Airport or within Massport Community Advisory Committee (Massport CAC) communities. For this EDR, this includes eight languages, as detailed in **Section 2.2.4.1 of Chapter 2.**

Lastly, Massport has created a dedicated web page specifically for EDR and ESPR filings, aimed at enhancing outreach. The website provides links for each chapter of the most recent filings, notices for upcoming meetings, materials from prior meetings, prior filings, the User's Guide, and links to regularly updated data sources that provide data included within EDRs and ESPRs analysis. Massport continues to make historical data accessible on its environmental filings website. The website is discussed within **Section 1.2.2.2 of Chapter 1, *Introduction and Executive Summary*.**

A-18: Environmental Justice

The U.S. Environmental Protection Agency (EPA) is leading a stakeholder effort to consider the "cumulative impacts" of historic and current activities on overburdened communities in Chelsea, including from the ongoing impacts of Logan Airport operations. Massport should report on any findings and action items that may result from that effort.

In November 2024, the U.S. Environmental Protection Agency (U.S.EPA) released an *Interim Framework for Advancing Consideration of Cumulative Impacts* report. Following its release, the U.S.EPA intended to actively conduct onsite cumulative impact analyses in Chelsea and various other locations across the United States. Funding for further analysis has been paused as of early 2025. Massport was not explicitly involved in the study, but will continue to track the study's progress and implications for Logan Airport in future EDR and ESPR publications, as needed.

A-19: Logan Airport Environmental Review and Planning

I am also directing Massport to participate in a work group, facilitated by MEPA and the EEA EJ Office, to consider supplemental mitigation measures to address public health impacts of Airport operations on surrounding EJ populations.

Massport is dedicated to collaborating with the newly established MEPA's Logan Airport Work Group, co-moderated by Massachusetts Environmental Policy Act (MEPA) and the Office of Environmental Justice & Equity (OEJE), to explore and assess supplemental mitigation measures aimed at addressing the environmental and public health concerns associated with Logan Airport operations on surrounding EJ communities, including East Boston, Winthrop, and Chelsea. As discussed in Comment A-1 and **Section 2.2.4.2 of Chapter 2, *Outreach and Environmental Justice***, MEPA's Logan Airport Work Group meetings at the time of filing have focused on covering the scope of the Work Group and hearing presentations from leading experts on air quality impacts from airports. Further discussion on the outcomes of the MEPA's Logan Airport Work Group will be provided within the 2025 EDR.

A-20: Logan Airport Environmental Review and Planning

The work group should engage public health experts to advise on effective intervention strategies to address air quality impacts and aim to form recommendations within one year for specific actions to be taken by Massport within the scope of its legal authority.

As discussed in comment A-1, MEPA's Logan Airport Work Group's primary objective is to assess and discuss feasible supplemental mitigation measures that could address environmental concerns associated with Logan Airport operations among environmental justice (EJ) communities in East Boston, Winthrop, and Chelsea. Over the course of the next year, the group will work towards forming recommendations for potential mitigation actions. Scientific expertise from state agencies and researchers who have studied air quality impacts will inform these discussions. Massport will contribute technical expertise, data, and resources to support this collaborative effort. The *2025 EDR* will provide updates on the Work Group's progress and process outcomes. Additional details on the MEPA's Logan Airport Work Group's scope, objectives, and key discussions are available in **Section 2.2.4.2 of Chapter 2, *Outreach and Environmental Justice*.**

A-21: Mitigation

[Massport should consider] Such actions could include partnerships with local or municipal organizations interested in HEPA filters, establishment of a curb idling reduction plan, enhanced community air monitoring in partnership with MassDEP and other air pollution sources, or other similar interventions to directly address the public health impacts of degraded air quality around the Airport.

As discussed in prior comments, Massport is committed to active participation in the MEPA's Logan Airport Work Group (the Work Group), established in collaboration with the Massachusetts Environmental Policy Act (MEPA) and the Office of Environmental Justice & Equity (OEJE). The Work

Group's primary objective is to assess and discuss potential supplemental mitigation measures that could address environmental concerns associated with Logan Airport operations among EJ communities in East Boston, Winthrop, and Chelsea. Over the course of the next year, the group will consider potential supplemental mitigation measures for EJ neighborhoods within proximity of the Airport with the goal of forming recommendations for potential actions. Scientific expertise from researchers who have studied air quality impacts will assist in informing these discussions. Massport will contribute technical expertise, data, and resources to support this collaborative effort. An update on the status of the MEPA's Logan Airport Work Group up to the time of this document filing is provided in **Section 2.2.4.2 of Chapter 2, *Outreach and Environmental Justice***. The *2025 EDR* will provide updates on the MEPA's Logan Airport Work Group's progress and process outcomes.

A-22: Logan Airport Environmental Review and Planning

The work group should also consider improvements to Massport's EDR and ESPR reporting process, including through availability of real-time data and abbreviated formats for future filings.

As discussed in Comment A-5, Massport has employed multiple different strategies to improve document timing and publishing of annual data. These strategies include an in-depth review of existing reporting, the development of the User's Guide, limiting data reported in the *2023/2024 EDR* to applicable years, and the development of the EDR and ESPR website. Massport has been an active participant in MEPA's Logan Airport Work Group meetings as discussed within comment A-1. Massport has agreed to begin hosting group stakeholder meetings with participants within MEPA's Logan Airport Work Group and other interested parties in order to further discuss the EDR's scope and timing. Stakeholder meetings are discussed in **Section 2.2.4.3 of Chapter 2, *Outreach and Environmental Justice*.**

A-23: Logan Airport Environmental Review and Planning

Massport is directed to provide administrative support and facilitate the convening of work group meetings, in consultation with the MEPA Office. The 2023/2024 EDR should report on the results of this work group process.

As discussed in Comment A-1, Massport is committed to active participation in the MEPA's Logan Airport Work Group (the Work Group), established in collaboration with the Massachusetts Environmental Policy Act (MEPA) and the Office of Environmental Justice & Equity (OEJE). This Work Group, launched in February 2025, includes representatives from state agencies, local officials, and community stakeholders and is co-moderated by MEPA and OEJE to promote an inclusive and transparent process. Massport will contribute technical expertise, data, and resources to support this collaborative effort. The *2023/2024 EDR* provides an update on the progress of the MEPA's Logan Airport Work Group as documented in **Section 2.2.4.2 of Chapter 2, *Outreach and Environmental Justice***.

A-24: Logan Airport Environmental Review and Planning

If actual growth in passenger and/or aircraft operations outpace forecasts during a reporting period, I expect that additional mitigation and policies and strategies will be considered to address the proportional growth in impacts.

ESPR forecasts estimate conditions at the future planning horizon (FPH) end date, which is customarily 15 to 20 years after the ESPR reporting year; however, the forecast analysis does not estimate passenger activity levels (PALs) or operations counts in the interim years as part of the industry standard forecasting methodology. The forecast is revisited every five years during ESPR development, and if the PALs or operation counts for a current ESPR reporting year's FPH appear to have significantly exceeded the prior ESPR's forecast, or seem to be substantially less than previously anticipated, Massport will examine the causes further and adjust policies and strategies accordingly. A discussion of the timing of Logan Airport's forecasting is included in **Section U3.4 of the User's Guide.**

The forecast developed within the *2022 ESPR* projected activity levels and operations 10 to 15 years into the future. Massport compared passenger activity levels and operations from 2024 to the forecast presented within the *2022 ESPR*, as described in **Section 3.1.5 of Chapter 3, *Activity Levels***. In 2024, while passenger activity levels were higher than experienced in 2019, levels remained approximately 19 percent below the 53.5 million annual passengers (MAP) presented in the 10-15 year future planning horizon in the *2022 ESPR*. Similarly, operations in 2024 were approximately 16 percent below those projected in the *2022 ESPR*. As a part of the EDR and ESPR process, Massport continues to provide updates on initiatives and actions to increase high-occupancy vehicle (HOV) use and reduce environmental impacts.

A-25: Logan Airport Environmental Review and Planning

The next EDR will analyze calendar years 2023/2024 and should propose a simplified format that could be accompanied by more frequent updates of available data through the Massport website.

As discussed in Comment A-3 and Comment A-4, Massport improved the usability and reduced the length of the *2023/2024 EDR* by focusing the main chapters solely on annual data updates and introducing a User's Guide that outlines regulatory frameworks and methodologies, enhancing document transparency and efficiency. In addition, the *2023/2024 EDR* focused analysis on reporting and benchmark years. The narrowing of the data focus is supported by the newly developed EDR and ESPR landing page. This landing page includes historical EDRs and ESPRs with extensive data, and Massport is working on strategies to convert this data into a searchable format for the public to download. Massport's progress on this effort will be reported in this and future EDRs and ESPRs. In addition to the historical data, the landing page will also include links to data sources referenced within EDRs and ESPRs that provide some of the publicly available data used to develop the EDRs and ESPRs. These data sources are primarily hosted by other state agencies, federal databases, and other reputable sources. The website is discussed within **Section 1.2.2.2 of Chapter 1, *Introduction and Executive Summary*.**

A-26: Logan Airport Environmental Review and Planning

Massport has indicated that [real-time data] (to the extent is available) will be part of an EDR/ESPR web page which is being developed to provide community stakeholders and the public a better understanding of future filings and access to collected environmental data in one location. The 2023/2024 EDR should report on the status of this website or dashboard and the data that is/will be available.

As discussed in prior comments, prior to filing the *2023/2024 EDR*, Massport developed a new web page specifically for EDR and ESPR filings (https://www.massport.com/environment/boston-logan-edr-espr-data-portal). The website provides links for each chapter of the most recent filings, notices for upcoming meetings, materials from prior meetings, prior filings, the User's Guide, and weblinks to data sources that provide data included within EDRs and ESPRs analysis. Massport continues to make historical data accessible on its environmental filings website. The website is discussed within **Section 1.2.2.2 of Chapter 1, *Introduction and Executive Summary*.**

A-27: Mitigation

The 2023/2024 EDR must include information on the environmental policies and planning that form the context of environmental reporting, technical studies, and environmental mitigation initiatives against which projects at Logan Airport can be evaluated. This should include identification of the cumulative effects of Logan Airport operations and activities, compared to previous years, as appropriate.

The EDR and ESPR User's Guide was developed in 2024 to provide information on environmental policies and planning that form the context for environmental reporting and technical studies. The User's Guide provides detailed background information to supplement the content within each EDR chapter to keep chapters focused on reporting year-to-year changes. As needed, EDR and ESPR chapters will note important updates on environmental policies, planning, and models that are not reflected within the User's Guide. As discussed within prior comments, the purpose of the EDR and ESPR has been to disclose the impact of recent growth at Logan Airport, as well as the impact of long-term growth through ESPRs. Consistent with past ESPRs and EDRs, the *2023/2024 EDR* describes the cumulative effects associated with overall Logan Airport operations and compares these effects to previous conditions in the last reporting year as well as to a benchmark reporting year's conditions for each topic covered. Based on findings from EDRs and ESPRs, Massport continuously assesses on-going and proposed programs and policies for efficacy to reduce Logan Airport's impact. The current status of these programs and policies is discussed within **Section 2.2 of Chapter 2, *Outreach and Environmental Justice*; Section 6.4 of Chapter 6, *Ground Access*; Section 7.4 of Chapter 7, *Noise*;** and **Section 8.5 of Chapter 8, *Air Quality and GHG Emissions;*** and the new **Chapter 11, *Sustainability and Climate Resilience***. Where data is available, Massport has quantified these beneficial measures and intends to find better methods to quantify the effects of these programs in future EDRs and ESPRs.

A-28: Logan Airport Environmental Review and Planning

The 2023/2024 EDR should include timely reporting of related environmental data to ensure a full picture of the information summarized in the report.

Massport filed this *2023/2024 EDR* in October 2025. Massport achieved a faster turnaround by enacting several strategies during the development process that streamlined and standardized the document and returned the focus to 2023 and 2024 environmental data and analyses, as discussed in prior comments. Massport anticipates leveraging these efficiencies to finalize future EDRs and ESPRs quickly and return the EDRs and ESPRs to an annual schedule. In addition, the development of the User's Guide preserves background and supporting information in a repository document outside of the main body of the document, which serves to reduce the overall document length, improve comprehension, and enhance readability. The User's Guide provides transparency on Massport's data analyses and methodologies, which will be updated approximately every five years to maintain accuracy and relevance. See **Section 1.2.2 of Chapter 1, *Introduction and Executive Summary,*** for an overview of document changes in the *2023/2024 EDR*.

As discussed in prior comments, Massport has published links to related environmental data from other Massport websites and external sources on the newly published EDR and ESPR landing page in order to provide links to sources used within the EDR that provide data more frequently than EDR and ESPR filings.

A-29: Environmental Justice

The 2023/2024 EDR should provide information on EJ populations in proximity to the Airport and summarize relevant information on community health data and outreach as discussed further below.

In accordance with 301 CMR 11.02, Massport defined a designated geographic area (DGA) for the *2022 ESPR* of 1 mile from the outer perimeter that defines the environmental justice (EJ) populations. The DGA are 64 EJ block groups, of which 32 meet the minority EJ criteria; three meet the low-income EJ criteria; seven meet both the minority and low-income EJ criteria; 14 meet both the minority and English isolation EJ criteria; and eight meet the minority, low-income, and English isolation EJ criteria. Detailed information on the EJ populations is included in **Table E-2 through E-4 of Appendix E, *Environmental Justice Supporting Documentation***, of the *2023/2024 EDR*.

The *2023/2024 EDR*, at the direction of Massachusetts Environmental Policy Act (MEPA), utilized Massachusetts Department of Environmental Protection (MassDEP)'s Cumulative Impact Analysis (CIA) framework to assess existing public health data within 1-mile of Logan Airport, or the DGA. In concurrence with MEPA, the *2023/2024 EDR* does not repeat any EJ analysis done in the *2022 ESPR*, specifically the Department of Public Health (DPH) EJTool and U.S.EPA's EJScreen, as these data sources have not been updated since the *2022 ESPR* filing or are no longer available. As previously discussed, the findings within this framework are largely consistent with outcomes from DPH EJ Tool and

U.S.EPA's EJScreen, as the MassDEP CIA framework utilizes similar sources, but at a much more granular level. Included in the findings are tables by census tracts, or block groups where available, presenting indicator findings. Through the use of MassDEP's CIA tool, Massport has demonstrated a willingness to continue to work with MEPA to advance EJ and public health analysis within the EDRs. Findings for the Air Quality and Climate indicators are presented in **Section 2.4 of Chapter 2, *Outreach and Environmental Justice***,

The public health data indicate that several environmental indicators averaged across the DGA are equal to or above the 80th percentile of the statewide rates, including the Diesel Particulate Matter (PM), Air Toxics Cancer Risk, Air Toxics Respiratory Hazard Index (HI), and Traffic Proximity. Reporting for the community health data is presented in **Section E.5 through Section E.9 of Appendix E, *Environmental Justice Supporting Documentation***.

As discussed in previous comments, Massport continues to evaluate and adjust engagement strategies by meeting the community where they are. Engagement with the community includes attending monthly neighborhood association meetings, verbal briefings before and after post-filing meetings at the Logan Airport Rental Car Center (RCC), and other forms of engagement as described in **Section U2.4 of the User's Guide.** Specific outreach related to the *2023/2024 EDR* is discussed within **Section E.1 of Appendix E, *Environmental Justice Supporting Documentation***.

A-30: Logan Airport Environmental Review and Planning

The 2023/2024 EDR must include copies of all ESPR and EDR Certificates and a distribution list for the 2023/2024 EDR. Supporting technical appendices should be provided as necessary.

The Secretary's Certificate on the *2022 ESPR* is included in this Appendix, **Appendix A, *MEPA Certificates and Responses to Comments***. Copies of previous Certificates on ESPRs and EDRs are included in previous publications, which can be accessed at: https://www.massport.com/environment/project-environmental-filings/boston-logan.

Appendix D, *Distribution*, lists the agencies and individuals who received a copy of this *2023/2024 EDR* via email with an online link, Notice of Availability with an online link, or a hard copy. The distribution list also includes representatives of governmental agencies, community groups, and local residents interested in activities at Logan Airport. As directed by EEA, the distribution list for the EDR was expanded to include the environmental justice (EJ) Reference List, which includes the CBOs and tribes located within 5 miles of the Logan Airport campus.

The *2023/2024 EDR*, along with past EDRs and ESPRs, is also publicly available on Massport's website at: https://www.massport.com/logan-airport/about-logan/environmental-reports/.

Supporting appendices are provided for the following technical chapters:

- **Appendix E, *Environmental Justice Supporting Documentation***
- **Appendix F, *Activity Levels Supporting Documentation***

- **Appendix G, *Regional Transportation Supporting Documentation***
- **Appendix H, *Ground Access Supporting Documentation***
- **Appendix I, *Noise Supporting Documentation***
- **Appendix J, *Air Quality Supporting Documentation***
- **Appendix K, *Water Quality Supporting Documentation***

Technical appendices include supporting technical and quantitative data used to develop the EDR and ESPR chapter content. For this EDR, the technical appendices include data for the 2022, 2023, and 2024 reporting years and topic-specific benchmark year data to illustrate overall change over time. In addition, complementing the EDRs and ESPRs, Massport released a User's Guide alongside the *2023/2024 EDR*. The stand-alone document provides detailed overviews of the regulatory framework, methodologies, models, model inputs, programs, and analyses. The User's Guide contains the contextual information and technical specifications, such as modeling and analysis methodologies and processes, previously found within EDR and ESPR chapter narrative text and technical appendices. The User's Guide will be updated approximately every five years to incorporate information on significant changes that occurred during the previous reporting cycle, like changes in regulatory requirements, modeling methodologies, or data collection approaches. However, these changes will be addressed in the relevant EDR and ESPR chapters for the reporting years in which these changes occurred, and then the information will be migrated to the User's Guide during the next ESPR refresh cycle.

Massport created the User's Guide to maintain transparency on how the findings within the *2023/2024 EDR* are developed and the contextual meaning of those findings, while maintaining the focus in the *2023/2024 EDR* narrative text on data updates. The *2023/2024 EDR* has numerous hyperlinks throughout that will take the reader to the relevant sections within the User's Guide to facilitate chapter comprehension. For more details on the User's Guide, see **Section 1.2.2.1 of Chapter 1, *Introduction and Executive Summary*.**

A-31: Logan Airport Environmental Review and Planning

The 2023/2024 EDR should propose a streamlined process for environmental reporting, which may be supplemented through real-time data and other metrics made available with more frequent updates through the Massport website.

As discussed in prior comments, Massport improved the *2023/2024 EDR*'s usability and reduced its length through several innovative strategies. Prior to drafting, Massport reviewed the main body chapters to keep content focused solely on annual data updates, discussing relevant metrics and trends. The approach reduced chapter size but also enabled more timely document development in future years. Additionally, Massport standardized headings and subheadings in the *2023/2024 EDR*, limiting data to the prior reporting year and current reporting year(s), which are 2022, 2023, 2024 for this report, and a topic-specific benchmark year for each technical analysis or finding. This approach

aligns with the EDR and ESPR process's goal of providing annual updates, concentrating findings, figures, and tables on relevant reporting years.

Complimenting the EDRs and ESPRs, Massport released a User's Guide alongside the *2023/2024 EDR*. The stand-alone document provides detailed overviews of the regulatory framework, methodologies, models, model inputs, programs, and analyses. The User's Guide contains the contextual information and technical specifications, such as modeling and analysis methodologies and processes, previously found within EDR and ESPR chapter narrative text and technical appendices. The User's Guide will be updated approximately every five years to incorporate information on significant changes that occurred during the previous reporting cycle, like changes in regulatory requirements, modeling methodologies, or data collection approaches. However, these changes will be addressed in the relevant EDR and ESPR chapters for the reporting years in which these changes occurred, and then the information will be migrated to the User's Guide during the next ESPR refresh cycle.

Massport created the User's Guide to maintain transparency on how the findings within the *2023/2024 EDR* are developed and the contextual meaning of those findings, while maintaining the focus in the *2023/2024 EDR* narrative text on data updates. The *2023/2024 EDR* has numerous hyperlinks throughout that will take the reader to the relevant sections within the User's Guide to facilitate chapter comprehension. For more details on the User's Guide, see **Section 1.2.2.1 of Chapter 1.** Prior to filing the *2023/2024 EDR*, Massport developed a new web page specifically for EDR and ESPR filings (https://www.massport.com/environment/boston-logan-edr-espr-data-portal). The website provides links for each chapter of the most recent filings, notices for upcoming meetings, materials from prior meetings, prior filings, the User's Guide and links to regularly updated data sources (Massport owned and external) that provide data included within EDRs and ESPRs analysis. Massport continues to make historical data accessible on its environmental filings website. For a detailed overview of document changes in the *2023/2024 EDR*, refer to **Section1.2.2 of Chapter 1**. These improvements enabled Massport to file the *2023/2024 EDR* smoothly in October 2025.

A-32: Public Comments

Massport should consider [public] comments and suggestions in preparing the 2023/2024 EDR. I encourage Massport to provide responses as part of the subject matter sections of the 2023/2024 EDR, to provide context to commenters on this document, and to explain how recommendations have been incorporated into the Scope.

In addition to the Certificate and responses to comments included within this Appendix, **Appendix A, *MEPA Certificates and Responses to Comments***, Massport included copies of public comment letters submitted from the *2022 ESPR* and responses to comments within **Appendix B, *Comment Letters and Responses to Comments*** of this *2023/2024 EDR*.

Massport thoroughly considered requests and suggestions from public commenters and made improvements to the content, format, and accessibility of information in this *2023/2024 EDR* to reflect

the public's requests. Massport responded to comments within the public comment letters that presented actionable requests related to the subject matter and delivery of the *2022 ESPR*. Where applicable, Massport's responses to public comments address where changes were made to the scope of the *2023/2024 EDR* or other Massport environmental initiatives in alignment with the commenter's recommendations.

A-33: Logan Airport Environmental Review and Planning

I encourage Massport to evaluate feasible suggestions for increased analysis and monitoring of air emissions, noise and traffic impacts, and to actively consider ways to make real-time tracking data available to the public.

Massport continues to evaluate new methodologies and technologies as they become available and evaluates them in the context of Logan Airport, including for this EDR. Prior to filing the *2023/2024 EDR*, Massport developed a new web page specifically for EDR and ESPR filings (https://www.massport.com/environment/boston-logan-edr-espr-data-portal). The website provides links for each chapter of the most recent filings, notices for upcoming meetings, materials from prior meetings, prior filings, the User's Guide, and weblinks to regularly updated data sources (Massport owned and external) for the data included within EDRs and ESPRs analysis. Massport continues to make historical data accessible on its environmental filings website. The website is discussed within **Section 1.2.2.2 of Chapter 1, *Introduction and Executive Summary***. Massport is working with Massport Community Advisory Committee (Massport CAC) to make available data accessible online, and updates on this coordination effort as well as when data will be available will be provided in this EDR as well as forthcoming ESPRs/EDRs.

A-34: Environmental Justice

The 2022 ESPR indicates that the "designated geographic area" (DGA) (as defined in 301 CMR 11.02) should be defined as one mile for future filings. Because ESPRs are distinct from standard project reviews, it is not necessary to define a formal DGA. However, to be consistent with other MEPA reviews, I find it appropriate for Massport to continue public engagement efforts, at minimum, over a 1-mile radius around the outer perimeter of Logan Airport.

In accordance with 301 CMR 11.02, Massport defined a designated geographic area (DGA) for the *2022 ESPR* of 1 mile from the outer perimeter that defines the environmental justice (EJ) populations. The DGA is 64 EJ block groups, of which 32 meet the minority EJ criteria; three meet the low-income EJ criteria; seven meet both the minority and low-income EJ criteria; 14 meet both the minority and English isolation EJ criteria; and eight meet the minority, low-income, and English isolation EJ criteria. Detailed information on the EJ populations is included in **Table E-2 through E-4 of Appendix E, *Environmental Justice Supporting Documentation***, of the *2023/2024 EDR*.

The Community Relations & Government Affairs Department directs Massport's EJ and community outreach for projects subject to Massachusetts Environmental Policy Act (MEPA) review. Massport

identifies EJ block groups within a 1-mile radius and 5-mile radius of a Project Area as part of the DGA for MEPA project filings on projects occurring after the enactment of the 2021 EJ Policy and 2022 EJ Protocols. Further information on project-specific Massport outreach policies can be found within **Section U2.4 of the User's Guide**. A map of the EJ populations within the DGA (1-mile) is illustrated in **Figure 2-1 of Chapter 2, *Outreach and Environmental Justice.*** Specific outreach related to the *2023/2024 EDR* is discussed within **Section E.1 of Appendix E, *Environmental Justice Supporting Documentation***.

A-35: Air Quality/Emissions Reduction (GHG)

Massport should identify any potential areas of additional impact around the Airport based on [UFP studies] and other ongoing studies, and conduct additional focused outreach to such areas.

As a part of MEPA's Logan Airport Work Group, researchers funded by the Federal Aviation Administration (FAA), Massport Community Advisory Committee (Massport CAC), and regulatory agencies have presented on air quality monitoring and studies within the near vicinity of the Airport and at other airports. **Section 8.6 of Chapter 8, *Air Quality and GHG Emissions***, discusses the studies and findings that have been presented on or referenced within the Work Group. The studies have identified the need for accurate modeling to understand health exposures and comprehensive air quality monitoring to further understand Ultrafine Particulates (UFPs) from Airport activities. To the extent that this information is directly applicable to Logan Airport, Massport will be transparent regarding aviation-related air pollution data associated with Logan Airport and its operations that Massport has access to, and Massport will summarize this data and report on the implications of UFP around the Airport. Key findings that have been discussed within the Work Group is the lack of comprehensive monitoring over time within communities surrounding the Airport. As MEPA's Logan Airport Work Group continues to assess and discuss potential supplemental mitigation measures that could address environmental concerns associated with Logan Airport, Massport will continue to consider, with stakeholder input, whether there are areas where additional outreach would be beneficial. Findings, recommendations, and outreach will be reported in future EDR and ESPR filings.

A-36: Environmental Justice

Massport should continue to engage with the MCAC and local organizations, and take recommendations for additional methods and areas of public engagement for future ESPRs and EDRs.

As discussed in A-29, Massport will continue to evaluate and adjust engagement strategies by meeting the community where they are. Engagement with the community includes attending monthly neighborhood association meetings, verbal briefings before and after filings at the RCC, and other forms of engagement as described in **Section U2.4 of the User's Guide**. Specific outreach related to the *2023/2024 EDR* is discussed within **Section E.1 of Appendix E, *Environmental Justice Supporting Documentation***. Massport will collaborate with the Massport Community Advisory Committee

(Massport CAC) and local organizations to assess public engagement methods in future ESPRs and EDRs. Throughout 2025, Massport is engaging regularly with stakeholders to discuss the *2023/2024 EDR*.

A-37: Environmental Justice

The 2023/2024 EDR should prioritize engagement strategies that meet the community where they are, especially by holding meetings in more publicly accessible locations within the EJ communities most impacted by Airport activities. Massport should also explore alternative methods of involvement beyond formal public hearings, such as hosting "open house" style public meetings, organizing small group discussions with stakeholders, or distributing community surveys to collect feedback. Massport is encouraged to meet EJ community members where they already gather by hosting pop-up informational sessions at existing community events (e.g., community celebrations, farmer markets, and cultural events).

Massport continues to strengthen and improve relations with the surrounding communities, especially those representing environmental justice (EJ) populations through the Massachusetts Environmental Policy Act (MEPA) and the Office of Environmental Justice & Equity (OEJE) MEPA's Logan Airport Work Group process, as a part of the Massport Department of Community Relations & Government Affairs, outreach for Logan Airport activities is conducted within communities neighboring Logan Airport, which often extends outside of the EJ populations and the surrounding communities. As discussed in A-29 and A-36, Massport continues to evaluate and adjust engagement strategies by meeting the community where they are. Engagement with the community includes attending monthly neighborhood association meetings, verbal briefings before and after filings at the RCC, and other forms of engagement as described in **Section U2.4 of the User's Guide**. Specific outreach related to the *2023/2024 EDR* is discussed within **Section E.1 of Appendix E, *Environmental Justice Supporting Documentation***. Massport continued to meet with stakeholders throughout 2025 to discuss the EDR.

A-38: Environmental Justice

Given the large percentage of households identified as having limited English proficiency (LEP) (almost half of EJ block groups within 1 mile of the Airport have over 20% of households who report limited English proficiency), the 2023/2024 EDR should also report on specific events planned/attended and strategies enacted to intensify engagement with members from these LEP populations.

As discussed in A-17, for *2023/2024 EDR* and future EDRs and ESPRs, Massport has expanded its environmental justice (EJ) outreach to provide translation services in languages spoken by at least 5 percent of a given population located within a 5-mile radius of Logan Airport or within Massport Community Advisory Committee (Massport CAC) communities. For this EDR, this includes eight languages, as well as interpretation services for Spanish at public meetings, with other languages

available upon request, as detailed in **Section 2.2.4.1 of Chapter 2, *Outreach and Environmental Justice***.

As discussed in A-29, A-36, and A-37, Massport continues to evaluate and adjust engagement strategies by meeting the community where they are. Engagement with the community includes attending monthly neighborhood association meetings, verbal briefings before and after filings at the RCC, and other forms of outreach as described in **Section U2.4 of the User's Guide**. Specific outreach related to the *2023/2024 EDR* is discussed within **Section E.1 of Appendix E, *Environmental Justice Supporting Documentation***.

A-39: Environmental Justice

The 2023/2024 EDR should present an updated analysis of existing environmental conditions and public health risk within EJ populations. This updated analysis should present data on all air quality and climate indicators presented in MassDEP's Cumulative Impact Analysis framework (which overlap in large part with EJ Screen data). Indicators above the 80th percentile as compared to statewide averages should be reported for each individual census tract (not for entire 1-mile radius) containing EJ populations within 1 mile of the Airport. In addition, these data should be reported for any EJ populations located within the largest geographic area associated with documented impacts from the Airport, most notably, the largest sound contours (e.g., 60 DNL) documented in the 2022 ESPR.

New for the *2023/2024 EDR*, a new chapter has been created to discuss outreach and environmental justice (EJ), see **Chapter 2, *Outreach and Environmental Justice***. Massport continues to coordinate with Massachusetts Environmental Policy Act (MEPA) independently and through the MEPA's Logan Airport Work Group process on refining the EJ and public health analysis throughout the development of the *2023/2024 EDR*. As discussed in prior comments, the Work Group's primary objective is to assess and discuss potential supplemental mitigation measures that could address environmental concerns associated with Logan Airport operations among EJ communities in East Boston, Winthrop, and Chelsea. Additional details on the MEPA's Logan Airport Work Group's scope, objectives, and updates are available in **Section 2.2.4.2 of Chapter 2**.

In concurrence with MEPA, the *2023/2024 EDR* does not repeat the EJ analysis within the *2022 ESPR*, specifically the DPH EJTool and U.S.EPA's EJScreen, as these data sources have not been updated since the *2022 ESPR* filing or are no longer available. The *2023/2024 EDR*, at the direction of MEPA, utilized Massachusetts Department of Environmental Protection (MassDEP)'s Cumulative Impact Analysis (CIA) framework to assess existing public health conditions within 1-mile of Logan Airport. The findings within this framework are largely consistent with the outputs from DPH EJ Tool and U.S.EPA's EJScreen as the MassDEP CIA framework utilizes similar sources, but at a much more granular level. Included in the findings are tables by census tracts, or block groups where available, presenting indicator findings. Through the use of MassDEP's CIA tool, Massport has demonstrated a willingness to continue to work with MEPA to advance EJ and public health analysis within the EDRs. In addition to these findings, the

community conditions assessment following MassDEP's CIA framework is presented in **Sections E.5 through E.9 of Appendix E, *Environmental Justice Supporting Documentation***. Findings for the Air Quality and Climate indicators are presented in **Section 2.4.3 of Chapter 2**.

As discussed in comment A-34, a designated geographic area (DGA) of 1-mile was considered for the public health existing conditions assessment, consistent with the 2022 EJ Protocols. As the MEPA's Logan Airport Work Group continues discussions, Massport will consider appropriate and scientifically sound methods to expand the area of the existing conditions assessment to accurately capture potential environmental impacts directly associated with operations.

A-40: Environmental Justice

The 2023/2024 EDR should contain a section on Environmental Justice to present [MassDEP CIA] analysis.

The *2023/2024 EDR*, at the direction of Massachusetts Environmental Policy Act (MEPA), utilized Massachusetts Department of Environmental Protection (MassDEP)'s Cumulative Impact Analysis (CIA) framework to assess existing public health data within 1-mile of Logan Airport. Reporting for the community health data is presented in **Section 2.4.3 of Chapter 2**, ***Outreach and Environmental Justice***. In concurrence with MEPA, the *2023/2024 EDR* does not repeat the environmental justice (EJ) analysis within the *2022 ESPR*, specifically the Department of Public Health (DPH) EJTool and U.S.EPA's EJScreen, as these data sources have not been updated since the *2022 ESPR* filing or are no longer available. As discussed in A-39, the findings within this framework are largely consistent with outcomes from DPH EJ Tool and U.S.EPA's EJScreen as the MassDEP CIA framework utilizes similar sources, but at a much more granular level. Included in the findings are tables by census tracts, or block groups where available, presenting indicator findings. Through the use of MassDEP's CIA tool, Massport has demonstrated a willingness to continue to work with MEPA to advance EJ and public health analysis within the EDRs and ESPRs. Findings for the Air Quality and Climate indicators are presented in **Table E-8 of Appendix E, *Environmental Justice Supporting Documentation*,** but despite the increased granularity, findings for health conditions and air quality and climate indicators remain in line with what was presented within the *2022 ESPR*. In addition to these findings, the community conditions assessment results following MassDEP's CIA framework are presented in **Sections E.5 through E.9 of Appendix E, *Environmental Justice Supporting Documentation***.

A-41: Logan Airport Environmental Review and Planning

[EJ analysis] should be separate from discussions of sustainability efforts or other distinct topics.

In the *2022 ESPR*, Massport introduced a new chapter that included discussions on Massport's outreach and potentially affected environmental justice (EJ) communities near Logan Airport. This *2023/2024 EDR* separates community outreach and EJ content from sustainability and climate resilience into two distinct chapters for each topic: **Chapter 2, *Outreach and Environmental Justice***, and **Chapter 11, *Sustainability and Climate Resilience***. In **Chapter 2**, Massport reports updates on EDR and ESPR-

specific community outreach and efforts towards greater community engagement, with a focus on EJ populations. **Section 2.4 of Chapter 2** also reports on conclusions and updates from the public health existing conditions review addressed in the *2022 ESPR*, and for the first time in the EDR and ESPR series, presents results from the Massachusetts Department of Environmental Protection (MassDEP) Cumulative Impact Analysis (CIA).

A-42: Air Quality/Emissions Reduction (GHG)

The 2023/2024 EDR should continue to report on [BU UFP studies] findings and additional mitigation measures implemented in response to new finding

As discussed in A-10, Boston University has participated in studies conducted in 2022 that evaluated Ultrafine Particulate (UFP) concentrations surrounding Logan Airport. **Section 8.6 of Chapter 8, *Air Quality and GHG Emissions***, includes a discussion of mitigation associated with air quality, and updated information regarding recent and on-going research on Airport emissions, including on UFP, by institutions like Boston University and Tufts University. As a part of MEPA's Logan Airport Work Group, researchers funded by the Federal Aviation Administration (FAA), Massport Community Advisory Committee (Massport CAC) and regulatory agencies have presented on air quality monitoring and studies within the vicinity of the Airport and at other airports. **Section 8.6 of Chapter 8** discusses the studies and findings that have been presented on or referenced within the MEPA's Logan Airport Work Group. The studies have identified the need for accurate modeling to understand health exposures and comprehensive air quality monitoring to further understand UFPs from Airport activities.

A-43: Air Quality/Emissions Reduction (GHG)

The 2023/2024 EDR should provide updates and implications from continuing institutional research on UFP, black carbon, [and] the public health impacts of aviation-related air pollution.

As discussed in A-10, As a part of MEPA's Logan Airport Work Group, researchers funded by the Federal Aviation Administration (FAA), Massport Community Advisory Committee (Massport CAC)

and regulatory agencies have presented on air quality monitoring and studies within near vicinity of the Airport and at other airports. **Section 8.6 of Chapter 8, *Air Quality and GHG Emissions***, discusses the studies and findings that have been presented on or referenced within MEPA's Logan Airport Work Group. The studies have identified the need for accurate modeling to understand health exposures and comprehensive air quality monitoring to understand Ultrafine Particulates (UFPs) from Airport activities further.

Additionally, Massport tracks other non-Logan Airport specific on-going research on health impacts of aviation-related air pollution. These studies include research on black carbon and UFP and are discussed in **Section 8.6 of Chapter 8**. Massport will continue to follow these studies and consider the applicability of findings as they relate to Logan Airport and are adopted by other airports.

A-44: Activity Levels

The 2023/2024 EDR should continue to report passenger and activity levels and consider planning/mitigation commensurate with the anticipated return to pre-pandemic levels in 2025; in particular, air, noise, and traffic reduction measures should be a significant emphasis of future EDR and ESPR reporting.

Passenger activity levels in 2023 mirrored levels observed in 2018, and in 2024, Logan Airport exceeded 2019 levels as airlines resumed previously suspended services, added new destinations, and responded to strong market demand in the Greater Boston area. Passenger activity at Logan Airport in 2023 decreased by 4 percent compared to 2019, with operations declining by nearly 8 percent. In 2024, Logan Airport exceeded 2019 passenger levels by approximately 2 percent, while operations declined by nearly 3 percent below 2019 levels. A detailed status update of passenger activity levels and operations related to 2019 levels is presented in **Table 3-1 of Chapter 3, *Activity Levels*** and **Appendix F, *Activity Levels Supporting Documentation***. Massport will continue to report and track passenger and operation activity levels, as it relates to the 2019 baseline year in future EDRs and ESPRs.

Consistent with past ESPRs and EDRs, the *2023/2024 EDR* describes the cumulative effects associated with overall Logan Airport activity levels and compares these effects to previous conditions in the last reporting year, as well as to a benchmark reporting year's conditions for each topic covered. The EDRs and ESPRs inform the projects subject to Massachusetts Environmental Policy Act (MEPA) and serve as a baseline condition assessing project-specific impacts. The *2023/2024 EDR* compares 2023 technical chapter data to 2022 and 2024 reporting year data, and 2023 and 2024 data are also compared to topic-specific benchmark year(s) to provide a standard frame of reference for comparisons. The rationale behind each benchmark year's selection for a given topic is provided in each topic's respective chapter.

Separate from the EDR and ESPR, each Airport project subject to MEPA review follows these frameworks in the assessment of potential impacts and the development of mitigation strategies, as required. The status of mitigation measures associated with project-specific Section 61 Findings are documented in **Chapter 10, *Project Mitigation***.

A-45: Activity Levels

The 2023/2024 EDR should continue to track flight and passenger levels and specifically note whether these levels have reached 2019 levels as of the reporting year; it should also indicate whether trends are on track to exceed projections based on actual activity levels gathered by the reporting year.

As discussed in A-44, the *2023/2024 EDR* reports that passenger activity in 2023 mirrored levels observed in 2018, and in 2024, Logan Airport exceeded 2019 levels as airlines resumed previously suspended services, added new destinations, and responded to strong market demand in the Greater Boston area. A detailed status update of passenger and activity levels as it relates to 2019 levels is

presented in **Section 3.1 of Chapter 3, *Activity Levels*.** Massport will continue to report and track passenger and operation activity levels, as it relates to the 2019 baseline year in future EDRs and ESPRs. In 2024, passenger activity levels exceeded levels seen in 2019 by approximately 2 percent; however, operations remained below 2019 levels by approximately 3 percent, as discussed in **Table 3-1** and **Section 3.1 of Chapter 3**.

The forecast developed within the *2022 ESPR* projected activity levels and operations 10 to 15 years in the future. Massport compared passenger activity levels and operations from 2024 to the forecast presented within the *2022 ESPR*, as described in **Section 3.1.5 of Chapter 3**. In 2024, while passenger activity levels were higher than experienced in 2019, levels remained approximately 19 percent below the 53.5 MAP presented in the 10-15 year future planning horizon in the *2022 ESPR*. Similarly, operations in 2024 were approximately 16 percent below those projected in the *2022 ESPR*.

A-46: Mitigation

If actual growth in passenger and/or aircraft operations outpace forecasts, I expect that additional information will be provided in future EDRs and ESPRs to demonstrate that additional mitigation and policies and strategies will be implemented to address the proportional growth in impacts.

The forecast developed within the *2022 ESPR* projected activity levels and operations 10 to 15 years in the future. Massport compared passenger activity levels and operations from 2024 to the forecast presented within the *2022 ESPR*, as described in **Section 3.1.5 of Chapter 3, Activity Levels**. In 2024, while passenger activity levels were higher than experienced in 2019, levels remained approximately 19 percent below the 53.5 MAP presented in the 10-15 year future planning horizon in the *2022 ESPR*. Similarly, operations in 2024 were approximately 16 percent below those projected in the *2022 ESPR*.

As discussed in prior comments, the purpose of the EDR and ESPR has been to disclose the impact of operations at Logan Airport as well as impact of long-term growth through ESPRs. Based on findings from EDRs and ESPRs, Massport continuously assesses on-going and proposed programs and policies for efficacy to reduce Logan Airport's impact. The current status of these programs and policies is discussed within **Section 2.2 of Chapter 2, *Outreach and Environmental Justice*; Section 6.4 of Chapter 6, *Ground Access*; Section 7.4 of Chapter 7, *Noise*;** and **Section 8.5 of Chapter 8, *Air Quality and GHG Emissions;*** and the new **Chapter 11, *Sustainability and Climate Resilience***. Where data is available, Massport has quantified these beneficial measures and intends to find better methods to quantify the effects of these programs in future EDRs and ESPRs.

A-47: Planning

The 2023/2024 EDR should continue to assess planning strategies for improving Logan Airport's operations and services in a safe, secure, more efficient, and environmentally sensitive manner. Massport must accommodate and guide tenant development. The 2023/2024 EDR should describe the status of planning initiatives for the following areas:

- **Roadways and Airport Parking;**
- **Terminal Area;**
- **Airside Area;**
- **Service and Cargo Areas;**
- **Airport Buffers and Landscaping;**
- **Energy, Sustainability, and Resiliency.**

Massport strategically plans Airport improvement projects to maintain its commitment to safety, security, efficiency, and environmental sustainability while adapting to meet the changing needs of the industry and passengers. Massport reports on the status and timeframe for implementing projects under consideration in **Chapter 4, *Airport Planning***. Massport also guides tenants in incorporating sustainable and resilient elements into their projects and everyday operations. See **Sections 11.1.2 and 11.2.3 of Chapter 11, *Sustainability and Climate Resilience***, for more sustainability initiatives and environmental considerations incorporated into Massport and tenant Airport planning processes.

A-48: Planning

The 2023/2024 EDR should update the timeline of long-range planning activities identified in [Table 4-1 of the ESPR] and should indicate a clear commitment to return to prior environmental commitments relative to capital projects intended to minimize air emissions impacts.

Chapter 4, *Airport Planning*, provides status updates of short and long-term planning initiatives that are on-going or were recently completed in 2023 and 2024. **Table 4-1 of Chapter 4, *Airport Planning***, summarizes the schedule for implementing these planning initiatives, many of which include environmental commitments or were initiated to enhance the sustainability and resiliency of Logan Airport.

Chapter 10, *Project Mitigation* details planned mitigation measures and associated status updates for specific projects that have completed Massachusetts Environmental Policy Act (MEPA) review at Logan Airport that were recently completed or have on-going mitigation measures. To reduce the length of **Chapter 10**, Massport assessed the projects previously reported on within this chapter and removed projects for which Section 61 mitigation measures had been completed or were indefinitely on-going. These projects' Section 61 mitigation findings and Massport's implementation of them have been preserved in prior EDR and ESPR filings on Massport's website. Each project discussed in **Chapter 10**

has completed the requisite state and federal environmental reviews and has formalized mitigation plans with individual Section 61 Findings.

Massport tracks the progress of both Massport and Logan Airport tenants towards implementing and meeting their environmental mitigation commitments on schedule and in accordance with the requirements set forth in the Section 61 Findings for each project. As each project moves forward through its design and construction phases, its mitigation plan is implemented with on-going tracking to verify compliance. Each section in **Chapter 10** describes the project's current implementation status and the mitigation measures undertaken in 2023 and 2024. **Appendix A, *Secretary's Certificate and Responses to Comments***, contains the Secretary's Certificate issued for the ENFs, Draft Environmental Impact Reports (DEIR), and Final Environmental Impact Reports (FEIR) for the projects discussed in this Appendix.

In addition to project-specific mitigation, Massport has developed numerous beneficial measures to address the environmental conditions at the Airport, around the Airport, and benefit neighboring communities. These measures are described within **Section 2.1 of Chapter 2, *Outreach and Environmental Justice*** and **Section 11.1.2.2 of Chapter 11, *Sustainability and Climate Resilience.***

A-49: Planning

The ESPR should identify the status and assess effectiveness of ground access changes, including roadway, parking projects, and transit projects that consolidate and direct Airport-related traffic to centralized locations and minimize Airport-related traffic on streets in adjacent neighborhoods.

The *2023/2024 EDR* details the results of the *2024 Logan Air Passenger Ground Access Survey*, which was used to track performance against Massport's passenger HOV mode share goal of achieving 40 percent HOV use by 2027. Based on the results of the *2024 Logan Air Passenger Ground Access Survey,* the HOV mode share has reached 38.4 percent. HOV modes include public transit, Logan Express and other scheduled bus services, and other shared-ride modes, plus certain automobile modes that carry more than one air passenger (Massport defines taxis, black car limousines, and Ride App services that carry two or more air passengers per vehicle as HOV). Details of the survey are included in **Section 6.5 of Chapter 6, *Ground Access*** and **Section U6.4 of the User's Guide**.

Massport ground access strategy promotes numerous HOV modes, including transit and shared-ride options, with the goal of improving on-Airport roadway and curbside operations, minimizing Airport-related vehicles in adjacent neighborhoods, alleviating demand on constrained parking facilities, reducing vehicle passenger drop-off and pick-up activities, and improving overall customer service. These options offer passengers and employees convenient and reliable HOV choices, which reduce environmental and community impacts. Implemented measures include a blend of strategies related to pricing, including incentives and disincentives, service availability, service quality, marketing, and traveler information. **Section 6.4 of Chapter 6** includes details on planned and implemented ground access initiatives.

On-going projects, such as the Terminal E Garage and Terminal C Canopy, Connector, and Roadway Projects, aim to further relieve roadway congestion, provide centralized Ride App pick-up and drop-off areas, and prioritize curb use for HOVs. These projects are discussed in **Section 4.1 of Chapter 4, *Airport Planning***.

A-50: Ground Access To and From Logan Airport

I note comments from Airport Impact Relief, Inc. (AIR, Inc), the City of Boston, and Conservation Law Foundation (CLF), which indicate that, without tracking data related to some of these initiatives (such as Logan Express, HOV, and TMA usage, Uber/Lyft matching program), it is difficult to see the efficacy of these programs in actually reducing VMT in and around the Airport. Comments from AIR, Inc. also specifically criticize Massport's lack of effort in controlling curbside idling, which Massport commits to consider through future initiatives. The 2023/2024 EDR should report on any improvements made in these areas, and Massport should proactively consider ways to make tracking data available on a more frequent basis.

Massport periodically administers an extensive survey of air passengers to understand better the ground access characteristics of air passengers traveling to and from Logan Airport. The survey results are used to track performance against Massport's passenger HOV mode share goal of 40 percent HOV use by 2027. Based on the results of the *2024 Logan Air Passenger Ground Access Survey*, the HOV mode share has reached 38.4 percent.

The survey also helps Massport to understand air passenger travel behavior, evaluate the effectiveness of transportation policies and services, and direct Massport's planning efforts to encourage travelers to use HOV and shared-ride modes to improve on-Airport roadway and curbside operations, alleviate demand on constrained parking facilities, reduce vehicle passenger drop-off and pick-up activities, and improve overall customer service. The results of the *2024 Logan Air Passenger Ground Access Survey* are presented in **Section 6.5 of Chapter 6, *Ground Access***.

Where data is available, Massport has quantified these beneficial measures and intends to find better methods to quantify the effects of these programs on reducing VMTs in future EDRs and ESPR. As discussed in **Section 6.1.2 of Chapter 6**, ridership of Logan Express, Massachusetts Bay Transportation Authority (MBTA) Silver Line, MBTA Blue Line, and water taxis has increased since 2022, demonstrating increased adoption of HOV. Prior to filing the *2023/2024 EDR*, Massport developed a new web page specifically for EDR and ESPR filings (https://www.massport.com/environment/boston-logan-edr-espr-data-portal). As discussed in prior comments, the website provides many different resources including links to regularly updated data sources (Massport owned and external) that provide data included within EDRs and ESPRs analysis. For ground access, these resources include real time vehicle volumes conditions and counts on roadways around Logan Airport, with ridership data provided by the Massachusetts Department of Transportation (MassDOT) and the MBTA. Massport will continue to explore methods to quantify benefits from ground access initiatives and make this data more readily available.

A-51: Ground Access To and From Logan Airport

The 2023/2024 EDR should continue to address […] target HOV mode share and incentives including a review of how the reported percentage by mode share is calculated and the methods used to incentivize.

As discussed in A-50, Massport periodically administers an extensive survey of air passengers to better understand the ground access characteristics of air passengers traveling to and from Logan Airport. The survey results are used to track performance against Massport's passenger HOV mode share goal of achieving 40 percent HOV use by 2027. Based on the results of the *2024 Logan Air Passenger Ground Access Survey*, the HOV mode share has reached 38.4 percent. The survey also helps Massport to understand air passenger travel behavior, evaluate the effectiveness of transportation policies and services, and direct Massport's planning efforts to encourage travelers to use HOV and shared-ride modes to improve on-Airport roadway and curbside operations, alleviate demand on constrained parking facilities, reduce vehicle passenger drop-off and pick-up activities, and improve overall customer service. The results of the *2024 Logan Air Passenger Ground Access Survey* are summarized in **Section 6.5 of Chapter 6, *Ground Access***.

Sections 6.1.2 and 6.4 of Chapter 6 presents on-going HOV initiatives for 2023 and 2024. As passenger levels in 2023 and 2024 return to pre-COVID levels, Massport continues to evaluate and plan for the recovery of air passenger activity and remains committed to implementing the broad range of ground access strategies that are outlined throughout the Chapter. The current status of these improvements is detailed in **Section 4.1 of Chapter 4, *Airport Planning*.**

A-52: Ground Access To and From Logan Airport

The 2023/2024 EDR should continue to address […] Impact of RideApps on Logan Airport landside operations and effectiveness of the RideApp management plan including information on how Massport quantifies the improvement in congestion and any related drop in GHG emissions.

Since 2017, Massport has implemented a Ride App management strategy to facilitate the sustainable use of Ride App at Logan Airport. The strategy has implemented programs such as the implementation of the Ride App Rematch Program, introducing rideshare, and developing a Ride App fee structure to support HOV. Roadway and garage projects, as discussed in **Section 4.1 of Chapter 4, *Airport Planning***, include centralization for Ride App pick-up and drop-off to help support shared rides, reduce deadhead trips, and reduce curbside congestion. Refer to **Section 6.4.1 of Chapter 6**, ***Ground Access*** for further information on Ride App management.

Massport is conducting a study to collect dwell time data from Ride App operations, which make up approximately 27 percent of Logan Airport's vehicle volumes, in designated pick-up areas within Logan Airport's parking garages. The new validated sample of dwell time data will be input into the idling emissions model to quantify the air quality impacts from vehicle idling Airport-wide. This analysis will help establish policies to minimize curbside idling and serve as a baseline to evaluate and present

progress towards curb idling reduction goals. The study's findings will be presented in future EDRs and ESPRs.

Where possible, Massport has provided quantification towards achieving full implementation of Section 61 commitments. Specific examples of these quantifications include mitigation achievements from the completion of Terminal E Modernization. Outside of project-specific mitigation commitments, Massport employs a variety of beneficial measures and continuously assesses current beneficial measures for efficacy to reduce Logan Airport's impact. The current status of these programs and policies is discussed within **Section 2.2 of Chapter 2, *Outreach and Environmental Justice*; Section 6.4 of Chapter 6, *Ground Access*; Section 7.4 of Chapter 7, *Noise*;** and **Section 8.5 of Chapter 8, *Air Quality and GHG Emissions;*** and the new **Chapter 11, *Sustainability and Climate Resilience***. Where data is available, Massport has quantified these beneficial measures and intends to find better methods to quantify the beneficial effects of these programs in future EDRs and ESPRs.

A-53: Ground Access To and From Logan Airport

The 2023/2024 EDR should continue to address […] Update on parking conditions including the status of construction of the new parking garage and project associated GHG and air quality mitigation commitments.

In 2023, there were 16,456 total in-service commercial spaces, which is below the 23,640 parking spaces permitted on-Airport by the Parking Freeze. The commercial and employee space allotment remained the same from 2022, but there were 128 fewer in-service commercial spaces in 2023. Massport periodically assesses its parking rate structure to support its ground access strategy. New rates became effective as of July 1, 2023. Both short-term and daily rates were increased for the terminal area garages and the Economy Parking garage. For more information on parking rates, see the **User's Guide, Section U6.3** The allocation of on-Airport parking spaces remained consistent with 2023 values in 2024. The parking rate structure remained unchanged in 2024 from 2023 rates.

Per the issuance of Massachusetts Environmental Policy Act (MEPA) Certificate on the Logan Airport Parking Freeze amendment, two new parking areas on the Airport campus were approved: the Terminal E Garage; and additional floors within the Economy Garage. Construction of the Terminal E Garage was originally deferred due to the COVID-19 pandemic but has since restarted. The current program calls for approximately 4,000 commercial revenue spaces to be built in a new garage in front of Terminal E. No parking spaces are being proposed for the Economy Garage at this time. Status update for the construction of the Terminal E Garage and associated Section 61 mitigation commitments can be found in **Section 10.3 of Chapter 10, *Project Mitigation*.** Future EDRs and ESPRs will continue to report on the progress of the Terminal E Garage project in the implementation of associated Section 61 commitments.

A-54: Ground Access To and From Logan Airport

The 2023/2024 EDR should continue to address […] non-Airport through-traffic.

Logan Airport's gateway roadways are equipped with permanent vehicle count stations as part of the Airport-wide Automated Traffic Monitoring System (ATMS), which collects data used to calculate Annual Average Daily Traffic (AADT), Annual Average Weekday Daily Traffic (AWDT), and Annual Average Weekend Daily Traffic (AWEDT). While overall vehicle volumes entering and exiting the Airport have generally increased since 2019, both AADT and AWDT in 2024 remained below 2019 levels, despite a significant rebound in air passenger activity. It is important to note, however, that while the ATMS provides reliable traffic data, distinguishing between Airport-related trips and non-Airport through traffic remains a challenge. The absence of vehicle-specific identifiers limits the ability to isolate traffic directly associated with Airport operations from regional traffic that utilizes the same roadway network. Further details on gateway vehicle volumes are detailed in **Section 6.2.1 of Chapter 6, *Ground Access***.

As Massport prepared for the 2023 and 2024 Sumner Tunnel closures, substantial work was done on-campus to reroute vehicles and limit congestion on Airport roadways. In preparation for that work, over 200 peak hour vehicles were observed to use the Airport's surface roadways as a path to avoid congestion on I-90 inbound to Boston with vehicles exiting I-90 to Transportation Way and re-entering I-90 at the Ted Williams Tunnel portal at Jefferies Street. Massport has since removed the left-turn from Transportation Way to the TWT and has seen a notable reduction (although not elimination) of cut-through traffic on Airport property.

A-55: Ground Access To and From Logan Airport

The 2023/2024 EDR should continue to address […] Cooperation with other transportation agencies to increase transit ridership to and from Logan Airport via the Blue Line, Silver Line, Water Transportation, and Logan Express.

Massport regularly engages with the MBTA partners on both Blue Line and Silver Line services ridership as they are important modes for reducing automobile travel to the Airport. In a 2019 survey, over three-quarters of Blue and Silver Line SL1 passengers indicated they would have used a taxi, Ride App service, or a private vehicle to be dropped off at the Airport. Massport offers free Silver Line boardings at the Airport; the free-fare program is expected to continue indefinitely. While the MBTA operates the ten Silver Line buses purchased by Massport in 2023, Massport pays the operating costs for the SL1 buses directly serving the Airport terminals. Massport coordinates with MBTA and taxi services to enhance HOV water transportation access and ridership. The Authority provides a free shuttle bus service between the Logan Airport Water Transportation Dock, the Airport terminals, and the MBTA Airport Station, and ridership information is monitored on an on-going basis. These services provide air passengers and employees from coastal, suburban, and downtown Boston areas access to water-based HOV service from Airport facilities. **Sections 6.1.2.2 and 6.1.2.3 of Chapter 6, *Ground Access*** discusses on-going initiatives related to the MBTA.

Massport continues to work with key stakeholders from the State, local towns, and cities to improve Logan Express ridership. These improvements are regularly assessed through the *2024 Logan Air Passenger Ground Access Survey*, which informs future service adjustments and demand for increased and expanded facilities, such as those in Danvers, Braintree, and Framingham, as discussed in **Sections 4.1.3, 4.1.4, and 4.1.5, of Chapter 4, *Airport Planning,*** respectively.

A-56: Ground Access To and From Logan Airport

The 2023/2024 EDR should continue to address […] Report on efforts to increase capacity and use of Logan Express and improvements to and expansion of service.

Recent Massport initiatives have successfully encouraged Logan Express' use and improved overall capacity. Braintree Logan Express service capacity for air passengers was increased in the short-term by relocating employees to a new dedicated park and ride lot in Quincy. The Braintree, Framingham, Woburn, and Back Bay Logan Express service frequencies have been improved, and construction has begun for approximately 1,000 additional parking spaces at Framingham. Massport enhanced marketing efforts to increase ridership and invested in a new, larger facility in Danvers to temporarily relocate the Peabody Logan Express. Refer to **Section 4.1 of Chapter 4, *Airport Planning*** for discussion of these projects. Massport intends to identify potential additional Logan Express locations west of Boston and at least one new, urban location, possibly North Station or a similar option. These improvements are regularly assessed through the *2024 Logan Air Passenger Ground Access Survey,* which informs future service adjustments and demand for increased and expanded facilities. Furthermore, Massport explored Ride App Last Mile connections and continues to monitor parking capacity across Logan Express sites. Further details on Logan Express service can be found in **Section 6.1.2.1 of Chapter 6*, Ground Access***.

A-57: Ground Access To and From Logan Airport

The 2023/2024 EDR should continue to address […] The expansion of piloted projects including the priority Airport passenger security line status for Logan Express riders.

Back Bay Logan Express piloted priority Airport passenger security line status for riders when operations at Back Bay restarted in October 2022. The priority program remains available to Back Bay Logan Express riders. **Section 6.1.2.1 of Chapter 6, *Ground Access*** provides information regarding initiatives related to Logan Express.

A-58: Ground Access To and From Logan Airport

The 2023/2024 EDR should continue to address […] Progress on enhancing water transportation to and from Logan Airport.

Massport continues to provide a free shuttle bus service between the Logan Airport Water Transportation Dock, the Airport terminals, and the MBTA Airport Station, and ridership information is monitored on an on-going basis and is reported in **Section 6.1.2.3 of Chapter 6, *Ground Access***.

A-59: Ground Access To and From Logan Airport

The 2023/2024 EDR should continue to address […] Results and recommendations of the most recent ground access survey including links to the most recent report.

As discussed in A-50, the results of the *2024 Logan Air Passenger Ground Access Survey* indicate that Massport's HOV initiatives are effectively decreasing single-occupancy vehicle trips and pick-up and drop-off activities at the Airport. Respondents showed an 81 percent increase in Logan Express use and an increase in MBTA use, as presented in the available report at: https://www.massport.com/sites/default/files/2025-06/2024-Logan-Ground-Access-Survey-Final-Report.pdf. Massport is actively reviewing the *2024 Logan Air Passenger Ground Access Survey* results to assess whether potential adjustments to HOV policies may be necessary. For more information on Massport's ground access initiatives and data, see **Chapter 6, *Ground Access***. Massport will continue to provide updates on potential HOV policy changes in future EDRs and ESPRs.

A-60: Ground Access To and From Logan Airport

The 2023/2024 EDR should continue to address […] Results and recommendations of the Long-term Parking Management Plan required by the Parking Freeze amendments.

Massport actively manages the on-Airport parking supply at Logan Airport as part of its overall strategy to reduce reliance on drop-off and pick-up and encourage the use of HOV modes. A key element of this strategy is the Long-Term Parking Management Plan, which guides the use of on-Airport parking to promote long-term over short-term parking. This approach helps reduce the number of daily trips to Logan Airport, supports balanced and efficient use of parking facilities, enhances customer service, and ensures compliance with the Logan Airport Parking Freeze. **Table 6-10 of Chapter 6, *Ground Access*** presents Massport's progress on the Long-Term Parking Management Plan for calendar years 2023 and 2024.

Per the issuance of the Massachusetts Environmental Policy Act (MEPA) Certificate on the Logan Airport Parking Freeze amendment, two new parking areas on the Airport campus were approved: the Terminal E Garage; and additional floors within the Economy Garage. Construction of the Terminal E Garage was originally deferred due to the COVID-19 pandemic but has since restarted. The current program calls for approximately 4,000 commercial revenue spaces to be built in a new garage in front of Terminal E. Status update for the construction of the Terminal E Garage and associated Section 61 mitigation commitments can be found in **Section 10.3 of Chapter 10, *Project Mitigation*.** Future EDRs and ESPRs will continue to report on the progress of the Terminal E Garage project in the implementation of associated Section 61 commitments.

A-61: Ground Access To and From Logan Airport

The 2023/2024 EDR should continue to address [...] Reporting of data (and comparison to prior years (2019-2022)) associated with the Logan Transportation Management Association (TMA) including number of employees participation in the various strategies (transit pass, shuttle services, etc.) and strategies for enhancing services and increasing employee membership in the Logan Airport TMA.

Section 6.4.4 of Chapter 6, *Ground Access*, presents current employee ground transportation initiatives and parking programs and initiatives. Massport continues to adopt comprehensive ground transportation initiatives for employees traveling to and from Logan Airport. The ground transportation strategy is designed to offer a choice of HOV, transit, and shared-ride options that are convenient and reliable, and that reduce environmental and community impacts. An update and comparison of the recent ground access conditions can be found in **Section 6.1 of Chapter 6**.

A-62:

The 2023/2024 EDR should report on specific reductions in VMT that could be achieved through these [ground access] measures, and indicate how such goals can be tracked over time.

Sections 6.1 and 6.4 of Chapter 6, *Ground Access* includes a description of measures to reduce vehicles traveling to and from Logan Airport through a comprehensive HOV Program, VMT reduction strategies, and physical infrastructure improvements at the Airport. Key performance metrics for these programs and data supporting their efficacy are routinely reported in ESPRs and EDRs. Program goals are tracked by comparing the current reporting year's data to the prior reporting year as well as to an established and fixed benchmark year, which serves as a standardized reference point to illustrate year-over-year progress. Massport will continue to advance tracking of VMT reductions associated with specific goals for future filings.

A-63: Noise

The 2023/2024 EDR should address Milton's concerns and the feasibility of implementing Block 1 and Block 2 recommendations from the recent MIT Study and specifically those relating to Runways 4R and 27.

Massport, the Federal Aviation Administration (FAA), the Massport Community Advisory Committee (Massport CAC), and Massachusetts Institute of Technology (MIT) have continued to collaborate on how to successfully design and implement Area Navigation (RNAV) procedures that comply with the 2016 memorandum of understanding (MOU) between Massport and the FAA. As discussed in **Section 7.4.1 of Chapter 7, *Noise*** and **Section I.4.5 of Appendix I**, ***Noise Supporting Documentation,*** implementing the Block 1 and 2 procedures requested by the Massport CAC and affected communities has resulted in the recent 2023 Runway 27 Standard Instrument Departures (SID) update, which confines flight tracks to within a defined noise abatement corridor area of more compatible land use and reduces the impacts from aircraft overflight noise. The FAA completed a Noise

Screening Analysis Report for Logan Airport's proposed RNAV SID in May 2024, which concluded there were no reportable or significant noise impacts, and the update meets NEPA compliance. In a presentation to Massport CAC in August 2024, the FAA also confirmed the Runway SID update and implementation of Block 1 and 2 procedures has achieved the MOU goal to confine at least 68 percent of flight tracks to within a defined noise abatement corridor area of more compatible land use. Block 2 departure procedures were published on November 30, 2023 and modified the RNAV departures to include a speed restriction, which enables aircraft to turn to the east earlier in their departures and shifts aircraft tracks to the north and away from Hull.

A-64: Noise

Massport restarted its residential sound insulation program (RSIP), applying for and receiving an initial grant to fund the beginning phase of the new program. The 2023/2024 EDR should report on the progress, timeline and insulation goals of the new program.

Bid set engineering design drawings were completed in January 2024, and Massport began soliciting bids for contractors to support the RSIP's implementation later that year. Massport estimated the work would require approximately nine months to complete once contracts with vendors were initiated. Acoustic pre-testing was conducted for ten homes included in a pilot study group in 2023. The development of construction designs for eligible structures in 2024 followed this phase of the RSIP implementation plan. Construction of the pilot phase began in early 2025. Following the construction initiation for the pilot group of homes, the process was initiated for the next group of homes. Information on these phases will be reported in the 2025 EDR.

The *2023/2024 EDR* summarizes the RSIP's implementation timeline and progress status from 2023 through the end of 2024. **Section 7.4.2 of Chapter 7, *Noise*** discusses the RSIP's goals and objectives in greater detail and also provides key project milestones with achievement status updates. Background information about the RSIP in general, including Federal Aviation Administration (FAA) requirements, qualification benchmarks for selecting which homes to include, and implementation details, is provided in **Section U7.5.2 of the *User's Guide***.

A-65: Noise

The 2023/2024 EDR should report any data used to measure the effectiveness of these improvements including the number of noise complaints from the previously impacted areas.

As discussed in **Section 7.4.1 of Chapter 7, Noise**, the Federal Aviation Administration (FAA) completed a Noise Screening Analysis Report for Logan Airport's Runway 27 Non-Area Navigation (RNAV) Standard Instrument Departure (SID) update in May 2024. This Report concluded there were no reportable or significant noise impacts, and the RNAV SID update meets NEPA compliance. In a presentation to the Massport Community Advisory Committee (Massport CAC) in August 2024, the FAA also confirmed the Runway 27 SID update, the result of implementing Block 1 and 2 community requested procedures, resulted in the Memorandum of Understanding (MOU) goal to confine at least

68 percent of flight tracks to within a defined noise abatement corridor area of more compatible land use. See **Appendix I**, **Section 1.8** for materials from the August coordination. **Section 7.4.3** includes **Table 7-5**, which demonstrates noise complaints from communities around the Airport (**Table I-23 in Appendix I** contains a full list). As demonstrated in this table, the number noise complaints declined approximately 24 percent between 2022 and 2023 and an additional 3 percent between 2023 and 2024. This decline was also seen within south Boston communities affected by the Runway 27 RNAV SID update.

A-66: Noise

The 2023/2024 ESPR should continue to report on the Airport noise mitigation program including summaries of the findings and recommendations of reports and studies focused on reducing community noise levels.

Massport's noise abatement program continues to play a critical role in helping to limit and monitor noise impacts. Massport's emphasis on noise abatement has focused on the benefits of better analysis tools, involvement in noise research projects, and improved modeling techniques to identify the causes of noise problems. Massport also continues to coordinate with Federal Aviation Administration (FAA) and the Massport Community Advisory Committee (Massport CAC) on matters related to runway use and the on-going Area Navigation (RNAV) Pilot project. The Logan Airport noise mitigation program includes operational restrictions on certain runways, limits to engine runup locations, late night runway preference, and noise abatement turns. Other continuing elements of Massport's noise mitigation program are discussed in the following sections. **Section 7.4 of Chapter 7, *Noise***, includes an update on the Massport *Noise Abatement Management Plan* and associated measures to reduce Airport-related noise effects. Massport continues to track the on-going noise reports and studies as discussed in **Section 7.4.4 of Chapter 7** and **User's Guide, Section U7.5**.

A-67: Climate Change

The 2023/2024 EDR should report on all climate resiliency measures planned or implemented and constructed. It should provide general information on the forecast methodology being used to identify threats and vulnerabilities to Logan Airport facilities and infrastructure and projects that actively address the risks of extreme heat, intense precipitation, and coastal flooding and sea level rise.

As discussed in A-8, the *2023/2024 EDR* includes a new section in **Chapter 11, *Sustainability and Climate Resilience*** dedicated to Massport's climate resiliency measures.

Since 2013, Massport has maintained and continuously enhanced a comprehensive set of climate resiliency measures to protect critical infrastructure and surrounding communities from climate change impacts, including extreme heat, intense precipitation, and coastal flooding and sea level rise. Climate resiliency is an embedded practice in Massport's planning, design, construction, and daily operations. In addition, Massport has prioritized awareness, education, and training on climate resiliency for both

internal staff and external stakeholders, reinforcing its commitment to long-term sustainability and preparedness. Massport collaborates with regional organizations, including the Massachusetts EEA, the ResilientMass program, U.S. ACE, and the City of Boston to share knowledge, align goals, and advance initiatives to protect the community. Massport initiatives related to these risks include:

- *Sustainability Design Guidelines;*
- *Urban Heat Island Program;*
- *Floodproofing Design Guide;*
- *Logan International Airport Stormwater and Flood Risk Modeling Study;*
- *Disaster and Infrastructure Resiliency Planning Study (DIRP);*
- *Logan International Airport Coastal Flood Operations.*

Section 11.3.4 of Chapter 11 reports the initiatives Massport has taken, and continues to take, to protect critical infrastructure, maintain operational continuity, and safeguard employees and surrounding communities from these evolving risks. Massport commits to providing updates on these initiatives in future EDR and ESPR filings and via the Net Zero website.

A-68: Air Quality / Emissions Reduction (GHG)

Future EDR/ESPRs should look to align this [net zero] reporting to provide a better picture of GHG emissions and efforts to reduce emissions through electrification.

The *2023/2024 EDR* includes a new chapter - **Chapter 11, *Sustainability and Climate Resilience***, which is dedicated to Massport's climate resiliency reporting and initiatives, linking to other Massport sustainability and resiliency resources. The chapter is aligned to report on themes that are a part of *Roadmap to Net Zero by 2031* (refer to **Section 11.2** of **Chapter 11**). Massport's Net Zero website (https://www.massport.com/environment/roadmap-to-net-zero) serves as a centralized resource for reporting GHG emissions reduction efforts. In addition, the site serves as a hub for tracking the Authority's progress towards its Net Zero emissions goals. It offers in-depth information on GHG emissions sources and outlines strategies for operational decarbonization, and presents relevant Key Performance Indicators (KPIs) to evaluate the effectiveness of these efforts. The platform is consistently updated with new data, milestones, and developments related to Massport's climate action initiatives. The website details fleet electrification procurements and investments in electric charging infrastructure. These efforts specifically support electrification of ground service equipment (eGSE), street sweepers, buses, ride-for-hire fleets, and rental cars. Data regarding ground transportation conversions and electrification infrastructure investments can be found in **Section 11.2.3.3 of Chapter 11, *Sustainability and Climate Resilience***.

A-69: Climate Change

The 2023/2024 EDR should provide the information requested in DOER's comment letter and further detail its pathway to Net Zero including DOER's recommendations.

In response to Department of Energy Resources (DOER)'s comment letter, Massport has established a new benchmark for sustainable development as part of its *Roadmap to NetZero by 2031*. This standard is based on the latest and most stringent building energy codes in the State of Massachusetts, along with reputable third-party sustainability rating systems. Refer to **Section 11.1.2.1 of Chapter 11, *Sustainability and Climate Resilience,*** which discusses Massport's *Sustainability Design Guidelines*.

As discussed in **Section 11.2.1 of Chapter 11**, in 2023, the Massport Board of Directors voted to approve $500 million in investments to Net Zero projects, laying the groundwork for future reductions. for emissions reduction projects over the next five years. This funding supplements routine funding requests that incorporate the Net Zero Program. For instance, at its January 14, 2025 meeting, the Board approved the purchase of up to 50 electric shuttle buses for Logan Airport, in collaboration with the MBTA. Massport has committed to achieving Net Zero GHG emissions for its Scope 1 and Scope 2 sources by 2031. Additionally, Massport aims to reach absolute Net Zero GHG emissions across these scopes, without relying on renewable energy credits (RECs) or carbon offsets, by 2040, as discussed in **Section 11.2 of Chapter 11.**

A-70: Air Quality / Emissions Reduction (GHG)

The 2023/2024 EDR should provide the most recent updates to [ASCENT UFPs studies] and its findings as they relate to the study area communities. To the extent that the studies provide measurements of UFPs in adjacent communities (or a methodology to do so), this data should be reported.

Massport continues to support the Boston University and Tufts University Federal Aviation Administration (FAA)-affiliated Center of Excellence for Alternative Jet Fuels and Environment, also known as the Aviation Sustainability Center (ASCENT), research studies evaluating the impact of aviation emissions on air quality in communities surrounding Logan Airport. The FAA ASCENT Project 18 "Community Measurements of Aviation Emission Contributions to Ambient Air Quality" aims to assess the impact of aviation emissions on Ultrafine Particulates (UFPs) concentrations in communities near the Airport. The Project is run through Boston University School of Public Health. The research so far has utilized both stationary and mobile monitoring to capture the spatial and temporal variations in air pollution, focusing on the contributions of aircraft arrivals and departures to UFP levels. The study emphasizes the importance of accurate exposure modeling for health studies.

As discussed in A-10, **Section 8.6 of Chapter 8, *Air Quality and GHG Emissions***, includes updated information regarding recent and on-going research on Airport emissions, including on UFP, by institutions like Boston University and Tufts University. As a part of MEPA's Logan Airport Work Group, researchers funded by the Federal Aviation Administration (FAA), Massport Community Advisory Committee (Massport CAC) and regulatory agencies have presented on air quality monitoring and studies within the vicinity of the Airport and at other airports. **Section 8.6 of Chapter 8** discusses the studies and findings that have been presented on or referenced within the MEPA's Logan Airport Work Group. As the Work Group continues to assess and discuss potential supplemental mitigation measures

that could address environmental concerns associated with Logan Airport, Massport will continue to consider the feasible extent to report on air quality in future filings.

A-71: Air Quality / Emissions Reduction (GHG)

The 2023/2024 EDR should continue to provide an overview of the environmental regulatory framework affecting aircraft emissions, changes in aircraft emissions, and the changes in air quality modeling including a mobile sources emissions inventory for CO, NOx, VOCs, and PMs.

Section 8.1 of Chapter 8, *Air Quality and GHG Emissions* provides an overview of federal and state requirements that govern air quality and GHG emissions at Logan Airport. Additionally, **Section U8.2 of the User's Guide** offers more information on how federal and state regulations apply to air quality and GHG emissions at Logan Airport.

In **Section 8.3 of Chapter 8,** Massport quantifies criteria air pollutants, precursor air pollutants, and GHG emissions from Airport-related sources in 2023 and 2024 and compares the results to previous and benchmark years. Massport used the most recent version of FAA's AEDT model at the time of this EDR, AEDT Version 3g,, to model aircraft emissions of VOCs, NOx, CO, and PMs. To model emissions of CO, NOx, VOCs, and PMs from mobile sources, Massport used the latest version of EPA's MOVES at the time of this EDR, MOVES Version 5. **Section 8.2.2 of Chapter 8** explains the differences between the iterations of the AEDT and MOVES modeling tools employed in this EDR compared to previous EDRs and ESPRs. Massport also presents the results of 2023 and 2024 emissions inventory using older versions of the modeling tools that were used in previous EDRs and ESPRs to highlight how the outputs are impacted by the version of the model used. **Appendix J, *Air Quality and GHG Emissions Supporting Documentation*** includes the data inputs used for air emissions modeling. For more information on the methodology behind the air emissions analysis and discussion on how the models are used, see **Section U8.3 of the User's Guide.**

A-72: Air Quality / Emissions Reduction (GHG)

The 2023/2024 EDR should quantify the emissions reductions associated with Massport's air emissions/GHG reduction initiatives to the extent feasible, including the reductions associated with initiatives targeted towards reducing emissions as well as those associated with MEPA reviewed projects where GHG mitigation requirements were made.

As discussed in A-71, in **Section 8.3 of Chapter 8, *Air Quality and GHG Emissions*** Massport quantifies criteria air pollutants, precursor air pollutants, and GHG emissions from Airport-related sources in 2023 and 2024 and compares the results to previous and benchmark years. The chapter also provides an overview of federal and state requirements that govern air quality and GHG emissions at Logan Airport. Additionally, **Section U8.2 of the User's Guide** offers more information on how federal and state regulations apply to air quality and GHG emissions at Logan Airport.

Chapter 10, *Project Mitigation*, includes Logan Airport projects that have on-going Section 61 commitments as a result of Massachusetts Environmental Policy Act (MEPA) review. Where possible, Massport has provided quantification towards achieving full implementation of a Section 61 commitment. Outside of project-specific mitigation commitments, Massport employs a variety of beneficial measures. Based on findings from EDRs and ESPRs, Massport will continuously assess current beneficial measures for efficacy to reduce Logan Airport's impact. The current status of these programs and policies are discussed within **Section 2.2 of Chapter 2, *Outreach and Environmental Justice*; Section 6.4 of Chapter 6, *Ground Access*; Section 7.4 of Chapter 7, *Noise*;** and **Section 8.5 of Chapter 8, *Air Quality and GHG Emissions***. Where data is available, Massport has quantified these beneficial measures and intends to find better methods to quantify the effects of these programs in future EDRs and ESPRs.

A-73: Air Quality / Emissions Reduction (GHG)

Comments from the City of Boston also suggest the need for more data about how Massport's air quality reduction strategies, especially those not under Massport's direct control, will be implemented to keep operation sources of VOCs, NOx, CO, PM_{10}, and $PM_{2.5}$ at "similar" levels over the next 10 to 15 years. To the extent the benefits of mitigation measures can be quantified, these values should be reported and tracked over time.

As discussed in A-71 and A-72, in **Section 8.3 of Chapter 8, *Air Quality and GHG Emissions***, Massport quantifies criteria air pollutants, precursor air pollutants, and GHG emissions from Airport-related sources in 2023 and 2024 and compares the results to previous and benchmark years. The Chapter also provides an overview of federal and state requirements that govern air quality and GHG emissions at Logan Airport. Additionally, **Section U8.2 of the User's Guide** offers more information on how federal and state regulations apply to air quality and GHG emissions at Logan Airport. Where possible, Massport has provided quantification towards achieving full implementation of a Section 61 commitment. Outside of project-specific mitigation commitments, Massport employs a variety of beneficial measures. Based on findings from EDRs and ESPRs, Massport continuously assesses current beneficial measures for efficacy to reduce Logan Airport's impact. The current status of these programs and policies is discussed within **Section 8.5 of Chapter 8**. Where data is available, Massport has quantified these beneficial measures and intends to find better methods to quantify the effects of these programs in future EDRs and ESPRs. Massport will continue to work with tenants to advance air quality improvements and GHG reductions.

A-74: Water Quality

The 2023/2024 should describe how exceedances are addressed and if community reporting and/or alerts are required.

Massport holds two individual permits under the U.S. Environmental Protection Agency (U.S.EPA) and Massachusetts Department of Environmental Protection (MassDEP) through the *National Pollutant*

Discharge Elimination System (NPDES) Program, as mandated by the Clean Water Act. These permits apply to Massport and its co-permittees at Logan Airport, establishing effluent limits, monitoring and reporting requirements. Exceedances, how they are addressed, and reporting requirements are discussed in **Section 9.2 of Chapter 9, *Water Quality,*** and the **User's Guide, Section U9**.

A-75: Mitigation

To enhance public transparency and tracking of mitigation measures, future EDR and ESPR filings should improve the reporting of mitigation measures and present all applicable measures in a tabular format organized by subject matter (traffic, noise, air quality, GHG emissions, environmental justice, etc.). The table should indicate whether the measures are ongoing or planned (and if the latter, provide an estimated timeframe for implementation).

Chapter 10, *Project Mitigation* details planned mitigation measures and associated status updates for specific projects that have completed Massachusetts Environmental Policy Act (MEPA) review at Logan Airport that were recently completed or have on-going mitigation measures. To reduce the length of **Chapter 10** Massport assessed the projects previously reporting on within this chapter, and removed projects for which Section 61 mitigation measures had been completed or were indefinitely on-going. These projects Section 61 mitigation findings and Massport's implementation of them have been preserved in prior EDR and ESPR filings on Massport's website. Each project discussed in **Chapter 10** has completed the requisite state and federal environmental reviews and has formalized mitigation plans with individual Section 61 Findings.

Massport tracks both Massport and Logan Airport tenants' progress towards implementing and meeting their environmental mitigation commitments on schedule and in accordance with the requirements set forth in the Section 61 Findings for each project. As each project moves forward through its design and construction phases, its mitigation plan is implemented with on-going tracking to verify compliance. Each section in **Chapter 10** describes the project's current implementation status and the mitigation measures undertaken in 2023 and 2024. **Appendix A, *MEPA Certificates and Responses to Comments***, contains the Secretary's Certificate issued for the ENFs, DEIRs, and FEIRs for the projects discussed in this Appendix. Massport will continue to explore ways to improve on the reporting and quantification of planned, on-going, and implemented mitigation measures for subsequent filings.

As discussed in prior comments, Massport is continuously committed to public transparency. Prior to the filing, Massport developed a new web page specifically for EDR and ESPR filings (https://www.massport.com/environment/boston-logan-edr-espr-data-portal). The website provides links for each chapter of the most recent filings, notices for upcoming meetings, materials from prior meetings, prior filings, the User's Guide, and links to regularly updated data sources (Massport owned and external) that provide data included within EDRs and ESPRs analysis. Massport continues to make historical data accessible on its environmental filings website. This landing page includes historical EDRs and ESPRs with extensive data for the public to download. Massport's progress on this effort will

be reported in this and future EDRs and ESPRs. Collaboration has been on-going with the Massport Community Advisory Committee (Massport CAC) to develop access to available data. For more on the EDR and ESPR website, refer to **Section 1.2.2.2 of Chapter 1**.

A-76: Mitigation

To the extent specific mitigation results from an individual project review, those commitments should be listed separately with a quantification, to the extent documented through the individual review, of the estimated reductions to applicable impacts (e.g., GHG reductions) that would result from the mitigation measure.

Chapter 10, *Project Mitigation* details planned mitigation measures and associated status updates for specific projects that have completed Massachusetts Environmental Policy Act (MEPA) review at Logan Airport that were recently completed or have on-going mitigation measures. To reduce the length of **Chapter 10**, Massport assessed the projects previously reporting on within this chapter and removed projects for which Section 61 mitigation measures had been completed or were indefinitely on-going. These projects Section 61 mitigation findings and Massport's implementation of them have been preserved in prior EDR and ESPR filings on Massport's website. Each project discussed in **Chapter 10** has completed the requisite state and federal environmental reviews and has formalized mitigation plans with individual Section 61 Findings.

Massport tracks both Massport and Logan Airport tenants' progress towards implementing and meeting their environmental mitigation commitments on schedule and in accordance with the requirements set forth in the Section 61 Findings for each project. As each project moves forward through its design and construction phases, its mitigation plan is implemented with on-going tracking to verify compliance. Each section in **Chapter 10** describes the project's current implementation status and the mitigation measures undertaken in 2023 and 2024. **Appendix A, *MEPA Certificates and Responses to Comments***, contains the Secretary's Certificate issued for the ENFs, DEIRs, and FEIRs for the projects discussed in this Appendix. Massport will continue to explore ways to improve on the reporting and quantification of planned, on-going, and implemented mitigation measures for subsequent filings.

A-77: Mitigation

To the extent the benefits of other mitigation measures (e.g., VMT or GHG reduction targets) can be quantified, these values should be reported and tracked over time. If same or substantially same level of reduction was not actually achieved, or mitigation commitments have changed over time, those updates should be reflected in the ESPR and may require a further Notice of Project Change (NPC) filing for the individual project.

Chapter 10, *Project Mitigation* details planned mitigation measures and associated status updates for specific projects that have completed Massachusetts Environmental Policy Act (MEPA) review at Logan Airport that were recently completed or have on-going mitigation measures. To reduce the length of

Chapter 10, Massport assessed the projects previously reporting on within this chapter and removed projects for which Section 61 mitigation measures had been completed or were indefinitely on-going. These projects Section 61 mitigation findings and Massport's implementation of them have been preserved in prior EDR and ESPR filings on Massport's website. Each project discussed in **Chapter 10** has completed the requisite state and federal environmental reviews and has formalized mitigation plans with individual Section 61 Findings.

Massport tracks the progress of both Massport and Logan Airport tenants towards implementing and meeting their environmental mitigation commitments on schedule and in accordance with the requirements set forth in the Section 61 Findings for each project. As each project moves forward through its design and construction phases, its mitigation plan is implemented with on-going tracking to verify compliance. Each section in **Chapter 10** describes the project's current implementation status and the mitigation measures undertaken in 2023 and 2024. **Appendix A, *MEPA Certificates and Responses to Comments*** contains the Secretary's Certificate issued for the ENFs, DEIRs, and FEIRs for the projects discussed in this Appendix. Massport will continue to explore ways to improve the reporting and quantification of planned, on-going, and implemented mitigation measures for subsequent filings.

A-78: Responses to Comments

The 2023/2024 EDR should include a copy of this Certificate. It should include copies of all comments received on the 2022 ESPR and provide responses to the comments and to this Certificate.

The *2023/2024 EDR* will include a copy of this Certificate, as well as the comments received on the *2022 ESPR* along with Massport's responses. Response to comments will address actionable points raised in the Certificate and public comments, ensuring transparency and accountability in Massport's environmental reporting process. This information is presented herein, **Appendix A, *MEPA Certificates and Responses to Comments*** where Massport has documented how each comment has been considered and addressed.

A-79: Responses to Comments

The 2023/2024 EDR should include direct responses to comments to the extent that they are within MEPA jurisdiction.

The *2023/2024 EDR* will provide direct responses to comments received on the *2022 ESPR* to the extent that they fall within the jurisdiction of the Massachusetts Environmental Policy Act (MEPA). Responses will address actionable points and clarify Massport's approach to mitigation, data reporting, and stakeholder engagement. Responses will be documented in **Appendix A, *MEPA Certificates and Responses to Comments***, where Massport will outline how each comment has been reviewed and addressed in accordance with MEPA's scope and regulatory framework.

A-80: Logan Airport Environmental Review and Planning

I am also directing Massport to participate in a work group, facilitated by MEPA and the EEA EJ Office, to consider supplemental mitigation measures to address public health impacts of Airport operations on surrounding EJ populations.

Massport is committed to active participation in the MEPA's Logan Airport Work Group (the Work Group), established in collaboration with the Massachusetts Environmental Policy Act (MEPA) and the Office of Environmental Justice & Equity (OEJE). This Work Group, launched in February 2025, includes representatives from state agencies, local officials, and community stakeholders and is co-moderated by MEPA and OEJE to promote an inclusive and transparent process. The Work Group's primary objective is to assess and discuss feasible supplemental mitigation measures that could address environmental concerns associated with Logan Airport operations among environmental justice (EJ) communities in East Boston, Winthrop, and Chelsea. Additional details on the Work Group's scope, objectives, and key discussions are available in **Section 2.2.4.2 of Chapter 2, *Outreach and Environmental Justice*.**

Secretary of the Executive Office of Energy and Environmental Affairs Certificate on the Logan Airport 2020/2021 Environmental Data Report (EDR)

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January 30, 2023

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
2020 & 2021 LOGAN AIRPORT ENVIRONMENTAL DATA REPORT

PROJECT NAME	: 2020/2021 Environmental Data Report (EDR)
PROJECT MUNICIPALITY	: Boston/Winthrop
PROJECT WATERSHED	: Boston Harbor
EOEA NUMBER	: 3247
PROJECT PROPONENT	: Massachusetts Port Authority
DATE NOTICED IN MONITOR	: December 7, 2022

As Secretary of Executive Office of Energy and Environmental Affairs (EEA), I hereby determine that the Environmental Data Report (EDR) submitted on this project **adequately and properly complies** with the Massachusetts Environmental Policy Act (MEPA; M.G.L. c. 30, ss. 61-62L) and Section 11.06 of the MEPA regulations (301 CMR 11.00).

Logan Airport Environmental Review and Planning

The environmental review process for Logan Airport (the "Airport"), first established in the 1970s, has been structured to occur on two levels: airport-wide and project-specific. The Environmental Status and Planning Report (ESPR) has evolved from a largely retrospective status report on airport operations to a broader analysis that also provides a prospective assessment of long-range plans. It has thus become, consistent with the objectives of the MEPA regulations, part of the Massachusetts Port Authority's (Massport) long-range planning process. The ESPR provides a "big picture" analysis of the environmental impacts associated with current

and projected activity levels, and presents a comprehensive strategy to avoid and minimize impacts. The ESPR analysis is supplemented by (and ultimately incorporates) the detailed analyses and mitigation commitments of project-specific Environmental Impact Reports (EIRs). The ESPR is generally updated on a five-year basis. The previous ESPR for the year 2017 (2017 ESPR) was filed in August of 2019. The Certificate on the 2017 ESPR was issued on November 25, 2019 and included a Scope for the 2018/2019 Environmental Data Report (EDR) (allowing a combined two-year EDR update).

EDRs are filed in the years between ESPRs. The EDR is a retrospective document that is generally filed annually and identifies environmental impacts based on actual passenger activity and operations. The EDR provides opportunities to compare activity levels and impacts against the prior year's EDR, as well as projections set forth in the five-year ESPR. In the Certificate on the 2018/2019 EDR, the Secretary required a combined 2020/2021 EDR given that 2020 activity levels, if considered in isolation, would not provide a clear and complete indication of post-Covid 19 growth trends. The 2020/2021 EDR responds to the Certificate on the 2018/2019 EDR. This Certificate also contains a proposed Scope for the next ESPR.

Through these EDR and ESPR reports, Logan Airport is subject to comprehensive and regular MEPA review, including opportunities for public comment on cumulative impacts from all aspects of airport operations. This regular updating and reporting on planning and cumulative impacts is unique among Agencies subject to MEPA jurisdiction. It reflects the challenge and complexity of managing and modernizing Logan Airport within a dense, urban area including many Environmental Justice Populations.[1] It recognizes that the proximity of communities to the Airport warrants an enhanced level of public engagement and a concerted, long-term effort to avoid, minimize and mitigate impacts.

As further described below, the data presented in the 2020/2021 EDR appear to show significant recovery in Airport operations as of the end of 2022 (albeit outside the reporting period for this EDR). Accordingly, I am directing Massport, as part of the Scope for the forthcoming 2022 ESPR, to provide a full and accurate report of airport operations in 2022 to confirm whether activity levels, in fact, demonstrate full recovery by the end of 2022, as compared to 2019 or other relevant projections set forth in prior ESPRs. The 2022 ESPR should also demonstrate a clear commitment by Massport to return to prior environmental planning initiated prior to the Covid-19 pandemic. Specifically, Massport should describe a clear decision making process and timetable for implementation of planned capital projects or programs that were deferred from 2018-19 due to pandemic conditions. These include several planned capital projects that would provide environmental benefits and reduce impacts associated with airport operations as activity levels recover, such as: the Logan Airport Parking Project (EEA# 15665) (5,000 new parking spaces, solar photovoltaic system, and electric vehicle charging stations), Phase 2 of Terminal E Modernization (EEA# 15434) (3 new terminal gates), several high-occupancy-vehicle investments (addition of 1,000 new spaces to Framingham Logan Express Garage (EEA# 16168), opening a new Logan Express suburban location, and implementing a 2nd urban Logan Express Service at North Station.

A-1

A-2

[1] [1] "Environmental Justice Population" is defined in M.G.L. c. 30, § 62 under four categories: Minority, Income, English Isolation, and a combined category of Minority and Income.

Comments also request that Massport establish a framework and planning process for community mitigation, in collaboration with surrounding EJ populations and other community stakeholders. Both the 2017 ESPR Certificate and the 2018/2019 EDR Certificate indicated that Massport should ensure that community benefits are being provided commensurate with increased growth and associated impacts. The 2018/2019 EDR Certificate also noted Massport's efforts, in response to a Department of Public Health (DPH) study conducted in 2014, to support public health services in the surrounding neighborhoods, including contributions to Chronic Obstructive Pulmonary Disease (COPD) treatment and the consideration of HEPA filters. In the forthcoming 2022 ESPR, Massport should demonstrate a clear commitment to revisit these prior initiatives and establish a framework and timetable for implementation. In particular, Massport should clearly communicate to community stakeholders its methodology for determining growth forecasts and projections, identify potential metrics or thresholds that may trigger the need to consider additional measures to reduce impacts, and describe efforts to continue contributions to local public health services in response to more recent research on airport impacts and address emerging issues such as Ultrafine Particles and Black Carbon. A-3 A-4 A-5 A-6

I note that, since review of the 2017 ESPR and 2018/2019 EDR, all new projects in "Designated Geographic Areas" ("DGA," as defined in 301 CMR 11.02, as amended) around EJ populations are subject to new requirements imposed by Chapter 8 of the Acts of 2021: An Act Creating a Next-Generation Roadmap for Massachusetts Climate Policy ("Climate Roadmap Act") and amended MEPA regulations at 301 CMR 11.00. Two related MEPA protocols – the MEPA Public Involvement Protocol for Environmental Justice Populations ("MEPA EJ Public Involvement Protocol") and MEPA Interim Protocol for Analysis of Project Impacts on Environmental Justice Populations ("MEPA Interim Protocol for Analysis of EJ Impacts") – are also in effect for new projects filed on or after January 1, 2022. While Massport's ESPR and EDR filings are not formally subject to these new regulations and protocols, I find it appropriate to require the filings to reflect robust community engagement and analysis that meet the spirit of these new regulations and protocols. To that end, I am directing Massport, through the Scope for the forthcoming 2022 ESPR, to establish a public engagement plan to govern the development of future ESPRs and EDRs. The plan should ensure that surrounding EJ populations and other community stakeholders have early and meaningful input in the development of the content of these filings, in addition to having the opportunity to provide formal comment once documents are finalized and filed with the MEPA Office. The documents should be prepared in a simpler, user-friendly format that can be digested by a broad sector of the public, so that key details and commitments are not buried in voluminous, data-heavy filings. A-7

Review of the 2020/2021 EDR and Scope for the 2022 ESPR

The 2020/2021 EDR is generally responsive to the Scope. It discusses the effect of the COVID-19 pandemic on activity levels and operations and impacts on future projects and programs. The technical studies in the 2020/2021 EDR include reporting and analysis of key indicators of airport activity levels, the regional transportation system, ground access, noise, air and water quality, environmental management, and project mitigation tracking. The 2020/2021 EDR also describes Massport's "Roadmap to Net Zero" introduced in 2022.

As discussed in the 2018/2019 EDR Certificate, Massport's filings previously indicated a rapid increase in passenger activity levels and aircraft operations during the years 2018 and 2019

due to strong economic conditions at that time. By 2019, air passenger activity levels at Logan Airport had reached an all-time high of 42.5 million, an increase of 3.9 percent over 2018 (40.9 million) and were on track to exceed the 50 million annual passengers projected in the 2017 ESPR much sooner than the previously identified 10-15 year time frame. However, the 2018-2019 EDR also detailed how beginning in March 2020, flights in and out of Logan Airport were dramatically reduced and passenger levels dropped by over 90 percent at the peak of the COVID-19 pandemic in the spring and summer of 2020. It indicated that total flight operations remained reduced by approximately 50 percent, and passenger levels by approximately 70 percent, during the reporting period as compared to January through October 2019.

As anticipated in the Certificate on the 2018/2019 EDR, activity levels at Logan Airport continued their recovery since demand dropped over 98 percent in April of 2020 due to the COVID-19 pandemic. The 2020/2021 EDR indicates that while activity levels are increasing, Logan Airport is recovering at a slower rate when compared to the overall US airport industry which recovered 72.7 percent of its 2019 passenger levels in 2021 while Logan Airport recovered only 53.3 percent. As noted in comments from the Conservation Law Foundation (CLF) and Airport Impact Relief Inc. (Air Inc.), however, more recent passenger activity data from 2022 indicates a much more rapid return to pre-pandemic levels of travel than stated in the EDR. Specifically, passenger data from the months of September, October and November 2022 show recovery up to 92 to 94 percent of levels during the same months of 2019. The 2020/2021 EDR includes a methodology for forecasting future growth which is similar to the method used by the FAA to develop Terminal Area Forecast and indicates that future activity levels are closely tied to the regional and national economy.

As previously noted in comments, the 2020/2021 EDR provides review of a review of airport planning including previously deferred capital projects that were anticipated to provide environmental benefits including installation of a solar photovoltaic system, new electric vehicle charging stations, and several high-occupancy-vehicle (HOV) investments. While some of the highlighted projects remain deferred, the 2020/2021 EDR indicates that ground access and parking remain priority planning interests. Given the indications that activity levels are more rapidly returning to pre-pandemic levels, the 2022 ESPR should indicate a commitment to prioritize mitigation efforts and provide a timeline for deferred projects. A-8

This 2020/2021 EDR discusses topics similar to the 2018/2019 EDR with a focus on the significant changes following the COVID-19 pandemic which has altered the aviation industry. Topics of focus include: (1) changes in activity levels and future forecasting; (2) airport planning including net zero and resiliency planning; (3) changes to ground access and parking; (4) noise abatement strategies; and (5) airport-wide emissions including those associated with vehicle trips.

The 2022 ESPR is an opportunity to update the cumulative impacts of passenger growth and associated ground and aircraft operations based on revised forecasts, documented trends, and environmental impacts. The next ESPR will analyze calendar year 2022 and provide projections through 2040. It should follow the general format of the 2017 ESPR and include an Executive Summary and Introduction, similar to previous ESPRs and EDRs. Several comments have noted the complexity and length of the document and difficulty in responding to lengthy, data-heavy A-9

analyses. Massport should consider shortening future filings to put less emphasis on historical accomplishments and only report on relevant updates, changes, and achievements, noting that historical data may be necessary for context. As indicated above, Massport should clarify methodologies and metrics related to growth projections and associated impacts and mitigation, so that future filings can focus on the most relevant data for assessing Massport's efforts to minimize impacts from Airport operations. A-10 A-11

The 2022 ESPR must include information on the environmental policies and planning that form the context of environmental reporting, technical studies, and environmental mitigation initiatives against which projects at Logan Airport can be evaluated. This should include identification of the cumulative effects of Logan Airport operations and activities, compared to previous years, as appropriate. The 2022 ESPR should include updated timelines for implementation of deferred mitigation projects to ensure that mitigation efforts keep up with increasing rates of travel as pandemic restrictions ease and travel resumes. A-12 A-13

The ESPR must include copies of all ESPR and EDR Certificates and a distribution list for the 2022 ESPR. Supporting technical appendices should be provided as necessary. A-14

Environmental Justice

Logan Airport is within two Environmental Justice (EJ) populations designated as Minority and is within one mile of two EJ populations characterized as Minority. Within the census tracts containing the above EJ populations, within one mile of the project site, the following languages are identified as those spoken by 5% of more of residents who also identify as not speaking English very well: Spanish and Spanish Creole. As indicated, while Massport's EDRs and ESPRs are not formally subject to MEPA EJ regulations and protocols, Massport acknowledges the proximity of the Airport to numerous EJ populations and has indicated a willingness to expand outreach efforts to meet the spirt of recently revised MEPA protocols. The 2022 ESPR should identify EJ populations with 5 miles of the airport including languages spoken by those who identify as not speaking English very well. These communities should be included in future outreach efforts with project summaries and announcements translated into the identified languages. Since 2013, Massport has also been advised by the Massachusetts Port Authority Community Advisory Committee (MCAC) (see St. 2013, c. 46, §§ 55, 82, as amended), which consists of representatives from 35 communities potentially impacted from Airport operations and located within 5 or more miles around the Airport. A-15

The 2022 ESPR should include a public engagement plan developed consistent with the MEPA EJ Public Involvement Protocol and review Massport's public outreach efforts prior to the filing of the ESPR. The public engagement plan should reflect strategies to provide opportunities for early and meaningful input on the development of Massport's filings, and should reflect community-based strategies beyond formal public hearings. I encourage Massport to provide a conceptual draft of the 2022 ESPR and to a hold public information session, held at accessible location and convenient time (such as the evening or weekend) so as to maximize input and participation from EJ neighborhoods and residents before the document is finalized. Massport should consult with the MEPA Office and EEA EJ Office in the development of the public engagement plan, and involve these offices in community meetings to the extent A-16 A-17 A-18

appropriate. The final 2022 ESPR, together with a fact sheet translated into relevant languages, should be circulated to community-based organizations (CBOs) and tribes/indigenous organizations ("EJ Reference List") provided by the MEPA Office, with as much advance notice as practicable so as to facilitate a meaningful review of surrounding EJ populations. I encourage Massport to allow for an extended comment period on the ESPR to allow for full public input and participation. Consistent with prior practice, the Executive Summary for the 2022 ESPR should be translated into Spanish and any other languages identified with input from the EEA EJ Director as representing languages spoken by a significant percentage of Limited English Proficiency (LEP) residents within the 35 communities represented by the MCAC. The identified languages should be used when distributing notice of public meetings and other relevant materials. A-19 A-20 A-21

The 2022 ESPR should contain a section on Environmental Justice and discuss public outreach activities conducted pursuant to Massport's public engagement plan. The ESPR should report on discussions with stakeholders regarding methodologies for growth projections, relevant metrics for assessing Airport impacts, and a framework for community mitigation in consideration of growth trends and associated impacts, as well as emerging research and science around public health impacts of airport operations in the U.S. Northeast and other regions. The ESPR should reflect a clear commitment by Massport to return to prior environmental commitments, including contributions to local public health services, that were begun prior to the Covid-19 pandemic. A-22 A-23 A-24

Activity Levels

Air traffic activity levels at Logan Airport are the basis for the evaluation of noise, air quality, and ground access conditions associated with the Airport. In this section, current activity levels at the Airport are compared to prior-year levels, and historical passenger and operations trends at Logan Airport dating back to 2000, which is the year Massport approved an Environmental Management Policy.

In 2017, air passenger activity levels at Logan Airport reached 38.4 million, an increase of 5.9 percent from 2016. At the time of the 2017 ESPR filing, it was projected that Logan Airport would reach 50 million annual passengers in the next 10 to 15 years (the Future Planning Horizon). As noted above, the 2019 passenger activity level represented a high for Logan Airport, which had been averaging an annual passenger growth of 5.9 percent since 2013 and continued to outpace the overall U.S. passenger growth of 4.1 percent for the same time period. The 2020/2021 EDR reports that due to the COVID-19 pandemic, 2020 passenger levels and operations have dramatically decreased with 2021 passenger levels showing a gradual return to 2019 levels with the rate of recovery being slower when compared to overall U.S. scheduled passenger recovery.

Domestic air passengers represent Logan Airport's largest market segment, accounting for approximately 85 and 88.4 percent of total air passengers in 2020 and 2021, respectively. The total number of scheduled domestic flights at Logan Airport in 2021 recovered to 62.8 percent of 2019 levels, or 211,549 operations, after falling 50.6 percent the previous year to 166,410. The 2020/2021 EDR attributes the high proportion of domestic activity (previously 81.2 and 80.2

percent of total air passengers in 2018 and 2019) to the strong demand for leisure travel following the lifting of pandemic related restrictions and a slower rebound of international activity as countries began to re-open their borders to visitors at the end of 2020 into 2021.

International passenger traffic at Logan Airport declined by 77.9 percent in 2020 as compared to 2019, but increased in 2021 compared to 2020, resulting in a 30.7 percent recovery when compared to 2019 international passenger levels. In 2020 and 2021, international passengers comprised approximately 14.6 and 11.2 percent of total Airport passenger shares, respectively, whereas prior to the pandemic between 2016 to 2019, international passengers made up between 18 and 20 percent. According to the 2020/2021 EDR, international travel demand was suppressed globally as governments implemented border closures, and rigorous testing requirements and vaccine-documentation were needed for non-essential travel, shifting demand to domestic markets.

The total number of aircraft operations at Logan Airport declined by 51.6 percent, from 427,176 operations in 2019, which was a historic peak since 2001, to 206,702 operations in 2020. Operations then increased in 2021 compared to 2020 to 266,034 operations representing a recovery of 62.3 percent of 2019 levels. Despite operational and passenger decreases, dedicated all-cargo operations saw operational growth as compared to 2019, increasing by 10.9 and 2.6 percent in 2020 and 2021, respectively. This continued growth resulted in the dedicated all-cargo segment exceeding 2019 levels by 13.8 percent by end of 2021. The 2020/2021 EDR states that air cargo volumes have been more resilient to pandemic-related effects than passenger traffic. Total cargo volumes (which includes "belly" cargo carried in the belly of passenger aircraft) declined by 16.3 percent in 2020 but increased to 649 million pounds in 2020, which represents a 90.5 percent recovery of 2019 volumes (717 million pounds).

The 2020/2021 EDR also notes a decline in the long-term trend toward greater efficiency, where the number of passengers per aircraft reached a peak of 99.5 passengers per flight in 2019, average number of passengers per flight fell in 2020 to 61.0 passengers per flight, a 38.5 percent decrease. This is a change in trends noted in the 2018/2019 EDR, which indicated a further increase in operational efficiency and "aircraft load factors." International services, which are typically operated by larger widebody aircraft with over 200 seats, were suspended, lowering the average available seat capacity, along with greater use of smaller regional jet (RJ) aircraft on domestic segments. The increase in average passengers per operation prior to the pandemic was attributed to the introduction of newer and larger aircraft at Logan Airport like the Airbus 350 and Boeing 787, in addition to flights operated by Boeing 777 and Airbus A380 superjumbo jets, especially for international long-haul flights. As the domestic demand recovered and international services began to be restored in 2021, the average passengers per operation increased to 85.2 by the end of 2021, or 85.6 percent of 2019 levels.

The 2020/2021 EDR also provides data for the first eight months of 2022 (January to August) which show that operations are down approximately 13 percent and passengers were down approximately 18 percent compared to the first eight months of 2019. As indicated in comments, however, more recent month-to-month data from September through November 20222 appear to show a more rapid return to pre-pandemic passenger levels of travel, when compared to the same months from 2019, than reported in the 2020/2021 EDR. The 2022 ESPR A-25

should continue to report passenger and activity levels and consider planning/mitigation commensurate with this more rapid growth; in particular, air, noise, and traffic reduction measures should be a significant emphasis of the 2022 ESPR. The 2022 ESPR should indicate a clear commitment to implementing deferred capital projects to ensure that these measures are taken to reduce impacts commensurate with activity levels as the economy recovers and the demand for air travel returns to the rate of growth seen before the pandemic. As noted, Massport should engage with stakeholders as it determines methodologies for measuring growth trends and appropriate mitigation planning. A-25 *cont.* A-26

The 2022 ESPR should report on: A-27

- Aircraft operations, including fleet mix and scheduled airline services at Logan Airport;
- Domestic and international passenger activity levels;
- Cargo and mail volumes;
- Comparison of 2022 aircraft operations, cargo/mail operations, and passenger activity levels to 2019 and 2020-21 activity levels; and
- Report on national aviation trends in 2022, the effect of the pandemic, and compare to trends at Logan Airport.

The 2022 ESPR should update the Logan Airport long-term passenger forecast to reflect growth trends at Logan Airport and revised expectations for the local/national/international economy including current recovery from the COVID-19 pandemic. Planning and impact sections will be based on forecasting for the next five years (2023-2027). It should address methodologies and assumptions used in the analysis, including anticipated changes to fleet mix changes and other trends in the aviation industry. It should also provide: A-28 A-29

- Updated forecasts for passenger volume, aircraft operations, and fleet mix;
- A comparison of 2022 operations to historic trends and 5-year and 2040 forecasts; and
- A comparison of forecast activity levels to Massport forecasts from previous ESPRs, FAA forecasts and the U.S. aviation industry.

As indicated above, Massport should establish a public engagement plan to engage with the MCAC and other stakeholders as it develops a methodology for future growth projections. The 2022 ESPR should report on the results of this consultation and provide a clear, easily digestible description of methodology that will be understood by a broad sector of the public. This methodology should be carried forth in annual EDRs during the next five-year ESPR reporting period. A-30

<u>Planning</u>

The Airport Planning section describes the status of projects underway or completed at Logan Airport through the fall of 2022. The longer planning period was covered due to the slow recovery following the Covid-19 pandemic and provide a better picture of recovery trends. While the 2020/2021 EDR indicates that the dramatic reduction in revenues and activity during the pandemic period resulted in deferment of many projects, Massport asserts it remains committed to implementing project-related mitigation strategies. Planning projects fall into the following

categories: Ground Transportation (including high occupancy vehicle (HOV) improvements and Parking; Terminals; Airside Planning, Service Areas; Airport Buffers and Open Space; and Energy, Sustainability, and Resiliency. The 2020/2021 EDR provided updates on over thirty projects including several transportation planning initiatives. Significant projects are highlighted below.

- *Logan Airport Parking Project*: This project includes the construction of up to 5,000 new commercial parking spaces to reduce trip generation associated with increases in passenger drop-off and pick-up at the airport. The Certificate on the ENF was issued on May 5, 2017 and included a Scope for the Draft Environmental Impact Report (DEIR). The Draft EIR/Environmental Assessment (EA) was published in May 2019. The Final EIR/EA was filed in November 2019 and the Secretary's Certificate was issued on January 30, 2020. The project required an amendment to the Logan Airport Parking Freeze Regulations (310 CMR 7.30). Amendments to the regulations were promulgated in 2017. The project is currently advancing design for the first 2,000 spaces in the parking lot across from Terminal E. Both phases are deferred due to the reduction in passenger activity associated with the pandemic.

- *RideApp (formerly Transportation Network Company (TNC)) Infrastructure and Policy (Airport-wide*): As RideApps have become a popular option for transportation to and from Logan Airport, MassPort has developed strategies to manage RideApp operations and reduce RideApp "deadhead" activity.[2] Massport consolidated RideApp activities on the ground floor of the Central and West Garages beginning in October 2019 and completed in December 2019. Massport implemented reduced ride fees for Shared Rides and authorized a rematch program in 2020. Terminal B RideApp pick-up and drop-off operations from the ground floor of the Central Garage are in the process of being moved to the second floor of the Terminal B Garage. This will provide 60 spaces, including three Americans with Disabilities Act (ADA) accessible and four electric vehicle (EV) spaces. This new location is anticipated to open in November 2022.

- *Logan Express Route and Facility Expansion (Off-Airport):* Massport continues to promote Logan Express ridership, thereby reducing vehicle miles traveled (VMT), congestion, and air quality emissions by shifting riders from other vehicle modes. Investments being considered for Logan Express include improving Back Bay Logan Express service, offering a new urban Logan Express service at North Station, pursuing new suburban Logan Express locations, increasing the frequency of the Braintree service, investing in existing suburban sites, and investing in structured parking at existing sites. In March 2020 many service reductions were implemented due to severely reduced passenger levels. In 2021, several Logan Express service enhancements were restored in response to recovering airport activity levels. Woburn service was reopened and Braintree and Framingham service was increased to half-hourly service. In February 2022, Peabody services was reopened at a new more convenient location at the Northshore Mall. Back Bay service restarted in October 2022. No new or potential locations are identified in the 2020/2021 EDR.

[2] Deadhead trips are those trips to or from the Airport that do not contain a passenger.

- *Terminal E Modernization Project*: This project will accommodate existing and long range forecasted demand for international service. The expansion will add the three gates approved in 1996 (International Gateway West Concourse project, EEA #9791), which were never constructed, and an additional four gates in an extended concourse. A key feature of this project is the first direct pedestrian connection from the MBTA Blue Line Airport Station to the terminal complex at Logan Airport. The building will also be aligned to function as a noise barrier. Initial construction began in 2019 but in June 2020 construction was adjusted in response to the pandemic. Currently, Massport is proceeding with construction of the first four gates that will connect to the existing Terminal E in mid-2023. The remaining three gates and pedestrian connection to the Blue Line Airport Station is currently deferred.

- *Terminal B Airline Optimization Project:* Massport is upgrading its facilities on the Pier B side of Terminal B to meet airlines' needs (primarily reflecting the merger of American Airlines and US Airways) and to provide facilities that improve the passenger traveling experience. Similar improvements have been implemented with the recent renovations and improvements at Terminal B, Pier A. Planned improvements include an enlarged ticketing hall; improved outbound bag area; and expanded bag claim hall, concession areas and holdroom capacity at the gate. Project construction was completed in 2022.

- *Terminal C, Pier B Optimization:* This project will make improvements within the existing footprint of Terminal C, Pier B. Existing passenger areas will be renovated and a second level of less than 5,000 square feet will be added. A jet bridge will be installed at an existing aircraft parking position. Project construction was completed in 2019

- *Terminal C Canopy, Connector, and Roadway Project:* Massport is planning improvements that will enhance Terminal C facilities and provide a post-security connector between Terminals B and C, replace aging roadways serving the terminals, and improve the operation of the Terminal C curb. The enhancements also include replacement of the existing canopy on the Departures Level. Construction of the building enhancements began in fall of 2019. Construction of the replacement canopy was completed in 2021, with a slightly reduced program than originally planned. The Terminal C to B Connector was completed in 2022 and roadways are anticipated to be complete in summer 2023.

- *Terminal A to B Airside Connector:* As part of the Airport-wide effort to enhance terminal connectivity post-security, a secure-side connector between Terminals A and B is under consideration. The airside connector between Terminals A and B is still being considered; however, this project is not currently in the five-year Capital Program.

- *Runway 9-27 RSA Improvement Project*: The FAA has approved the use of an Engineered Materials Arresting System (EMAS) for construction of a runway safety area for aircraft overrun protection. Recommended construction is expected to be similar to a pile-supported deck installed at Runway 33L. Work on the Final Environmental Impact Report (EIR) and National Environmental Policy Act (NEPA) document is underway.

- *Runway 15-33 Rehabilitation Project*: Pavement inspections and sampling indicates that Runway 15R-33L is in need of rehabilitation, which was last performed in 2012. Massport plans to rehabilitate Runway 15R-33L, including pavement at the intersections with Runways 4L-22R and 4R-22L, and intersecting taxiways. The project also includes taxiway pavement geometry modifications at or near Runway 15R-33L in accordance with the latest FAA standards, and the RIM Study and Comprehensive Airfield Geometry Analysis. Associated runway and taxiway lighting, pavement markings, and pavement sensors would be upgraded and/or replaced as part of the project. Massport began design for the proposed Runway 15R-33L rehabilitation in 2022. Pending project review and approval, construction is estimated to start in the spring of 2023.

- *Jet Fuel Storage Addition – North Service Area (NSA)*: Massport proposes to enhance the reliability of jet fuel storage availability and distribution to meet current demand at Logan Airport by installing additional jet fuel storage facilities within the existing storage and distribution system. The proposed location for these additional facilities is the site of an abandoned Massport water pumping station, located on Prescott Street adjacent to the rear of the Economy Garage. Construction of a fifth jet fuel storage tank immediately adjacent to the existing tanks and fuel distribution facilities began in 2022 with an expected 2024 completion date.

- *Relocated Compressed Natural Gas (CNG) Station in the North Cargo Area (NCA)*: Massport continues to examine potential on-Airport parcels for relocation of the existing CNG station. Relocation is not expected to occur before 2023.

- *Piers Park Phase II*: Piers Park Phase II will add 4.2 acres of green space to the existing Piers Park on the East Boston waterfront. The Phase II site is located adjacent to the Phase I site, along Marginal Street. The conceptual design of the Phase II site envisions a fully accessible park with a central lawn area, basketball and volleyball courts, and bicycle and rollerblade tracks. Massport has committed up to $15 million for the design and construction. Elevation of the site is also planned to improve neighborhood resiliency and flood damage protection. A new 1,000-square foot community/sailing center, located on the waterfront, is designed to replace the existing Sailing Center building while providing additional meeting spaces for the community. The concept planning and permitting phase was completed in 2022. Construction for Piers Park II commenced in October 2022 and is scheduled to be complete by the end of 2023.

The 2022 ESPR should continue to assess planning strategies for improving Logan Airport's operations and services in a safe, secure, more efficient, and environmentally sensitive manner. As owner and operator of Logan Airport, Massport must accommodate and guide tenant development. The 2022 ESPR should describe the status of planning initiatives for the following areas: A-31 A-32

- Roadways and Airport Parking;
- Terminal Area;
- Airside Area;
- Service and Cargo Areas;

- Airport Buffers and Landscaping;
- Energy, Sustainability, and Resiliency. A-32 *cont.*

The 2022 ESPR should also indicate the status of long-range planning activities, including the status of public works projects implemented by other agencies within the boundaries of Logan Airport. The ESPR should identify the status and assess effectiveness of ground access changes, including roadway and parking projects, that consolidate and direct airport-related traffic to centralized locations and minimize airport-related traffic on streets in adjacent neighborhoods. Where key environmental mitigation projects have been deferred, Massport should describe the decision making process and factors that will be used to inform the timing of its implementation. While the Scope for the 2018-2019 EDR required a disclosure of this decision-making, the EDR was not fully responsive as it provided details on the status of multiple projects without a clear framework for determining when deferred projects, particularly those intended to mitigate air emissions impacts of Airport operations, would be implemented. A-33 A-34 A-35

The 2022 ESPR should indicate a clear commitment to return to prior environmental commitments relative to capital projects intended to minimize air emissions impacts, and identify the metrics, monitoring data, or other criteria that will be used to inform when it will be implemented based on future increases in demand for air travel as the economy recovers. A-36

Mitigation

The 2020/2021 EDR provides an update on Massport's mitigation commitments under MEPA for projects at Logan Airport for which an EIR was filed to document that all feasible measures have been taken to avoid or minimize impacts. The 2020/2021 EDR addresses cumulative, Airport-wide impacts and reports on these measures through the end of September 2022. It also updates the status of mitigation commitments for recent projects such as the Terminal E Modernization Project (in progress) and the Logan Airport Parking Project (deferred) as well as projects previously included in the EDRs.

Regional Transportation

The 2020/2021 EDR describes activity levels at New England's regional airports and provides an update on regional planning activities, including long-range transportation efforts. The New England region is anchored by Logan Airport and a system of 10 other commercial service, reliever, and general aviation (GA) airports (regional airports). In 2020 and 2021, the New England region saw a decrease in air passenger activity. Regional air passengers decreased (as compared to the 2019 high of 59.7 million) by 69 percent to 18.52 million air passengers in 2020 and by 43.7 percent to 33.64 million in 2022. In 2020 and 2021, the 10 regional airports accounted for a total of 5.9 and 11.0 million passengers, respectively, compared to 17.2 million passengers in 2019.

The 2022 ESPR should report on: A-37

Regional Airports

- 2022 regional airport operations, passenger activity levels, and schedule data within an historical context;

- Status of plans and new improvements as provided by the regional airport authorities;
- Regional economic factors;
- Role of the Worcester Regional Airport and Hanscom Field in the regional general aviation system and Massport's efforts to promote these airports; and
- Ground access improvements.

Regional Transportation System

- Massport's role in managing the regional transportation aviation facilities;
- Massport's cooperation with other transportation agencies to promote efficient regional highway and transit operations; and
- Report on metropolitan and regional rail initiatives and ridership.

A-37 *cont.*

Ground Access to and from Logan Airport

The 2020/2021 EDR reports that average daily traffic and VMT on Airport roadways has decreased in 2020 and 2021 compared to 2019 as a result of the pandemic. As reported, fewer passengers and employees were traveling to and from Logan Airport and there was less roadway congestion both in Boston and the metropolitan area. The EDR states that Massport continues to plan for the recovery of air passenger activity and remains committed to implementing the broad range of ground access and trip reduction strategies aimed at increasing the number of passengers arriving by transit or other HOV mode. The 2020/2021 EDR provides a discussion of ground access modes and trip generation associated with each mode including: (1) transit and shared-ride HOV services; (2) drive to Logan Airport and park; or (3) drop-off/pick-up mode, which can involve a private vehicle, taxi, limousine, or RideApp/TNC.[3]

Average weekday on-Airport VMT decreased by about 75 percent from 2019 to 2020 from approximately 209,900 in 2019 to 52,794 in 2020. Between 2020 and 2021, average weekday on-Airport VMT increased to 118,937 (an increase of 79.7 percent over 2020); however, this still represented a decrease of 43.3 percent below 2019 levels. RideApp transactions dropped from over 7 million in 2019[4] to just 2 million in 2020 and 3 million in 2021. Similarly, the number of black car limousines and scheduled van seats dropped by nearly 64 percent from 2019 to 2021. Taxi dispatches declined 80 percent in 2020 compared to 2019 and increased by 66 percent between 2020 and 2021. MBTA Blue Line ridership decreased by approximately 36 percent between 2019 and 2020 but increased 31 percent in 2021 compared to 2020. Logan Express ridership from suburban park-and-ride locations decreased by 70 percent between 2019 and 2020 and increased by 18 percent between 2020 and 2021. Massport indicates results of the 2022 Air Passenger Ground-Access Survey will be presented in the 2022 ESPR to provide post pandemic trends related to HOV mode share.

The 2020/2021 EDR reports on the effectiveness of the RideApp management plan and provides an update on planned and executed measures to relieve on-Airport roadway congestion including updates on the Logan Airport Parking Project. Massport describes policies that Massport has implemented to manage the RideApp operations and status of each, noting that reduced fees are currently offered for shared rides. In addition, Terminal B RideApp pick-up and

[3] Transportation Network Companies (TNCs) are now referred to as RideApp companies (e.g., Uber and Lyft).
[4] The Certificate on the 2018/2019 EDR indicated RideApp activity was 8 million in 2019.

drop-off operations are in the process of being moved from the ground floor of the Central Garage to the second floor of the Terminal B Garage. This will provide 60 spaces, including three Americans with Disabilities Act (ADA) accessible and four electric vehicle (EV) spaces. This new location is anticipated to open in November 2022. Massport is continuing to promote Logan Express ridership by expanding parking, frequency, and facility upgrades reducing vehicle miles traveled (VMT), congestion, and air quality emissions.

Post-pandemic, Logan Airport is expected to continue to be one of the top U.S. airports in terms of high-occupancy vehicle (HOV) and transit mode share. The 2020/2021 EDR states Massport has a goal of reaching 35.5 percent HOV mode share by 2022 and 40 percent by 2027. Based on the results of the 2019 Logan International Airport Air Passenger Ground-Access Survey, HOV mode share reached 40.4 percent, exceeding both near-term and longer-term goals; however, COVID-19 had a range of impacts on ground transportation, particularly on the use of ground-access HOV modes. Comments note that it is unclear whether Massport remains compliant with HOV goals, as a result of pandemic conditions. In 2020 goals to improve HOV mode share included adding 1,000 parking spaces to the Framingham Logan Express service and adding a new urban Logan Express Location. Both projects have been deferred until ridership increases. The 2020/2021 EDR reports that after a temporary suspension of bus service from Peabody and Woburn (Braintree and Framing continued to operate on reduced schedules), suburban Logan Express services have been restored and the Peabody service was relocated (February of 2022). New initiatives to increase urban Logan Express ridership included a pilot security line status for riders (suspended in 2020 but resumed in October 2022) and implementation of electronic ticketing (October 2022). The 2020/2021 EDR indicates there is no pre-pandemic information on Silverline boarding data but the number of passengers increased by 30 percent between 2020 and 2021. As noted above, Massport will purchase eight new Silver Line buses as part of a forthcoming (Spring 2023) MBTA procurement.

The 2022 ESPR should report on 2022 ground access conditions at the airport and provide a comparison to 2019, 2020, and 2021 for the following:

A-38

- Description of compliance with Logan Airport Parking Freeze;
- HOV ridership (including Blue Line, Silver Line, Water Transportation, and Logan Express) and description of compliance with HOV goals and explanation of methodology for determining compliance;
- Logan Airport Employee Transportation Management Association (Logan TMA) services;
- Logan Airport gateway volumes;
- On-airport traffic volumes;
- On-airport VMT;
- Parking demand and management (including rates and duration statistics);
- Status of long-range ground access management strategy planning and the connection to the MBTA Airport Station associated with the planned Terminal E Modernization;
- Results of the 2022 Logan Airport Air Passenger Ground-Access Survey; and,
- Status of proposed connector to the Airport Station associated with the planned Terminal E Modernization Project.

The chapter should present a discussion of analytical methodologies and assumptions for the planning horizon year (2040)[5] for traffic volumes, on-airport VMT and parking demand. A-39

The 2022 ESPR should address the following topics: A-40

- Target HOV mode share and incentives;
- Impact of RideApps on Logan Airport landside operations and effectiveness of the RideApp management plan;
- Update on parking conditions;
- Non-Airport through-traffic;
- Cooperation with other transportation agencies to increase transit ridership to and from Logan Airport via the Blue Line, Silver Line, Water Transportation, and Logan Express;
- Report on efforts to increase capacity and use of Logan Express;
- Progress on enhancing water transportation to and from Logan Airport;
- Results and recommendations of the ground access study Long-term Parking Management Plan required by the Parking Freeze amendments; and
- Strategies for enhancing services and increasing employee membership in the Logan Airport TMA.

Noise

The 2020/2021 EDR provides an update on the status of the noise environment at Logan Airport in 2020 and 2021 and describes Massport's efforts to mitigate noise exposure and impacts. As described throughout the EDR, 2020 and 2021 are unusual in comparison to the trends of the preceding decades.

The 2020/21 EDR provides noise modeling results from the AEDT (version 3d). The model requires detailed operational data as inputs for noise calculations, including numbers of operations per day by aircraft type and by time of day, which runway is used for each arrival and for each departure, and flight track geometry for each track. The 2020/2021 EDR also presents summaries of the 2020 and 2021 operational data used in the noise modeling, as well as the resultant annual Day-Night Average Sound Level (DNL) noise contours, a comparison of the modeled results with measured levels from the noise monitoring system, and estimates of the population residing within various increments of noise exposure in 2020 and 2021

Both FAA and the U.S. Department of Housing and Urban Development consider DNL exposure levels above 65 decibels (dB) to be incompatible with residential land use. The 2020/2021 EDR describes how there was an overall decrease in the total number of people residing within the DNL 65 dB contour in 2020 and 2021 due to the significant drop in annual daily operations in those years. Specific changes noted in DNL contours include a greater than expected decrease in the Point Shirley area of Winthrop due to a 2.5 month closure of Runway 27 for construction in 2020, a slight increase in East Boston towards Chelsea due to an increase in use of Runway 15R for arrivals (about 0.5 percent in 2020 and about 4 percent in 2021), and a

[5] The planning horizon in the 2017 ESPR was 2035.

slight increase in 2020 for the lobe that reaches into Revere in 2020 followed by a slight decrease in 2021.

Massport monitors flights that operate during the DNL nighttime period of 10:00 PM to 7:00 AM, when each modeled flight is increased by 10 dB in calculations of noise exposure. Nighttime operations during this period represented 13 percent of total operations for both 2020 and 2021. Nighttime operations decreased from an average of 186 operations in 2019 to approximately 72 per night in 2020 and 92 per night in 2021. This represents total nighttime operations decrease from 2019 to 2020 of 61 percent with 2020 to 2021 rebounding slightly with an increase of 29 percent. The 2020/2021 EDR notes that nighttime cargo operations accounted for approximately 5 percent of all commercial nighttime operations in 2019; that percentage increased to 13 percent for 2020 and was 9 percent for 2021 most likely due to an increased demand for shipping during the pandemic. The majority (about 86 percent in 2020 and 78 percent in 2021) of nighttime operations occurred either before midnight or after 5:00 AM.

The DNL 65 dB contours decreased dramatically in 2020 due to the lower noise levels accompanying the dramatic reduction in airport operations. As noted above, in 2020, the DNL 65 dB contour reaches farther into populated areas of Boston, Winthrop, and Revere than in 2020 but remains smaller than in 2019. The total number of people residing within the DNL 65 dB contour decreased from 8,768 in 2019 to 804 in 2020. The estimated population (based on 2020 U.S. Census data) within the DNL 65 dB contour increased to 2,497 in 2021 but still well below 2019.

The 2018/2019 EDR anticipated that the return of air traffic would be accompanied by a different mix of aircraft types as larger and older aircraft models were retired. Aircraft are categorized according to their noise emissions levels in FAA Advisory Circular 36-1H, *Noise Levels for U.S. Certificated and Foreign Aircraft*, as either Stage 3, Stage 4, or Stage 5 (older State 1 and 2 aircraft have been phased out). The 2020/2021 EDR reports that about 29 percent of 2020 and 2021 operations were conducted in aircraft meeting the requirements for Stage 5 certification, 69 percent meeting Stage 4 certification, and the remaining 2 to 3 percent meeting only Stage 3 certification. The 2020/2021 EDR does not provide this same metric for 2019 as means of comparison.[6] A-41

In 2020, Massport received 240,951 noise complaints from 72 communities, a decrease of about 10 percent from 268,929 noise complaints from 86 communities in 2019. In 2021, as the number of flights rebounded, the number of complaint calls rose to 269,867 from 83 communities. Massport attributes the change to an increase in ability to submit complaints (improvement in phone and online complaint reporting system),[7] an increased public awareness from community groups, and an increase in people working from home.

The 2020/2021 EDR report on the status of Block 1 and 2 of the RNAV Pilot Project, which will analyze the feasibility of changes to some of RNAV approaches and departures from Logan Airport to reduce noise. Recommendations from the study conducted by a technical team

[6] Data is provided by carrier but not as a percentage of total 2019 operations.
[7] Airnoise is a subscription service that allows the user to file a noise complaint by clicking a button. The system finds the aircraft closest to the complainer and then files a detailed noise complaint directly with Massport. https://www.airnoise.io/.

led by MIT, completed recommendations in two phases. Block 1 recommendations were those that would not result in shifting noise from one area to another, and that would not have significant operational/technical implications. A report on Block 1 recommendations was completed in December 2017 and was sent to the FAA in 2020 for review and implementation. In 2021, the FAA completed development of these recommendations and published the procedures in December 2021. Block 2 recommendations were those that could result in noise increases in some areas or face technical barriers that would require further review. The RNAV technical team, led by MIT, completed the Block 2 report in June of 2021; however, after review by FAA and industry stakeholders, it was determined that none of the procedures would be recommended for further evaluation. The RNAV study team worked with FAA on revisions to several of the procedures which were released in December 2021. Two of the procedures, including modifying the existing RNAV Standard Instrument Departure (SID) from Runways 22R and 22L to enable an earlier turn to the east, and adding a new over-water RNAV approach for Runway 22L, were put forth for further study and implementation. In January of 2022, Massport submitted a request to the FAA for review and implementation of these procedures.

The 2020/2021 EDR reports that no new dwelling units received sound insulation from Massport. A total of 5,467 residential buildings and 11,515 dwelling units have been sound insulated since 1986 when the program was first implemented. In December 2021, the FAA approved Massport's updated Residential Sound Insulation Program (RSIP) Noise Exposure Map (NEM) (a requirement to establish eligibility for sound insulation). In 2022, Massport applied for and was approved for an initial grant by the FAA to fund the beginning phase of the RSIP program. The initial grant amount will fund the upfront work related to sound insulation including outreach to eligible homes, application process, pre-testing, and design/bid documents for homes that pass the FAA required pre-testing. Homes that pass the pre-testing will be used as pilots to inform future phases of the program. The 2022 ESPR should contain an update on the initial phase and the progress on additional grant applications to ensure sound insulation is available to qualified residences. A-42

The 2022 ESPR should also provide an overview of the environmental regulatory framework affecting aircraft noise, the changes in aircraft noise, and the updates in noise modeling. The chapter should report on 2022 conditions and provide a comparison to 2020, 2021 and 2019 for the following: A-43 A-44

- Fleet Mix, including Stage 3, and qualifying Stage 4 and Stage 5 aircraft;
- Nighttime operations;
- Runway utilization (report on aircraft and airline adherence with runway utilization goals); and,
- Flight tracks.

The 2022 ESPR should report on the following: A-45

- Changes in annual noise contours and noise-impacted population;
- Measured versus modeled noise values, including reasons for differences and any improvements attributable to the models deployed;
- Cumulative Noise Index (CNI);

- Times-Above for 65, 75, and 85 dBA threshold values/Dwell and Persistence of noise levels; and
- Flight track monitoring noise reports. A-45 *cont.*

The 2022 ESPR should also report on noise abatement efforts, results from Boston Logan Airport Noise Study (BLANS) and report on the status of Block 1 and 2 of the RNAV Pilot Project. A-46

Sustainability at Logan Airport

The 2020/2219 EDR describes Massport's airport wide sustainability goals as identified in its International Organization for Standardization (ISO) 14001 Environmental Management System (EMS) and Sustainability Management Plan (SMP). The Logan Airport SMP (2015) is integrated with the existing EMS framework to promote environmental, social, and economic improvement. The next SMP is anticipated to be released in 2022. Annual Sustainability and Resiliency Reports have been published since 2016 but were suspended for 2020 and 2021. Massport indicated that sustainability project information could be found in its Annual Sustainable Massport Calendars[8] and within the 2021 EDR as indicated by a leaf icon on individual pages; however, the reported efforts had generally been completed prior to 2020. The 2020/2021 EDR did report on the preparation in 2021 and release in March of 2022 of Massport's *Roadmap to Net Zero by 2031*.[9] The nine page document on the Massport Website presents a high-level overview of how Massport will achieve net zero including improving energy efficiency, investing in electric vehicles, and finding ways to transition to renewable energy including onsite generation. The 2020/2021 EDR reports that the upcoming 2022 SMP will outline performance throughout the global pandemic (2020 and 2021) and will also serve to close out the performance targets of the 2015 SMP. The 2022 ESPR should provide a summary of 2022 and future goals. A-47

Climate Change

Massport assets and Logan Airport, in particular, are critical infrastructure and play an important role in the economy. Governor Baker's Executive Order 569: Establishing an Integrated Climate Change Strategy for the Commonwealth was issued on September 16, 2016. The Order recognizes the serious threat presented by climate change and direct Executive Branch agencies to develop and implement an integrated strategy that leverages state resources to combat climate change and prepare for its impacts. The urgent need to address climate change was again recognized by Governor Baker and the Massachusetts Legislature with the recent passage of St. 2021, c. 8, An Act Creating a Next Generation Roadmap for Massachusetts Climate Policy, which sets a goal of Net Zero emissions by 2050. I note that the MEPA statute directs all Agencies to consider reasonably foreseeable climate change impacts, including additional greenhouse gas emissions, and effects, such as predicted sea level rise, when issuing permits, licenses and other administrative approvals and decisions.

The 2020/2021 EDR acknowledges the MEPA Interim Protocol on *Climate Change and Resiliency*, effective for all new filings as of October 1, 2021, and states that all new projects at

[8] https://www.massport.com/massport/business/capital-improvements/sustainability/sustainability-management/
[9] https://www.massport.com/massport/about-massport/roadmap-to-net-zero/

Logan Airport that are filed with MEPA will comply with the amended regulation and protocols. The 2022 ESPR should report on all climate resiliency measures planned or implemented/constructed. A-48

Adaptation and Resiliency

A particular concern for Massport is the effect of sea level rise and projected increases in the severity and frequency of storms. The 2020/2021 EDR reviews planning efforts initiated by Massport beginning in 2013 with the Disaster and Infrastructure Resiliency Planning (DIRP) Study for Logan Airport, the Port of Boston, and Massport's waterfront assets in South and East Boston. It includes a hazard analysis; modeling of projected sea-level rise and storm surge; temperature and precipitation projections; and anticipated increases in extreme weather events.

In addition to the DIRP Study and its related initiatives, Massport issued a *Floodproofing Design Guide* and developed a resilience framework to provide consistent metrics for short- and long-term planning and protection of its critical facilities and infrastructure. Massport's *Floodproofing Design Guide* was updated in November 2018. Plans were also introduced in 2015 that included the deployment of temporary flood barriers to protect up to 12 locations of critical infrastructure in the event of severe weather. The 2020/2021 EDR indicates that additional locations have been permanently enhanced to prevent flooding.

The 2022 ESPR should report on the status of projects undertaken to prevent impacts from future climate change including reporting on specific projects implemented to protect against sea-level rise. It should report on planning initiatives to improve resiliency including any updates to the DIRP. A-49

GHG emissions

The 2020/2021 EDR incorporates GHG emissions reporting consistent with that provided in the 2017 ESPR but with a change in methodology. In prior years, GHG emissions were quantified using emission factors and methodologies outlined in the *Greenhouse Gas Emissions Policy and Protocol* issued by EEA and the Transportation Research Board's *Guidebook on Preparing Airport Greenhouse Gas Emissions Inventories* (Airport Cooperative Research Program (ACRP) Report 11, Project 02-06). The 2020/2021 GHG reporting utilizes additional guidance from the Airports Council International (ACI) and the Airports Carbon Accreditation Program (ACA) which separates emissions based on ownership/control: Scope 1/Direct – emissions that are controlled by Massport; Scope 2/Indirect - emissions associated with the generation of electricity consumed but generated off-site at public utilities; Scope 3/Indirect and Optional – GHG emissions that are associated with the activities of the reporting entity (Massport), but are associated with sources that are owned and controlled by others (aircraft-related emissions, tenant activities, and ground transportation). The 2020/2021 EDR quantifies and reports GHG emissions for all three scopes which, in total, are consistent and comparable to prior EDRs. The 2020/2021 EDR provides comparisons to data from 1990 and 2000 and then annually for 2010 to 2019, noting that 2020 and 2021 were influenced by the pandemic and were not representative. The analysis showed that total GHG emissions in 2020 decreased by about 60 percent and in 2021 decreased by 51 percent from 2019 levels. This reduction in GHGs is

attributed to the COVID pandemic as flights in and out of Logan Airport were dramatically reduced and passenger levels significantly dropped.

Massport reports on initiatives to reduce emissions and highlights the Alternative Fuel Vehicles (AFV) Program which is designed to replace Massport's conventionally fueled fleet with alternatively fueled or powered vehicles and reports on new charging infrastructure including a 2020 grant for charging infrastructure at Terminal E and other locations. Massport has also made a commitment to purchase eight new MBTA Silver Line buses (spring 2023). The Certificate on the 2018/2019 EDR requested that Massport consider comments from the Department of Energy Resources (DOER) which recommend electrification of space and water heating, as well as evaluation of opportunities for distributed renewable energy generation. DOER comments on the 2020/2021 EDR reiterate these recommendations, which should be addressed in the 2022 ESPR. Massport indicates that with the recent release of its Net Zero Roadmap, implementation efforts are underway and future EDR/ESPR filing will provide an update on progress. While Massport's Net Zero efforts should be commended, I note that these relate only to emissions that are under Massport's control (Scope 1 and portions of Scope 2). The 2022 ESPR should continue to report on all initiatives to reduce GHG emissions from all Airport sources, including deferred capital projects intended to reduce mobile source GHG emissions from ground transportation to and from the Airport. To the extent feasible, Scope 3 emissions should distinguish aircraft and ground transportation sources as separate sub-categories of emissions. A-50 A-51

For the 2022 ESPR, Massport proposes to continue GHG reporting to better align with international airport GHG reporting protocols and indicates the 2022 ESPR will describe these refinements. The 2022 ESPR should continue to be quantified for aircraft, GSE, motor vehicles, and stationary sources using emission factors and methodologies outlined in the Greenhouse Gas Emissions Policy and Protocol issued by EEA, the Transportation Research Board's Guidebook on Preparing Airport Greenhouse Gas Emissions Inventories, and the ACRP and ACA. The results of the 2022 GHG emissions inventory should be compared to the 2019, 2020 and 2021 results as the EDR indicates that 2020 and 2021 are not representative. The ESPR should also provide projections for GHG emissions over the next five years and through 2040, based on the projected activity levels surveyed as indicated above. The ESPR should compare these projections to historical levels as set forth in prior ESPRs. The ESPR should describe all efforts by Massport to reduce GHG emissions during 2022 and the years since the last ESPR, and should quantify reductions associated with those initiatives to the extent feasible. To the extent efforts were deferred, the ESPR should clearly track the anticipated emissions benefits associated with such initiatives, and ensure that those reductions are not credited in the future projections provided for the relevant reporting period. The ESPR should provide a status update that reports on progress made towards achieving Massport's Net Zero goal for emissions under its control. A-52 A-53 A-54 A-55 A-56

<u>Air Quality/Emissions Reduction</u>

The 2020/2021 EDR provides an overview of airport-related air quality issues in 2020 and 2021 and the efforts to reduce emissions. The air quality modeling is based on aircraft operations, fleet mix characteristics, and airfield taxiing times combined with GSE usage, motor vehicle traffic volumes, and stationary source utilization rates. The 2020/2021 EDR uses FAA's

approved computer model for calculating emissions from aircraft-related sources, the Aviation Environmental Design Tool (AEDT) (model v. AEDT 3d). Total air quality emissions from all sources associated with Logan Airport are significantly lower than a decade ago and have decreased from 2019 due to decreases in airport operations. The 2020/2021 EDR identifies Massport's initiatives to improve air quality and reduce emissions, including: replacement of gas- and diesel-powered GSE with all-electric GSE (eGSE) by the end of 2027 (as commercially available); implementation of additional initiatives to increase HOV use, investments in renewable energy installation on-airport including solar and wind, use of clean-fuel shuttle buses, and implementation of Massport's net Zero Roadmap by 2031 initiatives.

Massport prepared emissions inventories for 2020 and 2021 for the criteria pollutants carbon monoxide (CO), particulate matter (PM10/PM2.5), volatile organic compounds (VOCs), and oxides of nitrogen (NOx). Total modeled emissions of volatile organic compounds (VOCs), oxides of nitrogen (NOX), carbon monoxide (CO), and particulate matter (PM10/PM2.5) decreased from 2019 to 2020 by about 58 percent, 54 percent, 59 percent, and 47 percent, respectively. The 2021 total modeled emissions of VOC, NOX, CO, and PM10/PM2.5 decreased by about 45 percent, 42 percent, 48 percent, and 23 percent, respectively, from 2019 levels. These decreases are primarily attributable to the decrease in passenger activity levels and aircraft operations due to the COVID pandemic. Modeled emissions of VOCs, NOX, CO, and PM10/PM2.5 associated with aircraft decreased from 2019 to 2020 due to the COVID pandemic, by approximately 59 percent, 54 percent, 58 percent, and 53 percent, respectively. While there are model version differences (between AEDT v.3c and v3d) between 2019 and 2020, causing variances in emissions between those years, overall aircraft emissions decreased from 2019 to 2020 for all pollutants predominantly due to the decrease in passenger air travel demand, and thus fewer operations. Modeled emissions of VOCs, NOX, CO, and PM10/PM2.5 associated with aircraft decreased from 2019 to 2021 by approximately 48 percent, 42 percent, 49 percent, and 44 percent, respectively. Modeled emissions of VOCs, NOX, CO, and PM10/PM2.5 associated with GSE declined from 2019 to 2020 by approximately 40 percent, 48 percent, 36 percent, and 50 percent, respectively. From 2019 to 2021, GSE-related emissions of VOCs, NOX, CO, and PM10/PM2.5 decreased by approximately 22 percent, 39 percent, 20 percent, and 39 percent, respectively, due to the decrease in aircraft operations in the two years, which in turn required reduced use of GSE and aircraft auxiliary power units (APUs).

At the time that emission estimates were prepared for the 2020/2021 EDR, MOVES Version 3.0.3 was the EPA's latest approved computer model for estimating emissions from mobile sources (i.e., on-road motor vehicles and most nonroad equipment). The 2018/2019 EDR was prepared using the MOVES214b version. According to the EPA release notes, the differences in the two database servers, as well as the updates to the vehicle population, travel activities, and emission rates, results in higher PM10/PM2.5 outputs in MOVES3.0.3 than MOVES2014b. The EDR indicates that Moves 3.03 modeled emissions of VOCs, NOX, CO, and PM10/PM2.5 associated with motor vehicles, many of which Massport has influence on, have declined from 2019 to 2020 by approximately 76 percent, 93 percent, 79 percent, and 27 percent, respectively. Notably, the small decrease in PM10/PM2.5 emissions from 2019 to 2020, despite the substantial reduction in passenger activity levels, is mainly due to the model variances used between the two analysis years. From 2019 to 2021, emissions of VOCs, NOX, and CO decreased by approximately 50 percent, 84 percent, and 57 percent, respectively. On the

other hand, PM10/PM2.5 emissions increased by approximately 57 percent. Massport notes that this is mainly due to the model variances between the two different model versions of MOVES.

The 2022 ESPR should continue to provide an overview of the environmental regulatory framework affecting aircraft emissions, changes in aircraft emissions, and the changes in air quality modeling. The 2022 ESPR should also provide discussion of progress on national and international levels to decrease air emissions. Massport should continue to use the latest version of FAA's AEDT model for air emissions modeling as was presented in the 2020/2021 EDR. The EPA Motor Vehicle Emission Simulator (MOVES) tool should continue to be used to assess vehicular emissions on airport roadways. The 2022 ESPR should include a mobile sources emissions inventory for CO, NOx, VOCs, and PMs. It should also report on Massport and tenant alternative fuel vehicle programs and the status of Logan Airport air quality studies undertaken by Massport or others, as available. The 2022 ESPR should demonstrate that Massport's programs to maintain and increase HOV modes provide the capacity to meet demand associated with growth as passenger activity levels and airport operations fully recover from the COVID-19 pandemic. The ESPR should quantify the emissions reductions associated with Massport's air emissions/GHG reduction initiatives to the extent feasible. Future filings should include data on Diesel PM to the extent such data are available. A-57 A-58 A-59 A-60 A-61 A-62

The 2020/2021 EDR provides updated information on Ultrafine Particles (UFPs) which is particulate matter (PMs) subdivided into categories based on their diameters. UFPs have diameters less than 0.1 micrometers (µm). In December of 2020, the Environmental Protection Agency (EPA) published a final action in the Federal Register detailing the agency's review of the National Atmospheric Air Quality Standards (NAAQS) for PM10/PM2.5. UFP is addressed in the supplemental information of the notice. In their review of the PM10/PM2.5 NAAQS, EPA determined that due to significant uncertainties and limitations, as well as the limited availability of air monitoring data, that the PM2.5 NAAQS would be retained as the indicator for UFP. Studies conducted at Zurich Airport in Switzerland and London Heathrow Airport in England have demonstrated that UFP dispersion is highly dependent on wind speed and direction with UFP particle counts being on the order of 10 times higher when measured downwind of the airports. The 2020/2021 EDR indicates that Massport is cooperating with Boston University and Tufts University in identifying aircraft specific related UFPs in an urban environment with non-airport related sources. This research is ongoing in the East Boston area and Massport continues to contribute by providing Logan Airport operational and other pertinent data. The 2022 ESPR should provide a more detailed update on the study and how findings may relate to Massport operations and a potential framework for community mitigation. A-63

The 2020/2021 EDR summarized other recent studies on impacts of aviation emissions on air quality and public health including a project between Olin College, Air Inc., and the Town of Winthrop to continuously measure pollutants such as CO, CO_2, nitric oxide (NO), NO_2, and O_3, as well as the mass concentration of PM2.5/10, and relevant meteorological conditions. This study is ongoing and Massport will continue to provide operational data and collaborate as needed. As requested in the Certificate on the 2018/2019 EDR, Massport has indicated that it has renewed an agreement to provide funding to the East Boston Neighborhood Health Center to help expand the efforts of their Asthma and Chronic Obstructive Pulmonary Disease (COPD) Prevention and Treatment Program in East Boston and Winthrop that provides services including A-64

screenings for children, distribution of asthma kits, and home visits, among others. The 2022 ESPR should include updates on the status of these collaboration efforts. The 2022 ESPR should continue to report on engagement with the Health Center and include a discussion of how the services provided directly to and through the Health Center (which are funded by Massport) can be expanded. As indicated above, Massport should consult with community-based organizations about potential approaches to further mitigate air quality impacts in light of growth trends and emerging research on the impacts of airport operations on public health. The ESPR should describe a decision making process that Massport intends to follow to determine what, if any, additional public health contributions would be considered, and how Massport would seek to fund such contributions. The ESPR should clearly describe the research efforts that Massport will fund or collaborate on, and how such efforts will be identified. A-64 *cont.* A-65 A-66

Water Quality/Environmental Compliance

The 2020/2021 EDR describes Massport's ongoing environmental management activities including National Pollutant Discharge Elimination System (NPDES) compliance, stormwater, fuel spills, activities under the Massachusetts Contingency Plan (MCP), and tank management. Massport's primary water quality goal is to prevent or minimize pollutant discharges, to limit adverse water quality impacts of airport activities. Massport employs several programs to promote awareness of activities that may impact surface and groundwater quality. Programs include implementing best management practices (BMPs) for pollution prevention by Massport, its tenants, and its construction contractors; training of staff and tenants; and a comprehensive stormwater pollution prevention plan. The 2020/2021 EDR reports that in 2020, 100 percent of stormwater samples complied with standards for pH, oil and grease, and TSS. In 2021, 99 percent of stormwater samples complied with standards for pH, oil and grease, and TSS. Massport notes that given the large size of the drainage areas and low concentrations of pollutants, it is not always possible to trace exceedances to specific events.

The 2022 ESPR should identify any planned stormwater management improvements and report on the status of: A-67

- NPDES Permit and monitoring results for Logan outfalls and the Fire Training Facility;
- Jet fuel usage and spills;
- MCP activities;
- Tank management;
- Update on the environmental management plan; and
- Fuel spill prevention.

Response to Comments

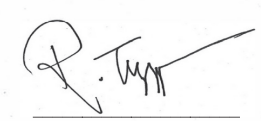
The 2020/2021 EDR was noticed in the Environmental Monitor on December 7, 2022, with a 30-day public comment period and was subsequently extended by Massport to a 60-day comment period ending on January 23, 2023. A hybrid public presentation of the EDR was held on December 15, 2023 at the Rental Car Center at Logan Airport with remote meeting access available for those who could not attend in person.

The Response to Comments section should address all of the substantive comments on the 2020/2021 EDR, and other Certificates for Logan Airport that reference EDR/ESPR documentation (e.g. Logan Airport Parking Project (EEA# 15665), Terminal E Modernization (EEA# 15434)). To ensure that the issues raised by commenters are addressed, the 2022 ESPR should include direct responses to comments to the extent that they are within MEPA jurisdiction. This directive is not intended to, and shall not be construed to, enlarge the scope of the 2022 ESPR beyond what has been expressly identified in this Certificate. The Response to Comments should not reference a section of the 2022 ESPR unless they are directly responsive to the comment. Common themes that should be addressed throughout the 2022 ESPR and in the Responses to Comments include mitigation for air quality impacts (and the findings and relevance of UFP research being performed by Tufts University and Boston University), noise abatement, and traffic reduction measures. The ESPR should also include information to clarify and refine its process for estimating growth rates and provide more detailed data on the implementation of deferred mitigation projects aimed at addressing impacts. The 2022 ESPR should consider alternative methods of presenting and explaining data and findings that are accessible and understandable to all readers. A-68 A-69 A-70 A-71

Conclusion

Massport may prepare a 2022 ESPR for submission consistent with the Scope included in this Certificate. I encourage Massport to target early 2024 for filing of the 2022 ESPR. A-72

January 30, 2023
Date



Rebecca L. Tepper

Comments received:

12/16/2022 Friends of the Mary Ellen Welch Greenway
01/23/2023 Massport Community Action Advisory Committee (MCAC)
01/23/2023 Airport Impact Relief, Inc. (Air Inc)
01/26/2023 Department of Energy Resources (DOER)

RLT/JAH/jah

Copy of the Secretary of the Executive Office of Energy and Environmental Affairs Certificate Issued for the Terminal E Modernization Project Final Environmental Assessment/Environmental Impact Report

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November 10, 2016

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
FINAL ENVIRONMENTAL IMPACT REPORT

PROJECT NAME	: Terminal E Modernization
PROJECT MUNICIPALITY	: East Boston
PROJECT WATERSHED	: Boston Harbor
EEA NUMBER	: 15434
PROJECT PROPONENT	: Massachusetts Port Authority
DATE NOTICED IN MONITOR	: October 5, 2016

As Secretary of Energy and Environmental Affairs, I hereby determine that the Final Environmental Impact Report (FEIR) submitted on this project **adequately and properly complies** with the Massachusetts Environmental Policy Act (MEPA; M.G.L. c.30, ss.61-62I) and with its implementing regulations (301 CMR 11.00). As noted in my Certificate on the Draft EIR (DEIR) issued September 16, 2016, the DEIR fully responded to the Scope contained in the Certificate on the Environmental Notification Form (ENF) and therefore the scope of the Final EIR (FEIR) was limited to a response to comments and draft Section 61 Findings.

Comments received on the FEIR continue to identify concerns regarding existing airport operations and noise levels and potential increases with long-term growth. I have received comment letters from elected officials (including U.S. Congressman Michael E. Capuano, the Milton Board of Selectmen, and Revere Mayor Brian Arrigo), state agencies, environmental advocacy groups, businesses, and residents. The issue of cumulative airport-wide impacts, particularly noise and air quality, is not new to the review of projects at Logan Airport. As noted in past Certificates, the EIR is not intended to address broad concerns associated with airport operations and growth. The venue for addressing cumulative environmental impacts is through the Environmental Status and Planning Reports (ESPR) and Environmental Data Reports (EDR). Through these reports, Logan Airport is subject to comprehensive and regular MEPA review, including opportunities for public comment on the cumulative impacts. This regular updating and reporting on planning and cumulative impacts is unique among State Agencies. It reflects the challenge and complexity of managing and modernizing Logan Airport within a dense, urban

area. It recognizes that the proximity of communities to the Airport warrants an enhanced level of public engagement and a concerted, long-term effort to minimize and mitigate impacts.

Subsequent ESPRs and EDRs will update the cumulative impacts of passenger growth and associated ground and aircraft operations based on revised forecasts and update and revise environmental management plans to address impacts. Future submittals will continue to document potential impacts and trends and propose measures to implement the broad goal of maintaining or reducing Logan's overall environmental impacts, even as annual passenger volumes rise in the future. The next ESPR will analyze calendar year 2016 and will likely be filed in 2017 or 2018 and the next EDR will analyze calendar year 2015 and will likely be filed in the fall of 2016.

I note many comments identify a particular concern with concentrations of flight tracks due to the Federal Aviation Administration's (FAA) area navigation (RNAV) procedures. The primary purpose of the RNAV procedures is to increase safety and operational efficiency. As documented in the ESPR and annual EDR submittals, implementation of several of the RNAV procedures have generated increased noise complaints in some towns surrounding Logan Airport. The procedures themselves have resulted in aircraft at higher altitudes and concentration of flight patterns over certain communities. I note that the FAA is implementing the RNAV program nation-wide. This program is separate from and unrelated to the Terminal E Modernization project. Nonetheless, I am aware that Massport and the FAA recently signed a Memorandum of Understanding (MOU) to frame a new process for analyzing opportunities to incrementally reduce noise through changes or amendments to Performance Based Navigation, including RNAV procedures. I commend Massport and the FAA for establishing this agreement, which is a unique project between the FAA and an airport operator. Massport has indicated that this process will incorporate community outreach and public input. I expect that updates on this process will be provided in in future ESPRs and EDRs which will provide an additional forum and meaningful opportunities for public review of information related to these issues.

Over the past year, Massport has engaged in a concerted outreach effort with elected officials, municipalities, and community groups to identify and discuss potential Massport projects, including but not limited to, Terminal E. Massport created the Logan Airport Impact Advisory Group (IAG) to solicit comment and to identify and prioritize projects and programs of significance to the IAG. I commend Massport for its outreach efforts and encourage Massport to continue a productive dialogue with interested stakeholders, including through the IAG.

I have received comments that identify concerns with other potential Massport projects, including the potential parking garage identified in the DEIR, which would require an amendment to the Logan Airport Parking Freeze Regulation (310 CMR 7.30). As noted in the DEIR and previous Certificate, the potential parking garage will be subject to MEPA review pursuant to 301 CMR (6)(a)(7) because it will be constructed by a State Agency and will include construction of 1,000 or more new parking spaces. Subsequent MEPA review will include review of potential environmental impacts and development of project-specific impact avoidance, minimization, and mitigation measures.

Project Description

The project proposes modernizing Boston-Logan International Airport's John A. Volpe International Terminal (Terminal E) with a 560,000-square foot (sf) addition that corrects facility deficiencies and accommodates current and anticipated passenger volumes. The project includes three gates which previously underwent MEPA review (International Gateway Project, EEA #9791) but were not constructed, and four additional aircraft gates, passenger holdrooms, concourse, concessions, and passenger processing areas. The project includes Customs and Border Patrol (CBP) and Federal Inspection Services (FIS) facilities to replace and expand FIS facilities that were originally reviewed under MEPA (Terminal B, Pier A Improvements/Satellite FIS Facility, EEA #12235) but also not constructed. The project includes a direct pedestrian connection between Terminal E and the MBTA Blue Line Airport Station.

Terminal E was constructed in 1974 with 12 gates and served 1.4 million annual passengers. In 2014, it served approximately five million passengers. The DEIR indicated that the current level of passenger activity routinely causes severe congestion in the terminal at peak times, leading to greatly reduced customer service, and inefficient operations in the terminal and gates. According to the DEIR, gate congestion leads to airside delays and inefficiencies on the North Apron. When no gates are available, arriving aircraft and passengers are held on the apron. The DEIR indicated that aircraft must use remote parking facilities at hardstands in the North Cargo Area and passengers are bused to the terminal during peak periods when there are insufficient gates. The DEIR built upon the information presented in the ENF regarding challenges associated with current operations at Terminal E. Massport has clearly demonstrated the need for the project and made a compelling case for the expansion.

The project is proposed in two phases. Phase 1 will be constructed from 2018 – 2022 and will include construction of four new gates with associated passenger holdrooms and elevators/escalators to relieve existing deficiencies and accommodate interim growth. A partial new concourse will be constructed to allow for future expansion to a seven-gate facility at full build-out. Phase 1 will not require modifications to roadway realignment. Phase 2 will be built by 2028 and will provide three additional gates and the MBTA connection. The project will be fully constructed and operational by 2030.

The project will displace ground service equipment (GSE), other airside activities, existing surface parking, the cell phone lot, and the gas station which will be relocated within existing airport boundaries. Relocation of ground facilities that conflict with the new concourse location, including the gas station, will occur in Phase 1.

Environmental Status and Planning Report (ESPR) and Environmental Data Reports (EDRs)

The MEPA environmental review process for Logan Airport occurs on two levels: airport-wide and project-specific. The ESPR and EDR provide a "big picture" analysis of the environmental impacts of current and anticipated levels of airport-wide activities (including aircraft operations and passenger activity), and presents comprehensive strategies to avoid, minimize and mitigate impacts. The ESPR is generally updated on a five-year basis; the most recent ESPR for the year 2011 was filed in April 2013 and it contained updated passenger activity levels and aircraft operations forecasts through 2030. EDRs evaluate environmental conditions for the reporting year as compared to the previous year and are filed in the years

between ESPRs. The most recent EDR for the year 2014 was filed in October 2015. The EDR provided a comprehensive cumulative analysis of the effects of all Logan Airport activities based on actual passenger activity and aircraft operation levels in 2014 and presents environmental management plans for addressing environmental impacts. The ESPR is supplemented by (and ultimately incorporates) the EDRs and the detailed analyses and mitigation commitments that emerge from project-specific reviews. This process provides a comprehensive and continuous review of airport programs, projects, environmental impacts and associated data.

The 2015 EDR Scope includes, but is not limited to, reporting on noise, air quality, and long-term parking management. The 2015 EDR and 2016 ESPR should reflect the proposed connection to the Airport Station, provide updates on the planning and design of the connection, and identify the anticipated ridership, changes in the HOV mode share, and ground access planning considerations.

The MEPA regulations (Section 11.06(2)) indicate that during the course of an ENF review I may review any relevant information from any other source to determine whether to require an EIR, and, if so, what to require in the Scope. To provide context for this project-specific review and because many issues raised by commenters relate to airport-wide operations and impacts, this Certificate refers to documents from the ESPR process (EEA#3247/5146).

Logan Airport and Project Site

The Airport boundary encompasses approximately 2,400 acres in East Boston and Winthrop, including approximately 700 acres underwater in Boston Harbor. The Airport is surrounded on three sides by Boston Harbor and is accessible by two public transit lines and the roadway system. The airfield is comprised of six runways and approximately 15 miles of taxiway. Logan Airport has four passenger terminals, A, B, C, and E, each with its own ticketing, baggage claim, and ground transportation facilities.

Terminal E is located adjacent to the North Cargo Area, closest to the MBTA Blue Line Airport Station. Land uses in the area of the proposed project include UPS aircraft parking and loading area, the airport's Remain Over Night aircraft parking area, the North Cargo Area equipment storage area, a building occupied by United Parcel Service (UPS), the MBTA Blue Line Airport Station, airport roadways, various short-term and cell phone parking lots, and a gas station.

The project site is located within the coastal zone of Massachusetts. The entirety of the project site is comprised of previously disturbed impervious area. It is not located in Priority or Estimated Habitat as mapped by the Division of Fisheries and Wildlife's (DFW) Natural Heritage and Endangered Species Program (NHESP). The project site does not contain wetland resource areas regulated pursuant to the Wetland Protect Act and its implementing regulations (310 CMR 10.00).

The ENF identified the following projects within the vicinity of Terminal E that have been reviewed under MEPA: Terminal A Replacement (EEA#9329), Terminal E Modifications (EEA#9324), Federal Inspection Services (FIS) Facility and West Concourse Project / International Gateway (EEA#9791), and Terminal B, Pier A Improvements/Satellite FIS Facility (EEA#12235).

Permitting and Jurisdiction

The project is undergoing MEPA review and required an ENF pursuant to 301 CMR 11.03(6)(b)(6) because it will be undertaken by a State Agency and results in the expansion of an existing terminal at Logan Airport by greater than 100,000 sf.

The project requires a Sewer Permit Modification from the Boston Water and Sewer Commission (BWSC) and may require an Industrial User Permit from the Massachusetts Water Resource Authority (MWRA). The project may be subject to Massachusetts Office of Coastal Zone Management (CZM) federal consistency review.

The project requires approval by the Federal Aviation Administration (FAA) for changes to the Airport Layout Plan and, therefore, requires an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA). The project also requires a National Pollutant Discharge Elimination System (NPDES) General Permit for Construction from the U.S. Environmental Protection Agency.

Because the project will be undertaken by a State Agency, MEPA jurisdiction is broad in scope and extends to all aspects of the project that may cause Damage to the Environment, as defined in the MEPA regulations.

Environmental Impacts and Mitigation

As described in the ENF, the project includes construction of approximately 500,000 to 700,000 sf of new floor area (for a maximum 1,500,000 sf total), and will increase both water consumption and wastewater generation by approximately 25,600 gallons per day (76,800 gpd total). The project will not create new impervious area and will eliminate approximately 60 parking spaces. The DEIR indicated that the project will accommodate existing and forecasted passenger levels and operations and, therefore, will not increase passenger enplanements or vehicle trips.

Measures to avoid, minimize and mitigate project impacts include reducing air emissions, greenhouse gas (GHG) emissions, and energy consumption compared to existing conditions by improving access to gate plug-ins, pre-conditioned air, and reducing busing operations. In addition, the building is designed to act as a noise barrier to the adjacent residential areas and Memorial Stadium Park.

Review of the FEIR

The FEIR was responsive to the scope issued in the Certificate on the DEIR. It included responses to comments filed on the DEIR and revised draft Section 61 Findings that outline Massport's mitigation commitments for the project. The FEIR included an Executive Summary of the DEIR both in English and a translated version in Spanish. The FEIR included the FAA's revised draft Finding of No Significant Impact/Draft Record of Decision (Draft FONSI/DROD) which was updated since the DEIR. This Certificate applies to the MEPA review of the project.

MEPA review cannot and does not restrict the ability of the federal government to act on those aspects of the project subject to the National Environmental Act (NEPA).

The only change to the project since the review of the DEIR is incorporation of additional mitigation measures to reduce GHG emissions (described below). No other changes to project programming, layout, or anticipated environmental impacts are identified. State Agencies did not request additional MEPA review or identify further analysis that would warrant additional MEPA review.

Response to Comments

The Response to Comments contained a copy of the DEIR Certificate and a copy of each comment letters received on the DEIR. A total of 186 comment letters were provided on the DEIR, of which 120 consisted of form letters. The FEIR contained a summary table that identified each commenter, the issues identified in their comment letter, and the corresponding section(s) of the FEIR to assist in locating the response. The FEIR contained both thematic responses to frequent comments and separate responses to individual comments. I commend Massport for providing a comprehensive response to comments and recognize the time and effort that Massport has invested in the preparation of the FEIR.

Responses to individual comments were provided for state agencies, municipalities, elected officials, and key stakeholders. Thematic responses were provided for the following categories: alternatives, cumulative impacts, environmental justice, ground transportation, health effects, induced growth, MEPA process, mitigation, noise, parking, regionalization, resiliency, RNAV departure procedures, and stakeholder outreach. Many of the comments received on the DEIR identify concerns related to existing airport operations and noise levels and potential increases in impacts associated with long-term growth. As noted in past Certificates, the EIR is not intended to address broad concerns associated with airport operations and growth. The venue for addressing cumulative environmental impacts is through the Environmental Status and Planning Reports (ESPR) and Environmental Data Reports (EDR). The Response to Comments refers to future EDRS and/or ESPRs to address these issues which are not within the Scope of this review.

As required in the Scope, the response to comments section of the FEIR provided a direct response to comments from the Department of Energy Resources (DOER) that clarified the GHG reduction measures proposed for the project and included a revised GHG analysis. Based on the revised analysis, the project incorporated two additional and significant mitigation measures: a 25,000 square feet (sf) rooftop solar photovoltaic (PV) system (300 kW) and solar thermal heating of domestic hot water for public restrooms. These two measures will reduce GHG emissions by 363 tons per year (tpy) compared to the proposed as presented in the DEIR. With these additional mitigation measures, the Preferred Alternative will reduce CO_2 emissions associated with the terminal expansion by 1,390 tpy, for a total of 3,818 tpy, or a twenty-seven percent decrease. The FEIR revised the draft Section 61 findings to reflect the revised mitigation measures.

The FEIR also evaluated and quantified the potential GHG reduction associated with the following five mitigation measures: Dual Box Minimum, Fin Tube Radiation, Energy Recovery Wheel, Dynamic V8 Filtration, and additional 50,000 sf of solar PV panels. The incorporation of

these measures would reduce GHG emissions by fifty-percent. Massport has committed to continue evaluating these measures as design progresses. The FEIR also included an analysis of additional wall, roof, and fenestration improvements which indicated they are not effective GHG reduction strategies for the project. It included an evaluation of solar thermal for the concession-area hot water; however this measure remains under deliberation as concession needs are still being developed.

I acknowledge and appreciate the consultation between Massport and DOER which has resulted in the identification and commitment to additional and significant GHG emission reductions.

Mitigation/Draft Section 61 Findings

The FEIR identified measures to avoid, minimize, and mitigate environmental impacts and included draft Section 61 Findings for use by State Agencies. The FEIR clarified that the timing and responsibility for implementation of each measure. The direct connection to the Airport MBTA Blue Line Station, full sound barrier benefits associated with extending the full width of the terminal, and curb improvements will be implemented during the second phase of the project. The other energy reduction and greenhouse gas reduction measures will be implemented in the first phase of the project. Measures to avoid, minimize, and mitigate environmental impacts include:

Operational Impacts

- The Terminal E expansion has been sited and will be designed to act as a noise barrier to the adjacent East Boston neighborhoods and Memorial Stadium park to the southwest of the North Apron. The new structures will have a minimum height of 45-ft above ground level.
- New gates will have electric power and pre-conditioned air to allow aircraft to plug in at gate rather than be serviced remotely to reduce need for on-board engine/auxiliary power unit operation, thereby reducing aircraft air emissions and GHG emissions.
- New gates will increase ramp efficiency and reduce movements on North Apron and the need to bus passengers between terminal and remote aircraft parking locations, thereby reducing ground transportation related air emissions and mobile source GHG emissions.
- Roadway and curb improvements which will improve vehicle flow and high-occupancy vehicle access.
- Construction of a weather-protected pedestrian connector from the Terminal to the MBTA Airport Blue Line Station (proposed as part of Phase 2).

Sustainable Design Features/Greenhouse Gas Emissions

- Project will seek LEED Certification at the Silver level rating or better and meet or exceed the goals of the MA LEED Plus program.
- Improved building envelope (wall insulation of U-0.05, roof insulation of U-0.037, improved glazing of U-0.34, and reduced window to wall ratio of 25%).
- Improved Air Handling Units.
- Efficient water loops with reduced water supply temperature and wider return temperatures to reduce demand on the pumping and fan systems.
- Reduced interior lighting power density of 0.62 W/SF and reduced exterior lighting power of 9.3 kW.

- The roof design will incorporate materials with a minimum reflectance rating of 0.70 and emittance value of at least 0.75 for a minimum of 75% of the available roof area. Roofing materials will be non-glare to reduce heat island effect.
- Final design will incorporate infrastructure for collection, storage, and handling of recyclable materials.
- Massport will establish a project-specific goal for sourcing materials extracted, harvested, recovered, and or manufactured within New England.
- The project will be designed to achieve energy efficiencies of a minimum of 20% below the MA Energy Code.
- The project will reduce operational-related GHG emissions associated with the Project by a minimum of 30%.
- The project will include water conservation devices that reduce water use by 20% below the MA Plumbing Code.
- The project will be built 'solar ready' to accommodate rooftop solar.
- The Terminal E rooftop will include a minimum 25,000 sf of rooftop solar PV (300 kW).
- Solar thermal PV system will be used to provide hot water for the restrooms.
- Project will incorporate occupancy sensors in all indoor areas to reduce electrical demand.
- Continue to evaluate feasibility of the following measures as design progresses: Energy Recovery Wheel, additional rooftop solar PV, Dual Box Minimum, and Dynamic Filtration.
- A self-certification will be provided to the MEPA office upon completion of the project construction signed by an appropriate professional (e.g. civil engineer, traffic engineer, architect, general contractor) indicating that all of the GHG mitigation measures, or equivalent measures that are designed to collectively achieve the proposed stationary source GHG emission reduction committed to in the FEIR, have been incorporated into the project.

Air Quality

- Project will result in a decrease in carbon monoxide (CO) emissions in the area of Terminal E and the associated aircraft apron by approximately 9%, nitrogen oxide (NO_x) emissions by approximately 44%, and sulfur oxides (SO_x) emissions by approximately 33%.
- Project will result in decrease of Volatile Organic Compounds (VOCs) in the project area by approximately 6% and particulate matter (PM_{10} and $PM_{2.5}$) by approximately 9% and 25%, respectively.

Construction Period Impacts

- Development of a construction waste management plan that requires diversion or reduction of construction waste by a minimum of 75%.
- Use of high efficiency space heating/cooling systems in temporary work spaces.
- Work hours will be limited to 7:00 AM to 7:00 PM unless constrained by operational conditions at the Airport. The sound levels from construction activities will employ measures to voluntarily comply with the City of Boston's noise standards.
- Soil Management Plan will be developed based on sub-surface investigations to address identification and disposal of contaminated materials.
- Implement Indoor Air Quality (IAQ) Management Plan during construction.

- Stormwater Pollution Prevention Plan will be developed to keep sediment and contaminants out of the stormwater management system during construction.
- Soil and groundwater management during construction will be conducted in accordance with the appropriate submittals (i.e., Release Abatement Measures, Immediate Response Actions, and/or Safety Management Plans) and subsurface contamination (if encountered) will be remediated in compliance with the Massachusetts Contingency Plan.
- Measures to reduce impacts from the approximately 60 daily truck trips associated with project construction include:
  - Construction-related traffic will be required to use the North Gate using only state and federal highways and the airport roadway network to keep construction-related traffic off of local East Boston roadways.
  - Use of police detail, as necessary, to manage traffic and ensure public safety.
  - Construction companies will be required to provide off-Airport parking for their employees and to provide shuttle services or other HOV service from these locations.
- The following measures will address construction phase air quality impacts:
  - Contractor will comply with MassDEP's Clean Air Construction Initiative regarding installation of emission control devices (such as diesel oxidation catalyst and/or particulate filters) on equipment;
  - Enforcement of construction vehicle anti-idling provisions;
  - Retrofitting diesel construction equipment with diesel oxidation catalysts and/or particulate filters;
  - Fugitive dust will be controlled via wetting or sweeping and all trucks hauling materials from the construction site will be covered.

Conclusion

Based on a review of the FEIR, comment letters, and consultation with State Agencies, I find that the FEIR adequately and properly complies with MEPA and its implementing regulations. Future EDRs and ESPR submittals will continue to document potential impacts and trends and propose measures to implement the broad goal of maintaining or reducing Logan's overall environmental impacts, even as annual passenger volumes rise in the future. Massport and State Agencies should forward copies of the final Section 61 Findings to the MEPA Office for publication in accordance with 301 CMR 11.12.

November 10, 2016
Date

Matthew A. Beaton

Comments received:

10/08/16 David Waite
10/10/16 Sarah James
10/10/16 Peter Houk
10/15/16 Marjorie Smith
10/18/16 Lahra Tillman

10/18/16 Maureen Wing
10/18/16 Reena Freedman
10/18/16 John Vitagliano
10/21/16 David Bowen
10/21/16 Ken Bader
10/23/16 Estella and David Keefer
10/24/16 Carolann Barrett
10/25/16 Shelia Mooney
10/27/16 Luke Preisner
10/28/16 Frederick Salvucci
10/28/16 Mary Ryan
10/31/16 Amelia Kantrovitz
10/31/16 Caslynn Carambelas and Vaishal Patel
10/31/16 Elizabeth Gazda
10/31/16 Juan Carlos Garzon
10/31/16 Stephen Raymond
10/31/16 Scott Johnson
10/31/16 Julie Vail
11/01/16 Sema Bekiroglu
11/01/16 Catherine Stacy
11/01/16 Cady Landa
11/01/16 Dominica Bonanno
11/01/16 Congressman Michael Capuano
11/01/16 Hull Neighbors for Quiet Skies
11/02/16 Tonya Saccardo
11/02/16 Robert Saccardo
11/02/16 Milton Board of Selectmen
11/02/16 Matthew Stachler, M.D., Ph.D.
11/03/16 Barbara L Lawrence
11/03/16 Magdalena Ayed
11/03/16 City of Lynn, Bill Bochnak, Massport CAC & Logan Airport Member
11/03/16 G. Bernadette Cantalupo, 156 Porter St.
11/03/16 William Schneiderman
11/04/16 Gail Miller
11/04/16 Massachusetts Department of Environmental Protection (MassDEP)
11/04/16 Chris Marchi
11/04/16 James Linthwaite
11/04/16 Catherine Stalberg
11/04/16 Mary Ellen Welch (1 of 2)
11/04/16 Mary Ellen Welch (2 of 2)
11/04/16 Department of Energy Resources (DOER)
11/04/16 Vickie Livermore
11/04/16 City of Revere, Mayor Arrigo
11/04/16 AIR Inc., Aaron Toffler
11/04/16 Deborah Hartman
11/04/16 Mimi Callum
11/04/16 Andrea Vilanova
11/04/16 Ann Jansen
11/04/16 John Casamassima
11/04/16 Alyssa Vangeli
11/04/16 Tara Ten Eyck
11/04/16 Boston Harbor Now

11/07/16 28 Form Letters from Residents of the Porter156 Condominium Association
11/07/16 Jesse Borthwick

MAB/PRC/prc

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Copy of the Secretary of the Executive Office of Energy and Environmental Affairs Certificate Issued for the Logan Airport Parking Project Final Environmental Impact Report

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The Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

Charles D. Baker
GOVERNOR

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January 30, 2020

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
FINAL ENVIRONMENTAL IMPACT REPORT

PROJECT NAME	: Logan Airport Parking Project
PROJECT MUNICIPALITY	: Boston
PROJECT WATERSHED	: Boston Harbor
EEA NUMBER	: 15665
PROJECT PROPONENT	: Massachusetts Port Authority (Massport)
DATE NOTICED IN MONITOR	: December 23, 2019

Pursuant to the Massachusetts Environmental Policy Act (MEPA; M.G.L. c. 30, ss. 61-62I) and Section 11.08 of the MEPA Regulations (301 CMR 11.00), I have reviewed the Final Environmental Impact Report (FEIR) and hereby determine that it **adequately and properly complies** with MEPA and its implementing regulations.

Project Description

As described in the FEIR, the project includes the phased construction of 5,000 additional commercial parking spaces at the Logan International Airport (the "Airport"). The project will construct a structured parking garage with 2,000 parking spaces in the location of the existing Terminal E surface parking lot followed by the addition of 3,000 new spaces at the Economy Garage through expansion of the existing facility. The Terminal E Garage will open in 2022 and the Economy Garage expansion will open by the end of 2025. The parking spaces are intended to accommodate existing and anticipated air passenger demand for parking at the Airport. According to the FEIR, the project will reduce drop-off/pick-up activity at the Airport and will reduce regional air-passenger-related vehicle miles traveled (VMT) and associated air emissions.

In addition to the overall air quality benefits, the FEIR indicated that Massport is implementing additional high occupancy vehicle (HOV) mode improvement measures in conjunction with this project. These HOV mode improvement measures include trip reduction strategies that target different methods in how people get to the airport. Parking strategies are one part of the overall trip reduction strategies which includes enhancing Logan Express bus service through expanded parking at existing locations and increased frequency of service, and expanding the Logan Express service area to new suburban locations and urban/downtown areas based on the success of the Back Bay Logan Express pilot program. The FEIR also indicated that Massport has committed to purchase additional Silver Line buses to increase service capacity to the Airport. Additionally, Massport has just began in December 2019 to centralize transportation network company (TNC) (e.g. Uber, Lyft, etc.) operations (i.e. drop-offs and pick-ups) on the ground floor of the Central Garage complex to reduce congestion outside the terminals. Finally, Massport is evaluating mechanism to decrease the number of TNC drivers that leave the Airport without a passenger (i.e., deadhead trips). These mechanisms include both a program called "rematch" at the Central Garage where TNC drivers come in and drop off passengers for the Airport and then the driver is paired up with a passenger who is leaving the Airport, and also a new fee structure for TNCs that decreases the cost of the ride if the TNC driver does a drop-off and then a pick-up.

Project Background and Context

The number of commercial and employee parking spaces allowed at Logan Airport is regulated by the Massachusetts Department of Environmental Protection (MassDEP) through the Massport/Logan Airport Parking Freeze (310 CMR 7.30), an element of the Massachusetts State Implementation Plan (SIP) under the federal Clean Air Act. As previously described in the Environmental Notification Form (ENF) and the Draft EIR (DEIR), peak daily demand for on-Airport (on-site) parking was increasing, resulting in daily demand frequently nearing the Logan Airport Parking Freeze cap. Massport worked with MassDEP on an amendment to the Parking Freeze. The ENF was filed concurrent with MassDEP's issuance of a draft regulation to amend the Parking Freeze to allow the creation of an additional 5,000 commercial parking spaces at the Airport. After the Certificate on the ENF was issued, MassDEP approved the requested parking increase and promulgated the amended regulation on June 30, 2017. The EPA issued a proposed rule approving the revision of the SIP and incorporating the amended Parking Freeze on March 6, 2018, and the rule went into effect on April 5, 2018. The MassDEP regulations provide the larger framework setting overall caps for the Logan Airport Parking Freeze, while project-specific impacts and mitigation measures were intended to be analyzed through the MEPA review process for the Logan Airport Parking Project.

The approved regulations increased the Logan Airport commercial parking limit by 5,000 spaces (from 18,640 to 23,640 spaces) and increased the total cap to 26,088 commercial and employee parking spaces (comprised of 23,640 commercial spaces and 2,448 employee parking spaces). The regulations (310 CMR 7.30(8)) required that Massport complete the following studies, which were completed on September 30, 2019, to identify ways to further support alternative transit options to the airport:

1. A study to evaluate the costs, feasibility, and effectiveness of potential measures to improve HOV access to the Airport. The study should consider, among other things,

possible improvements to Logan Express bus service and the benefits of adding Silver Line buses with service to the Airport.

2. A study of costs and pricing for different modes of transportation to and from the Airport to identify a pricing structure and the use of revenues so generated to promote the use of HOV modes of transportation by air travelers and visitors to the Airport. The study will include evaluation of short-term and long-term parking rates and their influence on different modes of Airport transportation.
3. A study of the feasibility and effectiveness of potential operational measures to reduce non-high occupancy vehicle pick-up/drop-off modes of transportation to the Airport, including an evaluation of emerging ride-sharing and transportation network company modes.

Logan Airport and Project Site

The Airport boundary encompasses approximately 2,400 acres in East Boston and Winthrop, including approximately 700 acres underwater in Boston Harbor. The airfield is comprised of six runways and approximately 15 miles of taxiway. Logan Airport has four passenger terminals, A, B, C, and E, each with its own ticketing, baggage claim, and ground transportation facilities. The Airport is surrounded on three sides by Boston Harbor and is accessible by two public transit lines and the roadway system. The preferred locations for the parking structures are the Economy Garage and the Terminal E surface parking lot. The Economy Garage is located in the northwest portion of the Airport campus at the intersection of Service Road and Prescott Street. It is comprised of two levels and provides over 2,700 spaces. The Economy Garage has an existing rooftop solar photovoltaic (PV) system on its top level which will be relocated or replaced on the top level of the garage following construction. The Terminal E surface parking lot is located within the Airport interior and adjacent to Terminal E.

The Airport is served by several Massachusetts Bay Transportation Authority (MBTA) public transit routes, including Blue and Silver Lines for the rapid transit system, commuter ferry service, and local and express bus routes. Specifically, Massport provides free shuttle service between the Blue Line Airport Station and all Airport terminals and subsidizes the Silver Line Logan Airport Route (SL1) by providing free outbound Silver Line trips from the Airport on eight Silver Line buses purchased for this route by Massport. Massport also operates an extensive Logan Express Bus service, serving five locations. The airport is also served by other private express bus service and intercity bus service as part of the range of HOV modes available for ground access.

The Economy Garage and the Terminal E parking lot sites are both located within the coastal zone of Massachusetts. Both locations are comprised of previously disturbed impervious area. They are not located in Priority or Estimated Habitat as mapped by the Division of Fisheries and Wildlife's (DFW) Natural Heritage and Endangered Species Program (NHESP). The parking lot sites do not contain wetland resource areas regulated pursuant to the Wetland Protect Act and its implementing regulations (310 CMR 10.00).

Environmental Impacts and Mitigation

The project includes construction of 5,000 new commercial parking spaces at two locations. The project is located within previously altered impervious area and will not create new impervious area. The new spaces are intended to accommodate existing and anticipated air passenger demand for parking at the Airport while minimizing pick-up and drop-off activity and decreasing regional air passenger-related VMT and associated vehicle emissions. The project will reduce carbon dioxide (CO_2), volatile organic compounds (VOC), and oxides of nitrogen (NO_x) emissions by 10%, 11%, and 11%, respectively, in 2022 when the first 2,000 parking spaces are constructed and 12%, 12% and 11%, respectively, in 2030 when all 5,000 spaces are constructed, as compared to the future No-Build Alternative.

In addition to the overall project benefits in reducing air pollution, Massport is undertaking additional HOV measures in conjunction with the construction of the proposed 5,000 parking spaces. These include: enhancing and expanding existing Logan Express scheduled bus service; exploring Logan Express scheduled bus service in the urban/downtown area; and investing in additional MBTA Silver Line buses.

Jurisdiction and Permitting

The project is undergoing MEPA review and requires preparation of a mandatory EIR pursuant to 301 CMR 11.03(6)(a)(7) because it will be undertaken by a State Agency and will construct greater than 1,000 parking spaces in a single location.

The project may require a Sewer Permit Modification from the Boston Water and Sewer Commission (BWSC). The project may be subject to Massachusetts Office of Coastal Zone Management (CZM) federal consistency review. The project requires approval by the Federal Aviation Administration (FAA) for changes to the Airport Layout Plan and, therefore, requires an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA). The project also requires a National Pollutant Discharge Elimination System (NPDES) General Permit for Construction from the EPA.

Because the project will be undertaken by a State Agency, MEPA jurisdiction is broad in scope and extends to all aspects of the project that may cause Damage to the Environment, as defined in the MEPA regulations.

Changes since the Filing of the DEIR

The FEIR identified changes to the project since the DEIR was filed. Changes to the new garage in front of Terminal E include a plan is to install an approximately 20,000-square foot (sf) solar PV installation on the garage's eastside. This is an increase from the 10,000-sf solar PV installation proposed in the DEIR. This expanded solar PV system will produce approximately 467,000 kilowatt-hours (kWh) per year, or about 217,000 kWh per year more than the system proposed in the DEIR. This expanded system will offset 50 percent of the proposed garage's total energy (i.e., electricity and natural gas) consumption. In addition, the project will now include construction of additional electric vehicles (EV) charging stations. The DEIR indicated that Massport would install 15 single-port EV charging stations at the new garage in front of Terminal E. The FEIR indicates that Massport, instead, will install 11 double-port stations at this location to accommodate 22 dedicated EV charging parking spaces. As demand grows, Massport

will add EV charging stations to ensure that the garage can accommodate 150 percent of demand.

Changes to the design of the Economy Garage expansion since the filing of the DEIR relate to advancing installation of the additional EV charging stations. The additional EV infrastructure was accelerated to take place at the existing Economy Garage with construction that began in 2019. Massport will also increase the number of EV charging stations as part of the Economy Garage expansion to accommodate 150 percent of demand. Massport has committed to reevaluate the need for the additional 3,000 parking spaces planned as part of the Economy Garage expansion prior to beginning that facility's design and construction process.

Review of the FEIR

Massport filed a joint FEIR and Final Environmental Assessment (Final EIR/EA) to satisfy MEPA, NEPA, and the Federal Aviation Administration's (FAA's) implementing procedures (Order 1050.1F and Order 5050.4B).

This Certificate applies to the review of the project under MEPA only, and does not restrict the ability of the federal government to act on those aspects of the project subject to NEPA or FAA rules. The FEIR described the proposed project, identified existing conditions, described potential environmental impacts and mitigation measures, and provided an expanded discussion of greenhouse gas (GHG) emissions. The FEIR included an update on state, local, and federal permitting and provided a discussion of permitting requirements and the project's consistency with regulatory standards.

Though the Executive Office of Energy and Environmental Affairs' (EEA) *Environmental Justice (EJ) Policy* is not applicable to this project, Massport conducted outreach consistent with the enhanced public participation provisions of the EJ Policy including providing translators at all public meetings, notice of availability of the ENF, DEIR and FEIR in local newspapers in several languages, and translation of the Executive Summary/Introduction for the ENF, DEIR and FEIR.

Alternatives Analysis

The location of the Preferred Alternative (Economy Garage, Terminal E surface lot) has not changed since the ENF was filed. The DEIR included an expanded alternatives analysis that evaluated various massing and circulation alternatives for the Terminal E garage which was expanded in the FEIR. The ENF indicated that the planning process considered six alternative on-airport locations for the structured parking facilities. All of the sites are paved and developed areas that are currently used for parking or vehicle storage. The ENF indicated that each of the sites are comparable in terms of regional VMT and emissions reductions since regional access routes will not vary as a result of the garage siting.

- Harborside Drive – Structured parking in location of existing vehicle layover space
- Porter Street – Structured parking over existing taxi pool
- North Cargo Area – Expand Economy Garage in the location of existing surface parking and the Massachusetts State Police building

- Southwest Service Area – Structured parking in location of current bus/limousine pool and overflow parking
- Economy Garage (Preferred Alternative) – Additional spaces above existing garage
- Terminal E Surface Lot (Preferred Alternative) – Structured parking in location of existing surface parking lot

According to the ENF, the Preferred Alternative was selected based on input from the East Boston Logan Impact Advisory Group (LIAG). The ENF indicated that Harborside Drive and Porter Street sites were eliminated due to potential wayfinding and operational challenges and the North Cargo Area was eliminated due to the need to relocate the existing uses. The Southwest Service Area was eliminated as it would require construction of a new parking structure and integration of existing uses into the ground floor. The ENF indicated that the No-Build alternative was eliminated as it would result in higher pollutant emissions and roadway congestion due to the higher VMT associated with the drop-off/pick-up mode. The ENF identified the Economy Garage and Terminal E Surface Lots as the Preferred Alternative. The ENF indicated the Economy Garage location was selected as the Preferred Alternative because the site access is well defined, it does not require significant changes to existing roadway infrastructure, and it is adjacent to compatible land uses and the Terminal E Surface Lot location was selected due to its proximity to Airport terminals, compatibility with adjacent land uses, and location within the Airport interior to minimize impacts to adjacent communities.

The location of the Preferred Alternative (Economy Garage, Terminal E surface lot) has not changed since the DEIR was filed. The massing and height of the Economy Garage was determined by FAA airspace height restrictions, structural considerations, and cost. The Preferred Alternative for the Terminal E garage includes a pedestrian bridge connection to the Central Garage with five parking levels on the west side and six parking levels on the east side of the pedestrian bridge. The garage will have two access points for public vehicles, a separate access point for limousines, and a vehicle bridge to the Central Garage complex. The vehicular bridge will be used by Massport to transfer vehicles under overflow conditions. This direct connection will remove vehicles from on-Airport circulation, reduce on-Airport VMT, and provide air quality benefits. The Preferred Alternative for the Economy Garage will construct three additional parking levels on top of the existing structure and a six level addition on the facility's south side. The FEIR indicates that the project will provide an adequate number of parking spaces, reduce on-Airport VMT, and provide operational efficiencies; it is also adjacent to compatible land uses and/or Airport terminals, and will not require significant changes to existing roadway infrastructure. According to the FEIR, the project will provide sufficient parking to accommodate approximately 10 years of peak-day parking demand.

The Terminal E garage will be constructed first to achieve construction efficiencies with other construction projects at the Airport and to provide increased operational flexibility in managing the parking supply. Additionally, the parking supply in the Terminal E garage will compensate for the loss of 1,000 revenue-generating parking spaces associated with centralizing TNC operations in the Central Garage complex.

Air Quality

As described in the FEIR, if the project were not constructed, the commercial parking supply would become more constrained and approximately 77% of "would-be parkers" would switch to drop-off/pick-up modes. The project is anticipated to shift mode share from drop-off/pick-up modes and result in reductions in regional off-Airport VMT and improvements to on-Airport roadway conditions compared to the future No-Build scenario. The VMT analysis presented in the ENF assumed that all 5,000 spaces would be operational by 2022. The DEIR included a revised analysis that incorporated construction phasing and evaluated both interim (2022; 2,000 spaces in Terminal E Garage operational) and full-build (2030; both garages operational with 5,000 spaces) scenarios which remain the same in the FEIR. As noted, the project is expected to result in CO_2, VOC, and NO_x reductions of 10%, 11%, and 11%, respectively, in 2022 and 12%, 12% and 11%, respectively, in 2030, compared to the future no-build scenario. According to the FEIR, the project will comply with the Clean Air Act General Conformity Rule, the SIP, and will not cause or contribute to a violation of the National Ambient Air Quality Standards (NAAQS) for these pollutants. The FEIR also presented the results of a microscale analysis, which demonstrated the carbon monoxide (CO) concentrations will be below the NAAQS for both the 1-hour and the 8-hour concentrations.

The analysis is predicated on and Massport has committed to achieving a future HOV mode share goal of 40% by 2027. The FEIR identified the following commitments which Massport plans to implement to improve HOV mode share:

- Providing preferred taxi and TNC line privileges to electric vehicles (EV);
- Training ground transportation personnel to encourage passengers to share rides;
- Increasing Logan Express capacity, measured in available seats, by 10%; and,
- Purchasing eight more (16 total) MBTA Silver Line buses by 2024 (dependent upon MBTA procurement).

The FEIR also provides a summary of what Massport has already begun implementing to improve HOV mode share including:

- Relocating Back Bay Logan Express service to the MBTA's Back Bay Station, eliminating the fare from the Airport to Back Bay, and reducing the fare from Back Bay to the Airport from $7.50 to $3.00. This has already resulted in a substantial increase in ridership since the relocation in May 2019.
- Increasing peak-hour frequency on the Logan Express Braintree service from 30-minute to 20-minute headways.
- Advancing a new urban Logan Express service at North Station with free service from the Airport. Buses for the service have been ordered.
- Offering priority access at the Airport Security Line to customers who take Back Bay Logan Express or any mode of water transportation to the Airport.
- Initiating studies of a new suburban Logan Express location with parking.
- Implementing a new Ride App drop-off fee of $3.25 (in addition to the current $3.25 pick-up fee) and providing a discounted fee of $1.50 for shared-ride (such as UberPool and Lyft Line) customers.
- Implementing parking pricing that discourages short-term parking that is associated with pick-up and drop off uses.

- Piloting use of the South Boston Waterfront Emergency Access Ramp to reduce travel time on the MBTA Silver Line service to help encourage use.
- Consolidating Ride App operations at dedicated areas on the ground floor of the Central Garage to make it easier for drivers to pick up arriving air passengers after dropping off departing passengers without having to circulate around the Airport.

I note that further monitoring and reporting on the progress towards achieving the goals and success of the mitigation program can be addressed in future Environmental Status and Planning Reports (ESPRs) and Environmental Data Reports (EDRs) (EEA#3247). The ESPR provides analysis of the environmental impacts associated with current and projected activity levels and presents a comprehensive strategy to minimize impacts. The ESPR analysis is supplemented by (and ultimately incorporates) the detailed analyses and mitigation commitments of project specific EIRs. The ESPR is generally updated on a five-year basis. The EDRs are filed in the years between ESPRs. The EDR is a retrospective document that is filed annually and identifies environmental impacts based on actual passenger activity and operations.

In addition to Massports' mitigation measures for this project, Massport has committed to implement additional measures to reduce air emissions from Airport operations, including: providing high-speed EV charging stations in taxi, limousine, and TNC lots; working with airlines/tenants to convert commercially available ground source equipment (GSE) to electric power; and working with airlines to increase the use of electric tugs to 60% of aircraft that need re-positioning.

I refer Massport to comments from the Metropolitan Area Planning Council (MAPC) which identify methods for incorporating measures to reduce emissions for this project and methods for Massport's notification when reevaluating the need for the additional 3,000 parking spaces planned as part of the Economy Garage expansion prior to the start of its construction. Comments from the Conservation Law Foundation (CLF) identify additional measures that Massport has agreed to implement to support HOV use and reduce air emissions, including free Blue Line service from the Airport Station for employees, implementation of variable-rate parking and Airport pass-through rate (if warranted based on study results), and incentivizing ride-sharing through reduced fees.

Climate Change

Executive Order 569: Establishing an Integrated Climate Change Strategy for the Commonwealth (EO 569; the Order) was issued on September 16, 2016. EO 569 recognizes the serious threat presented by climate change and directs agencies within the administration to develop and implement an integrated strategy that leverages state resources to combat climate change and prepare for its impacts. The Order seeks to ensure that Massachusetts will meet GHG emissions reduction limits established under the Global Warming Solution Act of 2008 (GWSA) and will work to prepare state government and cities and towns for the impacts of climate change.

The GHG Policy and requirements to analyze the effects of climate change through EIR review is an important part of a statewide strategy. These analyses advance proponents' understanding of the projects' contribution and vulnerability to climate change.

Greenhouse Gas Emissions

The project is subject to review under the May 5, 2010 MEPA Greenhouse Gas Emissions Policy and Protocol ("the Policy"). The parking garages will be naturally ventilated and airconditioned space in both will be limited to mechanical/electrical rooms, elevator lobbies, and cashier booths.

The DEIR included a GHG analysis that quantified the CO_2 emissions associated with the project's energy use (stationary sources), primarily associated with interior and exterior lighting. Mobile source GHG emissions were calculated using a similar method as the air quality analysis and were based on the anticipated reduction in VMT under future conditions. The Scope detailed in the DEIR required that FEIR should include analysis on the feasibility and GHG mitigation benefits of expanding the proposed canopy solar PV arrays as recommended by Department of Energy Resources (DOER) during the review of the DEIR.

The analysis provided in the FEIR estimates the area available for solar canopies on each of the top parking levels, states the assumed panel efficiency, estimates the electrical output of the system, and identifies associated GHG reductions. The analysis is also supported by conceptual plans that identify the "usable areas" for potential solar PV canopy systems and other appurtenances. The analysis presented in the FEIR evaluates the east and west sides of the Terminal E Garage and the entire top level of the Economy Garage.

The project's stationary source GHG emissions were estimated at 1,337 tpy in the Base Case. The Preferred Alternative will reduce stationary source GHG emissions by 367 tpy, for a total of 970 tpy, or a 32.5% decrease. The project's mobile source emissions have not changed from the review of the DEIR and are summarized in the below table.

Year	Condition	Regional VMT of "would be parkers"	CO_2 Emissions (tpy)
2017	Existing	327,280	153
2022	No-Build	13,584,217	5,079
	Build/Proposed Project	12,279,027	4,497
	Difference	**1,305,190 (-10%)**	**582 (-11%)**
2030	No-Build	52,130,253	15,126
	Build/Proposed Project	46,922,626	13,314
	Difference	**5,207,627 (-10%)**	**1,812 (-12%)**

The reduction in mobile source emissions is primarily attributed to the reduction in regional VMT as compared to the future No-Build Alternative. As described above, this will be achieved through shifting "would be parkers" from drop-off/pick-up modes to parking; reducing the number of trips associated with "would-be parkers" traveling to and from the Airport; reducing recirculation at the Terminal E curbsides and decreasing on-Airport VMT; and reducing on-Airport emissions related to improved curbside operations at Terminal E as air passengers shift from drop-off/pick-up modes to parking in the garages.

Adaptation and Resiliency

The project's design incorporates measures for increasing its resiliency to the effects of climate change. The project will incorporate redundant or back-up power sources to protect against extreme weather conditions that may cause power outages. It will also include drought tolerant landscaping along the façade of the Terminal E Garage to minimize the heat island effect and reduce irrigation needs. Stormwater runoff from the Terminal E garage will be collected and used to offset a portion of cooling tower water consumption at the Central Heating Plant. The project will be consistent with Massport's Disaster and Infrastructure Resiliency Planning Study and Floodproofing Design Guide. Critical equipment and infrastructure will be elevated above future projected flood elevations. Critical infrastructure that will raised above the designated design flood elevation for the new facilities, as defined by Massport's Floodproofing Design Guide, include incoming electrical and telecommunications lines.

Construction Period

Construction of the Terminal E garage will commence in spring 2020 and will be completed in 2022. The six levels on the east side of the pedestrian bridge will be constructed first, followed by the five parking levels on the west side of the bridge. Massport has agreed to reevaluate the need for the additional 3,000 parking spaces planned as part of the Economy Garage expansion prior to the start of its construction. Currently construction of the Economy Garage expansion will begin in 2023 and be completed by the end of 2025. Construction of the Economy Garage will start at the west end of the garage and proceed towards the east end. I refer Massport to comments from MAPC which recommend constructing the Economy Garage expansion only if/when warranted by demand.

The Terminal E garage will be constructed simultaneously with the Terminal E Modernization Project (EEA# 15434) and Terminal C Canopy, Connector, and Roadway Project. Massport has committed to measures to reduce construction period traffic impacts, including: developing specific truck routes, coordinating arrival of large equipment, requiring contractors to park off-site, and development of traffic management plans. Measures to reduce construction period air quality impacts include: limiting vehicle idling, using low- or zero-emissions equipment where practicable; retrofitting construction equipment, dust suppression, stabilizing exposed areas, and suspending construction during high-wind conditions. Massport will also voluntarily comply with the City of Boston's noise control regulations during construction. Portions of the project site are regulated pursuant to the Massachusetts Contingency Plan (MCP; 310 CMR 40.0000). An Activity and Use Limitation (AUL) is located on the Economy Garage site. Therefore, a Release Abatement Measure (RAM) Plan must be submitted to MassDEP prior to any subsurface work on this site.

Mitigation and Draft Section 61 Findings

The FEIR includes a separate chapter summarizing proposed mitigation measures. The FEIR also includes an Appendix with draft Section 61 Findings for each area of impact associated with Massport's Preferred Alternative. The FEIR contains clear commitments to implement these mitigation measures, estimates the individual costs of each proposed measure, identifies the parties responsible for implementation (either funding design and construction or performing actual construction), and a schedule for implementation. To ensure that all GHG

emissions reduction measures adopted by Massport in the Preferred Alternative are actually constructed or performed by Massport, Massport has agreed to provide a self-certification to the MEPA Office indicating that all of the required mitigation measures, or their equivalent, have been completed. A summary of the measures Massport has committed to implement to avoid, minimize, and mitigate, environmental impacts is provided below. Refer to Appendix C Table 1 on page C-6 of the FEIR for a description which also estimates the individual costs of each proposed measure and identifies the parties responsible for implementation.

Ground Access Improvement and Trip Reduction

- Advance the electrification of ground service equipment, pursuant to which all ground service equipment will be replaced no later than the end of 2027 (as available);
- Expand Logan Express capacity by 10 percent; and,
- Increase the percentage of zero emission taxi, livery, and Ride App vehicles (i.e., those associated with companies such as Uber and Lyft) by providing: high-speed electric vehicle charging stations at all taxi, livery, and Ride App pools; and taxi and Ride App queue priority to electric vehicles (subject to negotiation with companies).

Project Planning and Design

- Accommodating existing and anticipated air passenger demand for parking to reduce the environmentally undesirable drop-off/pick-up mode share and its associated vehicle miles traveled (VMT) and on and off-Airport air emissions;
- Reusing existing developed areas (i.e., the Project sites avoid undeveloped, greenfield lands);
- Selecting Project sites with community input that are in areas already used for parking (i.e., not introducing a new use), are on existing bus/shuttle routes, and are separated from nearby residential communities;
- Providing added noise barrier benefits to nearby residences and recreation areas, in conjunction with the Terminal E Modernization Project, through the expansion of the existing Economy Garage;
- Providing drivers with roadway and parking information through internal and external wayfinding systems to reduce on- Airport and in-garage circulation, as well as associated VMT and air emissions;
- Providing convenient passenger access between the new garage in front of Terminal E and the terminal buildings and to the pedestrian bridge that connects Terminal E to the Central Garage complex (which includes the West and Central Garages);
- Incorporating the following ground access features into the design of the new garage in front of Terminal E: a secondary entrance for public parkers to reduce on-Airport recirculation and associated VMT; a vehicular bridge connected to the Central Garage complex to enable more efficient operational movements by Massport's Ground Transportation Unit; relying on existing roadway infrastructure, bus routes, and signage for the Economy Garage expansion; and, encouraging parkers to pay their fees prior to returning to their vehicles via Massport's pay-by-foot system, which uses automated kiosks to enable the efficient flow of vehicles exiting the garages and reduce vehicle idling and associated air emissions.

Climate Change Adaptation and Resiliency/ Greenhouse Gas Emissions

- Incorporating measures from the U.S. Green Building Council's (USGBC) Parksmart rating system into the Project's technology, structural design, and operation;
- Reducing lighting power densities from a base of 0.19 watts per square foot to a maximum of 0.05 watts per square foot;
- Installing occupancy sensors and photocells on all applicable interior and exterior lighting;
- Installing programmable thermostats, where applicable (i.e., mechanical/electrical rooms);
- Conditioning electrical and telecommunications rooms with split system heat pumps capable of operating at or below temperature of 0°F;
- Designing the parking decks to be open air, negating the need for ventilation systems
- Performing building commissioning in accordance with ASHRAE Guideline 0-2005 and ASHRAE Guideline 1.1-2007;
- Incorporating a solar PV system at the new garage in front of Terminal E capable of offsetting 50 percent of the facility's total energy consumption, including all lighting and power required for its electric vehicle (EV) charging stations;
- Relocating the existing solar PV system at the Economy Garage to the top of the facility's new highest level upon completion of Project construction (the installation of a newer, more efficient system will be evaluated for feasibility as that construction period gets closer);
- Designing and building the proposed garages to accommodate expanded solar in the future as it becomes more cost effective/feasible;
- Reserving parking spaces for alternative fuel vehicles (e.g., EVs) amounting to at least 1 percent of total spaces and assigning preferred parking spaces for other low-emitting and fuel-efficient vehicles amounting to at least another 1 percent of total spaces;
- Installing 11 EV charging stations (22 ports) in the new garage in front of Terminal E;
- Designing and building the proposed garages to accommodate expanded EV charging infrastructure to accommodate 150 percent of demand;
- Providing tire inflation services for each garage to promote increased fuel efficiency and vehicle safety;
- Integrating vertical landscaping into the façade of the new garage in front of Terminal E;
- Planting water-conserving ground landscapes that apply the principles of xeriscaping (e.g., use of native plants);
- Specifying water efficient fixtures and faucets in a staff restroom at the new garage in front of Terminal E;
- Applying durable design principles to extend the facilities' lifespan and avoid greenhouse gas emissions caused by future large-scale construction and renovation activities;
- Preparing/adhering to a preventative maintenance plan to extend facility lifespan and avoid greenhouse gas emissions caused by future large-scale construction and renovation activities;
- Installing and applying only no- or low-volatile organic compound (VOC) coatings, paints, and sealants;
- Installing halon-free fire suppression systems in each garage Massport/ Construction;

- Complying with Massport's Floodproofing Design Guide and elevating critical equipment and systems above the designated design flood elevations;
- Ensuring redundant or back-up power sources to reduce disruption from extreme weather conditions that may cause power outage;
- Performing frequent sweeping (at least monthly) to reduce the need for constant pressure washing and associated water use;
- Implementing an active recycling program to reduce the amount of waste sent to regional landfills/incinerators and to reduce GHG associated with material disposal;
- Displaying educational materials to convey the facilities' environmentally sustainable design and operations;
- Participating in a recognized sustainable purchasing buying program applicable to non-capital equipment/materials; and,
- Implementing environmentally safe cleaning supplies and providing necessary training to use, maintain, and dispose of these products.

Construction Period Mitigation

- Providing on-Airport storage areas for construction materials;
- Developing specific truck routing and/or staging plans for implementation by the various contractors;
- Encouraging construction companies to provide off-Airport parking for their employees and to provide shuttle services from these locations (shuttles are required to use the Coughlin Bypass road to access the Airport);
- Requiring all construction vehicle/equipment to follow anti-idling procedures and all construction managers to provide associated training;
- Requiring the use of low- or zero-emissions equipment, where practicable;
- Requiring the retrofitting of appropriate diesel construction equipment with diesel oxidation catalyst and/or particulate filters;
- Requiring contractors to use Ultra Low Sulfur Diesel Fuel (ULSD);
- Deploying air quality and fugitive dust management best practices, such as reducing exposed erodible surface areas through appropriate materials and equipment staging, covering exposed surface areas with pavement or vegetation in an expeditious manner, and stabilizing soil with cover or periodic watering;
- Requiring trucks to access the Project sites by Route 1A, Interstate 90, Coughlin Bypass road, and the main Airport roadway only or other routes in compliance with transportation safety requirements;
- Prohibiting trucks from using local streets;
- Putting into place an Erosion and Sedimentation Control Program, in compliance with the Stormwater Pollution Prevention Plan, to protect water quality and to minimize construction phase impacts to Boston Harbor; and,
- Deploying spill prevention measures and sedimentation controls throughout the construction phases to prevent pollution from construction equipment and erosion.

Conclusion

Based on a review of the FEIR and comment letters, and consultation with State Agencies, I have determined that the FEIR adequately and properly complies with MEPA and its implementing regulations. The project may proceed to permitting.

January 30, 2020
Date

K. Theoharides
Kathleen A. Theoharides

Comments received:

01/23/2020 Conservation Law Foundation (CLF)
01/23/2020 Metropolitan Area Planning Council (MAPC)

KAT/ACC/acc

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Copy of the Secretary of the Executive Office of Energy and Environmental Affairs Certificate Issued for Runway 27 End Runway Safety Area (RSA) Improvement Project Final Environmental Impact Report

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The Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
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January 30, 2023

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
FINAL ENVIRONMENTAL IMPACT REPORT

PROJECT NAME	: Boston Logan International Airport Runway 27 End Runway Safety Area (RSA) Improvement Project
PROJECT MUNICIPALITY	: Boston
PROJECT WATERSHED	: Boston Harbor
EEA NUMBER	: 16433
PROJECT PROPONENT	: Massport
DATE NOTICED IN MONITOR	: December 16, 2022

Pursuant to the Massachusetts Environmental Policy Act (MEPA; M.G.L. c. 30, ss. 61-62L) and Section 11.08 of the MEPA regulations (301 CMR 11.00), I have reviewed the Final Environmental Impact Report (FEIR) and hereby determine that it **adequately and properly** complies with MEPA and its implementing regulations.

Project Description

As described in the Final Environmental Impact Report (FEIR), the Massachusetts Port Authority (Massport) is proposing improvements to the Runway Safety Area (RSA)[1] located at the end of Runway 27 at Boston Logan International Airport. The Federal Aviation Authority requires that airports receiving federal funding for airport improvement projects and commercial service airports provide standard RSAs where possible.[2] The RSA is intended to reduce the risk of damage to aircraft and protection of passengers in the event of an unintentional excursion from the runway.[3]

The project proposes the construction of an approximately 650-foot long by 306-foot-wide RSA on a pile-supported deck with an Engineered Materials Arresting System (EMAS) bed installed on the deck. An EMAS is constructed of collapsible concrete blocks which can decelerate an aircraft in a way that minimizes damage to the aircraft and potential injuries. An EMAS is often used when a full-dimension RSA (1,000 ft long by 500 ft wide) is not possible due to lack of available land or to minimize environmental impacts; an EMAS provides an FAA-approved level of safety equivalent to an RSA built to the full-length dimensions. It is expected that the 306-foot-wide deck would extend between 450 feet over Boston Harbor. The deck will be supported by 326 20-inch square concrete piles. Two emergency access ramps are proposed on each side of the deck. The 20-foot wide perimeter access road on the north side of Runway 27 will also be straightened and realigned to enhance vehicular site lines.

As indicated in the FEIR, the proposed RSA improvement is a safety improvement and does not extend the runway or have any effect on runway operations, runway capacity, or the types of aircraft that can use the runway.

Project Site

The project is located within Logan International Airport (Logan Airport), which is owned and operated by Massport. Logan Airport is New England's primary international and domestic airport and includes approximately 2,400 acres in East Boston and Winthrop, including 700 acres in Boston Harbor. Logan Airport is one of the most land-constrained hub airports in the nation and is surrounded on three sides by Boston Harbor. The airfield has six runways (which vary in length from 2,557 feet to 10,081 feet), 15 miles of taxiways, and approximately 240 acres of concrete and asphalt apron.

The 10-acre project area is focused on the east end of Runway 9-27 which is comprised of Runway 9 on the west end and Runway 27 on the east. The project site includes the existing Runway 27 end and the armored coastal shoreline and intertidal and subtidal areas seaward of the existing runway end. Runway 9-27 is 7,001 feet long, 150 feet wide, and is constructed of asphalt pavement. The runway has 75-foot-wide paved shoulders on either side. At the approach end of Runway 9 (western end of the runway), the existing RSA meets the full dimensions set forth in the FAA design standards. The approach end of Runway 27 (eastern end of the runway) does not meet the current FAA design standards for length. This runway was constructed before the current FAA design guidelines were in place. The Runway 27 End RSA is only 150 feet long and therefore does not meet the RSA length requirement of 1,000 feet for a full dimension RSA.

[1] As described by the Federal Aviation Authority (FAA), an RSA is a defined surface surrounding the runway, typically 500-feet wide and extending 1,000-feet beyond each runway end.

[2] Because many runways were built before the 1000-foot RSA standard was adopted approximately 20 years ago, the FAA implemented the Runway Safety Area Program to make practicable improvements to existing RSAs for priority runways.

[3] An excursion from the runway can include an overrun (when an arriving aircraft fails to stop before the end of the runway), an undershoot (when an aircraft arriving on a runway touches down before the start of the paved runway surface), or an event in which an aircraft veers off to one side of a runway.

Portions of the project site include Priority Habitat as mapped by the Natural Heritage and Endangered Species Program (NHESP) *Massachusetts Natural Heritage Atlas* (15th Edition). The project is located adjacent to and within Boston Harbor and contains coastal wetland resource areas including Coastal Bank, Coastal Beach, Land Subject to Coastal Storm Flowage (LSCSF), Land Subject to Tidal Action, Land Containing Shellfish (LCS), and Land Under Ocean (LUO). The project site includes areas within mapped Federal Emergency Management Agency (FEMA) flood zone VE (an area that is subject to high velocity waters and waves and is inundated by a 100-year storm) with a base flood elevation (BFE) of elevation (el.) 13 ft NAVD88. The landward area of the project site is mapped as FEMA flood zone AE (an area inundated by a 100-year storm but not subject to high velocity waters), with BFE el. 12 ft NAVD88 according to FEMA flood insurance rate map (FIRM) number 25025C0082J effective March 16, 2016.

The project site is located within two Environmental Justice (EJ) populations characterized as Minority and is within one mile of two EJ Populations also characterized as Minority. The DEIR identified the "Designated Geographic Area" (DGA) for the project as 1 mile around EJ populations, included a review of potential impacts and benefits to the EJ populations within this DGA, and described public involvement efforts undertaken to date.

Changes Since the Filing of the DEIR

The FEIR states that the project has not changed since the DEIR filing; however, project mitigation has been updated to include replacement/restoration of intertidal and subtidal wetland resource areas impacted by piles and egress ramps and replacement of lost grassland habitat impacted by changes to the perimeter access road.

Environmental Impacts and Mitigation

Environmental impacts associated with the project include creation of 3.8 acres of new impervious surface (3.3 acres RSA deck, and 0.5 acres approach slab and perimeter road), as well as permanent alteration of 390 linear feet (lf) of Coastal Bank, 2,660 sf of Coastal Beach, 97,200 sf of LSCSF, 45,420 of Land Subject to Tidal Action, 66,760 sf Land Containing Shellfish, and107,700 sf of LUO. The project will impact 154,120 sf of flowed tidelands.

The project will minimize and mitigate environmental impacts by adhering to time-of-year (TOY) restrictions for marine fisheries and provide a mitigation fee for impacts to LCS; providing 1:1 replacement/restoration of intertidal and subtidal wetland resource areas; installing stormwater management in compliance with the Stormwater Management Standards (SMS); using turbidity curtains around in-water construction and employing erosion and sediment control and other construction best management practices to reduce noise, air and water quality impacts during the construction period.

Jurisdiction and Permitting

The project is subject to the preparation of a Mandatory EIR pursuant to 301 CMR 11.03(3)(a)(5) because it requires Agency Action and involves a new non-water dependent use or Expansion of an existing non-water dependent structure, provided the use or structure occupies one or more acres of waterways or tidelands. The project also exceeds the ENF threshold at

11.03(3)(b)(1)(f) because it will result in the alteration of one-half or more acres of any other wetland (LUO, Coastal beach, Land Containing Shellfish, LSCSF). The project requires a Chapter 91 (c. 91) License (Modification) and 401 Water Quality Certification (WQC) from MassDEP. The project will require Federal Consistency review by the Massachusetts Office of Coastal Zone Management (CZM). It may require a Conservation and Management Permit (CMP) from NHESP.

The project requires an Order of Conditions (OOC) from the Boston Conservation Commission (or in the case of an appeal, a Superseding OOC from MassDEP). The project will require a National Pollutant Discharge Elimination System (NPDES) Stormwater General Permit from the Environmental Protection Agency (EPA). The Project will also be subject to review by the FAA under the National Environmental Policy Act (NEPA).

Because Massport, an Agency within the meaning of MEPA, is the Proponent, MEPA jurisdiction is broad and extends to those aspects of the project that are likely, directly or indirectly, to cause Damage to the Environment as defined in the MEPA regulations.

Review of the FEIR

The FEIR included a project description, existing and proposed conditions plans, estimates of project-related impacts including new information on greenhouse gas (GHG) emissions from construction period activities, and a summary of stormwater management measures. It contained updates on coordination with permitting agencies and the status of project permits. As requested in the Certificate on the DEIR, the FEIR included additional mitigation for project impacts including wetland and habitat replacement/restoration. The FEIR provided a response to comments on the DEIR[4] including additional review of project alternatives. The FEIR included draft Section 61 Findings and a summary of project mitigation. It also contained an updated assessment of the public health impacts of the project and information related to impacts on EJ populations consistent with 301 CMR 11.07(6)(n).

The FEIR also serves as the Draft Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) and is referred to in the filing as the Draft EA/Final EIR.

Alternatives Analysis

The FEIR contained a summary of the six alternatives identified as part of the *Boston Logan Airport Runway Incursion Mitigation Study/Runway 9-27 Runway Safety Area (RSA) Alternatives Study* (the RIM/Runway 9- 27 RSA Alternatives Study). The alternatives, as previously described in the DEIR, included:

- No Build Alternative
- Alternative 1 Declared Distances
- Alternative 2 Displaced Threshold Markings

[4] On November 15, 2022, MEPA issued a memorandum acknowledging the inadvertent omission of comment letters on the DEIR from Air Impact Relief, Inc. (Air Inc.) and the Town of Winthrop due to technical issues with the on-line public comment portal and failed mail delivery. These letters were provided to Massport and responses to these comments were included in the FEIR.

- Alternative 3A Full RSA in Boston Harbor, Fill Option
- Alternative 3B Full RSA in Boston Harbor, Deck Option
- Alternative 4A EMAS on 500-Foot-Wide Deck
- Alternative 4B EMAS on 306-Foot-Wide Deck (Preferred Alternative)

In response to comments, the FEIR provided additional detail to substantiate the dismissal of Alternatives 1 and 2. As stated in the FEIR, Alternative 1, Declared Distances was dismissed not only because it would reduce the ability of Runway 9-27 in accommodating approximately 75% of aircraft using that runway, but would also result in those aircraft having to take weight penalties (reduce their takeoff weight). The FEIR also describes the southwest corner of the airfield, where pavement markings would be adjusted, as a Massport and FAA-identified "hot spot" where measures have already been implemented to reduce the possibility of pilot confusion including runway status lights, enhanced markings, and signage. The FEIR states that any shifting or relocating of runways in this area will complicate a complex area even further. Alternative 2, Displaced Thresholds would restripe a segment of Taxiway M pavement immediately west of the existing Runway 9 End. This alternative would decrease the existing RSA length deficiency from 850 feet to 655 feet, increasing the RSA length only marginally but not resulting in the Runway 27 End meeting FAA's design requirements. The FEIR also responds to comments requesting consideration of alternatives not previously proposed including the possibility of reconfiguring or shifting Taxiway E to or making other airfield alterations to facilitate capacity needs with a shortened runway. The FEIR provides a discussion of why these alternatives are not feasible including issues of safety and taxiway congestion.

As stated in the FEIR, Massport, in consultation with FAA, previously selected RSA Alternative 4B (EMAS on 306-foot-wide deck) as the Preferred Alternative. This alternative was selected because it would provide full FAA-required overrun and undershoot protection, while maintaining the airfield utility and efficiency. It would do so with reduced impacts to environmental resources in Boston Harbor and the navigation channel, compared to the other alternatives that would achieve the project goals. Comments on the DEIR questioned the FAA's role in selecting the Preferred Alternative. The FEIR notes that based on the findings of the RIM study, the existing runway cannot be improved to enhance safety. In addition, the FAA will need to approve the final runway design and construction, since a portion of the project will be funded by the FAA.

Environmental Justice

As noted above, the project site is located within two EJ populations characterized as Minority (Census Block Groups 9901.01[5] and 9813 Block Group 2) and is within one mile of two additional EJ populations also characterized as Minority (Census Block Groups 1804 Block Group 2 and 9801.01 Block Group 1). Within the Census Tracts containing the above four EJ populations within one mile of the project site, the following languages are identified as those spoken by 5% of more of residents who also identify as not speaking English very well: Spanish and Spanish Creole.

The FEIR provided a summary of ongoing public outreach which included the following when the FEIR was filed:

[5] Census Tract 9901.01 is not associated with any data as it is located with Boston Harbor.

- Posted a social media announcement notifying the public of the filing.
- Notice of Availability in English and Spanish published in *Boston Herald, East Boston Times, Winthrop Transcript*, and *El Mundo*.
- Circulated the FEIR electronically to the EJ Reference List provided by MEPA.
- Translated the Notice of Availability and Executive Summary into Spanish and posted a copy on Massport's website.
- Posted the FEIR on Massport's website at the time of the filing, allowing for approximately an additional week of review time.

The FEIR provided additional detail on how flights redirected during the Runway 27 closure might impact EJ populations as flights will temporarily shift to other runways. The FEIR notes that the approach and departure routes depend on FAA air traffic control safety determinations including wind and weather. While the airport is surrounded by communities containing both EJ and non-EJ populations, it is not expected that any one population will be disproportionately affected. The FEIR provides the following summary of potential flight paths:

Northeast flow FAA traffic pattern: Aircraft that depart from Runway 9 would primarily shift to Runway 4R departures. Aircraft departing Runway 4R fly a route that generally travels northeast of the airport over communities of Boston, Winthrop, and Revere at varying altitudes. Communities located northeast of the airport, below the Runway 4R departure routes, include a mix of both non-EJ and EJ populations.

Southwest flow FAA traffic pattern: Aircraft that would have landed on Runway 27 are expected to primarily shift to Runway 22L arrivals. On descent, aircraft would fly over the same communities listed for the Northeast flow. If shifted to the northeast flow, aircraft would primarily shift to Runways 4R and 4L arrivals which generally overfly southwest of the airport over communities of Boston, Milton, and others.

Northwest flow FAA traffic pattern: Aircraft that would have landed or departed on Runway 27 are expected to shift primarily to Runway 33L. Runway 33L departures generally travel northwest of the airport over the communities of Boston, Chelsea, and Everett (both EJ and non-EJ communities). Runway 33L arrivals generally come from the southeast over Boston Harbor (away from close-in residential land uses) but also overfly at higher altitudes South Shore communities including Hull, Weymouth, and Cohasset

The FEIR also notes that during a similar closure of Runway 9-27 in the summer of 2020, Runway 9 departures shifted to Runway 4R and a small portion to Runway 15R. The Runway 27 departures shifted primarily to Runway 22R. However, as stated above, the choice of runways to be used by FAA will be based on wind, weather, and safety requirements and cannot be predicted in advance. A review of the EJ map provided in the FEIR shows the airport is within and surrounded by EJ communities. As noted above, only arrivals from the southeast, over Boston harbor, are away from residential areas and EJ populations.

Temporary construction impacts associated with the project are expected to include marine vessel trips which will generate additional GHG emissions. The FEIR describes the anticipated routes of these marine vessels, indicating that the contractor's offsite yard will likely be in Quincy, East Boston, or Charlestown. As discussed further below, the FEIR provides the number and types of vessels to be used and quantifies the expected emissions. It is anticipated that barges and other vessels supporting construction would operate in an area up to 220 feet on

either side of the footprint of the RSA deck during the two 60-day runway closure periods. The DEIR previously indicated that the nearest residences are 2,400 feet from the project. The FEIR also notes the location of other sensitive receptors including schools, daycare centers, children's health clinics, or any other concentrated populations of children, indicating that the closest facility is a daycare in Winthrop, approximately 5,000 feet north of the project site.

The FEIR assesses potential impacts to water quality and indicates that the project will comply with the MassDEP Stormwater Management Standards (SMS). As discussed further below, although the project proposes an increase in impervious area, stormwater discharges will be to a tidal area and will not affect floodplain levels. The FEIR included summaries of interagency meetings with the Division of Marine Fisheries and the U.S. Coast Guard which documented that access to shellfish beds will continue for badged shellfishers upon completion of construction, and that the project would not preclude use of the navigational channel by the public during construction.

Impervious Area and Stormwater

The project will increase impervious area by 3.3 acres of RSA deck over open water and by 0.5 acres of perimeter road pavement and approach slab some of which is in currently grassed uplands. Comments on the DEIR from MassDEP indicated that treatment of the runoff from the deck would be required to provide water quality treatment and reduce the velocity of the runoff. The FEIR responds that the Notice of Intent application will describe the stormwater management measures and address each of the ten SMS with supporting calculations. The preliminary stormwater design includes scuppers to collect runoff on the RSA deck connected to a trunk line to carry the runoff to the outer end of the deck to be released into deep water. Correspondence from Massport[6] states that runoff from the RSA will be clean unimpacted water that does not require treatment prior to discharge. This conflicts with prior MassDEP comments indicating that water quality treatment would be required and should be addressed during permitting. The FEIR describes stormwater treatment for the new pavement associated with the relocated perimeter road stating that the runoff would be allowed to sheet flow onto adjacent grassed or crushed stone surfaces for infiltration. The proposed stormwater management will be subject to review and approval by the Boston Conservation Commission under a Notice of Intent filing (or in the case of an appeal, a Superseding Order of Conditions from MassDEP).

Wetlands and Fisheries

As noted above, the following wetland resource areas will be impacted by the deck: 45,420sf of Land Subject to Tidal Action, 2,660 square feet of Coastal Beach, 97,200sf of LSCSF (100-year Floodplain), 107,700 sf of LUO, and 66,760sf of LCS. The impacts are summarized in the table below:

[6] Email from Stewart Dalzell, Massport, to Jennifer Hughes, MEPA Analyst, dated January 20, 2023.

Table 5-1 Runway 27 End RSA Direct Impacts to Coastal Wetland Resources - Proposed Project

Wetland Resource Area	Jurisdiction	Impacts			
		RSA Deck (shading)	Piles (Number/Area[1])	Emergency Access Ramps	Total[2]
Land Under the Ocean	Local and State	107,700 sf	246 / 690 sf	0	107,700 sf
Coastal Beach	Local and State	2,170 sf	6 / 20 sf	490 sf	2,660 sf
Coastal Banks	Local and State	310 lf	N/A	80 lf	390 lf
Salt Marsh	Local and State	0	0	0	0
Land Containing Shellfish	Local and State	58,130 sf	124 / 350 sf	8,630 sf	66,760 sf
Land Subject to Tidal Action	Local and State	35,960 sf	70 / 200 sf	9,460 sf	45,420[3]
Land Subject to Coastal Storm Flowage	Local and State	92,000 sf	10 / 30 sf	5,200 sf	97,200 sf
Land Below Annual High Tide	Federal	143,660 sf	316 / 880 sf	9,460 sf	153,120 sf
Mud Flat (Special Aquatic Site)	Federal	37,210 sf	100 / 280 sf	490 sf	37,700 sf

All square footages are approximate values as they have been rounded to the nearest value of ten (most values were rounded up).
1 Each 20-inch square pile is 2.78 square feet (sf). Direct impact of all 326 piles is 906 square feet.
2 Area of impact under the RSA Deck or area of upland. Area of piles or approach slab not included, since included in the overall deck area.
3 Includes 1,230 square feet for RSA Deck approach slab.
lf = linear feet
sf = square feet
N/A = Not Applicable

In the FEIR, Massport indicates that it will provide mitigation for permanent impacts to LUO and Coastal Beach (mudflat) associated with the placement of 252 piles and the installation of safety/egress ramps. This mitigation will be detailed as part of the Notice of Intent filing but is expected to include some form of shoreline restoration in Boston Harbor or Chelsea Creek or could involve mudflat creation similar to work conducted to offset impacts associated with the 33L RSA project. The FEIR also addressed the overshadow of approximately 2.7 acres of LUO and Coastal Beach by the RSA deck and states that the shaded area will continue to be influenced by the tides which will supply phyto- and zooplankton for filter feeding species and organic detritus for scavengers/detritivores. The FEIR also notes that there are no vascular plants, saltmarsh, or aquatic bed species present within the deck area that would be impacted by the lack of sunlight. As noted above, restoration/replacement will be provided as mitigation for the 700 sf of coastal wetland resource area altered by the deck piles.

As requested by the Division of Marine Fisheries (DMF), the FEIR contained a record of project coordination between DMF and other resource agencies (NOAA, USEPA, CZM, Boston Conservation Commission) regarding the development of a detailed mitigation plan for permanent impacts to shellfish and mud flat habitat. The record of the meetings indicates that mitigation for impacts to LCS will be in the form of a contribution to the shellfish restoration program. The FEIR states that badged shellfishers will be temporarily restricted from the mudflats in the work area during construction but upon completion, the shellfishers would have access to areas previously open for harvest which includes areas under the deck; however, boat access under the deck would be restricted. The FEIR indicates that project mitigation will include the DMF recommended TOY restriction for in-water, silt-producing work from February 15 to June 30 to minimize impact to winter flounder. In addition, the project will use turbidity curtains to contain turbidity associated with in-water silt-producing work occurring outside of the recommend TOY to minimize impacts to spawning and early life history stages of shellfish species in the vicinity of the project.

Chapter 91 and Tidelands

The FEIR includes additional information regarding the location of the State Harbor Lines relative to the project site and indicates that the proposed RSA deck will extend up to 460 feet seaward of the line established by Chapter 733 of the Acts of 1966. The FEIR asserts that the Massport Enabling Act[7] contains broad authorization for Massport to utilize adjacent underwater areas for airport purposes should the need arise in the future, including seaward of the State Harbor Line. Comments from the MassDEP Waterways Regulation Program (MassDEP Waterways) state that MassDEP does not agree with this assertion but indicate that the matter can be worked out during licensing. MassDEP Waterways recommends that Massport request a prefiling consultation to clarify this point. To the extent such consultation results in the need to make design changes to meet c. 91 requirements, Massport should consult with the MEPA Office about whether further review may be needed in the form of a Notice of Project Change (NPC) filing.

Public Benefit Determination (PBD)

The project site is comprised of tidelands subject to the provisions of *An Act Relative to Licensing Requirements for Certain Tidelands* (2007 Mass. Acts ch. 168) and the Public Benefit Determination (PBD) regulations (301 CMR 13.00). I must issue a PBD for any project in tidelands required to under an EIR review process. The FEIR included more detailed information describing the nature of tidelands affected by the non-water dependent project and documented compliance with the requirements for public benefits. The FEIR indicates that the project will protect Boston Harbor in the event of an overrun or undershoot event, by preventing aircraft from entering the harbor. The FEIR notes that, under the Massachusetts Port Authority Enabling Act, preservation of public safety and security at Logan Airport has been legislatively determined to be an appropriate use of the affected tidelands. Other potential public interests in tidelands that might be affected by the proposed safety project are limited due to existing Airport security restrictions. As noted above, shellfish harvesting by licensed clammers is allowed within the Security Zone with prior notice from DMF. The FEIR also indicates that boats operating in the outer 250-foot security zone will need to divert around the footprint of the RSA deck. However, boats are not currently permitted to anchor within the existing Logan Airport 500-foot security zone and the proposed RSA deck would not change the existing restriction on boating activities.

I will issue a PBD within 30 days of the issuance of the FEIR Certificate.

Rare Species

As noted above, the proposed project site is mapped as *Priority Habitat* for a state-listed species: Upland Sandpiper (*Bartramia longicauda*), Endangered and Eastern Meadowlark (*Sternella magna*), Special Concern as indicated in the *Massachusetts Natural Heritage Atlas* (15th Edition). The FEIR details the impacts to Priority Habitat, including 17,400 sf of impacts from relocating the vehicle perimeter road to a safer, more perpendicular crossing of the Runway 27 End. The FEIR further states that in the new position, the grass area between the existing

[7] Massachusetts Port Authority Enabling Act, Chapter 465 of the Acts of 1956, Section 4, Paragraph 6.

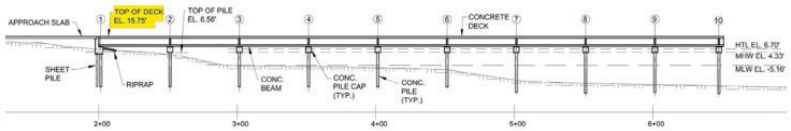
roadway and the new road will be replaced with crushed stone to eliminate the need for mowing. An additional area of approximately 3,000 sf of grassland will be impacted by paving an area on the south side of the runway end to provide a continuous 300-foot wide paved area for the runway and shoulders as required by FAA. In total, the FEIR reports that 20,300 sf of grassland habitat would be permanently altered. To mitigate these impacts, Massport will work with the FAA, NHESP and airport operations to identify an area on the airfield where an equal amount of pavement could be removed to avoid a Take and the need for a CMP.

The FEIR identifies temporary impacts associated with construction staging and equipment operations that will impact an additional 22,000 sf of grassland habitat. The temporary impacts will be for two 60-day construction periods between July and October. Once construction is completed, the disturbed area will be restored and reseeded with a seed mix approved by NHESP to establish the grassland habitat. In an email dated January 24, 2023, NHESP indicates that comments prepared in response the DEIR remain largely applicable to the FEIR submission and further indicates that provided permanent impacts to grassland habitats are replaced and temporary grassland impacts repaired, then NHESP would anticipate the project may be conditioned to avoid a prohibited Take of state-listed species.

Climate Change

Adaptation and Resiliency

The Certificate on the DEIR required that Massport discuss whether the elevation of the runway safety area is consistent with recommendations from the MA Resilience Design Tool for the 2050 and 2070 planning horizon. The FEIR contained the figure below illustrating that the top of the deck would have an elevation of approximately 15.75 feet NAVD88.



The final EIR also provided the table below, showing the current and projected elevations for the mean low water line, mean high water line, water surface elevation, and wave action elevation based on the MA Resilience Design Tool Report included in the FEIR, which recommended that the RSA deck be designed to be resilient to the 100-year storm event in 2070. Based on the elevations below, the top of the deck would be above the projected water surface elevation for the 100-year storm in 2070, but slightly under the projected "wave action" water elevation which takes into account the effect of wave action on the site.

Table 3-6 RMAT Sea Level Rise Projections for 2050 and 2070 Planning Horizons (feet, NAVD 1988)

Measure	Current	2050	2070
Mean Low Water	-5.16	-2.3	-0.7
Mean High Water	4.3	7.3	9.2
Water Surface Elevation	5.51	12.5	14.3
Wave Action Elevation	9.49	13.6	15.9

Current values from NOAA, *Tide Predictions; Datum for 8443970, Boston, MA*, https://tidesandcurrents.noaa.gov/datums.html?id=8443970.
Projected values from the RMAT Output Report, see Appendix E.3 for further methodology.

The Certificate on the DEIR indicated that that the recommendation provided by the MA Resilience Design Tool appears to be correlated to a "Medium" criticality assessment of project assets, which is understated given the critical function of Logan Airport as a key transportation hub for the Northeast region. For "High" critical assets, the MA Resilience Design Tool guidance recommends planning for the 200-year storm (as of 2070 and interim planning horizon of 2050) for most buildings/facilities for the sea level rise/storm surge parameter, and up to the 500-year storm for transportation assets. The FEIR states that the project design will not be able to meet these design recommendations since it will not be possible to raise the entire airfield and runway system. According to the FEIR, Massport recognizes that some assets may be inundated by flooding or excessive precipitation and has worked to flood-proof light vaults and other features, and to identify operational changes to runways and taxiways to accommodate drying out before being returned to service. In addition, in 2020 Massport elevated the runway 27 threshold by 10 inches and improved the drainage system.

The FEIR notes that the elevation of the Runway 9-27 deck will be higher than those constructed at the Runway 4R End light pier and the Runway 33L RSA deck in 2017 and 2014, respectively. The Certificate on the DEIR required that Massport discuss adaptive management strategies to improve resiliency to project assets if the project design does not meet the recommended Tool recommendations. The FEIR references the Massport *Floodproofing Design Guide* introduced in 2014 which was created with the intent of protecting airport assets from climate change related impacts. The FEIR notes that the Massachusetts Coastal Flood Risk Model (MC-FRM) is also used to assess potential flooding vulnerabilities for Massport projects. The FEIR also references several ongoing programs to improve resiliency at the airport as well as lessen the airport's overall impact to climate change including an evolving sustainability policy, development of a Climate Action Plan, and a net zero GHG emissions roadmap titled *Roadmap to Net Zero by 2031*.

Greenhouse Gas (GHG) Emissions

The FEIR included an air quality analysis that identifies the project-related construction emissions, including marine vessel emissions, and indicates that they are below the *de minimis* standards for General Conformity with the National Ambient Air Quality Standards (NAAQS) for criteria pollutants. To estimate exhaust emissions from on-road vehicles and construction equipment, emissions factors were developed using the USEPA's Motor Vehicle Emissions Simulator model (MOVES3) (on road and nonroad modules). The methodology associated with the analysis is further detailed in an appendix to the FEIR. The construction period emissions inventory is shown in the table below.

Table 3-3 Construction Period Emission Inventory by Source (Tons/Year)

Category	2025					
Source	CO	NO_x	VOC	PM_{10}	$PM_{2.5}$	SO_2
On Road	0.004	0.101	0.079	0.002	0.002	0.0002
Off Road Equipment (Land + Marine)	0.49	5.19	7.96	0.29	0.28	0.01
Marine Vessels	1.46	8.60	0.23	0.18	0.17	0.01
Fugitive Dust	-	-	-	0.91	0.13	-
Total (2025)	1.95	13.89	8.27	1.38	0.58	0.01
Category	**2026**					
Source	CO	NO_x	VOC	PM_{10}	$PM_{2.5}$	SO_2
On Road	0.003	0.076	0.062	0.001	0.001	0.0001
Off Road Equipment (Land + Marine)	0.17	1.65	2.65	0.10	0.10	0.00
Marine Vessels	1.32	7.77	0.21	0.16	0.15	0.01
Fugitive Dust	-	-	-	0.87	0.12	-
Total (2026)	1.49	9.50	2.93	1.13	0.37	0.01

The FEIR further reports on short-term increases in GHG emissions due to construction activities. Based on a preliminary estimate of construction equipment and vehicles that are anticipated during the two 60-day construction periods, a maximum of 45 trucks and automobiles and a maximum of 15 marine vessels could be deployed daily. As requested in the Certificate on the DEIR, a GHG emission inventory by source was conducted and is summarized in the table below.

Table 3-5 Construction-Period GHG Emissions Inventory by Source (Tons CO_2/Year)

Source/Year	2025	2026
On Road	48	37
Off Road Equipment (Land and Marine)	2,845	1,125
Marine Vessels	649	586
Total	3,542	1,748

Source: WSP, May 2022.

Construction-period air quality mitigation measures detailed in the FEIR include:

- Dust suppression techniques will be implemented to control fugitive dust emission sources and are anticipated to reduce PM10 and PM2.5 emissions by 75 percent.
- Construction equipment will be maintained according to manufacturers' specifications and operated using USEPA-compliant fuels to minimize emissions.

- Contractors will be required to use Tier III or Tier IV equipment where feasible, limit idling, and implement construction worker vehicle trip management techniques.
- Contractors will be required to use Ultra Low Sulfur Diesel fuel and/or operate vehicles using alternative fuels, where feasible.
- Contractors will be required to use after-engine emissions controls, such as oxidation catalysts or diesel particulate filters, where feasible.

Mitigation and Draft Section 61 Findings

The FEIR provides final mitigation commitments and draft Section 61 Findings for use by Participating Agencies, which are summarized below. The Section 61 Findings should be provided to Participating Agencies to assist in the permitting process and issuance of final Section 61 Findings. As an Agency undertaking the project, Massport should also issue Section 61 Findings including all mitigation commitments for the project.

Environmental Justice/Public Health

- Continue public outreach as outlined in the *Updated EJ Outreach Plan*.
- Provide erosion and sedimentation control during construction and stormwater management in accordance with the MassDEP Stormwater Standards to protect water quality.
- Minimize engine idling in accordance with Massachusetts anti-idling regulations.
- Retrofit appropriate diesel construction equipment with diesel oxidation catalysts and/or particulate filters to minimize emissions.

Wetlands and Fisheries

- Provide 1:1 replacement/restoration of intertidal and subtidal wetlands impacted by piles and egress ramps.
- Provide stormwater management system to control and treat stormwater runoff in compliance with the Massachusetts Stormwater Management Standards
- Implement winter flounder time-of-year (TOY) restriction from February 15 to June 30 for in-water construction activities
- Provide mitigation fee to DMF) for off-site restoration.
- Use turbidity curtains for in-water construction.

Chapter 91 and Tidelands

- Continue to allow shellfish harvesting by licensed clammers within the Security Zone with prior notice from DMF.

Rare Species

- Provide 1:1 replacement of lost upland grassland habitat

Climate Change

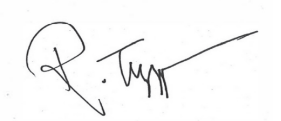
- Elevate the RSA deck above the projected water surface elevation for the 100-year storm in 2070.

Construction Period

- Develop and implement a comprehensive Soil Erosion and Sediment Control Plan in accordance with NPDES and MassDEP standards.
- Apply water to dry soil to prevent fugitive dust.
- Maintain mufflers on construction equipment.
- Minimize engine idling in accordance with Massachusetts anti-idling regulations.
- Retrofit appropriate diesel construction equipment with diesel oxidation catalysts and/or particulate filters.
- Fit any air-powered equipment with pneumatic exhaust silencers.
- Implement construction worker vehicle trip management techniques.

Conclusion

Based on review of the FEIR, comment letters, and consultation with reviewing Agencies, I find that the FEIR adequately and properly complies with MEPA and its implementing regulations. No further MEPA review is required, and the project may proceed to permitting. Participating Agencies and Massport should forward copies of the final Section 61 Findings to the MEPA Office for publication in accordance with 301 CMR 11.12.



January 30, 2023
Date

Rebecca L. Tepper

Comments received:

01/05/2023 John Vitagliano
01/12/2023 B. Cooney
01/18/2023 Division of Marine Fisheries (DMF)
01/20/2023 D. Hickey
01/23/2023 K. Dimes
01/23/2023 Air Inc.
01/23/2023 MassDEP Waterways Regulation Program (WRP)
01/24/2023 Natural Heritage and Endangered Species Program (NHESP)

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Copy of the Secretary of the Executive Office of Energy and Environmental Affairs Certificate Issued for Runway 27 End Runway Safety Area (RSA) Improvement Project Notice of Project Change

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The Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

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June 30, 2025

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
NOTICE OF PROJECT CHANGE

PROJECT NAME	: Boston Logan International Airport Runway 27 End Runway Safety Area (RSA) Improvement Project
PROJECT MUNICIPALITY	: Boston
PROJECT WATERSHED	: Boston Harbor
EEA NUMBER	: 16433
PROJECT PROPONENT	: Massport
DATE NOTICED IN MONITOR	: May 7, 2025

Pursuant to the Massachusetts Environmental Policy Act (MEPA; M.G. L. c. 30, ss. 61-62L) and Section 11.10 of the MEPA regulations (301 CMR 11.00), I have reviewed the Notice of Project Change (NPC) submitted for this project and hereby determine that it **does not require** an Environmental Impact Report (EIR).

Original Project

The original project received a Certificate on the Final Environmental Impact Report (FEIR) on January 30, 2023, which found that the filing adequately and properly complied with MEPA. As previously described in the FEIR, the Massachusetts Port Authority (Massport) proposed improvements to the Runway Safety Area (RSA)[1] located at the end of Runway 27 at Boston Logan International Airport. The Federal Aviation Authority requires that airports

[1] As described by the Federal Aviation Authority (FAA), an RSA is a defined surface surrounding the runway, typically 500-feet wide and extending 1,000-feet beyond each runway end.

receiving federal funding for airport improvement projects and commercial service airports provide standard RSAs where possible.[2] The RSA is intended to reduce the risk of damage to aircraft and protection of passengers in the event of an unintentional excursion from the runway.[3]

The project proposed the construction of an approximately 650-foot long by 306-foot-wide RSA on a pile-supported deck with an Engineered Materials Arresting System (EMAS) bed installed on the deck. An EMAS is constructed of collapsible concrete blocks which can decelerate an aircraft in a way that minimizes damage to the aircraft and potential injuries. An EMAS is often used when a full-dimension RSA (1,000 ft long by 500 ft wide) is not possible due to lack of available land or to minimize environmental impacts; an EMAS provides an FAA-approved level of safety equivalent to an RSA built to the full-length dimensions. It is expected that the 306-foot-wide deck would extend approximately 450 feet over Boston Harbor. The deck would be supported by 326 20-inch square concrete piles. Two emergency access ramps were proposed on each side of the deck (located within Coastal Beach/Mud Flat) to provide safe access for emergency response personnel to the harbor and to provide egress for any passengers or crew that might be in the harbor and able to get to shore. The 20-foot wide perimeter access road on the north side of Runway 27 would also be straightened and realigned to enhance vehicular site lines.

As indicated in the prior FEIR, the proposed RSA improvement would be a safety improvement and would not extend the runway or have any effect on runway operations, runway capacity, or the types of aircraft that can use the runway.

Project Change

According to the NPC, in advancing the design of the two emergency access/egress ramps located on either side of the RSA deck, the design/build engineers identified the following adjustments that were needed to achieve the functional and safety requirements for emergency ramps:

- The landside connections to Logan Airport's perimeter road and grades landward of the new bulkhead (located at the end of the existing runway) needed to be raised to align with grades for the planned pile-supported deck
- The lower end of the ramps needed to be extended seaward to achieve the design criteria of being a minimum of one foot below mean lower low water (MLLW). To achieve these requirements, portions of both ramps needed to be elevated and extended. The ramps will be supported by sloped rock fill

Coordination among Massport's design, construction, and environmental staff, Massport Fire and Rescue, and the design build team determined that the longer ramps were essential for incident response. The changes will also result in the perimeter road being temporarily relocated to the west in order to avoid the construction for the ramps. The perimeter road alteration will

[2] Because many runways were built before the 1000-foot RSA standard was adopted approximately 20 years ago, the FAA implemented the Runway Safety Area Program to make practicable improvements to existing RSAs for priority runways.
[3] An excursion from the runway can include an overrun (when an arriving aircraft fails to stop before the end of the runway), an undershoot (when an aircraft arriving on a runway touches down before the start of the paved runway surface), or an event in which an aircraft veers off to one side of a runway.

require landside fill which will be seeded with grass following construction; this was not discussed in prior filings. In response to coordination with Massachusetts Department of Environmental Protection (MassDEP), stormwater improvements have been added to the design to handle stormwater from the RSA deck. Stormwater from the RSA deck will be directed to a nearby outfall; this change will require additional impacts to upsize the outfall appropriately.

Project Site

The project is located within Logan International Airport (Logan Airport), which is owned and operated by Massport. Logan Airport is New England's primary international and domestic airport and includes approximately 2,400 acres in East Boston and Winthrop, including 700 acres in Boston Harbor. Logan Airport is one of the most land-constrained hub airports in the nation and is surrounded on three sides by Boston Harbor. The airfield has six runways (which vary in length from 2,557 feet to 10,081 feet), 15 miles of taxiways, and approximately 240 acres of concrete and asphalt apron.

The 10-acre project area is focused on the east end of Runway 9-27 which is comprised of Runway 9 on the west end and Runway 27 on the east. The project site includes the existing Runway 27 end and the armored coastal shoreline and intertidal and subtidal areas seaward of the existing runway end. Runway 9-27 is 7,001 feet long, 150 feet wide, and is constructed of asphalt pavement. The runway has 75-foot-wide paved shoulders on either side. At the approach end of Runway 9 (western end of the runway), the existing RSA meets the full dimensions set forth in the FAA design standards. The approach end of Runway 27 (eastern end of the runway) does not meet the current FAA design standards for length. This runway was constructed before the current FAA design guidelines were in place. The Runway 27 End RSA is only 150 feet long and therefore does not meet the RSA length requirement of 1,000 feet for a full dimension RSA.

Portions of the project site include Priority Habitat as mapped by the Natural Heritage and Endangered Species Program (NHESP) *Massachusetts Natural Heritage Atlas* (15th Edition). The project is located adjacent to and within Boston Harbor and contains coastal wetland resource areas including Coastal Bank, Coastal Beach, Land Subject to Coastal Storm Flowage (LSCSF), Land Subject to Tidal Action, Land Containing Shellfish (LCS), and Land Under Ocean (LUO). The project site includes areas within mapped Federal Emergency Management Agency (FEMA) flood zone VE (an area that is subject to high velocity waters and waves and is inundated by a 100-year storm) with a base flood elevation (BFE) of elevation (el.) 13 ft NAVD88. The landward area of the project site is mapped as FEMA flood zone AE (an area inundated by a 100-year storm but not subject to high velocity waters), with BFE el. 12 ft NAVD88 according to FEMA flood insurance rate map (FIRM) number 25025C0082J effective March 16, 2016.

The FEIR previously identified that the project site was located within two Environmental Justice (EJ) populations characterized as Minority and was within one mile of two additional EJ populations also characterized as Minority. The NPC presents updated EJ population information, based on updated data from the EJ Maps Viewer, following the release of 2020 Census data. The project is within one EJ population characterized by Minority and

within one mile of two EJ populations characterized by Income (1) and Minority (1).[4] The NPC notes that the ENF for the project was filed prior to the implementation of the MEPA EJ Protocols (effective January 1, 2022); however, the DEIR and FEIR voluntarily provided information in compliance with EJ Protocols, and the NPC continued to update information on impacts within the "Designated Geographic Area" (DGA) identified as 1 mile around the project site. The NPC also detailed ongoing outreach conducted for the project change.

Environmental Impacts and Mitigation

As reported in the FEIR, impacts associated with the original project included creation of 3.8 acres of new impervious surface (3.3 acres RSA deck, and 0.5 acres approach slab and perimeter road), as well as permanent alteration of 390 linear feet (lf) of Coastal Bank, 2,660 sf of Coastal Beach, 97,200 sf of LSCSF, 45,420 of Land Subject to Tidal Action, 66,760 sf Land Containing Shellfish, and107,700 sf of LUO. The project will impact 154,120 sf of flowed tidelands.

As compared to the originally proposed project, the NPC form indicated that the project change would increase land alteration by 3.1 acres and impervious area by 3.0 acres. Supplemental information from the Proponent[5] clarified that the lengthened emergency access ramps will result in a decrease in impervious area of 0.05 acres (compared to the original project) as the access ramps, as proposed in the FEIR, were wider (0.34 acres of impervious) while the lengthened ramps proposed in the NPC will be narrower (0.29 acres of impervious area). According to the supplemental information, there will be no change in total impervious area from the project change as any increase in impervious area (as a result of the 100% design changes) will be offset by removal of portions of a perimeter road (a decrease of 0.13 acres) that was not previously disclosed in the FEIR.

According to the NPC, increased impacts to coastal wetland resource areas are associated with the lengthening of the emergency access ramps (including solid fill base) as well as changes associated with final design (100% design) of the project. The NPC indicates that changes to the project associated with a 100% design included a reduction in the number of piles, from 326 20-inch piles to 300 19-inch piles, and additional impacts associated with landward fill for bulkhead support, new pavement and a stormwater outfall stone apron. Impacts to each coastal wetland resource area associated with the changed project elements are shown in the tables below (by resource area).

[4] MEPA guidance released at the time of the 2022 EJ Maps View update stated that any project for which an EIR Scope was issued prior to January 4, 2023 should continue to apply the EJ mapping in place at the time of the Scope. For this reason, the FEIR filed in December 2022 did not update this information. Given the changes in project design and to update disclosures, this NPC now presents updated EJ Populations reflecting the 2022 EJ Maps update.

[5] Email from Vivian Kimball, VHB to Jennifer Hughes, MEPA, dated June 24, 2025.

Table 1-3 Land Under Ocean Impacts

	FEIR	100% Design[4]	Difference from FEIR to 100% Design
Deck Shading (sf)	107,700	106,406	-1,294 (reduction)
Piles (count/sf)[1]	246/690	229/515	-17 / -175 (reduction)
Egress Ramps and Associated Grading (sf)	N/A	6,874	6,874
Fill Landward of Bulkhead (sf)[2]	N/A	N/A	N/A
Bulkhead Rip Rap Support (sf)[2]	N/A	N/A	N/A
New Pavement (sf)[2]	N/A	N/A	N/A
Stormwater Outfall Stone Apron (sf)[2]	N/A	N/A	N/A
Total (sf)[3]	**107,700**	**113,795**	**6,095**

Table 1-4 Coastal Beach Impacts

	FEIR	100% Design[4]	Difference from FEIR to 100% Design
Deck Shading (sf)	2,170	8,351	6,181
Piles (count/sf)[1]	6/20	14/32	8/12
Egress Ramps and Associated Grading (sf)	490	5,390	4,900
Fill Landward of Bulkhead (sf)[2]	N/A	N/A	N/A
Bulkhead Rip Rap Support (sf)[2]	N/A	N/A	N/A
New Pavement (sf)[2]	N/A	N/A	N/A
Stormwater Outfall Stone Apron (sf)[2]	N/A	10	10
Total[3]	**2,660**	**13,751**	**11,091**

Table 1-5 Coastal Bank Impacts

	FEIR	100% Design[4]	Difference from FEIR to 100% Design
Deck Shading (lf)	310	0	-310 (reduction)
Piles (count/lf)[1]	-	-	-
Egress Ramps and Associated Grading (lf)	80	56	-24 (reduction)
Fill Landward of Bulkhead (lf)[2]	N/A	180	180
Bulkhead Rip Rap Support (sf)[2]	N/A	N/A	N/A
New Pavement (lf)[2]	N/A	417	417
Stormwater Outfall Stone Apron (lf)[2]	N/A	N/A	N/A
Total[3]	390	653	-263 (reduction)

Table 1-6 Land Containing Shellfish Impacts

	FEIR	100% Design[4]	Difference from FEIR to 100% Design
Deck Shading (sf)	58,130	58,226	96
Piles (count/sf)[1]	124/350	120/270	-4 / -80 (reduction)
Egress Ramps and Associated Grading (sf)	8,630	19,408	10,778
Fill Landward of Bulkhead (sf)[2]	N/A	N/A	N/A
Bulkhead Rip Rap Support (sf)[2]	N/A	N/A	N/A
New Pavement (sf)[2]	N/A	N/A	N/A
Stormwater Outfall Stone Apron (sf)[2]	N/A	175	175
Total[3]	66,760	77,809	11,049

Table 1-7 Land Subject to Tidal Action Impacts

	FEIR	100% Design[4]	Difference from FEIR to 100% Design
Deck Shading (sf)	35,960	30,606	-5,354 (reduction)
Piles (count/sf)[1]	70/200	41/92	-39 / -108 (reduction)
Egress Ramps and Associated Grading (sf)	9,460	15,910	6,450
Fill Landward of Bulkhead (sf)[2]	N/A	1,856	1,856
Bulkhead Rip Rap Support (sf)[2]	N/A	3,722	3,722
New Pavement (sf)[2]	N/A	554	554
Stormwater Outfall Stone Apron (sf)[2]	N/A	175	175
Total[3]	45,420	52,813	7,393

Table 1-8 Land Subject to Coastal Storm Flowage Impacts

	FEIR	100% Design[4]	Difference from FEIR to 100% Design
Deck Shading (sf)	92,000	137,700	45,700
Piles (count/sf)[1]	10/30	270/607	260/577
Egress Ramps and Associated Grading (sf)	5,200	24,823	19,623
Fill Landward of Bulkhead (sf)[2]	N/A	68,344	68,344
Bulkhead Rip Rap Support (sf)[2]	N/A	4,535	4,535
New Pavement (sf)[2]	N/A	64,982	64,982
Stormwater Outfall Stone Apron (sf)[2]	N/A	175	175
Total[3]	97,200	300,559	203,359

All square footages are approximate values as they have been rounded to the nearest whole value.

1 The piles were reduced in overall number and size as a result of the design update. There are now a total of 300 eighteen-inch piles.

2 These impacts were not previously included in MEPA filings.

3 Does not include sf associated with piles.

4 Since filing the NPC, design has progressed to 100%. These tables reflect updated numbers based on the final design.

sf = square feet

N/A - not applicable

The project will minimize and mitigate the increased environmental impacts associated with the project change by adhering to time-of-year (TOY) restrictions for marine fisheries; providing a mitigation fee for impacts to LCS; providing 1:1 replacement/restoration of intertidal and subtidal wetland resource areas; installing stormwater management in compliance with the Stormwater Management Standards (SMS); using turbidity curtains around in-water construction and employing erosion and sediment control and other construction best management practices to reduce noise, air and water quality impacts during the construction period.

Jurisdiction and Permitting

The original project was subject to the preparation of a Mandatory EIR pursuant to 301 CMR 11.03(3)(a)(5) because it requires Agency Action and involves a new non-water dependent use or Expansion of an existing non-water dependent structure, provided the use or structure occupies one or more acres of waterways or tidelands. The project also exceeded the ENF threshold at 11.03(3)(b)(1)(f) because it will result in the alteration of one-half or more acres of any other wetland (LUO, Coastal beach, LCS, LSCSF). The original project required a Chapter 91 (c. 91) License (New or Amended) and 401 Water Quality Certification (WQC) from MassDEP. The project will require Federal Consistency Review by the Massachusetts Office of

Coastal Zone Management (CZM). The original project was anticipated to require a Conservation and Management Permit (CMP) from NHESP; however, a conditional "No-Take" determination was received on June 21, 2024. The project continues to require the above permits with the changes disclosed in this NPC; no additional permits or Agency Actions will be required due to the project change.

The project requires an Order of Conditions (OOC) from the Boston Conservation Commission (or in the case of an appeal, a Superseding OOC from MassDEP). The project will require a National Pollutant Discharge Elimination System (NPDES) Stormwater General Permit from the Environmental Protection Agency (EPA). The project will also be subject to review by the FAA under the National Environmental Policy Act (NEPA).

Because Massport, an Agency within the meaning of MEPA, is the Proponent, MEPA jurisdiction is broad and extends to those aspects of the project that are likely, directly or indirectly, to cause Damage to the Environment as defined in the MEPA regulations.

Review of the NPC

The NPC included a description of the original project, the revisions proposed to design, estimates of impacts related to the project change, updated measures to avoid, minimize and mitigate environmental impacts and updated Section 61 Findings. The Proponent provided supplemental information on May 20, 2025 and June 9, 2025 which included a copy of the Notice of Intent plans (prepared for a filing with the Boston Conservation Commission) for the project change and a response to agency input provided during the NPC review period. The Proponent subsequently provided clarification of project impacts via email.[6] For purposes of clarity, all supplemental information provided by the Proponent are included in references to the "NPC," unless otherwise indicated.

Alternatives Analysis

As noted, in advancing the design of the two emergency access/egress ramps, the design/build engineers identified the need for adjustments to achieve the functional and safety requirements for emergency ramps. The NPC acknowledges an increase in impacts associated with the project change and indicates that alternatives were evaluated to avoid/minimize these impacts, while achieving the purpose of the project change to address functional and safety requirements. The NPC evaluated the following alternatives as related to the project change:

- No Emergency Ramps
- A Single Emergency Ramp
- Narrower Emergency Ramps
- Shorter Emergency Ramps (similar to the FEIR design)
- Preferred Alternative

According to the NPC, Massport Fire and Rescue has stated that emergency ramps are essential for incident response and are needed to provide safe footing for both rescue personnel and incident victims. The ramps also facilitate the launching of small boats that could be needed

[6] Email from Vivian Kimball, VHB to Jennifer Hughes, MEPA, dated June 24, 2025.

to rescue individuals further from the shoreline. Eliminating the ramps also fails to achieve the stated purpose of this project change to achieve functional and safety requirements for the ramp system. For these reasons, the No Emergency Ramps Alternative was dismissed.

The Singe Emergency Ramp, which would be constructed on one side of the pile-supported deck only, was considered but rejected because there is no way of predicting where individuals might be stranded in the water; in addition, the grid of pilings would provide obstacles to quick and efficient rescue operations were the incident to occur on the opposite side of the deck from a single ramp. The NPC also notes that in an emergency situation, more access to the water is preferred.

The Narrower Emergency Ramps Alternative would consider a narrower width of the ramps in order to reduce overall wetland impacts. The NPC indicates that the emergency access ramps are proposed to be 25-ft wide, similar to the ramps constructed at the Runway-End 33, and that any dimension narrower would significantly constrain two-way rescue operations. For this reason, the Narrower Emergency Ramps Alternative was dismissed.

The Shorter Emergency Ramps, similar to the design described in the FEIR and incorporated into the Preferred Alternative at the FEIR stage, would not extend into the water at low tide and would severely restrict the launching of a small rescue boat. Also, absent a stable base at the water's edge, movement by rescue personnel and/or victims would be much more difficult in the existing marine substrate. As noted above, these safety issues with the emergency ramps were identified during final design of the project after conclusion of FEIR review. For these reasons, this alternative was dismissed.

During the review period, Agencies requested that the Proponent consider a Pile-Supported Ramp Alternative, in addition to the alternatives described above, as a way to further reduce wetland impacts. Permanent and temporary impacts to wetland resource areas from each alternative are shown in the tables below.

Table 1-1 Permanent Impacts for Access/Egress Ramp Alternatives

		LUO	Coastal Beach	Coastal Bank[1]	LCS	LSTA	LSCSF
Egress Ramp Design	**Previous Disturbance**						
Proposed Design	Prev. Disturbed	--	--	56 lf	4,372 sf	5,694 sf	6,380 sf
	Prev. Undisturbed	6,874 sf	5,390 sf	--	15,036 sf	10,216 sf	18,443 sf
Alternative 2 – Single Ramp	Prev. Disturbed	--	--	56 lf	1,037 sf	2,409 sf	3,273 sf
	Prev. Undisturbed	3,429 sf	4,505 sf	--	9,610 sf	8,237 sf	13,011 sf
Alternative 3 – Narrower Ramps	Prev. Disturbed	--	--	56 lf	4,372 sf	5,741 sf	6,606 sf
	Prev. Undisturbed	4,733 sf	4,408 sf	--	10,580 sf	7,902 sf	13,997 sf
Alternative 4 – Shorter Ramps	Prev. Disturbed	--	--	56 lf	4,372 sf	5,694 sf	6,380 sf
	Prev. Undisturbed	456 sf	5,310 sf	--	8,533 sf	10,126 sf	11,934 sf
Alternative 5 – Pile-Supported Ramps	Prev. Disturbed	--	--	--	263 sf	350 sf	88 sf
	Prev. Undisturbed	438 sf	175 sf	--	175 sf	175 sf	438 sf

1 The Coastal Bank is previously disturbed and is a manmade structure. Linear foot impacts measured along Top of Coastal Bank (existing contour 9.0 feet), near the seaward end of the current runway. There are no differences in impacts to Coastal Bank as all alternatives would result in the same impacts at this location.

LUO = Land Under Ocean, LCS = Land Containing Shellfish, LSTA = Land Subject to Tidal Action, LSCSF = Land Subject to Coastal Storm Flowage

Table 1-2 Temporary Impacts for Access/Egress Ramp Alternatives

Egress Ramp Design	Previous Disturbance	LUO	Coastal Beach	Coastal Bank[1]	LCS	LSTA	LSCSF
Proposed Design	Prev. Disturbed	--	--	14 lf	711 sf	783 sf	2,511 sf
	Prev. Undisturbed	1,998 sf	1,016 sf	--	3,861 sf	2,265 sf	5,513 sf
Alternative 2 – Single Ramp	Prev. Disturbed	--	--	14 lf	385 sf	454 sf	2,182 sf
	Prev. Undisturbed	1,009 sf	845 sf	--	2,501 sf	1,736 sf	3,994 sf
Alternative 3 – Narrower Ramps	Prev. Disturbed	--	--	14 lf	711 sf	783 sf	2,511 sf
	Prev. Undisturbed	1,834 sf	1,038 sf	--	3,902 sf	2,393 sf	5,475 sf
Alternative 4 – Shorter Ramps	Prev. Disturbed	--	--	14 lf	711 sf	783 sf	2,511 sf
	Prev. Undisturbed	701 sf	1,093 sf	--	2,790 sf	2,356 sf	4,283 sf
Alternative 5 – Pile-Supported Ramps	Prev. Disturbed	--	--	--	5,237 sf	7,315 sf	8,018 sf
	Prev. Undisturbed	7,523 sf	3,050 sf	--	9,713 sf	3,051 sf	7,523 sf

1 The Coastal Bank is previously disturbed and is a manmade structure. Linear foot impacts measured along Top of Coastal Bank (existing contour 9.0 feet).

The NPC notes that pile-supported ramps would result in substantial reductions in permanent impacts to wetland resource areas compared to the proposed design; however, temporary impacts would at least double due to the need for coffer dams to facilitate construction. Furthermore, although the direct fill impacts would be mostly limited to the footprint of the piles and pile caps, the ramp decks would be fairly close to the surface of the existing mudline, especially as the ramps approach MLLW, and, therefore, there would likely be additional fill impacts for scour protection under the deck. The area around the ramp decks would also likely be heavily shaded, limiting its habitat value. The DEIR previously noted that the hard surface of the ramps and adjacent sloped riprap/rock would provide new blue mussel habitat. According to the NPC, the emergency repair of pile-supported decks would also be more complicated and would take much longer than repair of a rock slope. Lastly, the sudden drop off the sides of the ramps poses a safety concern even if railings are installed. Because ensuring safety of passengers during emergency events is the primary objective of the project, the pile-supported alternative was determined to be an inferior alternative to achieve safety goals and was dismissed.

The Preferred Alternative, as described in the NPC, will include a solid fill base (sloped rip rap/rock) and will extend to one foot below MLLW, which Massport has determined is the design which best supports safe movement of rescue equipment, personnel and/or victims. The NPC indicates that while this increases wetland impacts, it is the design that best achieves the purpose of the project change to provide safe and efficient access for rescue and firefighting personnel (and equipment) during an emergency. As discussed further below, comments from Agencies indicated that the proposed design involves a significant amount of solid fill and armoring on the coastal beach, intertidal flats, and land under the ocean. Given the extent of fill associated with the emergency ramp expansions and grading changes, revisions to the mitigation package currently proposed are needed.

Environmental Justice

As noted above, the NPC provided an updated characterization of EJ populations based on the 2022 EJ Maps update, which was released after FEIR submittal. The project site is located within one EJ population characterized as Minority and is within one mile of two additional EJ populations characterized by Minority (Census Tract 1805 Block Group 3)[7] and Income (Census Tract 1802 Block Group 3). Within the Census Tracts containing the above EJ populations within the DGA, the following languages are identified as those spoken by five percent of more of residents who also identify as not speaking English very well: Spanish and Spanish Creole. The project site is within a census tract (9813.00) and within one mile of a census tract (9801.01)[8] in which five percent or more of the population have limited English proficiency (LEP) and are identified as speaking Spanish or Spanish Creole as their primary language (20.2% and 6.4%, respectively).

The NPC described public involvement activities conducted prior to filing the NPC, including advance notification of the project to a list of project-specific community-based organizations (CBOs) and tribes/indigenous organizations (the "EJ Reference List") developed by the Proponent from a list provided by the MEPA Office. The NPC is also posted on Massport's website in addition to a public outreach plan previously included in the FEIR (Appendix E.4). The NPC included an introductory letter (translated into Spanish) summarizing the project change and providing contact information for the project.

Based on the updated EJ mapping above, the NPC provided an updated baseline assessment of any existing unfair or inequitable Environmental Burden and related public health consequences impacting EJ populations in accordance with 301 CMR 11.07(6)(n)1. and the MEPA Interim Protocol for Analysis of EJ Impacts. According to the NPC, the data surveyed show some indication of an existing "unfair or inequitable" burden impacting the identified EJ populations. The DPH EJ Tool identifies the City of Boston and four Census Tracts in Winthrop (Tracts 1802, 1804, and 1805) within the one mile DGA as exhibiting "vulnerable health EJ criteria"; this term is defined in the DPH EJ Tool to include any one of four environmentally related health indicators that are measured to be 110% above statewide rates based on a five-year rolling average.[9] Specifically, vulnerable health EJ criteria are met for the following parameters:

- Childhood asthma (Boston)
- Childhood blood lead (Winthrop Census Tracts 1802, 1804, and 1805)
- Low birth weight (Winthrop Census Tract 1805)

[7] This EJ population is incorrectly identified in the NPC as Census Tract 1804 Block Group 2.
[8] Note that this census tract does not contain any EJ Populations as defined in 301 CMR 11.02. However, language outreach is still required under MEPA EJ protocols. As noted, the same languages were identified as spoken by LEP residents within EJ Populations in the DGA, and language services were offered in those languages.
[9] See https://matracking.ehs.state.ma.us/Environmental-Data/ej-vulnerable-health/environmental-justice.html. Four vulnerable health EJ criteria are tracked at the municipal level in the DPH EJ Viewer (heart attack hospitalization, childhood asthma, childhood blood lead, and low birth weight); of these, two (childhood blood lead and low birth weight) are also available at the census tract level.

In addition, supplemental information provided for the NPC indicates that the following sources of potential pollution exist within the one mile DGA, based on the mapping layers available in the DPH EJ Tool:

- Major air and waste facilities: 3
- M.G.L. c. 21E sites: 2
- "Tier II" toxics use reporting facilities:
- MassDEP sites with AULs: 1
- MassDEP public water suppliers: 2
- Underground Storage Tanks: 1
- Transportation infrastructure: 1 (Logan Airport)
- MBTA bus and rapid transit: (11 bus routes and 1 rapid transit line – Blue Line)

Although not required by the MEPA Interim Protocol for Analysis of EJ Impacts, the DEIR and FEIR surveyed environmental indicators tracked through the U.S. EPA's "EJ Screen." According to the NPC, there have been no changes to the findings related to the EJ Screen since the filing of the DEIR and FEIR. Namely, the one-mile project buffer area displays 4 out of the 12 environmental indicators at or above the 80th percentile: diesel particulate matter (DPM) concentrations, National Air Toxics Assessment (NATA) cancer risk, NATA non-cancer risk, and lead paint exposure.

As previously noted in the FEIR, temporary construction impacts associated with the project are expected to include marine vessel trips which will generate additional GHG emissions. The FEIR previously described the anticipated routes of these marine vessels, indicating that the contractor's offsite yard will likely be in Quincy, East Boston, or Charlestown. It is anticipated that barges and other vessels supporting construction would operate in an area up to 220 feet on either side of the footprint of the RSA deck for two 60-day runway closure periods. The FEIR indicated that the nearest residences are 2,400 feet from the project. The FEIR also previously noted the location of other sensitive receptors including schools, daycare centers, children's health clinics, or any other concentrated populations of children, indicating that the closest facility is a daycare in Winthrop, approximately 5,000 feet north of the project site. The NPC indicates that all short-term construction impacts are expected to be limited to on-Airport roadways with minimal impact to local roadways. All trucks would access the site by Route lA, Interstate 90, and the main Airport roadways only. Trucks would be prohibited from using local streets unless they are seeking construction-related access to or from local businesses. The FEIR previously detailed how flights redirected during the Runway 27 closure might impact EJ populations as flights will temporarily shift to other runways. The FEIR notes that the approach and departure routes depend on FAA air traffic control safety determinations including wind and weather. While the airport is surrounded by communities containing both EJ and non-EJ populations, it is not expected that any one population will be disproportionately affected. The NPC indicates that the project expects a maximum of 38 total daily construction truck trips and is expected to have minimal impact on Airport or regional roadways. The NPC also indicates that no additional construction period impacts are expected due to the project change.

The NPC notes that while the project is identified as having a high exposure to extreme precipitation (urban flooding) and sea level rise/storm surge, the project site and immediately

adjacent areas do not contain any residential areas and therefore, the project is not expected to impact EJ populations.

Impervious Area and Stormwater

The FEIR previously reported that the project would increase impervious area by 3.3 acres of RSA deck over open water and by 0.5 acres of perimeter road pavement and approach slab some of which is in currently grassed uplands. Supplemental information provided during the review period clarified that the FEIR did not include a 0.2 acre portion of the approach slab located over the existing crushed rock Inclined Safety Area (ISA). With this area included, the total impervious area should be 4.0 acres (not 3.8), as reported under "previously reviewed" in the NPC impact table.

According to the NPC form, the project change will result in an approximately 3.1 acre increase in impervious area; however, in supplemental information, Massport confirmed that while there are increases in wetland impacts, there will be no increase in impervious area. As noted above, the longer ramps will be narrower than those proposed in the FEIR, and additional areas of perimeter roadway will be removed resulting in no change in impervious area as reported in the FEIR (4.0 acres). The NPC notes that the increase does not meet or exceed any new review thresholds. The NPC indicates that in response to coordination with MassDEP, stormwater improvements have been added to the design to handle stormwater from the deck. This stormwater will be directed to a nearby outfall which provides water quality treatment; that change will require additional minimal impacts to upsize the outfall appropriately. The upsized outfall will require a stone apron that will alter approximately 10 sf of Coastal Beach/Mud Flat, 175 sf of LSCSF, and 175 sf of LCS/LSTA. The proposed stormwater management will be subject to review and approval by the Boston Conservation Commission under a Notice of Intent filing (or in the case of an appeal, a Superseding Order of Conditions from MassDEP).

Wetlands and Fisheries

As noted above, the following wetland resource areas will be impacted by the project change: 18,958 sf (15,910 permanent, 3,048 sf temporary) of LSTA, 6,496 sf (5,390 sf permanent, 1,106 temporary) of Coastal Beach, 32,874 sf (24,823 sf permanent, 8,024 sf temporary) of LSCSF (100-year Floodplain), 8,872 sf (6,874 permanent, 1,998 temporary) of LUO, and 20,482 sf (15,910 sf permanent, 4,572 temporary sf) of LCS. The NPC indicates that total impacts associated with the emergency ramps is approximately 168,071 sf (some resource areas overlap), which includes impacts associated with the shorter ramps reported in the FEIR.

According to the NPC, Massport will be required to provide a plan for replacement of all permanent intertidal and subtidal areas (Coastal Beach, LUO, and LCS) impacted by the project change in subsequent permitting. In the FEIR, Massport proposed a wetland mitigation goal of 1:1 restoration or replacement of approximately 1,200 sf of filled wetland area (impacts associated with RSA deck piles and shorter emergency ramps) via construction or restoration of mud flat based on current USACE and MassDEP guidance. Massport indicates that it is committed to meeting this 1:1 goal with respect to the additional impacts associated with the project change. In close coordination with the permitting agencies, mud flat mitigation is expected to be provided in the form of shoreline restoration within Boston Harbor. In coordination with the USACE, Massport will provide a payment to the Massachusetts

Department of Fish and Game In-Lieu Fee program, as recommended by Division of Marine Fisheries (DMF), for the impacts to shellfish resources and shellfishing. Additionally, Massport will conform to the Time of Year Restriction during construction to protect spawning winter flounder, manage and treat stormwater runoff in compliance with MA Stormwater Management Standards, develop and conduct Erosion and Sedimentation Control Program, and use turbidity curtains for the in-water construction work areas.

Comments from MassDEP indicate that payment of an in-lieu fee does not meet the performance standards contained in the Wetlands Protection Regulations for all resource areas, and that Massport should evaluate additional mitigation measures to address the increased impacts to wetland resource areas from the project change. Comments from CZM and MassDEP note that Massport has proposed a preliminary mitigation site (the Saratoga Street Mitigation Project) but states that this site may be insufficient to fully mitigate the impacts on coastal and marine resources associated with the project. In addition, Agencies have raised concern with expanding the proposed excavation of filled tidelands at the mitigation site to extend beyond the limits of the existing solid fill pier at Saratoga Street, as this may cause unintended impacts on the adjacent roadway. These concerns were expressed at the inter-agency meeting regarding the Saratoga Street Mitigation area on May 6, 2025. Comments indicate that Massport should analyze potential indirect impacts of design at the mitigation parcel and propose additional mitigation to address the increased impacts from the project change. Proposed work at the mitigation site, in addition to any additional mitigation that may be required for this project, is anticipated to undergo separate MEPA review, and full disclosures of impacts will be provided at that time.

Comments from the DMF include recommendations for TOY restrictions (February 15 to June 30); erosion and sediment control (recommending use of a turbidity curtain, conducting work in the "dry" at low tide, avoiding storage of construction material/equipment in the intertidal zone, and working in the intertidal zone from either a floating barge or from upland portions of the site to the extent practicable); post-construction site access (DMF concurs that badged shellfishers will be allowed access to the site following construction); and mitigation in the form of replacement and restoration. Comments from DMF include additional recommendations related to mitigation as follows:

- DMF supports the compensatory mitigation outlined in both Massport's proposed restoration at Saratoga Street and EPA's recommended restoration in the Rumney Marsh. DMF notes that the recommended Rumney Marsh restoration provides an opportunity to provide compensatory mitigation of a magnitude that it believes to be commensurate to the impact of the project. DMF is concerned that the proposed Saratoga Street restoration alone is insufficient to mitigate for the project's impacts.
- DMF also notes that the proposed Saratoga Street restoration effort is within shellfish growing area GBH5.14 classified as Prohibited for shellfish harvest and the recommended Rumney Marsh restoration effort is within shellfish growing area N26.6 also classified as Prohibited for shellfish harvest. The LCS impacted by the project includes shellfish growing areas classified as Conditionally Restricted for shellfish harvest. Thus, while restoration efforts at Saratoga Street and/or Rumney Marsh may provide replacement shellfish habitat, they will not provide replacement opportunity for shellfishing in Boston Harbor.

- DMF notes in-kind mitigation of impacts to shellfishing resources in Boston Harbor may not be feasible. Specifically, following review of the performance of previous shellfish restoration efforts in Boston Harbor and the current suitability of Boston Harbor for shellfish restoration, DMF does not believe a contribution to the DMF shellfish restoration program is an optimal means to mitigate the project's impacts to shellfish resources and shellfishing.
- In order to provide a possibility for project mitigation to occur in areas where shellfishing opportunities are available, DMF continues to support compensatory mitigation via payment into the USACE In-Lieu-Fee Program.
- DMF requests Massport continue to coordinate with regulatory agencies to identify appropriate mechanisms to mitigate for project impacts.

As noted, Massport indicates that it remains committed to a 1:1 restoration or replacement goal to account for the wetland impacts of the project, including the increased impacts of the project change. However, the details of the mitigation, including the design of the Saratoga Street Mitigation Project, are not yet finalized. Massport should continue to work with resource agencies to refine and finalize design of the Saratoga Street Mitigation Project with supplemental mitigation as appropriate. As noted, work proposed at the Saratoga Street Mitigation Project site, together with any additional mitigation that may be required for this project, is anticipated to be the subject of separate MEPA review. Final mitigation commitments for this project should continue to be updated through subsequent permitting, including Chapter 91 licensing, 401 WQC, and CZM Federal Consistency.

Chapter 91 and Tidelands

The NPC indicates that as a result of the project change, additional areas of flowed tidelands will be impacted. The NPC notes that the safety improvements would be constructed within the Logan Airport Security Zone and would be approximately 175 feet from the edge of the navigation channel at its nearest point. As previously stated in the FEIR, the proposed RSA deck would not limit vessel navigation outside the deck or between the deck and the navigation channel. Changes to the emergency ramps would also not affect vessel navigation. Comments from the MassDEP Waterways Program (MassDEP Waterways) note that the proposed project change identified in the NPC does not appreciably change the project as related to Chapter 91 and the regulations at 310 CMR 9.00, but note that the NPC did not specify the proposed mitigation measures/compensation with respect to c.91 requirements as stipulated in 310 CMR 9.21 and 9.55. The FEIR stated that the project would be located up to 460 feet seaward of the State Harbor Line and indicated that the Massport Enabling Act[10] "grants the authority broad authorization for Massport to utilize adjacent underwater areas for airport purposes that should arise in the future." Comments from MassDEP Waterways on the FEIR stated that the Department did not agree with this statement but that this jurisdictional matter could be worked out during licensing. Comments MassDEP Waterways on the NPC state that the c.91 License will ensure that the project adequately mitigates for unavoidable impacts to c.91 interests. The NPC indicates that Massport submitted a c.91 application with a request for a variance on August 20, 2024 which is currently being reviewed by MassDEP Waterways.[11] As noted by MassDEP

[10] 7 Massachusetts Port Authority Enabling Act, Chapter 465 of the Acts of 1956, Section 4, Paragraph 6.
[11] The ENF previously identified that the permitting pathway for this project was a Variance. The project changes do not affect this determination.

Waterways, the c.91 application for variance will need to be modified to include the project changes disclosed in the NPC.

Public Benefit Determination (PBD)

The project site is comprised of tidelands subject to the provisions of *An Act Relative to Licensing Requirements for Certain Tidelands* (2007 Mass. Acts ch. 168) and the Public Benefit Determination (PBD) regulations (301 CMR 13.00). A PBD for the project was issued on February 23, 2024 and determined that the previously reviewed project would have a public benefit. As noted, MassDEP Waterways has confirmed that the project change identified in the NPC does not appreciably change the project as related to Chapter 91 and regulations at 310 CMR 9.00. The site does not contain landlocked tidelands outside areas subject to Chapter 91 licensing and MassDEP jurisdiction. Accordingly, I will not issue an Amended PBD.

Rare Species

As noted above, the proposed project site is mapped as *Priority Habitat* for a state-listed species: Upland Sandpiper (*Bartramia longicauda*), Endangered and Eastern Meadowlark (*Sternella magna*), Special Concern as indicated in the *Massachusetts Natural Heritage Atlas* (15th Edition). The NPC indicates that the project change will decrease the amount of permanent grassland impacts from 22,000 sf to 15,000 sf. The existing and temporary perimeter roads would be removed and reseeded at the conclusion of construction. Additionally, the majority of fill landward of the bulkhead would be restored to grassland habitat. During construction, 29,000 sf of grassland will be temporarily altered for during in order to reroute the perimeter road around the project site. As noted above, NHESP issued a Conditional No-Take on June 21, 2024. Comments from NHESP[12] indicate that the project change reduces permanent impacts; however temporary impacts have increased. Comments state that NHESP has approved the changes as consistent with the previous Conditional No-Take Determination.

Mitigation and Draft Section 61 Findings

The NPC summarizes the proposed mitigation measures provided in the FEIR and includes revised Section 61 Findings for the project with the changes described in the NPC. It contains commitments to implement these mitigation measures, identifies the parties responsible for implementation, and includes a schedule for implementation. These draft Section 61 Findings should be provided to Agencies to assist in the permitting process and issuance of final Section 61 Findings. As an Agency undertaking the project, Massport should also issue Section 61 Findings including all mitigation commitments for the project. As described in the NPC, the Proponent has committed to implement the following measures to avoid, minimize and mitigate Damage to the Environment.

Environmental Justice/Public Health

- Continue public outreach as outlined in the *Updated EJ Outreach Plan* included in the FEIR
- Minimize engine idling in accordance with Massachusetts anti-idling regulations.

[12] Email from Amy Hoenig, NHESP, to Jennifer Hughes, MEPA dated June 23, 2024.

- Retrofit appropriate diesel construction equipment with diesel oxidation catalysts and/or particulate filters to minimize emissions
- Barges and other vessels will operate in an area up to 220 feet on either side of the RSA deck for two 60 day closure periods. The nearest residences are 2,400 feet from the project and the nearest sensitive receptor (a daycare in Winthrop) is approximately 5,000 ft to the north
- Trucks carrying construction materials, equipment, and personnel would have a minimal, temporary impact on ground transportation in the vicinity of Logan Airport. Construction vehicles would be prohibited from local roads

Wetlands and Fisheries

- Provide 1:1 replacement/restoration of intertidal and subtidal wetlands impacted by piles and egress ramps
- Provide stormwater management system to control and treat stormwater runoff in compliance with the Massachusetts Stormwater Management Standards
- Implement winter flounder time-of-year (TOY) restriction from February 15 to June 30 for in-water construction activities
- Provide mitigation fee to DMF for off-site restoration
- Provide Mud Flat mitigation in the form of shoreline restoration in Boston Harbor
- Use turbidity curtains for in-water construction
- Continue to coordinate with resource agencies to finalize the design of the Saratoga Street Mitigation Program with supplemental mitigation as appropriate to fully mitigate for impacts of the project change. Work required at mitigation sites is anticipated to undergo separate MEPA review.

Chapter 91 and Tidelands

- Continue to allow shellfish harvesting by licensed clammers within the Security Zone with prior notice from DMF.

Rare Species

- Provide 1:1 replacement of lost upland grassland habitat

Climate Change

- Elevate the RSA deck above the projected water surface elevation for the 100-year storm in 2070. The project is not able to meet the elevation to be above the 200-year storm event of 2070 (as provided by the output report from the MA Resilience Tool) because it is not possible to raise the runway system

Construction Period

- Develop and implement a comprehensive Soil Erosion and Sediment Control Plan in accordance with NPDES and MassDEP standards.
- Apply water to dry soil to prevent fugitive dust.

- Maintain mufflers on construction equipment.
- Minimize engine idling in accordance with Massachusetts anti-idling regulations.
- Retrofit appropriate diesel construction equipment with diesel oxidation catalysts and/or particulate filters.
- Fit any air-powered equipment with pneumatic exhaust silencers.
- Implement construction worker vehicle trip management techniques.

Conclusion

The NPC has sufficiently described the nature and general elements of the project for the purposes of MEPA review and described measures to avoid, minimize and mitigate the environmental impacts of the project change. Comments from Agencies do not request additional MEPA review. Accordingly, I find that an EIR is not required for this project change.

June 30, 2025
Date

Rebecca L. Tepper

Comments received:

01/05/2023 John Vitagliano (resubmitted 05/13/2025)
05/20/2025 Division of Marine Fisheries (DMF)
06/17/2025 Office of Coastal Zone Management (CZM)
06/20/2025 MassDEP Waterways Regulation Program (WRP)
06/20/2025 MassDEP NERO
06/23/2024 NHESP (via email)

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