2. Sustainability, Outreach, and Environmental Justice

This is a new chapter within the *2022 ESPR* that reorganizes and enhances information provided in previous Environmental Status and Planning Reports (ESPRs) and Environmental Data Reports (EDRs) on Massport's **sustainability** and **resiliency** efforts, environmental measures, and outreach and engagement activities associated with Logan Airport activities. In alignment with recent changes to Massachusetts Environmental Policy Act Office (MEPA) regulations, this chapter also discusses Massport's **Environmental Justice (EJ)** practices. This chapter provides an overview of measures Massport takes to avoid, minimize, and mitigate the environmental impacts of Airport operations and efforts to be a good neighbor to surrounding communities.

Chapter 10, *Project Mitigation*, details the project-specific mitigation for projects that met the MEPA requirements for preparation of an Environmental Impact Report (EIR). Beyond the measures required for individual projects, Massport also implements a wide range of ongoing initiatives to enhance operational efficiency and reduce overall Airport environmental impacts. Details on Massport's community open space and Airport edge buffers program are also presented in this chapter.

The following sections describe Massport's community engagement practices, EJ-focused measures, and Massport-wide sustainability and resiliency initiatives. Key environmental initiatives presented in this chapter include Airport-wide sustainability and resiliency programs, **greenhouse gas (GHG)** emissions reduction programs, and Massport's ambitious climate change initiative, the ***Roadmap to Net Zero by 2031* (*Net Zero by 2031*)**.

2022 Sustainability, Outreach, Environmental Justice and Key Findings

The following details key findings regarding sustainability, outreach, and EJ efforts at the Airport in 2022:

- The *Act Creating a Next-Generation Roadmap for Massachusetts Climate Policy* (the Climate Roadmap Act) was signed into law in March 2021 and set targets for GHG emissions reduction in the state, including a goal of net zero GHG emissions by 2050. In support of this goal, Massport published its *Net Zero by 2031* plan to achieve net zero GHG emissions from Massport facilities by 2031.
- Massport's Community Relations & Government Affairs Department manages outreach efforts with community members and government officials through extensive and evolving public involvement practices that include engagement with neighbors and EJ communities.
- For this and future EDRs and ESPRs, Massport has expanded its 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.
- The Massport CAC is made up of 35 representatives from impacted communities and serves as a forum for information sharing on projects, Massport initiatives, and other topics of interest.
- Massport conducted an EJ and public health existing conditions review. The Logan Airport **designated geographic area (DGA)** contains 64 EJ block groups, and both EJ and non-EJ populations within the DGA meet the Vulnerable Health EJ Criteria; meaning these populations likely experience health consequences consistent with the Vulnerable Health EJ Criteria.
- Massport continues to develop initiatives to limit cumulative environmental impacts from Airport operations.
- Massport funds community foundations in East Boston, South Boston, and Winthrop; each of which has a Board of Trustees that meets regularly to award grant funds to community programs and organizations that help improve the quality of life for residents.
- Since 2014, Massport has funded the East Boston Neighborhood Health Center's efforts to expand its Pediatric Asthma and Chronic Obstructive Pulmonary Disease (COPD) Prevention and Treatment Program.
- Each year, Massport awards scholarship grants to local high school seniors. Since 2007, Massport has awarded nearly $300,000 in scholarship grants for Diversity Science, Technology, Engineering, and Math (STEM) and Memorial Scholarships. Massport awards over $250,000 in grants to local non-profit organizations through the Charitable Contribution Program each year. Massport has set a goal to award at least 50 percent of the program's budget to programs predominately serving people of color.

2.1 Sustainability, Climate Adaption, and Resiliency

As the Boston area faces increasing temperatures, more frequent extreme weather events, and rising sea levels due to climate change, Massport recognizes the need to address its contributions to climate change; to thoroughly prepare for related impacts; and to protect its critical infrastructure, operational assets, and workforce. Through planning and regional collaboration, Massport will continue its leadership role in climate adaptation and resiliency planning in the region and among port authorities and the airport industry. For almost a decade, Massport has committed to improving its overall climate adaption and resiliency performance through implementing strategies including floodproofing buildings, operational planning for storm preparedness, innovative partnerships, regional collaboration, and reducing GHG emissions associated with Massport operations and activities.

Massport's Sustainability Vision - Massport will maintain its role as an innovative industry leader through continuous improvement in operational efficiency, facility design and construction, and environmental stewardship while engaging passengers, employees, and the community in a sustainable manner.

The following sections summarize the long-term and multifaceted sustainability initiatives undertaken by Massport. A history of Massport's sustainability planning is illustrated in **Figure 2-1**, and more information about Massport's resiliency programs is available at: https://www.massport.com/sustainability.

2.1.1 Massport Roadmap to Net Zero Greenhouse Gas Emissions

On March 26, 2021, the Climate Roadmap Act was signed into law, setting GHG interim targets for the state.[1] Targets include a 50 percent reduction in absolute GHG emissions by 2030, a 75 percent reduction by 2040, and an absolute GHG emissions reduction to 85 percent or less than 1990 GHG emission levels by 2050. The law also requires statewide net zero GHG emissions by 2050. These targets align with the federal government's net zero timeline and the 2015 Paris Agreement enacted by the United Nations (U.N.).[2,3] According to the U.N., achieving global net zero GHG emissions by 2050 is a crucial international goal to avert the worst impacts of climate change and preserve a habitable planet.[4]

1 Commonwealth of Massachusetts, Acts 2021, Chapter 8. March 26, 2021. An Act Creating a Next-Generation Roadmap for Massachusetts Climate Policy. Session Law 2021, c. 8, ss. 57-60. https://malegislature.gov/Laws/SessionLaws/Acts/2021/Chapter8.

2 Office of the Federal Chief Sustainability Officer, 2023. Net-Zero Emissions Operations by 2050, including a 65% reduction by 2023. https://www.sustainability.gov/federalsustainabilityplan/emissions.html.

3 United Nations Framework Convention on Climate Change, 2015. Paris Agreement. https://unfccc.int/process-and-meetings/the-paris-agreement.

4 United Nations Climate Change, 2023. For a livable climate: Net-zero commitments must be backed by credible action. https://www.un.org/en/climatechange/net-zero-coalition.

Figure 2-1 History of Sustainability at Massport

In March 2022, Massport published its *Roadmap to Net Zero by 2031*,[5] an ambitious, Authority-wide program to achieve net zero GHG emissions by 2031 for the activities under Massport's control. The 2031 timeframe also coincides with the 75th anniversary of Massport's founding. For areas where GHG emissions cannot be reduced to zero, Massport will invest in **carbon offsets** to reach the target. Massport expects to be net zero without offsets by 2040. Carbon offsets are investments in GHG-reducing projects, such as solar farms, which lessen the overall impact of, or offset, an organization's own GHG emissions. Massport's preference is to purchase offsets that benefit local projects within the State. Achieving these net zero targets would put Massport nearly two decades ahead of the 2050 deadline called for in the Paris Agreement and the Climate Roadmap Act. As a key economic entity within the state, Massport will be a leader in achieving net zero within the State and the transportation industry.

Massport Net Zero By 2031 *Report Cover. Source: Massport.*

Existing GHG Emissions at Massport

To assess the pathways for achieving net zero, Massport established a GHG emissions baseline across its organizational footprint. As is standard, Massport inventoried and then categorized its emissions sources into Scopes 1, 2, and 3.

Scope 1 emissions sources are under Massport's direct control, such as emissions associated with buildings, facilities, Logan Airport's Central Heating Plant, and Massport's vehicle fleet and equipment. Massport owns or has direct control of sources, and retrofits or replacements would eliminate these GHG emissions.

Scope Emissions at Logan Airport:

- Scope 1 and 2 = 12.5%
- Scope 3 = 87.5%

Scope 1 and 2 emissions make up 10.8% of Massport's total emissions

Scope 2 emissions sources are not directly within Massport's control, but Massport has some ability to limit or remove these sources. An example would be purchased electricity from an electrical utility provider. Massport may have the option to purchase renewably sourced electricity from one utility over another, but cannot affect what providers are available or influence its ability to meet Massport's energy demands.

Scope 3 emissions sources are not under Massport's control or ownership, like those of Airport users and tenants. However, Massport encourages and supports these groups to voluntarily implement GHG emission reduction initiatives. Examples of Logan Airport's Scope 3 sources include energy consumed by tenant-owned or operated facilities or equipment, like fleet vehicles, commercial aircraft, or ground service equipment (GSE) for example, or from sources like employee and passenger ground transportation. While Massport cannot control, for example, whether a passenger will use their personal

5 2031 marks the 75th anniversary of the establishment of Massport.

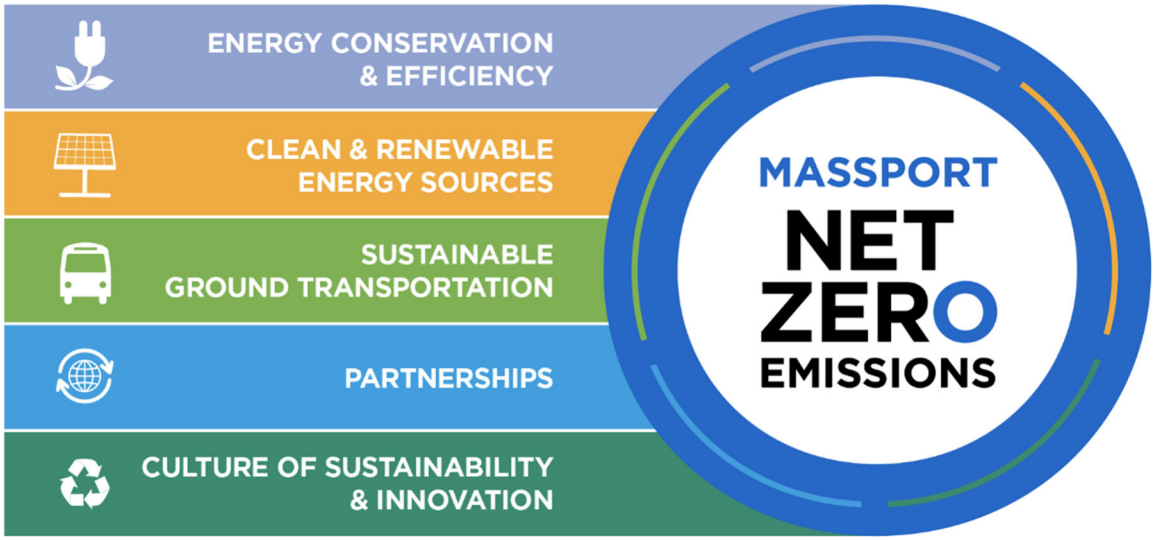
vehicle, Massport makes high-occupancy vehicle (HOV) use and public transportation options more accessible or affordable, thereby incentivizing GHG emissions-reducing behavior.

Between 2017 and 2019, Massport conducted an inventory of GHG emissions across its facilities. GHGs as a group are comprised of gases including carbon dioxide (CO_2), methane (CH_4), carbon monoxide (CO), and nitrous oxide (N_2O). For ease of reporting, Massport follows a common industry practice of converting measured GHG concentrations into metric tons of CO_2 equivalent ($MTCO_2e$).[6] In 2019, Logan Airport's total emissions were 808,125 $MTCO_2e$, with 51,359 $MTCO_2e$ from Scope 1 sources, 43,226 MTCO2e from Scope 2, and 713,540 $MTCO_2e$ from Scope 3. Logan Airport comprises approximately 86 percent of Massport's total Scope 1 and Scope 2 GHG emissions. Other relevant contributors to this total GHG emissions quantity include the Paul W. Conley Container Terminal and Flynn Cruiseport Boston, comprising 12 percent combined, and Laurence G. Hanscom Airfield and Worcester Regional Airport, comprising 2 percent combined.

Net Zero Roadmap

To meet Massport's net zero goals, five pathways were identified as illustrated in **Figure 2-2**. These pathways address the largest sources of Massport's controlled GHG emissions as well as the emissions it influences. These pathways also consider ways Massport can achieve additional sustainability benefits, such as advancing innovation within the industry and promoting collaboration and engagement through partnerships and Authority-wide engagement.

Figure 2-2 Net Zero GHG Emission Reduction Pathways to Implementation



6 U.S. Environmental Protection Agency (EPA), 2023. Greenhouse Gas Equivalencies Calculator. Website. Energy and the Environment. U.S. Environmental Protection Agency. https://epa.gov/energy/greenhouse-gas-equivalencies-calculator. Updated July 21, 2023.

For each of these pathways, GHG emissions reduction initiatives were identified. These initiatives were evaluated for their implementation practicality, emissions reduction potential, and capital costs. **Table 2-1** lists the priority initiatives produced by this evaluation process.

Table 2-1 Priority Emissions Reduction Initiatives

Pathway	Initiative
Energy Conservation and Efficiency	• Optimize building efficiency and conservation • Upgrade heating, ventilation, and air conditioning systems • Conduct an electrification infrastructure assessment study • Assess current and future building and equipment electrical demand • Determine options to achieve decarbonization for the Logan Central Heating Plant
Clean and Renewable Energy Sources	• Install solar photovoltaic arrays at Massport facilities and sites, where feasible • Evaluate alternative fuels for Massport operations, infrastructure, and equipment
Sustainable Ground Transportation	• Transition Massport fleet vehicles, including heavy-duty vehicles, shuttle buses, and Logan Express Buses to electric or alternative fuel vehicles.
Partnerships	• Develop partnerships with educational institutions, manufacturers, airlines, and energy providers • Integrate net zero and sustainability approach into the capital planning process
Culture of Sustainability and Innovation	• Implement a change management program across Massport • Develop and implement an internal education and training program

Net Zero Roadmap Implementation

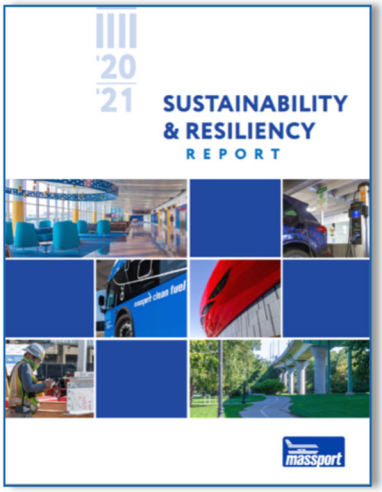
With the initial goals identified, Massport established a Program Management Office (PMO) involving a team of Massport staff and external subject matter experts leading the continued evolution and implementation of Massport's *Net Zero by 2031* program. The PMO guides the Authority towards achieving its net zero goals and objectives and assists Massport by:

- Assisting with implementing the pathways and initiatives identified in the *Net Zero by 2031* program;[7]
- Providing strategic thinking and planning for ongoing capital improvement projects and purchases;
- Identifying technological improvements and other forms of innovation pertinent to net zero;
- Tracking progress towards achieving net zero target goals and interim milestones;
- Working to verify that the net zero goal is understood and is positively affected by Massport's employees, business partners, and customers.

7 Massport, 2021. Roadmap to Net Zero. https://www.massport.com/massport/about-massport/roadmap-to-net-zero.

2.1.2 Sustainability Planning and Implementation

The *Net Zero by 2031* program builds on over a decade of sustainability and resiliency planning undertaken by Massport for its facilities and activities. Completed in 2015, the Federal Aviation Administration (FAA)-funded Logan Airport's *Sustainability Management Plan* (SMP) addresses sustainability holistically; considering economic vitality, operational efficiency, natural resource conservation, and social responsibility. The Logan Airport's SMP established a framework of goals, objectives, and an implementation plan with key performance indicators (KPIs); **Table 2-2** lists the Logan Airport's SMP's goals and objectives by sustainability category. The Logan Airport's SMP was then expanded into an Authority-wide Sustainable Massport program that addressed airport, maritime, and real estate assets. The *Sustainability and Resiliency Report*[8] (Sustainable Massport 2.0) builds and expands on the work started with Logan Airport's 2015 SMP. Having tracked progress on its sustainability goals for over a decade, Massport has a solid foundation for the *Roadmap to Net Zero by 2031* described in Section 2.1.1.



2020-2021 Sustainability and Resiliency Report Cover. Source: Massport.

The *2020 and 2021 Sustainability and Resiliency Report*, 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.

The progress made towards achieving the Logan Airport's SMP program's goals and objectives is published in sustainability reports, which also highlight Massport's efforts to improve and enhance sustainability and climate resiliency across the entire organization. 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 2024.

8 Massport, April 2018. Sustainable Massport; Annual Sustainability & Resiliency Report. https://www.massport.com/media/2774/massport-annual-sustainability-and-resiliency-report-2018_lr.pdf.

Table 2-2 Logan Airport Sustainability Goals and Descriptions

Sustainability Category and Goal		Sustainability Category and Goal	
Energy and Greenhouse Gas (GHG) Emissions		**Water Conservation**	
	Reduce energy intensity and GHG emissions while increasing the portion of Massport's energy generated from renewable sources.		Conserve regional water resources through reduced potable water consumption.
Community, Employee, and Passenger Well-being		**Materials, Waste Management, and Recycling**	
	Promote economically prosperous, equitable, and healthy communities, and passenger and employee well-being.		Reduce waste generation, increase the recycling rate, and utilize environmentally sound materials.
Resiliency		**Noise Abatement**	
	Become an innovative and national model for resiliency planning and implementation among port authorities.		Minimize noise impacts from Logan Airport operations and expand the sound insulation program.
Air Quality Improvement		**Ground Access and Connectivity**	
	Decrease air pollutant emissions from Massport sources.		Provide superior ground access to Logan Airport through alternative and high-occupancy vehicle (HOV) travel modes.
Water Quality/Stormwater		**Natural Resources**	
	Protect water quality and minimize discharge of pollutants.		Protect and restore natural resources near Massport facilities.

Source: Logan Airport's 2020/2021 SMP.

Resiliency Planning

Climate change is a real and urgent issue, causing a wide range of increasingly significant impacts such as rising sea levels, extreme storms, heavy precipitation, coastal flooding, and extreme heat. Massport recognizes the importance of taking action to mitigate and prepare for these impacts to protect critical infrastructure, operations, and surrounding communities. Massport embraces an integrated, comprehensive approach to climate change through resiliency planning and adaptation.

In 2013, Massport launched a comprehensive resiliency initiative to maximize business continuity amidst various human and natural threats. Massport's efforts are guided by the following goals:

- Improve resiliency overall for infrastructure and operations;
- Restore operations during and after disruptive events in a safe and economically viable timeframe;
- Create robust feedback loops that allow for adaptability and new solutions as conditions change;
- Adapt operations and policy, and implement design-build decisions, through the application of sound scientific research and principles that consider threats, vulnerabilities, and cost-benefit calculations;
- Become the ideal model of a knowledge-sharing, forward-thinking, and resilient port authority;
- Work with key influencers and decision-makers to strengthen understanding of the human, national, and economic security implications of extreme weather, changing climate, and anthropogenic threats to Massport's facilities and the region;
- Review capital programs, tenant alterations, real estate projects, and asset management projects for compliance with Massport's *Floodproofing Design Guide* (see https://www.massport.com/environment/sustainability/resiliency); and
- Conduct annual pre-hurricane season tabletop exercises and flood barrier training exercises.

In addition to protecting Massport-owned assets, the Authority has been collaborating with regional resiliency efforts, including the Massachusetts Executive Office of Energy and Environmental Affairs (EEA) ResilientMass program, U.S. Army Corps of Engineers (U.S.ACE), and City of Boston initiatives to protect surrounding communities. Massport's open space and airport edge buffer parks are an example of this district-scale resiliency approach. As described in Section 2.2.3.9, 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, establish a buffer area for neighborhoods in the event of extreme flooding.

2.1.3 Sustainable Design and Construction Guidelines

Massport is committed to being a leader in sustainable design and construction across all of its business lines, including Logan Airport. New construction and reconstruction or rehabilitation projects for both physical buildings and infrastructure of any square footage or monetary value at the Airport are considered within Massport's comprehensive approach to sustainability and resiliency within the built environment.

Design Guidelines for Sustainability, Net Zero, and Resiliency

The 2018 edition of Massport's ***Sustainability and Resiliency Design Standards and Guidelines (SRDSGs)*** codifies the sustainable practices Massport is currently working to achieve. These practices, documented in the Logan Airport's SMP and subsequent sustainability and resiliency reports, are requirements for both vertical and horizontal projects on Massport property. As applicable and feasible, the SRDSGs reference and incorporate state and local policies and plans such as the *Global Warming Solutions Act of 2008* and the Boston Zoning Code Article 37.

The standards are currently being updated to reflect the latest net-zero criteria and address topics like embodied carbon emissions and occupant health and wellness. More recent state and local policies, such as the *2021 Climate Roadmap Act*, the *Massachusetts Clean Energy and Climate Plan for 2025 and 2030*, *House Bill 5060: An Act Driving Clean Energy and Offshore Wind*, and *House Bill 5151: An Act Relative to Massachusetts's Transportation Resources and Climate* (MassTRAC), will also be referenced in the update to the SRDSGs, which is planned for publication in 2024.

Sustainability Rating Systems

Massport's SRDSGs include requirements from industry-leading green building rating systems, such as the U.S. Green Building Council's (U.S.GBC) Leadership in Energy and Environmental Design™ (LEED®) rating system.[9] If LEED® eligible, Massport-owned projects must achieve LEED® Gold Certification or higher. **Table 2-3** lists LEED®-certified Massport facilities. In addition to U.S.GBC's LEED® Certification requirement, Massport's next iteration of its SRDSGs is expected to incorporate the Institute for Sustainable Infrastructure's (ISI's) Envision™ rating system.[10]

9 The Leadership in Energy and Environmental Design™ (LEED®) rating system is a globally recognized green building certification system developed by the U.S. Green Building Council (U.S.GBC). It provides a framework for healthy, highly efficient, and cost-saving green buildings, and indicates sustainability achievement and leadership.

10 The Institute for Sustainable Infrastructure's (ISI's) Envision™ rating system is a comprehensive framework and certification system that assesses the sustainability of infrastructure projects across five categories: quality of life, leadership, resource allocation, natural world, and climate and resilience.

Table 2-3 Leadership in Energy and Environmental Design (LEED®)-Certified Facilities at Logan Airport

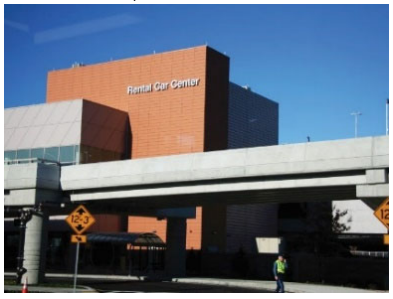
Project, Year Completed, LEED® Certification	LEED® Features
Massport Projects	
Terminal A, LEED® Certified, 2006 	• First airport terminal in the world to be LEED® Certified • Priority curb locations for high-occupancy vehicles (HOVs) and bicycles • Rooftop solar panel retrofits • Stormwater filtration systems • Reflective roof materials reduce heat island effect • Water consumption reduction features • Natural daylight paired with advanced energy-efficient lighting technologies • Recycled and regionally sourced building materials • Indoor air quality enhancement measures
Green Bus Depot, LEED® Silver, 2014 	• Rooftop solar panels • Water and energy-saving features • Vehicle miles traveled (VMT) reduction measures • New shuttle fleet includes clean diesel-electric hybrid and compressed natural gas (CNG) buses • Sustainably grown, harvested, produced, and transported building materials
Rental Car Center (RCC), LEED® Gold, 2015 	• Green building materials, including recycled and regionally sourced building materials • Rooftop solar panels • Bike and pedestrian access and connections • Natural daylight paired with advanced energy-efficient lighting technologies • Indoor air quality enhancement measures • Plug-in stations for electric vehicles (EVs) • Rental car fleets including electric, hybrid, and low emissions vehicles • Employee showers and changing areas to promote cycling or walking to work • Recycling and reuse of vehicle wash water • Stormwater reclamation for non-potable uses such as vehicle washing and landscaping irrigation • VMT reduction measures

Table 2-3 Leadership in Energy and Environmental Design (LEED®)-Certified Facilities at Logan Airport

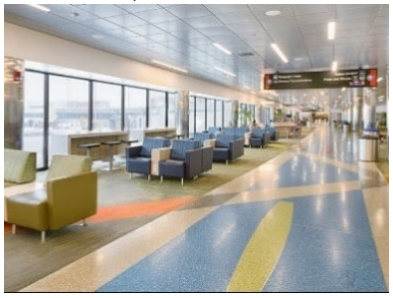
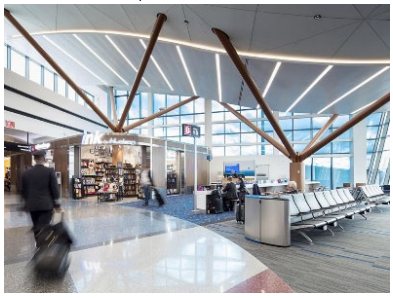
Project, Year Completed, LEED® Certification	LEED® Features
Terminal E New Large Aircraft Wing, LEED® Gold, 2017 	• Reflective roof materials and a light color concrete tarmac to reduce heat island effect • Low-flow water fixtures and water closets • Efficient light fixtures and efficient heating, ventilation, and air conditioning (HVAC) system • Renewable energy source usage • Recycled and regionally sourced materials • Indoor air quality enhancements • Solar-thermal domestic hot water system heats 100 percent of the wing's domestic water needs
Terminal B Gates 37-38, LEED® Gold, 2019 	• Energy Star® certified equipment used • Forest Stewardship Council (FSC®) certified wood products used • Expansive windows and outdoor views promote passenger comfort and well-being while reducing energy use for lighting
Terminal B Optimization, LEED® Silver, 2022 	• Energy conservation measures implemented for improved performance • Recycled or local materials utilized where feasible • Reused over half of the prior building structure or envelope • Significant construction and demolition waste diversion • Implemented water conservation measures to reduce potable water use. • Facility designed to maximize outdoor views and lighting

Table 2-3 Leadership in Energy and Environmental Design (LEED®)-Certified Facilities at Logan Airport

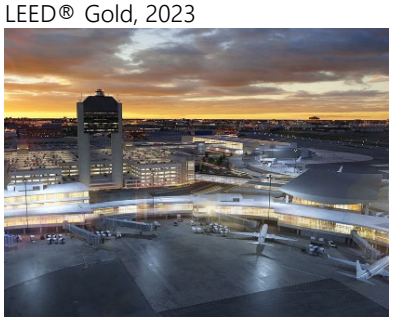
Project, Year Completed, LEED® Certification	LEED® Features
Terminal C to B Connector, LEED® Gold, 2023 	• Energy-efficient exterior and interior lighting • High-performance glazing on transparent curtain walls. • Electric vehicle (EV) charging infrastructure for electric ground support equipment (eGSE) • Energy efficient HVAC systems provide annual energy savings over baseline • Reflective roof materials and a light color concrete tarmac to reduce heat island effect
Actively Pursuing LEED® Certification	
Terminal E Modernization, LEED® Gold, in progress at the time of filing 	• View dynamic glazing on the hold room curtainwall system reduces glare and solar gain, and allows for overall cooling load reductions • Onyx™ photovoltaic glazing on the southern elevation provides electrical energy generation while providing a solar screen that eliminates glare and reduces overall cooling loads • Displacement ventilation throughout the Great Hall passenger hold room and concourse spaces provide a 17 percent increase in HVAC energy efficiency • New critical infrastructure equipment elevated above established 100-year flood elevation for enhanced system resiliency during extreme weather events
Tenant Projects	
Signature Flight Support General Aviation Facility, LEED® Certified, 2008 	• Water use reduction measures • Natural daylight paired with advanced energy-efficient lighting technologies • Window glazing and sunshades to maximize daylight and minimize heat build-up • Recycled and regionally sourced materials • Measures to enhance indoor air quality

Table 2-3 Leadership in Energy and Environmental Design (LEED®)-Certified Facilities at Logan Airport

Project, Year Completed, LEED® Certification	LEED® Features
Nouria Service Center, LEED® Silver, 2020 	• Energy-efficient lighting and HVAC systems • Installed efficient water fixtures. • Installed rooftop Solar array. • Installed direct current (DC)-Fast Chargers for EV Vehicles

2.2 Massport Community Engagement and Environmental Initiatives

Massport has and will continue to champion community benefits and robust community engagement. Working in concert with government, community, and civic leaders throughout Massachusetts and New England, Massport is actively engaged in advancing environmental initiatives and expanding community programs for residents living near Massport's facilities.

2.2.1 Massport Community Giving

Each year, the **Massport Charitable Contribution Program** provides grants to community organizations to help fund programs in areas such as youth education, arts and culture, social service, the environment, and athletics. Massport has set a goal to award at least 50 percent of the program budget to organizations serving predominately people of color. In fiscal year 2022 (FY 2022), Massport surpassed this goal by awarding 69 percent of the total FY 2022 budget to organizations or programs serving predominately people of color. A full list of the community organizations funded by Massport in FY 2022 can be found in Appendix E, *Environmental Justice Supporting Materials*, Section E.1.

In 2022, Massport distributed $600,000 to fund 275 youth summer employment positions through the **Community Summer Jobs Program**. The annual program helps civic and social service agencies by providing funds to hire youth workers in Massport's neighboring communities including Bedford, Charlestown, Chelsea, Concord, East Boston, Lexington, Lincoln, Revere, South Boston, Winthrop, and Worcester. Without the assistance of Massport's Community Summer Jobs Program, many local organizations would not be able to offer affordable summer programs to residents. Since 1991, thousands of local students have gained valuable work experience in various jobs, such as camp counselors, office

assistants, maintenance workers, and lifeguards; positions funded by Community Summer Jobs Program grants.

Massport collaborated with local and state governments, municipalities, and other charitable organizations to establish and fund the **East Boston Foundation, South Boston Foundation**, **and Winthrop Foundation**. Beginning with the East Boston Foundation in 1997, Massport has provided over $16 million in funds for vital programs in these highly impacted communities. In 2022, the community foundations awarded over $600,000 to local organizations, helping to improve the quality of life for area residents.

Massport provides annual funding to the **East Boston Neighborhood Health Center** to help expand the efforts of its Pediatric Asthma and Chronic Obstructive Pulmonary Disease (COPD) Prevention and Treatment Program in East Boston and Winthrop. The program provides services including screenings for children, distribution of asthma kits, and home visits.

Massport awarded **Diversity STEM and Memorial Scholarships** to six local students in 2022. Each year, high school students are selected to receive two Diversity STEM Scholarships and the Thomas J. Butler, Deborah Hadden Gray, Donna Rauseo, and Lowell L. Richards III Memorial Scholarships based on their academic achievements, post-secondary educational plans, and demonstrated commitment to community service. Since 2007, Massport has awarded Diversity STEM Scholarships to 46 students of color who plan to pursue degrees in a STEM field. Since 2011, Massport has awarded Memorial Scholarships to 38 students. Massport also provides annual scholarship grants to local high schools for students in Charlestown, Chelsea, East Boston, South Boston, Revere, and Winthrop.

As part of Massport's history of community engagement, Massport employees volunteer in community activities throughout the year such as a children's winter coat drive, Veterans Day initiatives, a Thanksgiving food drive, a children's backpack drive, a women's shelter donation drive, and community beautification projects.

2.2.2 Diversity, Equity, and Inclusion (DE&I)

As an engine for economic growth, Massport continually strives to extend economic opportunities and create equity for diverse people and businesses, internally and in surrounding communities. Leveraging real estate to bring more Bostonians to the table, Massport pioneered a DE&I model, known as the "Massport Model," for its real estate development programs and projects to expand economic opportunities through a competitive, market-driven process. The Massport Model focuses on including people of color and women in significant ownership and leadership roles in every aspect of a project, from development to property management. The model does not prescribe how to incorporate DE&I, but instead gives the private sector the flexibility to propose new and creative approaches.

The Massport Model was first applied in 2016 for the project to develop the Omni Boston Hotel at the Seaport. In that competitive bid, Massport said DE&I was as important as traditional evaluation criteria;

namely financials, design, and ability to execute. Smaller, women- and minority- owned firms, businesses historically excluded from large projects in the city, partnered with some of the region's largest development, architecture, and construction firms to bid, which resulted in a broadly diverse team as well as $7 million in equity from minority investors.

The Massport Model continues to evolve with the Seaport Circle project, which will house the South Boston Waterfront Job Training Pavilion and benefit a wide array of Bostonians by providing workforce training for high school graduates and underserved residents. The most recent application of the Massport Model was an RFP issued in 2021 for a mixed-income, affordable housing project on D Street in South Boston. Proposals will be evaluated equally for DE&I commitments, housing affordability, design, and ability to execute. The Massport Model has also begun to be emulated by other agencies and municipalities.

The **Massport Model** sets a policy to consider DE&I evaluation criteria and incorporating DE&I into project plans and execution to be as important as traditional architecture, design, and construction considerations.

2.2.3 Environmental Initiatives

Massport is committed to minimizing the effects of its operations on the community and environment by implementing a comprehensive set of Airport-wide initiatives that benefit the neighbors, Airport users, Airport employees, and the traveling public. These include, but are not limited to, the environmental initiatives listed in the following sections, which Massport has undertaken to lessen the Airport's environmental impacts. These initiatives are different from formal project environmental mitigation commitments as they are not tied to projects, and more generally reduce overall operational and environmental impacts from Airport sources. Conversely, MEPA Section 61 commitments are binding mitigation commitments made in past MEPA project filings developed by Massport to address project-specific environmental impacts. Updates on implementing Section 61 commitments for projects requiring mitigation are detailed in Chapter 10.

2.2.3.1 High-Occupancy Vehicle (HOV) Strategy

Massport employs numerous strategies to provide ground transportation options for Logan Airport passengers and employees to reduce emissions associated with accessing the Airport. Massport's goal is to maximize the use and capacity of HOV, transit, and RideApp options that are convenient and reliable and reduce environmental and community impacts. Massport continues to promote, operate, and support HOV and RideApp services to improve operations along Terminal-area roadways and at curbside areas, alleviate parking constraints, improve customer service, and minimize emissions.

Massport regularly evaluates and updates its strategies to improve and expand Logan Airport ground access services with a strong focus on HOV service modes. Central to this strategy is continued investment in Logan Express facilities and service. Logan Express is the seventh largest transit system in

Massachusetts and annually carries passengers and Airport employees between Logan Airport and five metropolitan locations.

Logan Express schedules were adjusted in March 2020 in response to the COVID-19 pandemic and the subsequent decline in ridership. As of October 2022, all Logan Express services have been restored following pandemic-related service cuts. The historically underperforming Peabody Logan Express operation has been relocated to a more convenient location at the North Shore Mall, the Back Bay Logan Express service has been restored, and plans are currently moving forward to expand the Framingham Logan Express parking garage. More information can be found in Chapter 6, *Ground Access*, Section 6.3.1.2, and Chapter 4, *Airport Planning*, Section 4.1.

In close partnership with the Massachusetts Bay Transportation Authority (MBTA), Massport purchased eight Silver Line rapid transit buses in 2004 for service between the Logan Airport Terminals, South Station, and South Boston. Since the existing Silver Line fleet is reaching the end of its useful life, Massport has recently purchased ten new Silver Line electric or hybrid buses as part of an MBTA procurement program. This will allow expansion of Silver Line service between Logan Airport and downtown. Since 2012, Massport has subsidized free Silver Line rides from the Airport to South Station. More information can be found in Chapter 6.

2.2.3.2 RideApp Management

RideApp services like Lyft™ and Uber™ remain a popular option for travelers getting to and from Logan Airport. Massport has developed strategies and will continue improving approaches to facilitate the efficient operation of diverse modes of ground transportation. To alleviate congestion and reduce GHG emissions, Massport has implemented a robust plan to manage RideApp operations and reduce RideApp deadhead trips.[11] For more detailed information on Massport's RideApp Management Plan, please see Chapter 6, Section 6.5.6. Among this plan is a new initiative to promote electrification of the RideApp fleet serving Logan Airport.

2.2.3.3 Long-Term Parking Management Plan

Logan Airport's parking supply, pricing, and operations are managed to promote the use of HOV, transit, and RideApp options as well as to reduce drop-off and pick-up modes, which generate up to four vehicle trips instead of two and higher emissions. Chapter 6, Section 6.5.7 provides additional updates on the evolving implementation of ground access strategies.

2.2.3.4 Noise Abatement and Sound Insulation

Massport's comprehensive noise abatement program includes the implementation of flight tracks designed to optimize over-water operations, especially during nighttime hours, runway restrictions for noisier aircraft, and noise-reducing ground run-up procedures. Massport has one of the nation's oldest

11 Deadhead trips are trips where vehicles travel to or from the Airport without additional passengers other than the driver.

residential and school sound insulation programs for those eligible under federal guidelines; to date, Massport has provided sound insulation for a total of 36 eligible schools and 11,515 residential units with investments of over $170 million towards these efforts, and Massport will continue to seek funding to provide mitigation for eligible properties whose owners have chosen to participate. Massport also operates a dedicated Noise Abatement Office with a state-of-the-art Noise and Operations Monitoring System (NOMS).

In response to advocacy efforts by elected officials and Massport, for the first time, the FAA will allow eligible homes treated prior to 1993 to be treated again under the sound insulation program.[12] In 2022, Massport was approved by the FAA for an initial grant to fund the beginning phase of a new Residential Sound Insulation Program (RSIP). Appendix I, *Noise Supporting Documentation* contains data on the residential buildings, dwelling units, and schools that have been sound insulated by Massport.

Massport has one of the nation's oldest residential and school sound insulation programs, and has provided sound insulation for 36 schools and 11,515 residences with investments of over **$170 million**.

In June 2022, Massport and FAA concluded work with the Massachusetts Institute of Technology (MIT) to identify opportunities to reduce noise through changes to performance-based navigation (PBN) systems, including area navigation (RNAV). This was a first-in-the-nation project between the FAA and an airport operator to better understand the implications of PBN and evaluate strategies to address community concerns about aircraft noise. Massport continues to coordinate with the CAC, FAA, and MIT on additional targeted technical questions and reviews. Massport is working with the FAA's Aviation Sustainability Center (ASCENT) on research projects concerning aircraft noise, flight procedures, and air quality monitoring related to **ultrafine particles (UFPs)**. These efforts and progress towards achieving noise reduction goals and UFP air quality monitoring can be found in Chapter 7, *Noise*, Section 7.4, and Chapter 8, *Air Quality and Greenhouse Gas Emissions*, Section 8.3.1.4, respectively.

2.2.3.5 Air Emissions Reduction

Massport is a national leader in studying, tracking, and reporting on the air quality environment of Logan Airport and implementing measures to reduce emissions. Initiatives include a commitment to sustainable design with all Massport capital projects; operating the state's seventh largest transit system (Logan Express); providing pre-conditioned air (PCA) and 400 Hertz (Hz) power at aircraft contact gates to reduce aircraft idling; and operating one of the largest privately operated, publicly accessible, compressed natural gas (CNG) stations in New England. More information can be found in Chapter 8, Section 8.6.

12 FAA Airport Improvement Handbook, Table C-5 Item (8), page C-19.

2.2.3.6 Alternative Fuel Vehicles (AFV) Program

Massport established a vehicle procurement policy in 2006 that requires consideration of AFVs when purchases are made. The Alternative Fuel Vehicles Program is designed to replace Massport's conventionally fueled fleet whenever feasible with alternatively fueled or powered vehicles to help reduce emissions associated with Logan Airport operations. Massport now operates more than 100 vehicles powered by gasoline-electric hybrid, diesel-electric hybrid, CNG, propane, flex fuel, and plug-in electricity. More information can be found in Chapter 8, Section 8.5.

2.2.3.7 Electric Ground Service Equipment (eGSE)

Massport is facilitating the replacement of gas- and diesel-powered ground service equipment with **electric GSE (eGSE)**, if commercially available. In 2020, Massport was awarded an FAA Voluntary Airport Low Emission (VALE) Program grant for charging infrastructure at Terminal E and installing 10 eGSE charging stations at Signature Aviation Building 14.

2.2.3.8 Energy Planning

Massport has a long-standing energy management program committed to supply-side wholesale energy management and procurement, and demand-side energy efficiency and renewable energy development. Supply-side wholesale purchasing is managed through an interdepartmental advisory group consisting of representatives from Massport's Administration and Finance, Building Operations, Capital Programs Department, and the Environmental Affairs Department. Procurement is guided by a Massport Board-approved Energy Hedge Policy. Demand management is through individual capital projects and stand-alone measures, where feasible, including investments in high-efficiency lighting and equipment and automated building energy management and control systems. Renewable energy planning has included a Massport-wide evaluation of feasible, third-party financed, renewable energy development sites designed in coordination with the Commonwealth of Massachusetts Solar Massachusetts Renewable Target Program (SMART). As part of this evaluation, all Massport properties were considered for potential solar development.

Massport will continue to evaluate renewable energy development potential across all its properties. Massport has existing self-financed solar panel installations at Logan Airport, including locations on top of Logan's Economy Garage, Terminal B Garage, Rental Car Center, Terminal A, and the Terminal C Canopy. Previously, Massport formed a public-private partnership to develop its largest existing 357 kWh solar installation on the roof of Terminal A and associated satellite buildings, which was part of a statewide solicitation to facilitate American Recovery and Reinvestment Act (ARRA) grant funding for solar energy.

2.2.3.9 Open Space and Airport Edge Buffers

Over the last two decades, Massport has developed an extensive open space program to enhance surrounding communities with more than $25 million invested towards the planning, construction, and maintenance of four airport edge buffer areas and two parks along Logan Airport's perimeter. Today, approximately 40 acres of green space are developed or managed by Massport in partnership with the East Boston community and as a response to engagement with the community. Massport also collaborates in East Boston's open space planning through meetings with other agencies, including the Massachusetts Department of Transportation (MassDOT), the City of Boston, and the MBTA.

Piers Park II broke ground on October 14, 2022, and was completed in December 2023, adding approximately 4.5 acres of green space to the East Boston waterfront. Sustainable elements of the Phase II design included:

Opening of Piers Park II, December 2023. Source: Massport

- Elevating the park site and creating landscape berms to provide flood protection;
- Replacing the current gravel lot with 4.5 acres of green space and planting 80 new trees;
- Installing drinking fountains with bottle filling stations;
- Placing energy-efficient lighting throughout the park and at the new Sailing Center building, and;
- Building a highly efficient heating and cooling system in the new Sailing Center building.[13]

Figure 2-3 illustrates the location of the Airport edge buffers and parks. **Table 2-4** provides a key to **Figure 2-3** with a description and history of each airport edge buffer and open space.

13 Massport. East Boston Community Celebrate Piers Park II Groundbreaking. October 14, 2022. Website. https://www.massport.com/media/newsroom/massport-east-boston-community-celebrate-piers-park-ii-groundbreaking.

Figure 2-3 Airport Edge Buffer Projects and Open Space

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Massport Open Space

0 500 1,000 2,000 Feet

Table 2-4 Description and Status of Airport Edge Buffer Projects and Open Space

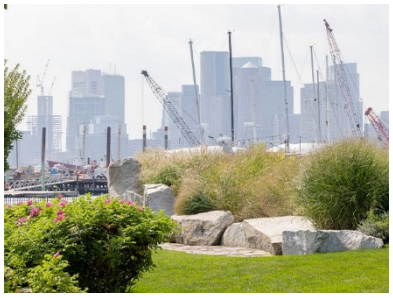
Map ID	Description (Completion Year)	Photo
1	**Piers Park I (1995), Piers Park II (2023)**	
	Piers Park, previously a 7-acre industrial site, opened in 1995 on the East Boston waterfront. The features a picnic area, fitness course, children's playground, spray park, outdoor amphitheater, pier, and community sailing facility. Piers Park II, an addition of 4.5 acres, 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.	
2	**Navy Fuel Pier Airport Edge Buffer (2007)**	
	The Navy Fuel Pier Airport Edge Buffer project started in 2001 with remediation of the former Navy Fuel Pier by the U.S. Army Corps of Engineers (U.S.ACE). The project beautified 0.7 acres through landscape improvements and waterfront stabilization and installed an interpretive panel detailing local history. This former 1940s Navy refueling pier is now an idyllic waterfront open space with walking paths and seating for the Jeffries Point neighborhood of East Boston.	
3	**Mary Ellen Welch Greenway (2007)**	
	The Mary Ellen Welch Greenway, previously known as the East Boston Greenway, is a former Conrail line transformed into a 3.3-mile rail trail and park, extended by the East Boston Greenway Connector and Narrow-Gauge Connector. It runs continuously across the majority of East Boston and links significant Massport-owned and operated open space, such as Piers Park and Bremen Street Park, and other open spaces such as Memorial Stadium, Wood Island Bay Marsh, and Constitution Beach. The Greenway opened in 2007 as a shared space for walking, running, and cycling and was renamed in honor of local advocate Mary Ellen Welch in 2019.	

Table 2-4 Description and Status of Airport Edge Buffer Projects and Open Space

Map ID	Description (Completion Year)	Photo
4	**Southwest Service Area (SWSA) Airport Edge Buffer (Phases I: 2006, Phase II: 2014)**	
	Phase I included construction of a 0.5-acre area with landscaping and lighting enhancements on Maverick Street, including evergreen and deciduous trees, ornamental shrubs, and groundcovers. Phase I employed dense landscaping and solid barriers like fences and walls to enhance the separation and connectivity between Maverick Street and East Boston Memorial Park and Stadium.	
5	**Bremen Street Park (2008) and Dog Park (2016)**	
	Constructed as part of the Central Artery and Tunnel Project and operated by Massport, the 18-acre park on Bremen Street serves as East Boston's second-largest neighborhood park. Previously a rail yard, it now provides facilities like a community garden, picnic area, children's play areas, and a direct pedestrian connection to the MBTA Blue Line Airport Station and the East Boston branch of the Boston Public Library. Located along Breman Street, the park connects to the Mary Ellen Welch Greenway. The 0.5-acre dog park was constructed later by Massport and holds the distinction of being East Boston's first.	
6	**Neptune Road Airport Edge Buffer (2016)**	
	The Neptune Road Airport Edge Buffer, a Massport community mitigation project, buffers the East Boston Neighborhood at Logan Airport's northwestern edge. This 1.5-acre parcel, adjacent to the MBTA's Wood Island Station, is primarily in the Runway 15R-33L Runway Protection Zone (RPZ). The project incorporates Olmsted-inspired landscaping to honor and acknowledge Wood Island Park and the surrounding neighborhood, which was lost in the 1960s due to airport expansion. The buffer features interpretive elements that complement the nearby North Service Area Roadway Corridor and extends the pedestrian and bicycle path to Bennington Street.	

Table 2-4 Description and Status of Airport Edge Buffer Projects and Open Space

Map ID	Description (Completion Year)	Photo
7	**East Boston Greenway Connector (2014)**	
	The East Boston Greenway Connector is a 0.5-mile pedestrian and bicycle path connecting Bremen Street Park to an overlook at Wood Island Marsh. The connector provides pedestrian access to the MBTA Blue Line Wood Island Station and is part of the Mary Ellen Welch Greenway.	
8	**Narrow-Gauge Connector (2016)**	
	The City of Boston constructed the Narrow-Gauge Connector, a third-mile extension of the Mary Ellen Welch Greenway, between Wood Island Marsh and Constitution Beach. Ownership, maintenance, and security of the project were handed over to Massport upon completion.	
9	**Bayswater Embankment Airport Edge Buffer (2003)**	
	The Bayswater Street Airport Edge Buffer project, completed in 2003, established a landscaped barrier between Bayswater Street and Boston Harbor. This community-involved project features a park with marine-tolerant landscaping and historic streetlights. Massport is currently working on repairing recent shoreline storm damage, and an Expanded Environmental Notification Form (EENF) was filed with MEPA in December 2023.	

Source: Massport.
Note: See **Figure 2-3** for the location of Airport edge buffer projects and planning concepts.

2.3 Community and Environmental Justice Outreach

Massport has demonstrated a consistent commitment to engaging with nearby communities and enhancing the quality of life of Massport's neighbors. This commitment is carried out by Massport's Community Relations & Government Affairs Department and the Massport CAC. This section outlines Massport's public outreach practices, including its comprehensive EJ and translation policies. These practices inform the Authority's strategy across both specific projects and broader filings such as EDRs and ESPRs. Included are specific measures taken for public involvement to ensure thorough, inclusive, and accessible communication. Additionally, this section highlights Massport's continued evolution in its approach to community engagement, with recent expansions in outreach efforts and the addition of pre-filing public information sessions for projects in the MEPA process.

2.3.1 Regulatory Framework

The Climate Roadmap Act (2021) defines EJ principles, the characteristics of EJ populations, environmental benefits and burdens experienced by EJ communities, and the potential impacts. The *Environmental Justice Policy of the Executive Office of Energy and Environmental Affairs*[14] (2021 EJ Policy), originally issued in 2002 and updated on June 24, 2021, incorporates the definitions from the Climate Roadmap Act and reinforces an inclusive community involvement in the environmental decision-making process. The 2021 EJ Policy builds upon federal guidelines under Executive Order 12898 and Executive Order 14008.

The EEA has developed further guidance to implement the requirements outlined in the Climate Roadmap Act and 2021 EJ Policy. The EEA enacted the *MEPA Public Involvement Protocol for Environmental Justice Populations*[15] and the *MEPA Interim Protocol for Analysis of Project Impacts on Environmental Justice Populations*[16] on January 1, 2022 (2022 EJ Protocols). The 2022 EJ Protocols require environmental notification forms (ENFs) and expanded ENFs (EENFs) filed with the MEPA Office to identify EJ populations within a 1-mile radius and a 5-mile radius of the Project Area, using the Massachusetts 2020 Environmental Justice Populations mapping tool (EJ Maps Viewer) and associated data layers. The 2022 EJ Protocols also outline subsequent impact analysis and outreach requirements. Logan Airport is located within and adjacent to census tract block groups identified by the EJ Maps Viewer as EJ populations.

Massport will comply with these amended regulations and protocols for individual projects at Logan Airport filed with MEPA. While Massport's EDR and ESPR filings are not formally subject to these new regulations and protocols, as they are not projects, the Secretary of the EEA's Certificate reflects robust community engagement that meets the spirit of the 2021 EJ Policy and 2022 EJ Protocols, and as such,

14 EEA. 2021. Environmental Justice Policy of the Executive Office of Energy and Environmental Affairs. https://www.mass.gov/doc/environmental-justice-policy6242021-update/download.

15 EEA. 2022. MEPA Public Involvement Protocol for Environmental Justice Populations. https://www.mass.gov/doc/final-mepa-public-involvement-protocol-for-environmental-justice-populations-effective-date-of-january-1-2022/download.

16 EEA. 2022. MEPA Interim Protocol for Analysis of Project Impacts on Environmental Justice Populations. https://www.mass.gov/doc/final-mepa-interim-protocol-for-analysis-of-project-impacts-on-environmental-justice-populations-effective-date-of-january-1-2022/download.

Massport is voluntarily complying with these new protocols. See Section 2.4, Section 2.5, and Section 2.6 for an EJ and public health existing conditions reviews for additional content in accordance with the 2021 EJ Policy and 2022 EJ Protocols.

2.3.2 Massport's History of Community Outreach

Massport has and continues to conduct comprehensive outreach to the surrounding communities through its Community Relations & Government Affairs Department. Additionally, Massport relies on input from the Massport CAC to act as a government representative for the 35 communities surrounding Massport facilities.

2.3.2.1 Massport Community Relations and Government Affairs

Massport's Community Relations & Government Affairs Department manages Massport's relations with community members and government officials and furthers Massport's goal of being a good neighbor. The department implements Massport's public engagement practices, which are tailored on a project-by-project basis per community needs and for the annual EDRs and ESPRs. Section 2.3.3 provides general information on Massport-wide public involvement and EJ engagement practices, which are refined for each Massport project or initiative.

2.3.2.2 Massport Community Advisory Committee

The Massport CAC (https://massportcac.org/) was established in 2014 to represent the interests of communities impacted by Massport's operations and functions as a government agency in the Commonwealth of Massachusetts. The Massport CAC provides a collective voice for 35 communities through advocacy, informing, liaising, and oversight. Massport receives input from the Massport CAC, which builds a strong relationship of continued collaboration and cooperation. As the Massport CAC functions as a government agency, it is subject to the Open Meeting Law, which means Massport CAC meetings are open to the public either during the meeting, through in-person or remote participation, or after the close of the meeting, through a recording or transmission, and meetings are announced with enough notice for the public to reasonably be able to attend.

2.3.3 Project-Specific Massport Public Involvement Practices

The Community Relations and Government Affairs Department directs Massport's EJ and community outreach for projects subject to MEPA review. Massport identifies EJ block groups within a 1-mile radius and 5-mile radius[17] of a Project Area as part of the MEPA project filings for projects occurring after the 2021 EJ Policy and 2022 EJ Protocols were enacted.

17 EJ populations within 5 miles of standard individual projects undergoing MEPA review are typically depicted in a figure, while EJ populations within 1 mile are detailed in a table and analyzed for disproportionate adverse effects. If the project exceeds an air quality threshold, the project is subject to a disproportionate adverse effects analysis for all EJ populations within 5 miles.

Massport translates and publishes key written project materials and public notices in other languages if the EJ Maps Viewer identifies a language is spoken by 5 percent or more of the census tracts within the DGA.[18] If 10 percent or more of the community speak the same non-English language and do not speak English well or at all, oral interpretation services are provided during public meetings and outreach activities. Massport offers additional language access services by request. When surrounding non-English speaking communities may be affected, but do not meet the 5 percent threshold, Massport publishes a call for translation requests, or Babel notice, in the languages commonly spoken in the surrounding communities with information on how to submit such requests.

The following measures are consistently applied to project-specific MEPA filings and constitute Massport's public involvement plan on an Authority-wide basis:

- Identify a team to coordinate and facilitate EJ and community outreach for the project, including effective communication with EJ stakeholders.
- Request an EJ Reference List from MEPA-EJ@mass.gov for each project that falls under MEPA review.
- Circulate a link to the filing electronically to the EJ Reference List, government officials, persons or entities who previously commented on past filings for the project, and other identified stakeholders.
- Distribute hard copies of filing documents to local libraries for ease of public access.
- Post public notices to Massport's website: https://www.massport.com/massport/community/public-notices/.
- Publish project information on Massport's website: https://www.massport.com/massport/community/ongoing-projects/.
- Post the public notice and filing notification on social media sites.
- Publish the public notice in relevant local print media, including non-English and community-specific media outlets and local newspapers, such as *Boston Herald*, *East Boston Times*, *Winthrop Transcript*, and *El Mundo*.
- Translate public notices and project summaries (or Executive Summaries) into languages spoken by at least 5 percent of the census tract's population who do not speak English very well or at all.
- Include a reference, or Babel notice, to public notices and certain filing materials that project, and meeting materials are available in other languages, upon request.
- Provide language interpretation services for languages spoken by at least 10 percent of the census tract's population who do not speak English very well or at all.
- Enable public meeting participation in-person, virtually, or by phone to accommodate those with limited technology or transit access.
- Schedule public meetings outside the standard workday for accessibility.

18 See the languages spoken layer at https://mass-eoeea.maps.arcgis.com/apps/MapSeries/index.html?appid=535e4419dc0545be980545a0eeaf9b53.

- Identify additional methods to reach EJ communities with limited technology access, as feasible, such as paper mailers instead of email communication in translated languages, alternative paper feedback forms, and one-page flyers for distribution at locations that are frequented by EJ populations.
- In addition to online repositories, identify additional traditional and non-traditional information repositories, such as houses of worship, community centers, and others, as appropriate.
- Hold pre-filing meetings as feasible, including technical review meetings.
- Provide pre-meeting discussions with key stakeholders to incorporate important topics and expressed concerns into public meetings.
- Offer smaller meetings with key stakeholders and community groups prior to filings, as feasible or upon request.

2.3.4 EDR and ESPR Public Involvement Practices

While EDRs and ESPRs are not project-specific filings, Massport still applies the public involvement practices listed in Section 2.3.3.

Per the Secretary's Certificate on the *2020/2021 EDR* for the *2022 ESPR*, for the EDR/ESPR process, Massport has expanded EJ outreach and the subsequent EJ Reference List to EJ populations within 5 miles, in languages spoken by at least 5 percent of the census tract's population who do not speak English very well or at all within 5 miles of Logan Airport as well as within Massport CAC communities (Appendix A, *MEPA Certificates and Responses to Comments*). A map of the EJ populations within a 1- and 5-mile radius can be found in **Figure 2-4**. In response to the Secretary's Certificate, and based on past EDR, ESPR, and Authority-wide public involvement practices, the measures listed in Section 2.3.3 have and will continue to be implemented for this and future EDR and ESPR filings, unless defined otherwise by MEPA.

Massport supplemented its existing EDR and ESPR public involvement practices by holding additional pre-filing public information sessions. The initial *2022 ESPR* public information session was held on June 26, 2023, to present the technical analysis methodology. A second pre-filing public session was held on January 17, 2024, and presented an update on the progress and preliminary findings of the *2022 ESPR*. The history of outreach prior to this filing is in Appendix E, **Table E-1**. Copies of the materials presented in these meetings are in Appendix E, Section E.2.1.

This *2022 ESPR* includes format changes that enhance the readability of the document including additional graphics, shorter sections, greater use of simpler language, and use of Appendices for technical information.

This ESPR, like previous Massport EDR and ESPR filings, voluntarily offers an extension to the typical MEPA 30-day public comment period.

As requested in the Secretary's Certificate, **Table 2-5** provides a list of languages spoken by more than 5 percent of a population who "do not speak English well or at all," within 5 miles of Logan Airport and

within the 35 Massport Community Advisory Committee (Massport CAC) communities (See Appendix A, *MEPA Certificates and Responses to Comments*). The table also denotes how Massport incorporated these languages into the EJ and community outreach strategy.

The ESPR's Chapter 1, *Introduction and Executive Summary*, is translated into Spanish, Portuguese, Simplified Chinese, and Haitian Creole, as specified by MEPA for the "French Creole" language designation that exceeded the 5 percent threshold. The Spanish translation of Chapter 1 is included in all printed copies. Spanish, Portuguese, Simplified Chinese, and Haitian Creole translations are available electronically via links to Massport's website and are available in print at local libraries (see Appendix D, *Distribution List*, for a list of the libraries that receive a copy). Massport intends to follow this translation approach for future public notices and summaries. In addition, 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 languages Massport included in the Babel Notice for the *2022 ESPR* are Vietnamese, Russian, Mon-Khmer, Arabic, and Korean. Massport offered interpretation services for Spanish, and additional languages upon request.

Table 2-5 Massport Enhanced Language Access

Massport Expanded Outreach	Languages Spoken by Greater Than 5% of Population within DGA							
	Spanish	Portuguese	Simplified Chinese	Haitian Creole	Vietnamese	Russian	Mon-Khmer	Arabic
Notification of Availability								
Full Translation	X	X	X	X				
Babel Notice					X	X	X	X
Chapter 1, Introduction and Executive Summary								
Full translation	X	X[1]	X[1]	X[1]				
Email Filing Notification								
Full Translation	X	X	X	X				
Babel Notice					X	X	X	X
Public Meetings								
Full Translation	X	X	X	X				
Babel Notice					X	X	X	X
Interpreter Provided	X							

1 Available electronically on Massport's website and at local libraries (see Appendix D, *Distribution List*).

2.4 Environmental Justice Existing Conditions Review

The Secretary's Certificate for the *2020/2021 EDR* requested that Massport "identify [EJ] populations within 5 miles of the Airport including languages spoken by those who identify as not speaking English very well" toward efforts of expanding public outreach, specifically to EJ populations (see Appendix A). Since the issuance of the *2020/2021 EDR* Secretary's Certificate and subsequent meetings with the MEPA Office and advocacy group meetings during the *2022 ESPR's* development, the MEPA Office requested Massport include a public health existing conditions review for communities surrounding Logan Airport (see Section 2.5) in the *2022 ESPR*. Massport is voluntarily conducting a public health existing conditions review for communities surrounding Logan Airport, with a focus on EJ communities.

The following section summarizes the EJ existing conditions review conducted in response to the Secretary's Certificate and voluntary review of existing public health conditions. Additional information is provided in Appendix E, Section E.3.

2.4.1 Environmental Justice Regulatory Context

As described in Section 2.3.1, the 2022 EJ Protocols require ENFs and EENFs for projects filed with the MEPA Office to identify EJ populations within 1 and 5 miles of a Project Area using the EJ Maps Viewer. Massport is the only agency in the state that prepares ESPR and EDR documents, reports on environmental conditions, discloses plans to inform the public, and describes facility cumulative impacts. The ESPRs and EDRs support but do not advance specific projects subject to MEPA review.

To identify EJ communities in the vicinity of Logan Airport, Massport used 2020 U.S. Census American Community Survey (ACS) data and applied the EJ criteria from the 2021 EJ Policy, where populations exhibited the following characteristics:

- The annual median household income is no more than 65 percent of the statewide annual median household income;
    - The statewide median household income matching the dataset timeframe (2016-2020) in Massachusetts is $84,385,[19] and 65 percent of this amounts to $54,850.25;
- Minorities comprise 40 percent or more of the population;
- English language proficiency is lacking among 25 percent or more of households; or
- Minorities comprise 25 percent or more of the population, and the annual median household income of the municipality in which the neighborhood is located does not exceed 150 percent of the statewide annual median household income.

19 U.S. Census Bureau. 2016-2020 ACS 5-Year Estimates.

2.4.2 Environmental Justice Existing Conditions Review Methodology

The EJ existing conditions review uses EEA's EJ Maps Viewer, which includes ACS block group data and publicly available EJ criteria data, within a DGA of a 1-mile radius from the Logan Airport boundary. EJ block groups within 1 mile are summarized in Section 2.4.3 and tabulated in Appendix E, **Table E-3**. EJ block groups within 5 miles are depicted in **Figure 2-4**. A more expanded methodology and discussion of data availability limitations can be found in Appendix E, Section E.3.1.

2.4.3 Environmental Justice Populations

Within the Logan Airport 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. See Section 2.4.1 for criteria thresholds per the 2021 EJ Policy. See Appendix E, **Table E-3** for a more detailed breakdown of EJ block group characteristics within 1 mile, and **Figure 2-4** for EJ block groups within 5 miles of Logan Airport.

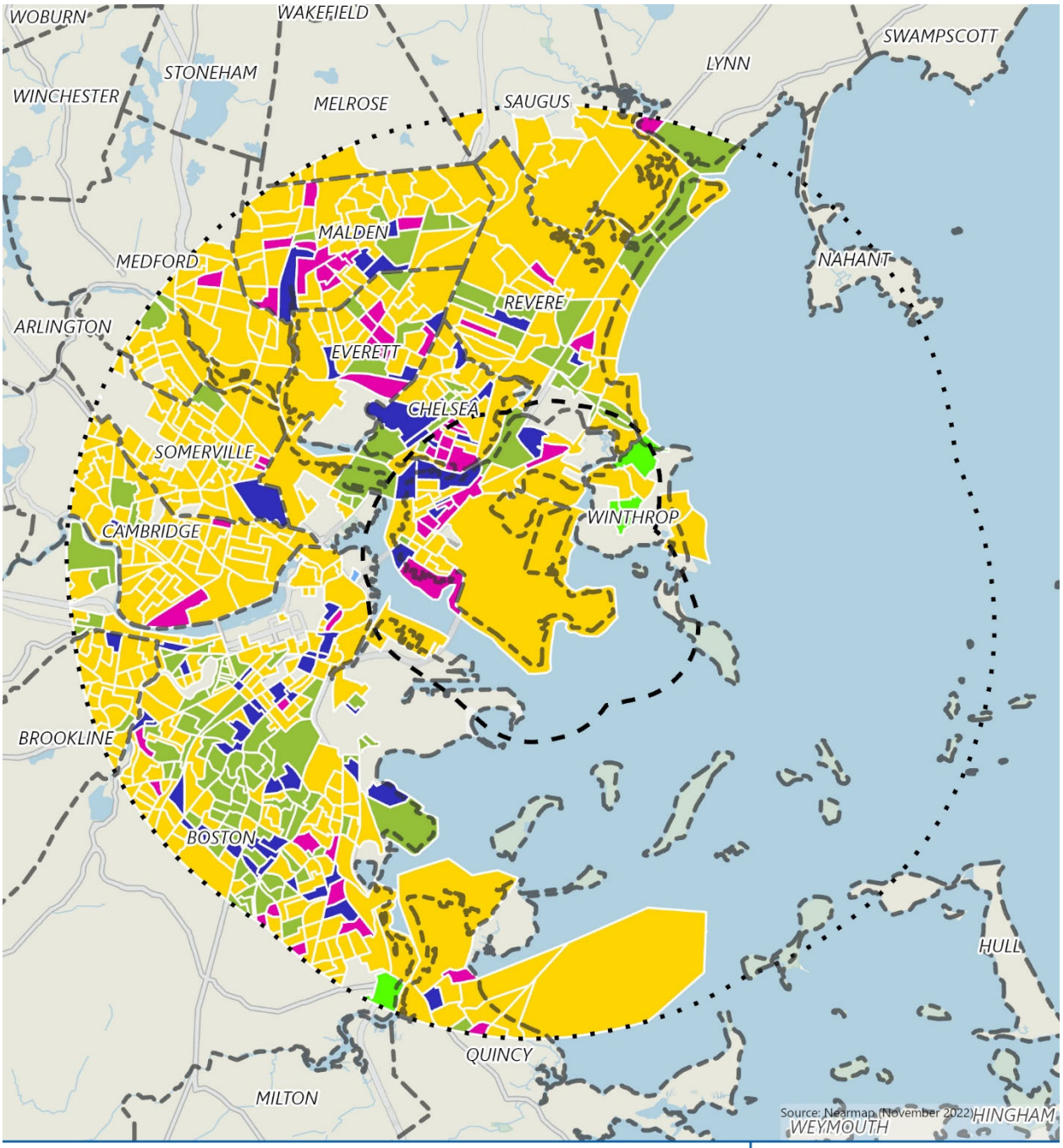


Figure 2-4 EJ Populations within 1 and 5 miles of Logan Airport

2022 Environmental Status and Planning Report

2.5 Public Health Existing Conditions Review

The following section summarizes the public health existing conditions review conducted in response to the MEPA Office's request, subsequent to the issuance of the Certificate on the *2020/2021 EDR*. This section includes a review of the Massachusetts Department of Public Health (DPH) Environmental Justice Tool (DPH EJ Tool) Vulnerable Health EJ Criteria, potential pollution sources, and U.S. Environmental Protection Agency's (U.S.EPA's) EJScreen EJ Indexes used to assess existing population health and surrounding environmental conditions for the communities (including EJ populations) within 1 mile of Logan Airport. The municipalities within the DGA included in this existing conditions review are Boston, Chelsea, Revere, and Winthrop.

This review was conducted to identify existing environmental burdens[20] and related public health consequences[21] experienced by communities surrounding Logan Airport. Tools used for the existing conditions review are approved by MEPA and are included in the 2022 EJ Protocols. However, a caveat on the tools used for this existing conditions review is the tools are unable to differentiate Logan Airport-related activities from other surrounding activities and site uses. When Massport can differentiate airport impacts from those derived from other sources, the impacts and associated offsets are reported in the respective ESPR chapters. Future ESPRs will provide updates on public health existing conditions, as data are available.

2.5.1 Public Health Regulatory Context

Since the issuance of the *2020/2021 EDR* Secretary's Certificate and follow-up meetings with the MEPA Office and advocacy groups during the ESPR's development, the MEPA Office has requested that Massport utilize the DPH EJ Tool to further understand existing health conditions the communities surrounding Logan Airport may experience. In addition to the request and as part of its commitment to sharing information with regulators and the community, Massport has voluntarily conducted an EJ and public health existing conditions review within a 1-mile radius of Logan Airport in this *2022 ESPR*. See Section 2.5.2 for more information on components of the public health existing conditions review methodology.

20 Environmental burdens are defined by EEA as "any destruction, damage, or impairment of natural resources that is not insignificant, resulting from intentional or reasonably foreseeable causes, including but not limited to climate change, air pollution, water pollution, improper sewage disposal, dumping of solid wastes and other noxious substances, excessive noise, activities that limit access to natural resources and constructed outdoor recreational facilities and venues, inadequate remediation of pollution, reduction of ground water levels, impairment of water quality, increased flooding or storm water flows, and damage to inland waterways and waterbodies, wetlands, marine shores and waters, forests, open spaces, and playgrounds from private industrial, commercial or government operations or other activity that contaminates or alters the quality of the environment and poses a risk to public health."

21 A public health consequence is designated by a rate of occurrence greater than 110 percent of the statewide rate of occurrence for DPH EJ Tool Vulnerable Health EJ Criteria data.

2.5.2 Public Health Existing Conditions Review Methodology

The public health existing conditions review uses the DPH EJ Tool,[22] and the U.S.EPA's EJScreen Tool.[23] These are all publicly available data, but are not at a level of detail that demonstrates Logan Airport-specific activity. The public health existing conditions review uses the same 1-mile radius as the DGA for the EJ existing conditions review.

The DPH EJ Tool was used to identify potential sources of pollution that may have affected, or may currently affect, communities, including EJ populations, within 1 mile of Logan Airport based on Vulnerable Health EJ Criteria.[24] Scientific research has shown these criteria, and the health conditions they represent, to be correlated with environmental pollution generally associated with certain industrial and commercial activities. The elevated blood lead and low birth weight Vulnerable Health EJ Criteria are available at the census tract level, while heart attack and pediatric asthma Vulnerable Health EJ Criteria are currently available at the municipality level. An associated health consequence of a Vulnerable Health EJ Criterion is designated by a rate of occurrence greater than 110 percent of the statewide rate of occurrence.

The DPH EJ Tool was also utilized to identify off-Airport sites classified by MEPA as potential pollution sources within 1 mile of Logan Airport. The activities associated with these facilities may contribute to Vulnerable Heath EJ Criteria rates of occurrence and associated consequences, as well as other adverse health and environmental conditions.

EJScreen EJ Indexes are a series of 13 environmental indicators that quantify a DGA's populations' risk as a percentile compared to state and national averages. Per the 2022 EJ Protocols, DGAs with an EJScreen environmental indicator value greater than or equal to the 80th percentile designate a heightened risk of burden or an existing health consequence. Percentiles are useful for comparison purposes and risk identification, but may not exactly portray burdens actively experienced by a community.

Table 2-6 summarizes the three types of public health data in the public health existing conditions review.

22 View at: https://matracking.ehs.state.ma.us/Environmental-Data/ej-vulnerable-health/environmental-justice.html#MyPopup.

23 View at: https://ejscreen.epa.gov/mapper/.

24 At the time of filing the 2022 ESPR, the DPH vulnerable health EJ criteria were in the process of being updated to 2020 census tract boundaries. These are best available data at the time of filing, but may not directly align with EJ and EJScreen data that are based on 2020 boundaries.

Table 2-6 Related Public Health Data

Pollutant Type	Related Potential Sources of Pollution	Related EJScreen Environmental Justice Indexes	Related Vulnerable Health EJ Criteria
Exposure to Air Pollution	• Large quantity toxic users • Large quantity generators • Facilities with air operating permits • Proximity to roadways • Airport infrastructure • Non-electric rail infrastructure • Power plants • Construction activities	• Particulate Matter • Ozone • Diesel Particulate Matter • Air Toxics Cancer Risk • Air Toxics Respiratory HI • Toxic Releases to Air • Traffic Proximity	• Heart Attack • Low Birth Weight • Pediatric Asthma
Exposure to Water and Soil Pollution	• Lead Paint (housing) • Water distribution pipes • M.G.L. c. 21E sites • Tier II toxics use reporting facilities • Sites with Activity and Use Limitations (AULs) • Leaking underground storage tanks (USTs) • Toxic Release Inventory (TRI) facilities	• Lead Paint • Superfund Proximity • Risk Management Plan (RMP) Facility Proximity • Hazardous Waste Proximity • Underground Storage Tanks • Wastewater Discharge	• Elevated Blood Lead

Source: DPH, Environmental Public Health Tracking and Data, 2022.

2.5.3 DPH EJ Tool – Vulnerable Health EJ Criteria Existing Conditions Review

Within the DGA, 15 census tracts containing 13 EJ block groups exhibit existing blood lead levels greater than 110 percent of the statewide rate. In addition, the data shows that 10 census tracts, including seven EJ block groups, currently experience greater rates of low birth weight than 110 percent of the statewide rate. Appendix E, **Table E-3** provides a breakdown of these occurrences by census tract and denotes if an EJ block group is present within the census tract.

It is important to note that while populations in the DGA may be experiencing some or all of these negative effects, the pollution sources and relative contributions from those sources cannot be distinguished from each other using these tools. Also, some of the pollutants described in **Table 2-6** are not associated with aviation or airport activities. For example, lead exposure in the context of the DPH EJ Tool primarily derives from sources in the home, such as exposure to lead paint or lead in other building materials, or from antiquated potable water infrastructure. Therefore, the associated Vulnerable Health EJ criteria for issues associated with lead exposure are not associated with airports or aviation activities. Additionally, pollutants related to the Vulnerable Health EJ Criteria have been shown in scientific literature to be associated with a wide variety of transportation, manufacturing, construction, and other industrial

activities, all of which occur in the areas surrounding Logan Airport, but these cannot be differentiated from one another or specifically attributed to a single source on the municipality scale.

At the municipality level, the DPH EJ Tool indicates that Boston meets the Vulnerable Health EJ criteria for low birth weight and pediatric asthma, but not for heart attack or elevated blood lead, and contains EJ block groups within the DGA. The Chelsea meets the Vulnerable Health EJ criteria for heart attack, elevated blood lead, low birth weight, and pediatric asthma, and contains EJ block groups within the DGA. The Revere does not meet any of the Vulnerable Health EJ criteria, and contains EJ block groups within the DGA. The Town of Winthrop meets the Vulnerable Health EJ criteria for elevated blood lead, but not for heart attack, low birth weight, or elevated blood lead, and contains EJ block groups within the DGA.

2.5.4 DPH EJ Tool – Potential Sources of Pollution Existing Conditions Review

While this public health existing conditions review including EJ populations provides a comprehensive list of facilities with routine activities or incidents that have been correlated with the potential for contributing to adverse environmental conditions and associated health effects, this existing conditions review cannot determine which of these facilities may or may not be specific contributors to the existing health or environmental conditions experienced by populations within the DGA. The number of facilities in the DGA for each applicable DPH classification category, including facilities on Logan Airport's campus, and a summary of site uses are provided in **Table 2-7.** The individual facility names within each category are provided Appendix E, Section E.4.2 for reference.

Table 2-7 MEPA Classified Facilities within the DGA

DPH Classification Category	Site Count	Site Uses
Major Air and Waste Facilities (large quantity toxic users, large quantity generators, air operating permits)[1]	49	• Commercial shipping • Surface, air, and water transportation • Fueling • Consumer goods • Pharmaceuticals
MassDEP Tier Classified 21E Sites	27	• Commercial shipping • Surface, air, and water transportation • Fueling • Automobile and machinery servicing • Municipal uses

Table 2-7 MEPA Classified Facilities within the DGA

DPH Classification Category	Site Count	Site Uses
Tier II Facilities	52	• Commercial shipping • Surface, air, and water transportation • Fueling and Energy • Consumer Goods • Telecommunication • Medical and Pharmaceuticals • Municipal uses
MassDEP Sites with Activity and Use Limitations (AULs)	81	• Surface, air, and water transportation • Fueling and Utilities • Automobile and machinery servicing • Municipal uses
MassDEP Groundwater Discharge Permits	0	• N/A
Wastewater Treatment Plants	10	• Wastewater treatment
Underground Storage Tanks (USTs)	60	• Surface, air, and water transportation • Fueling • Automobile and machinery servicing • Entertainment and Hospitality
U.S.EPA facilities (Toxic Release Inventory)[1]	3 (21 incidents)	• Commercial shipping • Fueling and Energy
Power Plants	2	• Consumer Goods • Medical and Pharmaceuticals

Source: DPH EJ Tool.

1 These potential sources of pollution categories contain additional data layers that are not listed due to a count of 0 sites.

2.5.5 EJScreen Community Existing Conditions Review

As part of this public health existing conditions review, Massport used the U.S.EPA's EJScreen tool to obtain percentile ranking comparisons by census block group to statewide and national averages, respectively, for 13 EJ Indexes. The Community Report generated by EJScreen (see Appendix E, Section E.4.4) provided percentiles of EJ Indexes within the DGA.

The following EJ Indexes are above the 80th percentile of the statewide and/or national average for the Project Buffer Area, signifying a potential existing environmental burden[25] for the area's EJ populations (see Table E-5 for the DGA index values and percentiles compared to state and national values, and Appendix E, Section E.4.3 for more information on the exceeded indexes):

Index related to air pollution:

- Diesel Particulate Matter (PM)
- Toxic Releases to Air
- Traffic Proximity

Index related to water and soil pollution:

- Lead Paint
- Risk Management Plan (RMP) Proximity
- Hazardous Waste Proximity
- Wastewater Discharge Indicator

2.6 Existing Conditions Review Conclusions

Both EJ and non-EJ populations within the DGA meet the Vulnerable Health EJ Criteria as established by EEA's 2021 EJ Policy and 2022 EJ Protocols, determined using the DPH EJ Tool and U.S.EPA's EJScreen. Per this public health existing conditions review, which used publicly available and validated data from government sources, both EJ and non-EJ populations within the DGA likely experience health consequences based on these populations meeting the Vulnerable Health EJ Criteria. Some of these datasets are not available on a census tract-level, and specific communities within the DGA itself may or may not experience health consequences associated with the Vulnerable Health EJ Criteria thresholds; however, this public health existing conditions review still acknowledges the probability that these public health consequences are experienced by EJ and non-EJ populations within the DGA. The findings of the public health existing conditions review are typical for a DGA centered around Boston and are consistent with typical sources of pollution that metropolitan areas across the State and U.S produce and experience.

The Vulnerable Health EJ Criteria met include heart attack, pediatric asthma, low birth weight, and elevated blood lead levels, which are correlated in the scientific literature with exposure to pollutants in air, potable water supplies, and soil or groundwater, as well as exposure to excessive noise levels. EJScreen indicates that diesel PM, toxic releases to air, traffic proximity, lead paint, RMP proximity, hazardous waste proximity, and wastewater discharge EJ Indexes are categorized as an environmental and health consequence when compared to the State or the U.S due to an 80th percentile or greater. Diesel PM, toxic releases to air, and traffic proximity may contribute to the low-birth-weight burden; while household lead paint, outdated water distribution systems, RMP proximity, and hazardous waste proximity may contribute to the elevated blood lead burden.

These pollutants have been shown in scientific literature to be associated with transportation, manufacturing, construction, and other industrial activities. Some types of facilities where these activities

25 U.S. EPA. Overview of Environmental Indicators in EJScreen. https://www.epa.gov/ejscreen/overview-environmental-indicators-ejscreen.

occur, or source areas, include pharmaceutical manufacturing facilities, factories, roadways, active construction sites, railyards, ports and shipping facilities, and airports.

While Logan Airport activities and operations might be a potentially contributing source of some of these forms of pollution, Logan Airport is not a primary source for lead exposure, which primarily comes from sources in the home or antiquated potable water infrastructure.

Currently, the scientifically validated data and technology needed to differentiate each of the pollution sources affecting these surrounding communities are not available. The scope and scale of source contributions cannot be directly quantified with the current technology available. Therefore, it is not possible at the time of filing this ESPR to accurately assess what effects are under its direct control to address or what actions could be taken that would have a meaningful effect.