

E. Environmental Justice Supporting Documentation

This appendix provides detailed information in support of Chapter 2, *Sustainability, Outreach, and Environmental Justice*, pertaining to environmental justice (EJ).

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E.1 Community Organizations Supported by Massport

The following is a list of community organizations funded by Massport to date, as referenced in Chapter 2, *Sustainability, Outreach, and Environmental Justice*, Section 2.2.1.

- Allied War Veterans Council of South Boston
- Apollinaire Theatre Company
- Artists for Humanity
- Babe Ruth League of South Boston
- Bedford Babe Ruth
- Boston Children's Chorus
- Boys & Girls Club of Worcester
- Casa Myrna
- Charlestown Boys & Girls Club
- Charlestown Community Center
- Charlestown Cooperative Nursery School
- Charlestown Lacrosse and Learning Center
- Chelsea Boys & Girls Club
- Chelsea Collaborative
- Chelsea Department of Public Works
- Children's Smile Coalition
- Children's Trust Fund
- City of Revere
- City of Worcester Neighborhood Summer Park Steward Program
- Codman Square Health Center
- Community Action Programs Inter-City, Inc. (CAPIC)
- Community Against Substance Abuse (CASA)
- Community Boat Building
- Condon Community Center
- Cottage Park Yacht Club
- CSF of Bedford
- Curley Recreation Center
- Dorchester Boys & Girls Club
- DotHouse Health Inc
- E. Inc.
- East Boston Central Catholic School
- East Boston Chamber of Commerce
- East Boston Community Development Corporation (CDC)
- East Boston Main Streets
- East Boston Social Centers
- East Boston YMCA
- FamilyAid Boston
- For Kids Only Afterschool
- Fort Point Arts Community
- Friends of Christopher Columbus Park
- Friends of Metro Boston, Inc.
- Labouré Center
- Lexington Education Foundation
- Logan Airport Association
- Martin Pino Community Center
- Maverick Landing Community Services
- McDonough Sailing Center
- Medicine Wheel Productions
- Monument Square Neighborhood Association
- North End Against Drugs, Inc.
- Paraclete Foundation
- Phoenix Academy
- Piers Park Sailing Center
- Revere Beach Partnership
- Revere High School Cheerleading Parents Club
- Revere on the Move
- Revere Parks & Recreation
- Revere Pop Warner
- Revere SUDI office
- Revere Youth Baseball & Softball
- Salesian Boys & Girls Club
- SeaCoast High School
- Seven Hills Foundation
- South Boston Boys & Girls Club
- South Boston Chamber of Commerce
- South Boston Community Health Center
- South Boston Neighborhood Development Corporation
- South Boston Neighborhood House
- South Boston Pop Warner Football & Cheerleading
- South Boston Youth Soccer
- Stretch Walsh Community Center
- Swift Waters After School Program
- The Cary Memorial Library Foundation
- The Dimock Center
- The Fishing Academy
- The Friends of the Chelsea Public Library
- The Museum of African American History
- The North End Community Health Center
- The Sports Museum
- Tynan Community Center
- UMASS Boston / Camp Shriver
- USS Constitution Museum

- Gate of Heaven CYO
- Gavin Foundation
- Girls Scouts of Central & Western Massachusetts
- Greendale YMCA/ YMCA of Central Massachusetts
- GreenRoots
- Hanscom Spouses Club
- HarborCOV
- Harborside Community Center
- Hull Lifesaving Museum
- Inner-City Scholarship Fund
- John F. Kennedy Family Service Center, Inc.
- Julie's Family Learning Program
- Vinton Street Hope Initiative
- We Are Boston
- West Broadway Task Force
- Winthrop Chamber of Commerce
- Winthrop Fireworks
- Winthrop High School
- Winthrop High School Girls Softball
- Winthrop Little League
- Winthrop Parks & Recreation
- Winthrop Youth Hockey Association
- Winthrop Youth Softball
- Worcester Tree Initiative
- Youth Enrichment Services (YES)

The following provides a list of organizations, programs, and causes that have received East Boston Foundation contributions to date, as referenced in Chapter 2, Section 2.2.1.

- A Change of Attitude
- Alliance East
- America Scores
- Atlantic Works
- BASE Baseball Program
- Bennington Street Planter
- Boston Area Natural Networks
- Boston Creative Action
- Boston History Collaborative
- Boston Police ESL Program
- Brooke Charter School Playground
- Chelsea Creek Action Group
- Collaboration for Active Communities
- Columbus Day Parade Committee
- Community Education Center
- Courageous Generation Seniors
- Crossroads Family Shelter
- Cultural Connections
- Curtis Guild School
- Don Orione Senior Program
- East Boston Adult Education
- East Boston APAC
- East Boston Artists Group
- East Boston Athletic Board
- East Boston Central Catholic School
- East Boston Chamber of Commerce
- East Boston Community Activity Day
- East Boston Cultural Exchange
- East Boston Ecumenical Community Council
- East Boston Flames Cheerleaders
- East Boston Girls Softball
- East Boston Youth Hockey
- Eastie Pride Day
- Eastie Week
- Excel Academy
- Freedoms Foundation
- Friends of Belle Isle Marsh
- Friends of East Boston Court
- Friends of East Boston Library Friends of East Boston Veterans Memorial
- Friends of the Golden Stairs Park
- Golden Age Seniors Bus Trips
- Harbor Arts
- Harbor City School
- Harborside Community Center
- Heritage Apartment Seniors Bus Trips
- Italia Unita Feast
- James Otis Elementary Schoolyard Initiative
- Jeffries Point Neighborhood Association
- Kennedy Schoolyard Renovation
- Kiwanis
- Little Folks
- Martin Pino Community Center
- Metro Lacrosse
- Montmorenci Avenue Block Party
- Nantucket Lightship
- New England Gallery of Latin American Art
- New England Scores
- NOAH
- North Shore Recreation
- North Suffolk Mental Health
- Paris Street Community Center

- East Boston Healthy Boston Coalition
- East Boston High School
- East Boston Little League
- East Boston Main Streets
- East Boston Museum
- East Boston Pop Warner Football
- East Boston Resident Action Council
- East Boston Seniors
- East Boston Social Center
- East Boston Veterans Council
- East Boston YMCA
- East Boston Youth Group
- Piers Park Sailing
- Sacred Heart Feast
- Sacred Heart Kids Club
- Salesians Boys and Girls Club
- Salvadorian Cultural Festival
- Savio Prep
- Senior Citizen Bus Trips
- St. Mary's Star of the Sea School
- Swift Waters Afterschool
- The Trust for Public Land/Lopresti Park
- Victory Gardens
- Zumix

E.2 Environmental Justice and Community Outreach

Table E-2 Provides a list of Massport-wide EJ and community outreach initiatives and ESRP-specific initiatives.

Table E-1 Environmental Justice and Community Outreach

Date	Meeting/Outreach Type
Prior to the Filing of the ESRP	
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 ESRP	
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.

E.2.1 Public Information Sessions Presentations

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Logan Airport 2022 Environmental Status and Planning Report Public Information Session

June 26th, 2023



Logan Airport 2022 ESPR - Information Session

Agenda

- Welcome and Introductions
- Information Session Purpose
- Overview of ESPR and EDR Process
- ESPR Contents
- Technical Analyses Methodology
 - Forecasting
 - Activity Levels
 - Noise Abatement
 - Air Quality and Emissions Reductions
 - Ground Access
- Future Meetings and Questions



Presenters

Massport

- Anthony Guerriero
- Brad Washburn

MEPA/EEA

- Jennifer Hughes

Consultant Team

- Carol Lurie – Project Manager

Purpose of Today's Public Information Session

- Share an overview of the ESPR contents and key technical analyses
- Provide an overview of the methodology for the analysis that goes into the ESPR
 - Future forecast of passenger levels and aircraft operations
 - Noise
 - Air quality and greenhouse gas
 - Ground transportation to and from Logan Airport
- Provide opportunity for community to learn about the ESPR and EDR process
- Enhance outreach to community in line with Massport goals



3

Massport has been preparing comprehensive annual environmental filings for Logan Airport since the early 1980s

- Represents the longest detailed tracking of environmental impacts of any US airport
- The reports analyze the *cumulative effects* of Logan Airport operations and activities
- Massport's **Environmental Status & Planning Reports (ESPR)** and **Environmental Data Reports (EDR)** are the only detailed facility annual environmental reports required by the Secretary of Energy & Environmental Affairs (EEA) for Massachusetts
- ESPRs are prepared every 5 years with interim annual EDRs
 - Last EDR reported on 2020/2021
 - ESPR will be prepared for 2022
- Circulation includes over 300 agencies, elected officials, community groups, and individuals
- Since 2010, the full documents are posted on the Massport website



4

Scope for 2022 ESPR

- Appendix C of the 2020/2021 EDR presented a Proposed Scope for the 2022 ESPR
- The EEA Secretary's Certificate on the 2020/2021 EDR augments the Proposed Scope for the 2022 ESPR
- As directed by the Secretary, Massport will hold public information sessions on the 2022 ESPR to provide the public with information on:
 - Activity levels/forecasting
 - Airport planning activities
 - Regional transportation
 - Ground transportation
 - Aircraft noise
 - Air quality



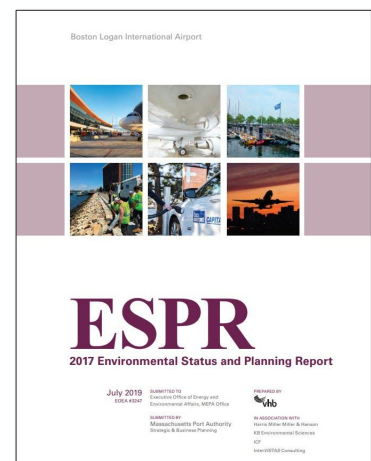
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Logan Airport ESPR will report on 2022 and likely future conditions

ESPRs/EDRs are designed to facilitate long-range tracking and comparison of operations and environmental impacts.

2022 ESPR Contents

- Overview of Executive Summary (Translated)
- Massport's Net Zero commitment and Sustainability
- Airport Planning Activities
- Logan Airport's Role in the Regional Transportation System
- Environmental Compliance and Management/Water Quality
- Environmentally Beneficial Measures and Project Mitigation Tracking
- Forecast Dependent Topics**
 - Current and Future Passengers and Aircraft Operations**
 - Ground Access to and from Logan Airport**
 - Noise Environment and Abatement Measures**
 - Air Quality/GHG Emissions and Reduction Strategies**



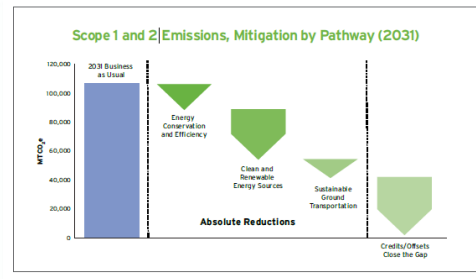
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Massport's Net Zero GHG Commitment and Extensive Sustainability and Resiliency Programs

- Net Zero GHG Emissions commitment by 2031 for **Massport-controlled** activities
- Support for airlines and tenants to reduce their GHG emissions
- Airports Council International - Airport Carbon Accreditation Program Certification application
- Massport's Sustainable and Resiliency Standards
- Sustainability rating certified facilities and infrastructure
- Climate change and resiliency planning – critical assets enhanced
- Commitment to community parks and open space



NET ZERO BY 2031



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Airport Planning

Describes recently completed, ongoing and upcoming projects

- Ground transportation and parking projects
- Terminal area, airside area, and service area projects and planning concepts
- Airport buffer areas and open space projects
- Energy, resiliency, and sustainability planning

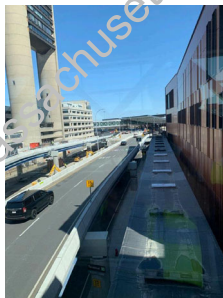
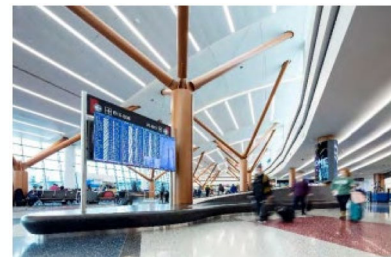


Photo Credit – David Doane



Photo Credit – Boston Globe

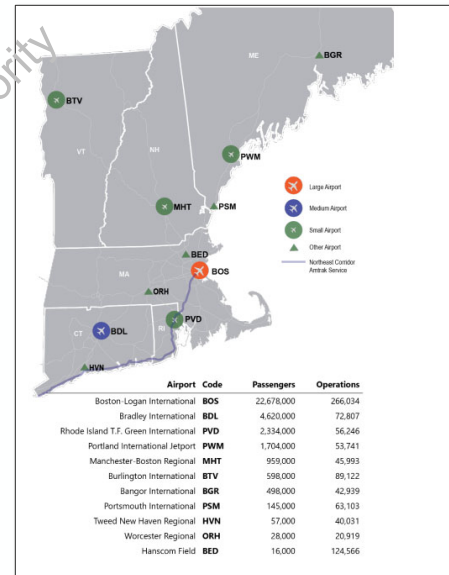
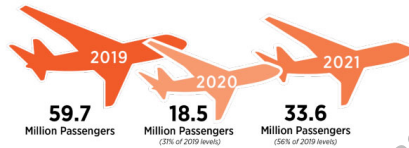
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Regional Transportation System

- Massport's airports' roles in the regional transportation network
- Overview of regional airports' activities and plans
- Amtrak service
- Collaborative regional efforts

Regional Air Passenger Trends



Regional Airport Network

9

Water Quality/Environmental Compliance

- Reports on compliance with water quality requirements according to the National Pollutant Discharge Permit for the airport/stormwater outfalls and Airport Rescue and Fire Fighting Facility
- Provides status update on tank management plan
- Tracks Massport's and tenants' compliance with the Massachusetts Contingency Plan for site remediation from fuel handling and other activities

Logan Airport stormwater outfalls



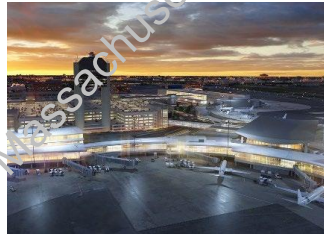
Harborwalk clean up



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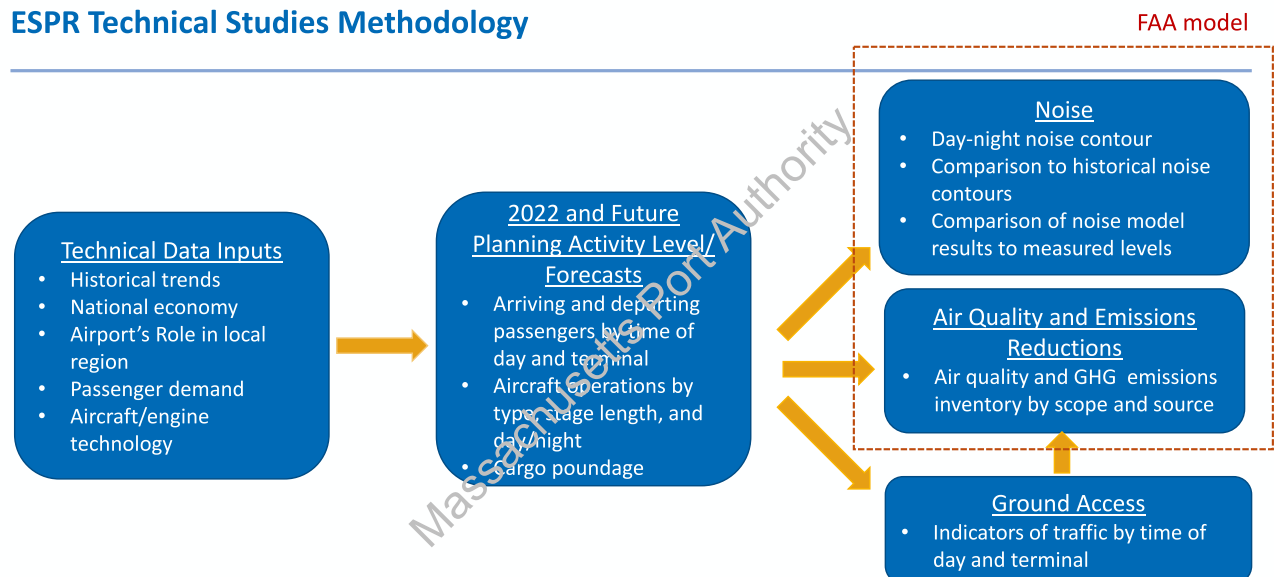
Environmentally Beneficial Measures and Project Mitigation Tracking

- Describes environmentally beneficial measures implemented by Massport
- Summarizes status of projects with ongoing mitigation (Section 61 commitments)



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ESPR Technical Studies Methodology



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ESPR Forecast

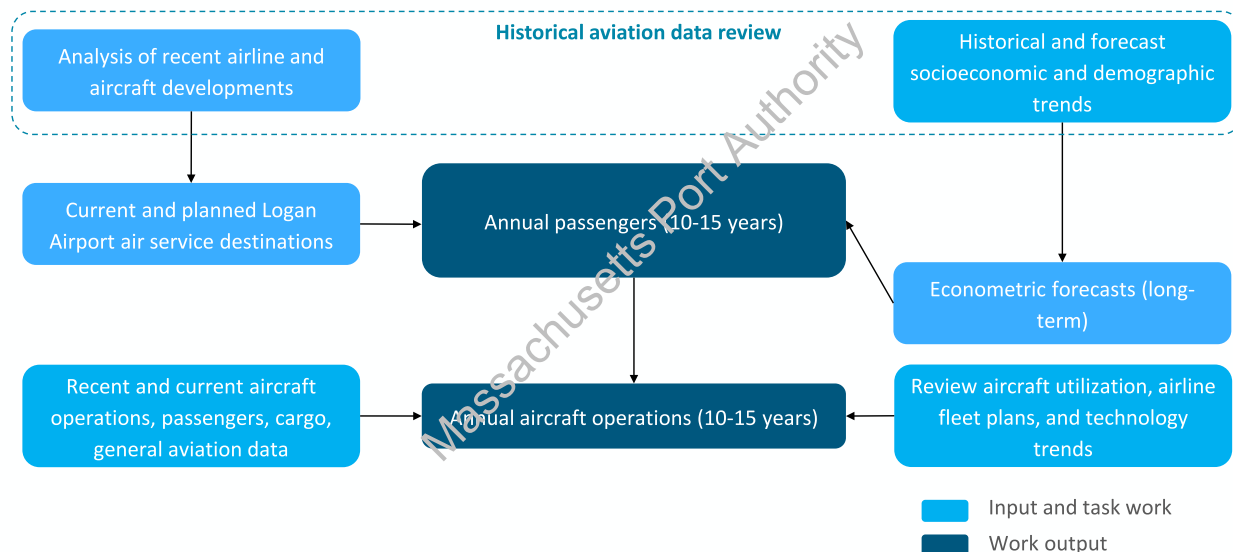
Forecast of passengers, aircraft operations, and cargo volumes updated from prior forecasts for Logan, considering most recent data and trends

- Overall approach: "best practice" industry forecasting techniques analyzing:
 - 10+ years of historical patterns of passenger traffic at Logan Airport
 - Recent trends and "shocks" at Logan Airport and in the industry
 - The outlook for future aviation demand based on national and regional economic factors
 - Role of Logan Airport in the regional transportation system
- Industry data sources including:
 - Massport data on airline and passenger activity
 - US DOT data on passengers, flights, routes, aircraft
 - Flight schedule databases
- Developing detailed forecasts:
 - International and domestic passenger and aircraft operations
 - Daily flight schedules
 - Terminal usage by passengers
 - Aircraft likely to be in the future fleet at Logan Airport



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ESPR Forecast Methodology



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Forecasting Trends Analysis

Uses a blend of near-term trends and insights with long-term economic factors



Recent trends in the airline seats available at Logan Airport and development plans reported by the major airlines



Information and air service insights provided by Massport



General airline industry conditions, such as airline profits, staffing levels, etc.



Potential economic indicators such as regional and national GDP, personal income, population, airline ticket prices, and fuel prices



Review of FAA Terminal Area forecasts and Aerospace forecasts



Long-term trends in aircraft fleet development



Review of benchmark industry forecasts

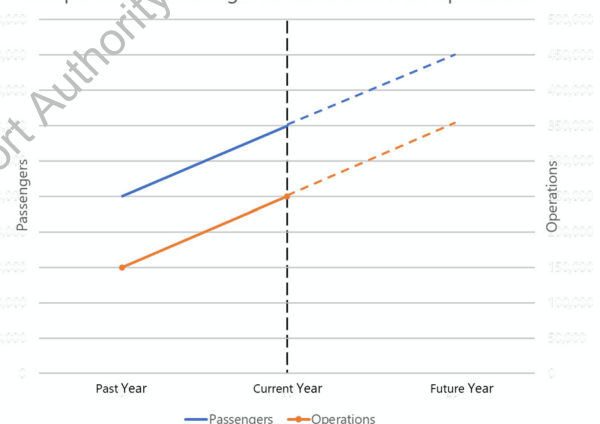


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Planning Activity Levels Account for Forecast Variability

- Long range forecasts are uncertain making it difficult for planning airport facilities
- Planning activity levels ("PALs") helps determine when demand may trigger the need for additional facilities
- PALs are not tied to specific years as actual activity levels may occur earlier or later than the forecast predicts
- Allows airport management to accelerate/ decelerate capital projects based on when demand occurs
- Facilities are built when there is a demand for additional space or gates
 - Constructing facilities and terminals/gates will not induce demand

Sample Annual Passenger Levels and Aircraft Operations



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Detailed Forecasts of Daily Activity Provide the Inputs for Technical Analyses

- Typical detailed forecasts for daily passengers and aircraft operations are:
 - Average day of the peak month* (ADPM) – an industry standard metric which represents a generally busy day of the year
 - Average annual day* (AAD) – represents activity during the average day of the year
- Daily flight schedule information will be derived from the annual forecast, based on expected service changes, and fleet evolution by Logan Airport air carriers

Analysis	Detail	Detailed forecast information required as input to analysis
Noise	AAD	Aircraft operations by type, origin and destination, and day/night
Air quality	AAD	Aircraft operations by type
Ground access	ADPM	Arriving and departing local passengers by terminal and by time of day



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Ground Access to and from Logan Airport

Technical Analyses

- Transportation modes to and from the airport
 - Rapid transit (MBTA)
 - Buses (Logan Express, private buses/coaches)
 - Taxis and limousines
 - RideApp (Uber, Lyft etc.)
 - Automobiles (Parking or dropping off/ picking up)
- Vehicle miles travelled (VMT)
- Average Annual Daily Traffic, Average Annual Weekly Traffic
- Short- and long-term parking

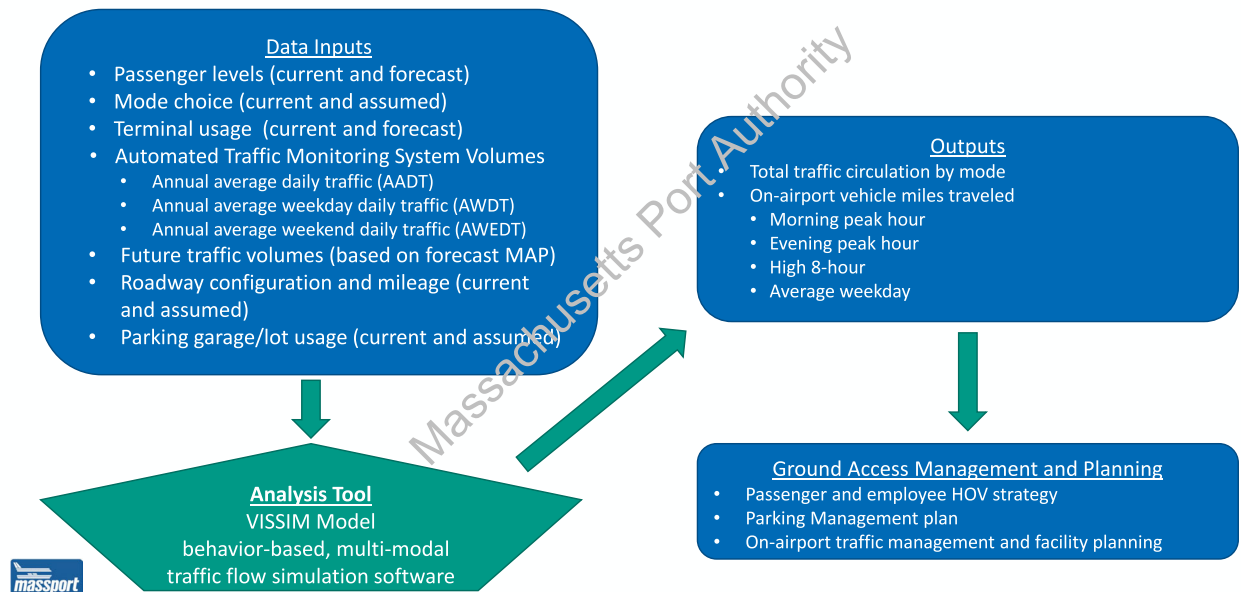
Forecasting inputs for Ground Access

- Total arriving and departing domestic and international passengers
- By time of day
- By terminal



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Ground Access Methodology



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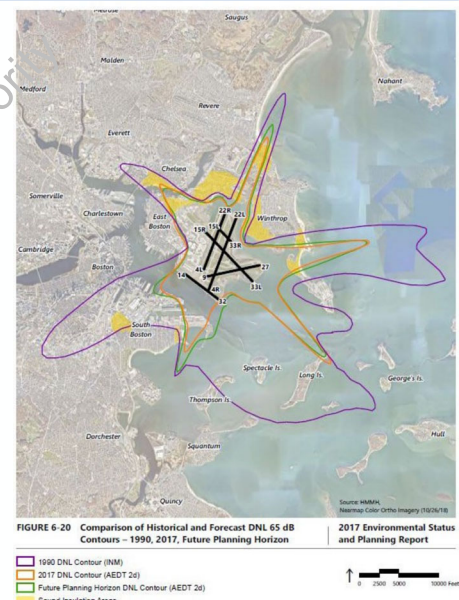
Noise Methodology

Technical Analyses

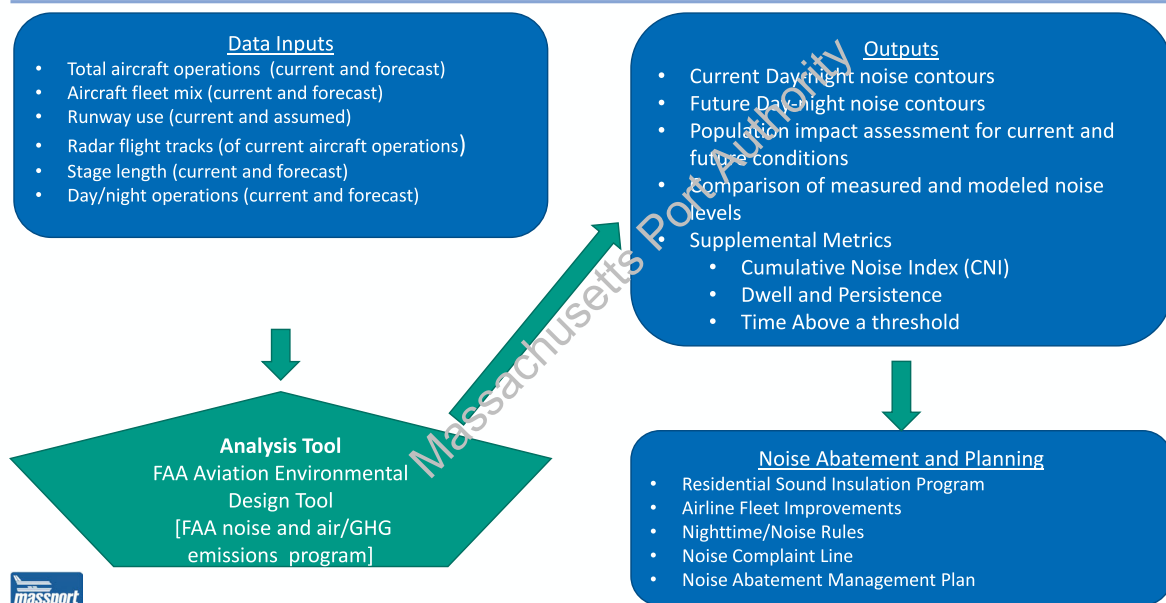
- Noise contours (Day-night average sound level contours in 5-decibel increments)
- Population counts within different contours
- Supplemental Metrics

Forecasting Inputs for Noise

- Total Aircraft operations by
 - Type
 - Origin and destination
 - Day/night schedule



Noise Methodology



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Air Quality and GHG Emissions Reductions

The Air Quality and Emissions Reductions chapters covers:

- Modeled emissions inventory for current operations
- Anticipated emissions inventory for the future planning horizon
- Greenhouse gas assessment
- Air quality emission reductions
- Air quality management goals
- Updates on other air quality efforts that apply to Massport
- Contribution to health studies

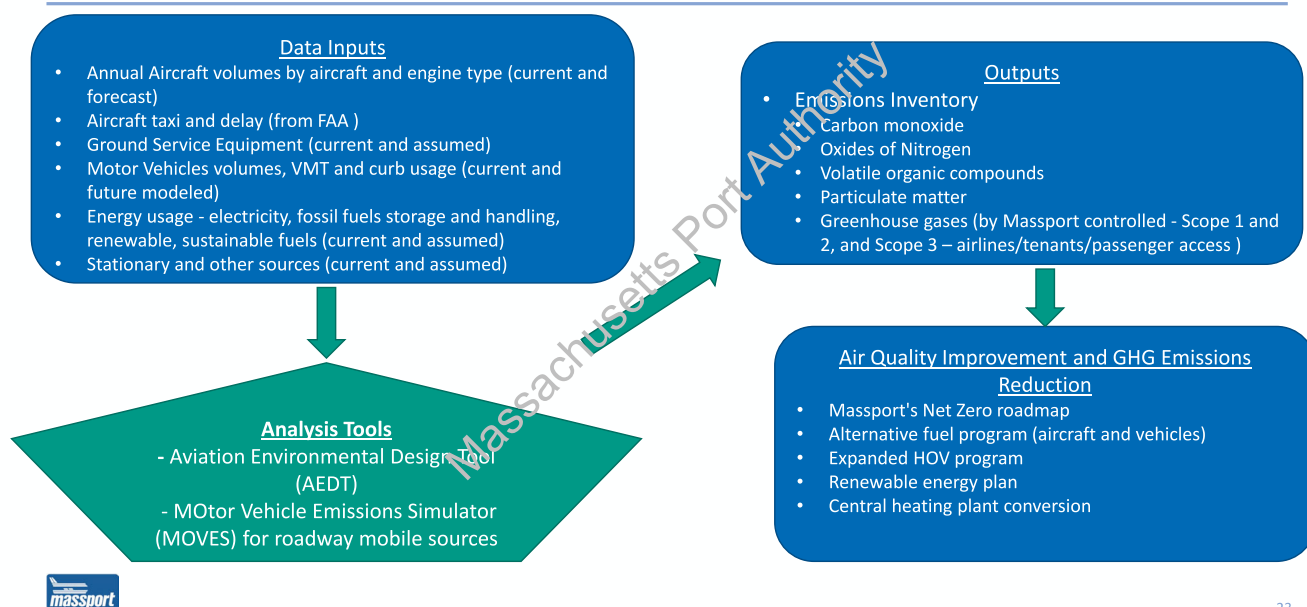
Forecasting Inputs for Air Quality and GHG

- Total Annual Aircraft operations by
 - Aircraft and engine type



22

Air Quality/GHG Methodology



23

Upcoming Public Information Sessions and Questions

Timing	Meeting Description
June 26, 2023	ESPR Overview
Fall/Winter 2023	Pre-Filing Preview of ESPR Findings
Spring 2024	Post-Filing ESPR Document Review

Questions ?

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Logan Airport 2022 Environmental Status and Planning Report Public Information Session

January 17, 2024



Logan Airport 2022 ESPR Pre-File Public Information Session

Agenda

- Welcome and Introductions
- Purpose and Overview of the 2022 ESPR
- Status Update on ESPR Chapters
 - Activity Levels/Forecast
 - Airport Planning
 - Regional Transportation
 - Ground Access
 - Noise Abatement
 - Air Quality and GHG Emissions Reductions
 - Environmental Compliance/Water Quality
 - Project Mitigation
 - Community Benefits, Sustainability, and Resiliency
- Report Format and Readability
- Future Meetings and Questions

Presenters

Massport

- Anthony Guerriero
- Brad Washburn
- Flavio Leo

MEPA/EEA

- Jennifer Hughes

Consultant Team

- Carol Lurie



EDRs/ESPRs are an important planning and reporting process for Massport

- **EDRs** provide an **annual** update on activity and environmental conditions at the Airport compared to the prior reporting year
- **ESPRs** provide annual updates and **long-range analysis** of projected operations, passengers, and cumulative impacts
- Massport's EDRs and ESPRs describe and analyze operating and environmental conditions.
 - EDRs and ESPRs **do not propose any projects** but provide a **planning context** for airport-wide activities to complement the individual project-specific MEPA or NEPA filings.
 - MEPA Certificates issued for EDRs and ESPRs are not statutory EIRs and are not intended to substitute notification requirements or activities assessments for projects subject to MEPA.
- The MEPA process **evaluates projects** and identifies potential adverse environmental impacts.

Massport is the only state agency that prepares ESPRs/EDRs



3

Structure of the 2022 ESPR

1. Introduction and Executive Summary
2. **Community Benefits & Outreach, Sustainability and Resiliency**
3. Activity Levels/Forecasts
4. Airport Planning
5. Regional Transportation
6. Ground Access
7. Noise Abatement
8. Air Quality and GHG Emissions Reductions
9. Environmental Compliance/Water Quality
10. Project Mitigation
11. Appendices: A and B – Responses to Comments
12. Appendices: C – K – Supporting Technical Information

In response to the 2020/2021 EDR, the 2022 ESPR includes a new chapter which discusses community benefits, sustainability and resiliency as well as outreach to environmental justice communities



4

Community Benefits & Outreach, Sustainability, and Resiliency

5

Massport has a long history of Community Engagement

- For over 50 years, Massport has had an entire department dedicated to engagement: Community Relations and Government Affairs
- Massport Community Advisory Committee (Massport CAC), established in 2014, represents the interests of 35 communities; this Committee replaced the former Logan CAC
- Massport regularly holds:
 - Project-specific briefing sessions, including technical overviews and public involvement sessions
 - Meetings with interested parties and key community stakeholders and groups



6

Massport Community Commitments and Initiatives

In addition to MEPA project specific mitigation (Section 61), Massport's engagement with impacted communities has resulted in:

- Massport has invested in an extensive 38-acre open space program. Green space initiatives:
 - a) Piers Park I
 - b) Airport Edge Buffers Program
 - c) Maintenance and Operation of Bremen Street Park
 - d) Mary Ellen Welch Greenway extension
 - e) Piers Park II
 - f) Thomas J. Butler Memorial Park
 - g) Bremen Street Dog Park
 - h) South Boston Maritime Park
- East Boston, South Boston, and Winthrop Foundations and Chelsea Development Agreement
- Updated Residential Sound Insulation Program



7

Massport Community Giving

- Provide annual funding to the **East Boston Neighborhood Health Center** for Pediatric Asthma and COPD Prevention and Treatment Programs in East Boston and Winthrop
- **Massport's Scholarship Program** provides \$50,000 per year for scholarships to students in neighboring communities as well as support for local high school scholarships.
- **Massport's Charitable Contribution Program** distributes over \$250,000 in funding to local organizations for programs in areas like youth & education, arts & culture, social service, environment and athletics.
- **Massport's Community Summer Jobs Program** provides grant funds to local community organizations to support youth summer employment.
 - Funded \$650,000 in grants to support 280 summer youth employment positions in 2023.
- The **Cathy Leonard-McLean Community Room** is available for community and civic organizations for neighboring community groups to use



8

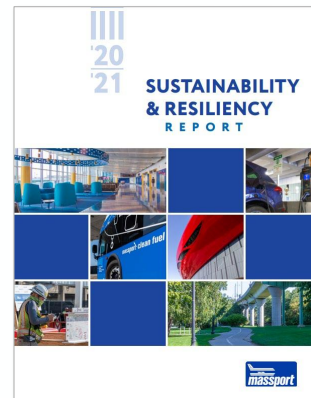
Massport is a national leader in sustainability and resiliency

- Net Zero GHG Emissions commitment by 2031 for **Massport-controlled** activities
- Support for airlines and tenants to reduce their GHG emissions
- Airports Council International - Airport Carbon Accreditation Program Certification application
- Massport's Sustainable and Resiliency Standards
- Sustainability rating certified facilities and infrastructure
- Climate change and resiliency planning – critical assets enhanced
- Commitment to community parks and open space development and management



Sustainability and Resiliency Report

- Logan Sustainability Management Plan (SMP) Completed in 2015, FAA funded
- Expanded in 2019 to other Massport assets
- Update to the SMP coming in 2024



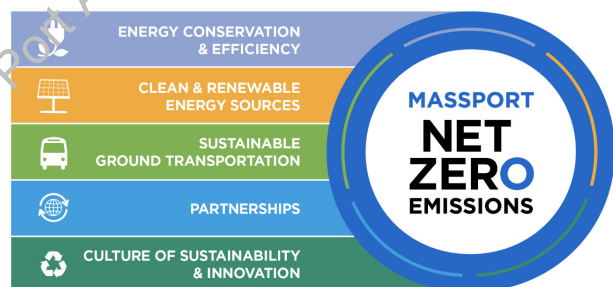
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Massport has an ambitious GHG reduction goal

Massport will strive to achieve net zero greenhouse gas emissions, for those activities under its control, by 2031, Massport's 75th anniversary

- Net Zero Roadmap identified five pathways towards implementation and prioritized future projects
- In March 2023, Massport committed to invest \$500 million in emissions reduction Projects
- Discussion of net zero GHG, sustainability and resiliency initiatives are compiled into new Chapter 2

Net Zero Roadmap



10

Enhanced Outreach

Massachusetts Port Authority

11

Massport has added new opportunities for community engagement*

	Meeting	Date
✓	Public Information Session 1- ESRP Overview / Forecasting Methodology*	June 26, 2023
✓	MEPA Briefing on ESRP *	November 28, 2023
✓	MEPA-hosted meeting with Community Groups on ESRP*	December 21, 2023
	ESRP Public Information Session 2 – ESRP Status update*	January 17, 2024
	File with MEPA	April 2024
	Public Information Session 3 - During comment period	Late April-Early May 2024
	Continued community engagement	Ongoing



12

Massport will update 2022 ESPR format and future ESPRs/EDRs based on MEPA and community feedback

New features:

- Overall shorter document
- Refreshed format and writing style for readability
- Technical materials moved to appendices
- Older project mitigation reporting, historical data, and dense data tables in appendices
- Navigation guides, numbered sections, and chapter color coding added
- Key terminology tables for reference
- Callout boxes for key points and icons on key topics
- Updated chapter structure and enhanced graphics
- Prior ESPR/EDR information incorporated by reference with web links for access
- **New Chapter!**

Chapter 2: Community Benefits & Outreach, Sustainability and Resiliency



13

Activity Levels and Forecasts

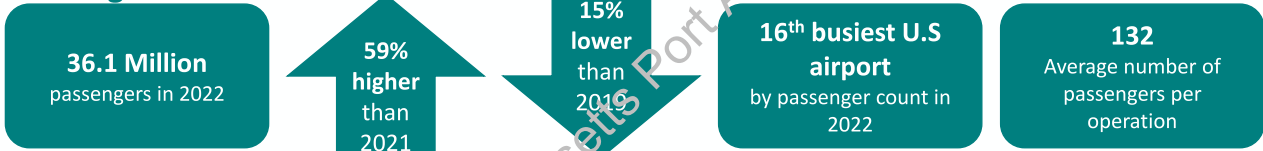
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Logan Airport 2022 Activity Levels are still below 2019 Levels

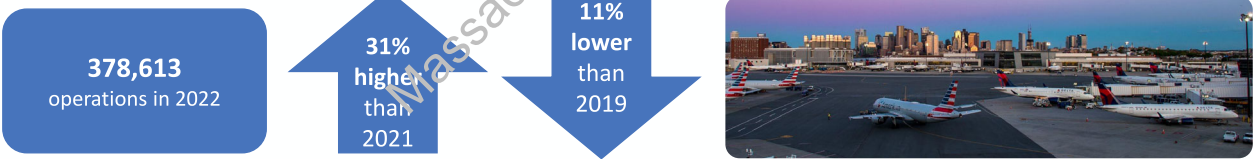
- Logan Airport and the aviation industry continued to recover from the impacts of the global COVID-19 pandemic

Summary of activity levels in 2022

Passengers



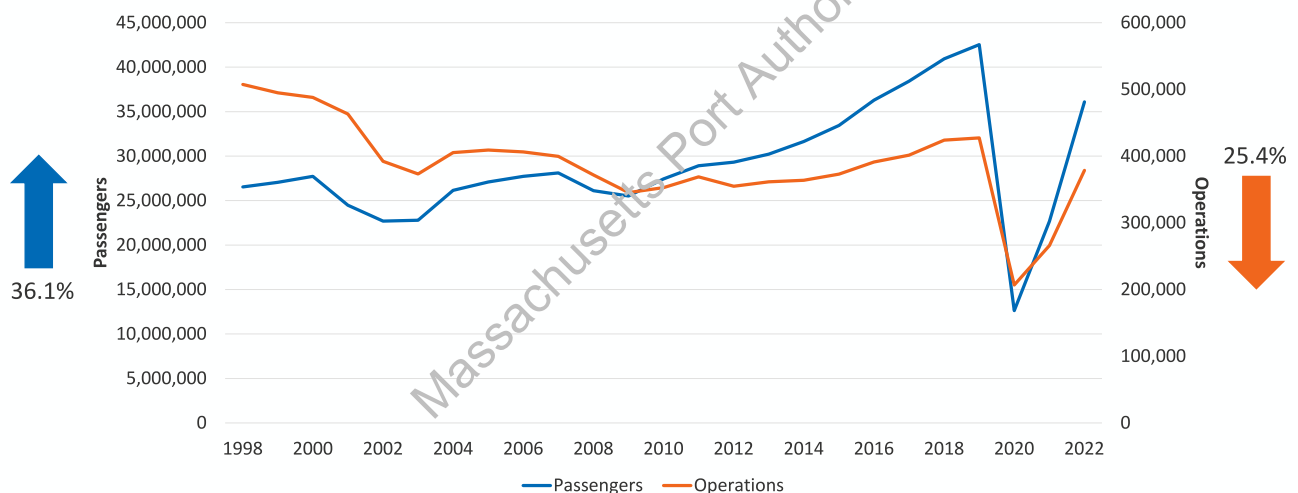
Operations



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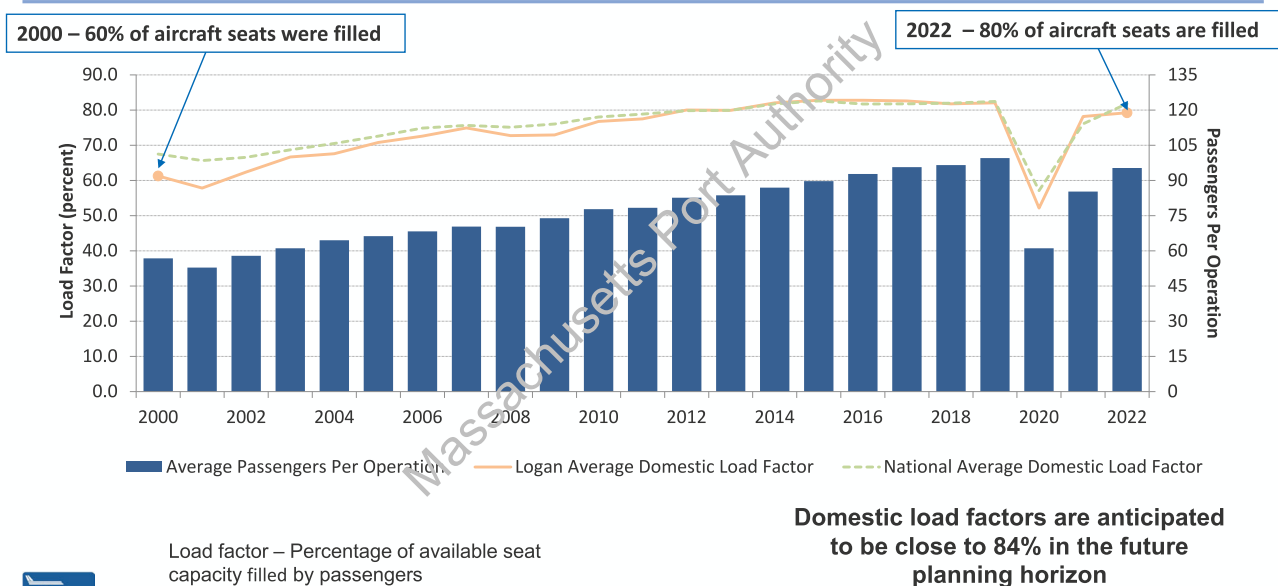
Over the long-term, passengers have increased while flights have decreased

Between 1998 and 2022, there was a 36.1% rise in the annual passenger count accompanied by a 25.4% decrease in the annual number of aircraft operations



16

More passengers are being accommodated on fewer flights

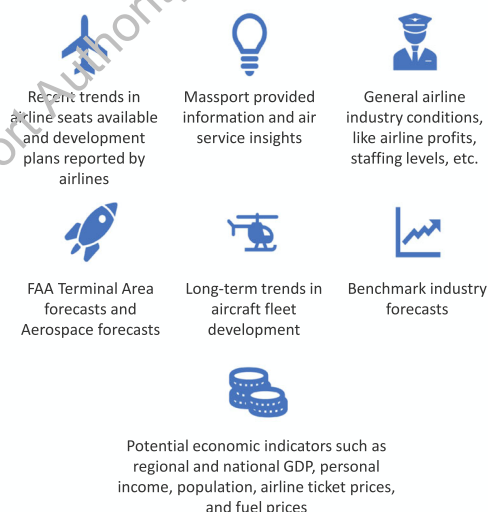


17

ESPR forecast methodology uses a blend of near-term trends and insights with long-term economic factors

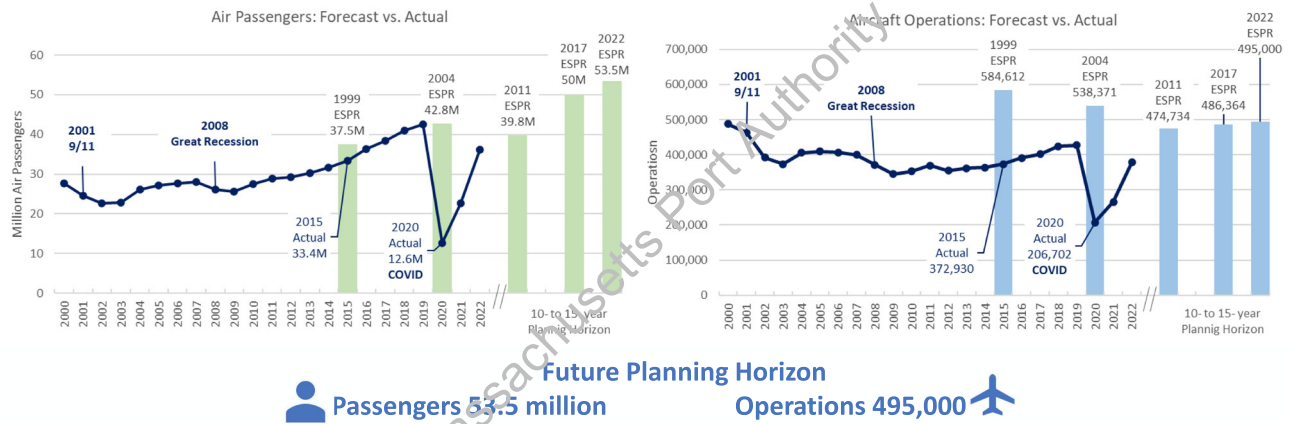
Industry best practices forecasting methods consider

- 10+ years of historical passenger traffic patterns
- Recent trends and “shocks” at the Airport and in the industry
- Future aviation demand based on national and regional economic factors
- Logan Airport’s role in the regional transportation system
- Airline and passenger activity data
- US Department of Transportation data on passengers, flights, routes, aircraft
- Flight schedules filed by the airlines
- International and domestic passenger and aircraft operations data
- Passenger terminal usage
- Future aircraft types likely to be in the fleet



18

Forecast are updated every 5 years and tend to track closely with actual activity levels



Very long-range forecasts are uncertain, therefore ESPR focuses on a more realistic 10- to 15- year timeframe

All forecast assumptions are revisited in each ESPR



19

Airport Planning

20

As passenger activity recovers, Massport restores service and restarts select postponed projects

Deferred Projects or Services due to COVID	Status
Parking Garage in front of Terminal E	Permitted for 5,000 spaces. Project design and sizing of parking currently being evaluated and designed
Construction of 1,000 parking spaces at Framingham Logan Express	In design, anticipated to break ground in 2024 or early 2025
New Logan Express suburban locations	Added Quincy location and new employee site at Wonderland; New, expanded North Shore Logan Express in 2024
Terminal E Improvement Phase 1	Terminal E Phase 1 opened in October 2023 – 4 new gates
New urban Logan Express service	Current focus is on Wonderland employee parking, better service on SL1, SL3, and Back Bay Logan Express
Logan Express service from Peabody, Woburn, and Back Bay	Services fully restored in 2022, Peabody Logan Express at new North Shore location
Dedicated HOV bus lanes	HOV prioritization throughout Logan campus
Reduced headways from Braintree and Framingham Logan Express	Passenger capacity added to Braintree; New Quincy employee lot to help increase parking capacity at Braintree; pending expansion in Framingham



21

ESPR highlights safety and efficiency Projects will be implemented (example projects)

Airside

- Runway 27 RSA Safety Improvements
- Signature Flight Support Relocation

Terminal Area

- Garage in front of Terminal E

Logan Airport Service Area

- North Service Area Optimization
- Green Bus Depot Operations Renovation
- Southwest Service Area Optimization
- Cargo Throughput Facility
- Terminal E, Phase 2



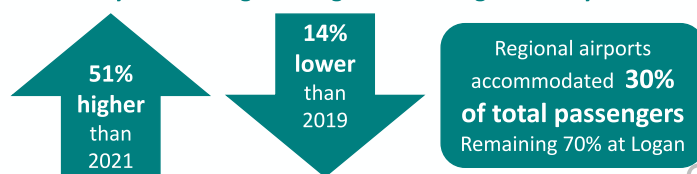
22

Regional Transportation

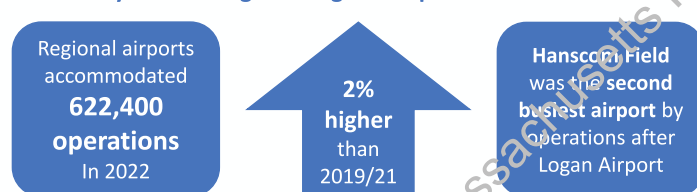
23

Regional Transportation 2022 Findings

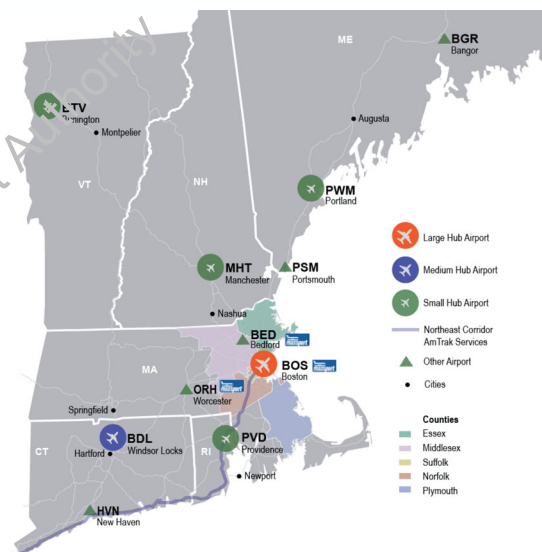
Summary of New England Regional Passenger Activity in 2022:



Summary of New England Regional Operations in 2022:



- General aviation traffic increased during the pandemic due to charter and private business jet activity but tapered off in 2022
- Worcester accommodated more than 200,000 passengers in 2023



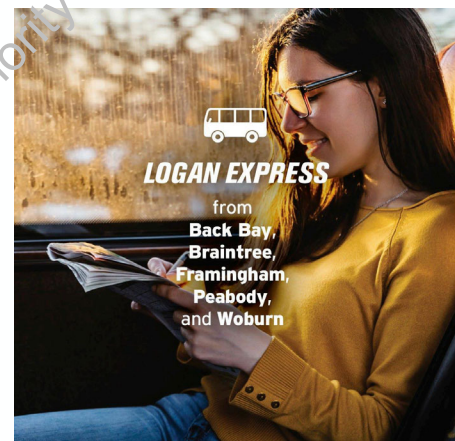
24

Ground Access

25

In 2022 Ground Access mode share continued to show impacts from the pandemic

- Average weekday on-Airport vehicle miles traveled (VMT) was **164,625 average daily miles** traveled, **27.5% lower than in 2019**
- All types of ground transportation services increased ridership in 2022, a return to pre-pandemic usage levels
- 2022 *Air Passenger Ground Access Survey* showed pandemic's impact on passenger travel choices [with more people using private automobiles]
- HOV mode share reached 38.4% exceeding Massport's goal of 35.5% HOV mode share by 2022.
- Post-pandemic, Logan Airport is expected to remain a **top U.S. airport for high-occupancy vehicle (HOV) and transit mode share**
- In 2022, Logan Airport continued to prioritize Long Term parking and comply with the Logan Airport Parking Freeze



26

Curbside Dwell Time Study in line with previous model assumptions

- As requested by the community, Massport conducted a curbside dwell time study to:
 - Better understand conditions at the curb (input to traffic model)
 - Inform emission calculations within the air quality analysis
- Terminal A curb was chosen as a pilot terminal due to ongoing construction at other terminals

Methodology

- Visual observations recorded how long various types of vehicles stayed at the curb throughout the average day
- Vehicle Types observed
 - Arrivals - taxis, airport shuttles, Silver Line and Logan Express buses, and personal vehicles
 - Departures – personal vehicles



Findings

- Observed dwell times are generally in line with those modeled
- Personal vehicle dwell times are longer during some times of the day, primarily outside of the peak travel times that are modeled (when fewer people are curbside)

Next Steps

- Massport plans to conduct dwell time studies for other terminal curbs as they are complete
- Findings will be used to inform the ESPR and EDR ground and air analyses
 - Updated dwell times are one of several components within modeling for on airport-emissions

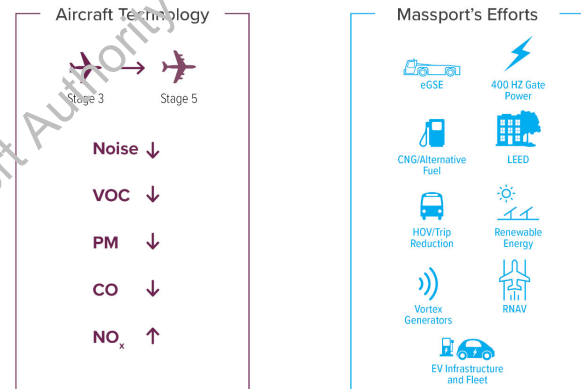
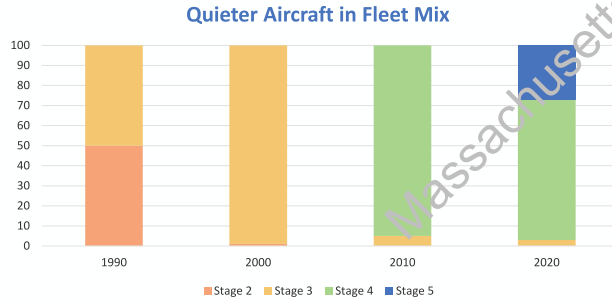
27

Noise Abatement

28

Technology improvements are resulting in reduced noise and air quality impacts

- Aircraft are getting quieter, moving from noisier Stage 2 aircraft to Stage 5 aircraft
- Aircraft and vehicle emissions are also getting cleaner
- Growing share of sustainable aviation fuel replacing jet fuel
- Vehicular emission factors have decreased due to improved engine efficiencies and growing share of EVs

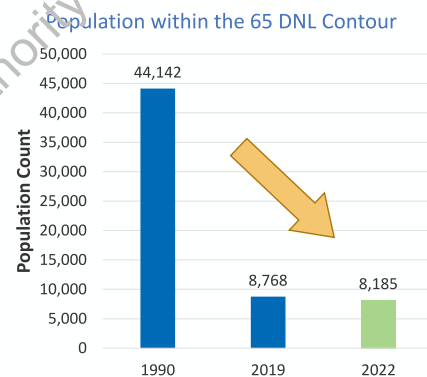


Aircraft engine technology has evolved over time

29

Population within DNL 65 dB contours remain well below historic peaks

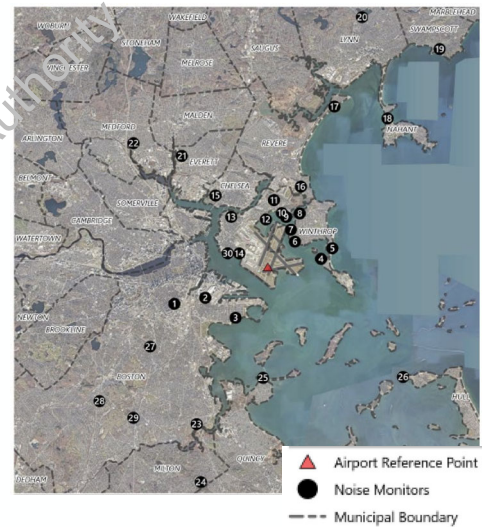
- 2022 Day-Night level (DNL) noise contours are similar to and smaller than 2019 due to fewer aircraft operations and quieter aircraft fleets
- The 65 dB threshold is the standard used by the FAA
- 8,815 estimated population within the 2022 DNL 65 dB contour - **7% below 2019 level**
- 2022 Nighttime aircraft operations were **14% of total operations**, with 83% occurring either before midnight or after 5:00 AM
 - Total nighttime flights was 26% less than in 2019



30

Massport recently upgraded its Noise Monitoring System

- Noise and Operations Monitoring System (NOMS) was upgraded **replacing 29 of 30 monitors**.
- Massport has invested over \$170 million in sound insulation and sought additional funding for noise mitigation in 2022



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Modeled Noise Future Conditions

- The DNL 65 dB contour for the future planning horizon remains within areas included in Massport's Residential Sound Insulation Program
- The future planning horizon predicts 9,435 people exposed to noise levels of DNL 65 dB or greater, a 15.2% increase from 2022, but **still well below historic peaks**
- Aircraft in the future forecast fleet are expected to have **quieter and more efficient engines** than older aircraft in the current fleet
- The future forecast DNL contours are a **conservative estimate of future noise levels**, with actual noise levels expected to be lower due to advancements in aircraft technology
- Nighttime operations are expected to increase from 2022 to the future planning horizon, but remain below 2019 levels.
 - In the future planning horizon, nighttime flights will represent 14% of total operations



Figure 7-22 Comparison of 1990, 2000, 2010, 2019, 2022, and 53.5 MAP 65 dB Contours

2022 Environmental Status and Planning Report



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Air Quality and GHG Emissions Reductions

33

Logan Airport and the Boston Metropolitan Area meet Federal Air Quality Requirements (i.e., NAAQS)

- Logan Airport is a part of the Boston Metropolitan Area as designated by the Clean Air Act (CAA)
- The CAA designates areas as either attainment, nonattainment, or attainment/maintenance in relation to the National Ambient Air Quality Standards (NAAQS)
- Boston Metropolitan Area meets all pollutant standards (attainment) as per NAAQS, except for Carbon Monoxide (CO)
 - The area is in a state of attainment/maintenance meaning it is maintaining the standards without any measured exceedance since 1995

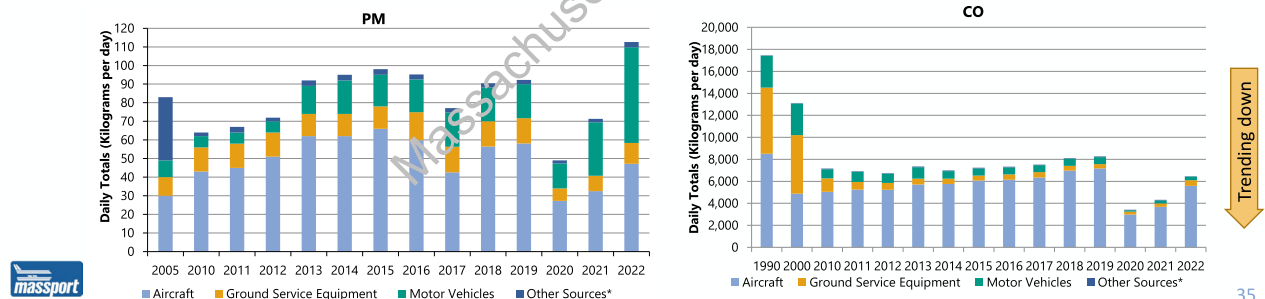
Air Quality Designation Status for the Boston Metropolitan Area	
Pollutant	Designation
Ozone (8-hour, 2018 Standard)	Attainment
Ozone (8-hour, 2015 Standard)	Attainment
Carbon Monoxide (CO)	Attainment/Maintenance ¹
Nitrogen Dioxides (NO ₂)	Attainment
Particulate Matter (PM ₁₀)	Attainment
Particulate Matter (PM _{2.5})	Attainment
Sulfur Dioxide (SO ₂)	Attainment
Lead (Pb)	Attainment
Source: U.S. Environmental Protection Agency (EPA), "Nonattainment Areas for Criteria Pollutants (Green Book)," accessed on August 30, 2023, https://www.epa.gov/green-book .	
1	The Boston Metropolitan Area was redesignated to attainment/maintenance for CO on April 1, 1996. MassDEP released a Second 10-Year Limited Maintenance Plan in 2018, outlining strategies to keep CO levels below the NAAQS standards.



34

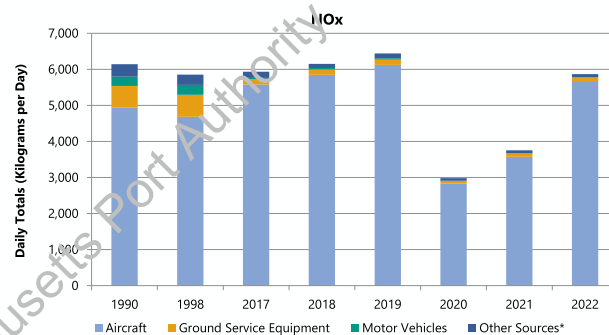
With new technology, reduction in VOCs and CO Emissions over the long run

- Criteria pollutants CO and VOCs are predicted to decrease in the future due to:
 - Changes in aircraft fleet mix and increased use of SAF
 - Conversion of fleet vehicles and GSE to EV or viable alternatives
 - Cleaner aircraft engine and motor vehicle technologies
- PM10/PM2.5 will also decrease over time, but model assumptions for motor vehicles reflect an increase for 2022



NOx has trended downward since 2019 due to reduced operations

- Most NOx emissions from aviation do not occur near the ground, and more than 90% occur above 3,000 feet.
- NOx will likely increase in the future due to:
 - Changing aircraft fleet and engine technology



Logan Airport Scope 1 and 2 GHG emissions remain well below 2019 levels

- Reductions attributable to
 - Lower passenger and aircraft activity levels than 2019
 - Recategorized parking lots to Scope 3 in line with ACA reporting protocols
 - Substantial reduction in use of #2 Fuel (higher emission factor than other fuels)
 - Greater accuracy of monthly utilities data reporting

**Logan Airport GHG emissions represent
Less than 1 % of Massachusetts' emissions**

- GHG emissions are anticipated to trend downwards due to:
 - Improved aircraft technology and increased use of SAF
 - Introduction of electric aircraft (in long-term)
 - Implementation of Massport's Net Zero GHG Roadmap

SCOPE	2019 MT of CO ₂ e	2022 MT of CO ₂ e	Percent difference
Scope 1 Emissions	51,360	31,415	-39%
Scope 2 Emissions	43,226	42,853	-1%
Scope 3 Emissions	713,539	511,452	-28%
Total Emissions	808,125	585,720	-28%
Percent of State Totals	1%	<1%	<1%



37

Environmental Compliance and Management Water Quality

38

Environmental Compliance and Management

- Massport maintains a Spill Prevention Control and Countermeasure Plan (SPCC) for its facilities and require Tenants meeting certain thresholds to prepare their own SPCC for their facilities.
- Track Massport's and tenants' compliance with the Massachusetts Contingency Plan
- Provides status update on tank management plan
- Reports on compliance with water quality requirements according to state and federal regulations for the airport/stormwater outfalls and the Fire Rescue Fighting Facility



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Questions

**For more information contact Brad Washburn
at bwashburn@massport.com**



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E.3 Environmental Justice and Public Health Existing Conditions Review Methodology Description

The following provides detailed methodology for the ESPR environmental justice (EJ) and public health existing conditions review:

- The Executive Office of Energy and Environmental Affairs' (EEA's) EJ Maps Viewer (EJ Maps Viewer) and Massachusetts Department of Public Health (DPH) Environmental Justice Tool (DPH EJ Tool) Vulnerable Health EJ Criteria by census tract data are added to an ArcGIS Pro project file for ease of reference and expanded capabilities.
 - This public health existing conditions review establishes a 1-mile radius from the Logan Airport boundary as the (Designated Geographic Area) DGA.
 - The EJ block groups, languages spoken, low birth weight by census tract, and elevated blood lead levels by census tract data layers were each intersected with the DGA layer. The ArcGIS Pro attribute tables were then exported to Excel.
- The EJScreen tool was used to establish the 13 EJ Indexes (indicators) by producing a Community Report.
 - To export the report, the DGA layer was brought into EJScreen as a zipped shapefile. Establishing a boundary in EJScreen produces a pop-up that then pulls percentile data relevant to the area within the boundary.
 - The Community Report was then downloaded as a PDF for that area.

E.3.1 Data Availability Limitations

Logan Airport's EDRs and ESPRs are status reporting and planning documents filed annually and every five years, respectively, and differ from traditional MEPA project filings. The EDRs and ESPRs report on cumulative impact conditions pertaining to Airport ground access, noise, air quality and water quality. Unlike an individual project, Logan Airport's activities and operations, and their related potential impacts, vary from year to year based on factors both within and outside of Massport's direct control, like airline service offerings or regional economic activity among others.

Most of the data provided by the DPH EJ Tool identify potential sources of burden, but do not provide these data at the granularity of the census tract level, except for the two Vulnerable Health EJ Criteria by census tract layers. For example, Vulnerable Health EJ Criteria by community data are at the municipality level, which is not easily delineated or extrapolated to the census tract or block group level. Thus, these data only provide a more qualitative representation and high-level view of a community's current conditions. Additionally, most of the air quality potential sources of pollution data are at the regional level and often similar to airport sources, and as a result, Logan Airport's impacts are not distinguishable from other transportation and pollution sources.

Most of the EJScreen data are proximity-based, and therefore provide possible existing burdens, but do not provide easily quantifiable metrics of burden. The degree or intensity of the burden created by a source of an environmental impact is not defined; just the distance from that source area to the community under assessment.

Additionally, noise burdens and annoyance factors, which are often a primary topic of community complaint, are not captured in either of these tools. However, Massport provides detailed noise impact assessment for each reporting year in the EDRs and ESPRs.

E.3.2 Environmental Justice Population – Detailed Findings

Error! Reference source not found. shows a summary of the EJ criteria for each block group; **bold font** and **highlighted cells** indicate the metrics that exceed MEPA EJ criteria thresholds.

Table E-2 Environmental Justice Block Group Summary

Block Group	Census Tract	Municipality	Total Population	Minority Population (%)	Median Household Income	Households with English Isolation	Languages Spoken
2.00	408.01	Boston	765	82.7	\$31,151	8.3	Spanish (10.5%) and Chinese (9.2%)
1.00	501.01	Boston	1,643	76.6	\$82,583	23.7	Spanish (34.5%)
2.00	501.01	Boston	1,389	76.4	\$22,910	37.5	Spanish (34.5%)
3.00	501.01	Boston	1,885	71.9	\$71,053	22.6	Spanish (34.5%)
1.00	502	Boston	2,140	72.9	\$67,564	13.2	Spanish (49.1%)
2.00	502	Boston	1,238	64.5	\$76,635	24.0	Spanish (49.1%)
3.00	502	Boston	788	71.3	\$54,911	53.7	Spanish (49.1%)
4.00	502	Boston	1,031	78.6	\$63,438	53.4	Spanish (49.1%)
1.00	503	Boston	1,475	55.2	\$66,250	9.9	Spanish (24.3%)
2.00	503	Boston	777	79.0	\$44,464	24.3	Spanish (24.3%)
3.00	503	Boston	1,006	57.6	\$12,013	24.6	Spanish (24.3%)
1.00	504	Boston	603	73.0	\$65,441	3.3	Spanish (36.5%)
2.00	504	Boston	1,769	47.6	\$80,268	20.0	Spanish (36.5%)
1.00	505	Boston	2,174	57.1	\$86,750	20.8	Spanish (45.7%)
1.00	506	Boston	1,162	68.7	\$73,750	38.6	Spanish (60.0%)
2.00	506	Boston	912	63.0	\$106,071	19.1	Spanish (60.0%)
1.00	507	Boston	1,766	72.5	\$61,339	33.9	Spanish (49.8%)
2.00	507	Boston	1,341	71.9	\$52,491	58.5	Spanish (49.8%)
3.00	507	Boston	1,413	71.3	\$81,897	62.1	Spanish (49.8%)

Table E-2 Environmental Justice Block Group Summary

Block Group	Census Tract	Municipality	Total Population	Minority Population (%)	Median Household Income	Households with English Isolation	Languages Spoken
1.00	509.01	Boston	1,421	82.6	\$76,591	36.4	Spanish (51.0%)
2.00	509.01	Boston	1,860	68.2	\$81,250	18.3	Spanish (51.0%)
3.00	509.01	Boston	961	73.8	\$37,333	43.4	Spanish (51.0%)
1.00	510	Boston	2,134	55.2	\$66,845	15.9	Spanish (19.6%)
2.00	510	Boston	1,055	56.2	\$21,438	15.5	Spanish (19.6%)
3.00	510	Boston	1,128	56.8	\$84,784	8.0	Spanish (19.6%)
1.00	511.01	Boston	1,803	62.1	\$67,930	26.4	Spanish (24.6%)
2.00	511.01	Boston	1,831	68.2	\$48,707	28.9	Spanish (24.6%)
3.00	511.01	Boston	1,727	53.0	\$121,875	0.0	Spanish (24.6%)
4.00	511.01	Boston	1,099	39.6	\$77,870	4.5	Spanish (24.6%)
1.00	512	Boston	833	37.5	\$150,313	25.7	Spanish (23.0%)
2.00	512	Boston	1,703	50.0	\$69,103	8.5	Spanish (23.0%)
3.00	512	Boston	918	29.8	\$90,917	7.3	Spanish (23.0%)
1.00	606.04	Boston	1,814	24.8	\$243,719	0.7	-
2.00	606.04	Boston	989	24.7	\$176,000	0.0	-
-	701.01 ¹	Boston	-	-	-	-	Chinese (9.8%)
1.00	701.04	Boston	890	30.1	\$129,792	5.4	-
2.00	701.04	Boston	610	31.5	\$196,250	0.0	-
-	1601.01 ¹	Chelsea	-	-	-	-	Spanish (49.8%)
1.00	1601.02	Chelsea	798	79.6	\$59,201	25.7	-
2.00	1601.02	Chelsea	1,613	95.6	\$63,469	39.3	-
3.00	1601.02	Chelsea	864	89.7	\$81,313	7.4	-
4.00	1601.02	Chelsea	548	88.7	\$25,451	34.1	-
1.00	1601.03	Chelsea	1,599	92.0	-	40.5	-
2.00	1601.03	Chelsea	1,081	93.3	\$69,713	67.9	-
3.00	1601.03	Chelsea	994	75.8	\$65,865	14.1	-
4.00	1601.03	Chelsea	972	75.2	\$198,000	32.3	-
1.00	1602	Chelsea	1,393	92.7	\$61,679	45.7	Spanish (60.8%)
2.00	1602	Chelsea	1,063	93.9	\$40,450	59.0	Spanish (60.8%)
3.00	1602	Chelsea	852	90.7	\$58,688	48.8	Spanish (60.8%)
4.00	1602	Chelsea	846	82.6	\$51,827	21.6	Spanish (60.8%)

Table E-2 Environmental Justice Block Group Summary

Block Group	Census Tract	Municipality	Total Population	Minority Population (%)	Median Household Income	Households with English Isolation	Languages Spoken
1.00	1603	Chelsea	728	48.9	\$78,427	20.5	Spanish (9.3%)
3.00	1605.02	Chelsea	1,616	80.0	\$60,479	14.5	Spanish (28.6%)
5.00	1605.02	Chelsea	905	78.5	\$67,818	24.2	Spanish (28.6%)
2.00	1706.01	Revere	1,719	61.4	\$117,436	2.6	Spanish (16.3%)
1.00	1707.01	Revere	1,181	55.9	\$34,420	7.4	Spanish (24.5%)
1.00	1708	Revere	1,974	52.5	\$65,455	19.7	Spanish (13.7%)
2.00	1708	Revere	1,572	55.2	\$53,420	4.6	Spanish (13.7%)
3.00	1708	Revere	1,184	53.1	\$44,250	20.9	Spanish (13.7%)
4.00	1708	Revere	1,043	53.3	\$76,974	22.8	Spanish (13.7%)
3.00	1801.01	Winthrop	766	19.2	\$42,485	13.2	-
4.00	1801.01	Winthrop	2,320	28.6	\$75,941	6.3	-
1.00	1802	Winthrop	1,429	26.2	\$87,194	0.0	-
2.00	1802	Winthrop	749	18.3	\$53,587	3.2	-
3.00	1802	Winthrop	695	20.9	\$52,118	0.0	-
3.00	1805	Winthrop	1,244	30.9	\$72,292	9.4	-
-	9801.01 ₁	Boston	-	-	-	-	Spanish (6.4%)
1.00	9813	Boston	79	31.6	\$128,000	0.0	Spanish (20.2%)

1 These census tracts do not contain EJ block groups, but do include languages spoken by more than 5 percent of the population who do not speak English well or at all within the DGA.

E.4 Public Health Detailed

The following sections provide more detailed information on the public health existing conditions review than what was provided in Chapter 2, Section 2.5. The public health existing conditions review includes data from the DPH EJ Tool and EJScreen tool, per MEPA guidance.

E.4.1 Vulnerable Health EJ Criteria by Census Tract Detailed

Table E-3 provides data on the childhood blood lead and low birth weight Vulnerable Health EJ criteria, which are available by census tract. The table denotes whether the census tract contains an EJ block group or not, as well.

Table E-3 Vulnerable Health EJ Criteria by Census Tract

Census Tract	Municipality	EJ Block Group Within?	Meets Criteria (Greater than 110% of the Statewide Rate)?	
			Childhood Blood Lead	Low Birth Weight
303	Boston	No	No	Yes
305	Boston	No	No	No
408.01	Boston	Yes	No	No
501.01	Boston	Yes	Yes	Yes
502	Boston	Yes	Yes	No
504	Boston	Yes	Yes	No
505	Boston	Yes	Yes	No
506	Boston	Yes	Yes	No
507	Boston	Yes	No	No
509.01	Boston	Yes	Yes	Yes
510	Boston	Yes	No	Yes
511.01	Boston	Yes	No	No
512	Boston	Yes	Yes	Yes
606	Boston	No	No	Yes
701.01	Boston	No	No	Yes
1601.01	Chelsea	No	Yes	No
1602	Chelsea	Yes	Yes	Yes
1603	Chelsea	Yes	Yes	No
1605.02	Chelsea	Yes	Yes	Yes
1706.01	Revere	Yes	Yes	No
1708	Revere	Yes	No	No
1801.01	Winthrop	Yes	No	No
1802	Winthrop	Yes	Yes	No
1803.01	Winthrop	No	No	No
1804	Winthrop	No	Yes	No
1805	Winthrop	Yes	Yes	Yes
9801.01	Boston	No	No	No
9812.01	Boston	No	No	No
9812.02	Boston	No	No	No
9813	Boston	Yes	No	No

Table E-3 Vulnerable Health EJ Criteria by Census Tract

Census Tract	Municipality	EJ Block Group Within?	Meets Criteria (Greater than 110% of the Statewide Rate)?	
			Childhood Blood Lead	Low Birth Weight
9815.02	Boston	No	No	No
9816	Boston	No	No	No
9901.01	Winthrop	No	No	No

Source: DPH EJ Tool

Note: At the time of filing the 2022 ESR, 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.

E.4.2 Detailed List of Potential Sources of Pollution

Table E-4 provides data on potential sources of pollution as categorized by the DPH EJ Tool. The site lists are directly derived from the DPH EJ Tool, and therefore the names and particular spellings are the same as what is available in the database.

Table E-4 DPH EJ Tool Detailed List of Potential Sources of Pollution within the DGA

DPH Classification Category	Site Count and List
Large Quantity Toxic User	2: <ul style="list-style-type: none"> Boston Ship Repair Massachusetts Bay Brewing Company
Large Quantity Generators	42: <ul style="list-style-type: none"> 150 Seaport Boulevard Project Alamo Rent A Car LLC Autozone Northeast Inc., DBA Autozone 3745 Avis Budget CONRAC QTA 1 Avis Rent A Car System Inc. Avis Rent A Car System LLC Boston Ship Repair Boston Harbor Cruises Boston Harbor Cruises Boston Harbor Cruises CVS 0140 CVS 1265 Delta Air Lines Inc. Former Coastal Oil Of New England Inc. East Boston Community Development Corporation Enterprise Rent A Car Enterprise Rent A Car Company Of Boston Federal Express Corporation CVS 619 CVS Pharmacy 10517 Ginkgo Bioworks Glen Mor Fuel Oil Co. Global Companies LLC

Table E-4 DPH EJ Tool Detailed List of Potential Sources of Pollution within the DGA

DPH Classification Category	Site Count and List
	<ul style="list-style-type: none"> • Gulf Oil Limited Partnership • Harbor Fuels • Hertz Corp 1798-01 • Hertz Corporation • HMS Scott Vessel • Hornblower Cruises And Events • HUSPP 250 Marginal LLC • Irving Oil Terminals Inc • Massport Authority Logbm-0147 • MBTA Silver Line Court House Station • M/V UBC Chile • Sapphiros Labs • Sunoco Partners Marketing & Terminals LP • Swissport Fueling Inc DbA BOSfuel Corp • Smartlabs 6 Tide • United Airlines Inc • U.S. Coast Guard • Vertex Pharmaceuticals Incorporated • Vertex Pharmaceuticals Incorporated
Air Operating Permits	5: <ul style="list-style-type: none"> • Boston Ship Repair • Gulf Oil Limited Partnership • Irving Oil Terminals Inc. • Massport Authority LOGBM-0147 • Sunoco Partners Marketing & Terminals LP
Hazardous Waste Recycler	0
Hazardous Waste Treatment, Storage/Disposal	10
MassDEP Tier Classified 21E Sites	27: <ul style="list-style-type: none"> • Amoco Petroleum Terminal - 3-0003550 • Dry Dock Area - 3-0030452 • Logan Airport - Former Building 6 - 3-0037749 • 1257 And 1263 Saratoga St - 3-0028293 • No Location Aid - 3-0029258 • Boston Fish Pier - 3-0031330 • Commercial Property - 3-0037901 • Gulf Oil Terminal - 3-0000163 • Wigglesworth Machinery Company - 3-0036436 • Intersection Of Highland And Suffolk STS - 3-0036450 • Commercial/Residential Property - 3-0035711 • Parking Lot Behind 276 Border Street - 3-0035829 • Commercial Property - 3-0035886 • Behind Moakley Courthouse - 3-0036865 • Boston Harbor At USCQ Base - Seneca - 3-0036396

Table E-4 DPH EJ Tool Detailed List of Potential Sources of Pollution within the DGA

DPH Classification Category	Site Count and List
	<ul style="list-style-type: none"> • New Shelby Auto Body and Repair - 3-0035990 • Bulk Terminal Tank #5 - 3-0034332 • Citgo Station - 3-0034875 • Logan International Airport - 3-0035047 • Silver Line Courthouse Station - 3-0037132 • East Pier, World Trade Center - 3-0037364 • 100 Salt Street - 3-0037464 • 2 Harbor Street - 3-0036957 • Boston Ship Repair - 3-0036959 • 143 Addison Street - 3-0037236 • 12-16 Revere Street - 3-0037239 • West End Of Parking Lot - 3-0037271 • Mario Umana Academy - 3-0036825
Tier II Facilities	<p>52:</p> <ul style="list-style-type: none"> • FedEx Express (BOSR) • Fidelity Real Estate Company • Fish Pier • Legal Sea Foods, LLC • Mass Bay Brewing Company, Inc • John Nagle Company • Jones Lang LaSalle Rowes Wharf • Logan International Airport • Channel Fish Co Inc • Charlestown Marina • BOS - Boston, MA - American Airlines • Delta Air Lines, Inc. - BOS • EAST BOSTON PRODUCT TERMINAL • Enterprise Rent-A-Car Company of Boston, LLC. • AT&T - USID41848 • Avis Budget Group, Inc. - CONRAC QTA # 1 - Boston-Logan International Airport • Avis Rent A Car System, LLC • BOSfuel Corporation/Swissport • BOSTON ALSF • Boston Area Operations - RAC - 1798-01 • Boston Harbor Shipyard & Marina • Boston Logan Int'l Airport - DTAG - RAC - Dollar 26510-02 • Boston Logan Int'l Airport - RAC - 1700-11 • Boston Logan Int'l Airport DTAG Thrifty RAC - 81001 • Boston Ship Repair, LLC. • Boston Yacht Haven • Biltrite Corporation • Commodity Forwarders Inc (BOS) • Irving Oil Terminals Inc. • Green Bus Depot

Table E-4 DPH EJ Tool Detailed List of Potential Sources of Pollution within the DGA

DPH Classification Category	Site Count and List
	<ul style="list-style-type: none"> • Harbor Fuels • Global Companies LLC f/k/a Global South Terminal • Global Companies LLC f/k/a Global South Terminal • Moakley Federal Courthouse • MOL Logistics (U.S.A.) Inc. Boston Branch • National Grid-Winthrop 22 • National Grid-Metcalf Square 96 • NSTAR Station 99 • Vertex Pharmaceuticals, Inc. • Vertex Pharmaceuticals, Inc. Bldg 1 • Vertex Pharmaceuticals, Inc. Bldg 2 • Verizon WINTHROP CO (VZ- MA577507) • United Airlines - Logan International Airport • US Coast Guard Base Boston • Verizon E BOSTON CO (MA577207) • NSTAR Station 488 • North Coast Seafoods • Paul Revere Transportation LLC Chelsea Garage • Porrazzo Rink • Suffolk Downs • Spaulding Rehabilitation Hospital • Signature Flight Support BOS
MassDEP Sites with Activity and Use Limitations (AULs)	<p>81:</p> <ul style="list-style-type: none"> • Vacant Lot - 3-0037349 • 100-110 Marginal Street - 3-0035962 • Clippership Wharf - 3-0033113 • No Location Aid - 3-0033143 • Former American Airlines - North Cargo - 3-0035030 • Former American Architectural Iron Co. - 3-0033527 • East Pointe Rehabilitation & Skilled Care - 3-0033774 • Boston EDIC - 3-0003124 • Terminal E - 3-0003179 • Robie Properties/Adj. To Logan Airport - 3-0010027 • Bellesteel Industries Inc. - 3-0003837 • Sumner Tunnel Ventilation Bldg - 3-0010550 • Corner Of Eastern Ave - 3-0010694 • Naval Shipyard Prcls 567 - 3-0003372 • Amerada Hess Corp - 3-0004332 • Massport Conley Terminal - 3-0004424 • Mobil Gasoline Station - 3-0004443 • Auto Dealership FMR - 3-0004611 • Butler Hanger FMR - 3-0004832 • Panam (FMR) Vandusen Tank Farm - 3-0004835 • Pier 4 Development Project - 3-0004064 • FMR Mobil Oil Corp Bulk Storage - 3-0001558

Table E-4 DPH EJ Tool Detailed List of Potential Sources of Pollution within the DGA

DPH Classification Category	Site Count and List
	<ul style="list-style-type: none"> • Chelsea Creek Headworks - 3-0002298 • Amoco Petroleum Terminal - 3-0003550 • Amoco Station v 2106 - 3-0000700 • American Airlines - 3-0000777 • Northeast Petroleum - 3-0000821 • Hertz Rent A Car - 3-0000956 • Butler Aviation Southeast - 3-0002690 • Harbor Gateway Industrial Park - 3-0002809 • Toyota Terminal - 3-0002835 • Texaco Inc S Boston Terminal 3 - 3-0000257 • Us Naval Fuel Depot FMR - 3-0000526 • MWRA Chelsea Creek Headworks - 3-0031365 • No Location Aid - 3-0014827 • No Location Aid - 3-0012741 • L Block Formerly Parcel 2 - 3-0019097 • Ft Banks Athletic Fields - 3-0017310 • No Location Aid - 3-0021897 • No Location Aid - 3-0017722 • Former Hodge Boiler Works - 3-0025307 • West Access Rd - 3-0013046 • Jeffries Point Lots 4438 To 4441 - 3-0017472 • American Architectural Iron Co. - 3-0016751 • Offsite Heating Oil Release - 3-0032323 • Willow/Suffolk/Congress/Highland - 3-0014181 • Massport Marine Terminal - 3-0026768 • No Location Aid - 3-0014027 • Logan Int'l Airport, Fire Training Fac. - 3-0028199 • FMR Perini Contractors Yard - 3-0014080 • Warehouse - 3-0022199 • Terminal - 3-0022200 • Old Rr Bed - 3-0022229 • No Location Aid - 3-0019346 • FMR 1000 Gallon UST - 3-0018331 • Global Tank Farm-Tank 25/Rte 1a - 3-0024602 • Porter And Cottage St - 3-0020180 • Logan Cargo Park - 3-0024813 • Ne Petroleum - 3-0013585 • Beachmont School - 3-0022311 • Coastal Oil WHSE - 3-0022385 • 6 Drydock Avenue - 3-0026301 • No Location Aid - 3-0016782 • Water Line Repairs/Sewer Line Repairs - 3-0026551 • Global South Term LLC Tank No 38 - 3-0023905 • No Location Aid - 3-0027313 • Fuel Deliv System Terms B And C - 3-0027353

Table E-4 DPH EJ Tool Detailed List of Potential Sources of Pollution within the DGA

DPH Classification Category	Site Count and List
	<ul style="list-style-type: none"> • 1257 And 1263 Saratoga St - 3-0028293 • Off Griffin Way Near Eastern Ave - 3-0012790 • No Location Aid - 3-0031132 • No Location Aid - 3-0031999 • Logan Airport, Southwest Service Area - 3-0032022 • Salesian School - 3-0028057 • No Location Aid - 3-0024948 • No Location Aid - 3-0014890 • Sunoco Logistics - 3-0031628 • No Location Aid - 3-0011673 • EDIC Meter Pit #4 - 3-0025471 • Willow/Suffolk/Congress/Highl - 3-0014339 • Former Robie Air Park - 3-0023493 • Proposed UAL GSE Facility - 3-0017652
MassDEP Groundwater Discharge Permits	0
Wastewater Treatment Plants	10 <ul style="list-style-type: none"> • Global South Terminal, LLC - MA0000825 • Atlantic Marine Boston, LLC - MA0040142 • New England Aquarium Corp. - MA0003123 • Tosco East Boston Terminal - MA0004006 • Union Wharf Condominium Trust - MAG250977 • Irving Oil Terminals, Inc. - MA0001929 • Gulf Oil - Chelsea - MA0001091 • Sterling Suffolk Racecourse LLC - MA0040282 • Massport Authority - Logan - MA0000787 • Massport - Logan Airport - MA0032751
Underground Storage Tanks	60 <ul style="list-style-type: none"> • Robert Wyatt Ent Inc. DbA Wyatt Mobil • Prescott Street Pumping Station • Localizer 4R LOC BOS • South Cargo Building 58 • Massport Authority Logan • Bolsters Citgo Energy To Go 2107 • Ventilation Building No. 5 • Former South Gate • Sterling Suffolk Racecourse LLC • Hilton Boston Logan Airport • Cumberland Farms 2003 • Chelsea Creek Headworks • Federal Aviation Administration • Fazio Enterprises Mobil • Hertz Corporation • Caruso Pump Station

Table E-4 DPH EJ Tool Detailed List of Potential Sources of Pollution within the DGA

DPH Classification Category	Site Count and List
	<ul style="list-style-type: none"> • Constitution Beach CSO Facility • Facilities II - Fuel Island • Logan Airport- Fire Rescue Headquarters • Facilities II - Auto Maintenance Shop • Shell Service Station 137748 • Pleasant Court Sewerage Pump Sta • Swissport Fueling Inc. DBA BOSfuel Corp. • United Airlines Inc. • Irving Oil Terminals Inc. • North Cargo Apron • North Outfall • MA Turnpike Authority Ops Control Center • Revere St Sewer Pumping Station • Green Valley Oil, LLC Station 30515 • United Airlines Inc. • North Cargo Apron • Cargo Building 58 • S&H Fuel Inc. DBA Stop & Fuel • Massport Authority Logan • Hess 21333 • ALSF-2/SSACR • South Cargo Ramp • Avis Rent A Car System Inc • Boston Harbor Ship Yard And Marina • Pleasant Park Yacht Club Inc. • Emergency Generator Terminal C - Pier C • Winthrop Golf Club • American Airlines Inc. • New Field Lighting Substation • South Cargo Building 57 • ALSF-2/SSACR • Pico Ave Sewage Pump Station • Fallon Properties LLC • Winthrop Department Of Public Works • Facility II - Fuel Island • Massport Conley Terminal Conbm-0004 • Logan Airport- Fire Rescue Headquarters • South Cargo Building 62 • Old Tower / Emergency Generator • Terminal C / Pier D / New Snow Melter # • West (South) Outfall • Logan Airport Citgo • Harbor Petroleum LLC • Ventilation Building #7
Toxic Release Inventory	21:

Table E-4 DPH EJ Tool Detailed List of Potential Sources of Pollution within the DGA

DPH Classification Category	Site Count and List
Toxic Release Inventory	<ul style="list-style-type: none"> Gulf Oil LP, Chelsea Terminal (Toluene; 1,2,4-Trimethylbenzene; Benzo[g,h,i]perylene; Benzene; Naphthalene; Polycyclic aromatic compounds; Ethylbenzene; Lead; n-Hexane; Xylene (mixed isomers)) Irving Oil Terminals Inc. (1,2,4-Trimethylbenzene; Benzo[g,h,i]perylene; Toluene; Naphthalene; Xylene (mixed isomers); Benzene; Polycyclic aromatic compounds; n-Hexane; Ethylbenzene; Lead) Boston Ship Repair LLC (Copper compounds)
Superfund Site Boundaries	0
Power Plants	2: <ul style="list-style-type: none"> Massachusetts Bay Brewing Company Spaulding Rehabilitation0000000000000000 Hospital

Source: DPH EJ Tool

E.4.3 EJScreen Environmental Justice Indexes

This section further explains the EJ Indexes that have a value within the DGA greater than the 80th percentile compared to the state and U.S. These EJ Indexes are defined by the EJScreen and indicate a potential existing burden or heightened risk of burden on EJ populations within the DGA, but are not specific to aviation activities and airport operations.

- **The Diesel Particulate Matter (PM)** indicator in EJScreen measures concentrations¹, and it is important to understand that the air toxics data presented in the EJScreen report provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations.

The Diesel PM concentration in the DGA (0.492 µg/m³) is higher than both the average concentrations in the state and in the USA (0.253 µg/m³ and 0.261 µg/m³). The DGA is proximate to major Boston metropolitan area roadways which are likely the local source of the majority of the Diesel PM.

- **Toxic Releases to Air** – This indicator is calculated from 2021 Risk-Screening Environmental Indicators (RSEI) Geographic Microdata results for the air pathway. The value represents RSEI-modeled toxicity-weighted concentrations of Toxic Release Inventory-listed (TRI-listed) chemicals in the air.²

The DGA value is 3,200, which is higher than the state average (2,800) and lower than the national average (4,600).

- **Traffic Proximity** – This indicator consists of a count of vehicles (average annual daily traffic (AADT)) at major roads within 500 meters, divided by distance in meters as calculated from 2019 U.S. Department of Transportation traffic data. Indicators of residential proximity address exposures

1 Health Assessment Document For Diesel Engine Exhaust (Final 2002) <https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=29060>.

2 U.S. EPA, TRI-Listed Chemicals. March 2024. <https://www.epa.gov/toxics-release-inventory-tri-program/tri-listed-chemicals>.

relevant to the residences within a block group, but do not capture most exposures that occur away from the home, such as at work, at school or during a commute.

The DGA value for the Logan ESPR analysis is 1,200 daily traffic count/distance to road, which is greater than both the state average (630 daily traffic count/distance to road) and the national average (210 daily traffic count/distance to road).

- **Lead Paint** – This indicator provides the percentage of housing units built prior to 1960, as an indicator of potential lead paint exposure. Lead paint can be found in home environments as deteriorating lead-based paint (that was banned in 1978), microdust particulates mobilized during home renovations, or on other surfaces that could come into contact with food or otherwise be ingested.³

The percentage of homes build pre-1960 within the DGA (65 percent) is higher than the state average (51 percent) and national averages (30 percent) but does not necessarily mean the lead exposure is greater than state and national exposure.

- **RMP Proximity** – The Risk Management Plan Rule implements Section 112(r) of the 1990 Clean Air Act amendments. The RMP Rule requires facilities that use extremely hazardous substances to develop an RMP. The existence of an RMP does not signify that a chemical accident has occurred. As with other proximity-based indicators, proximity alone may not represent an actual risk or possible exposure. RMP sites are included in EJScreen because of the potential adverse effects of an accidental release into the air.

The state and national averages are 0.36 and 0.43 facilities/km distance, respectively, while the value in the DGA is higher at 0.56 facilities/km distance.

- **Hazardous Waste Proximity** – This indicator identifies the presence of Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDFs) with permits issued by the appropriate regulatory agency. As with other proximity-based indicators, proximity alone may not represent actual risk or prior exposure.

The state and national averages are 6.7 and 1.9 TSDFs/km distance, respectively, while the value in the DGA is 19 TSDFs/km distance.

- **Wastewater Discharge Indicator** – This indicator provides the Risk-Screening Environmental Indicators (RSEI) modeled toxic concentrations at stream segments within 500 meters, divided by distance in kilometers (km). As with all proximity-based indicators, proximity alone may not represent an actual risk or potential exposure.

The output values from EJScreen identify the DGA's wastewater discharge proximity at (0.21 toxicity-weighted concentration/m distance) in comparison to the state average (0.2 toxicity-weighted concentration/m distance) and the national average of (22 toxicity-weighted concentration/m distance). The output values are inconsistent magnitudes and therefore exposure comparisons are difficult to determine.

3 U.S. EPA, *Learn About Lead*. September 2022. <https://www.epa.gov/lead/learn-about-lead>.

E.4.4 EJScreen Community Report

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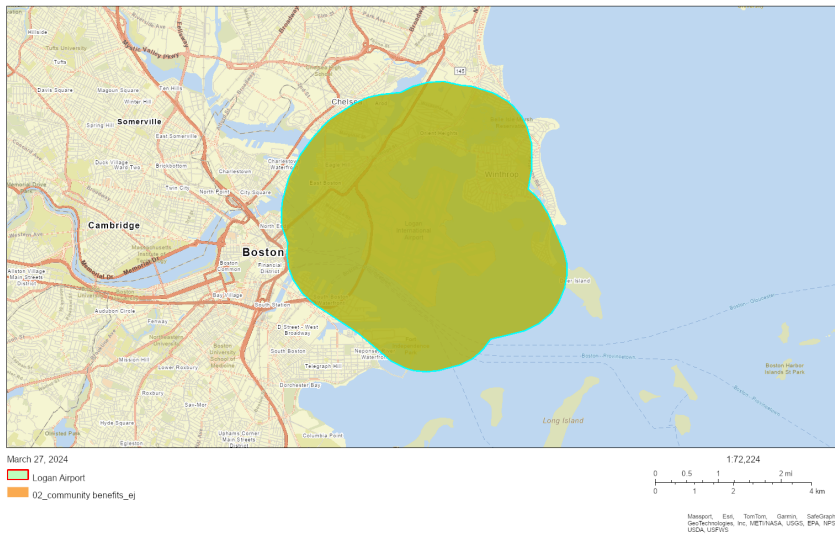
EJScreen Community Report

This report provides environmental and socioeconomic information for user-defined areas, and combines that data into environmental justice and supplemental indexes.

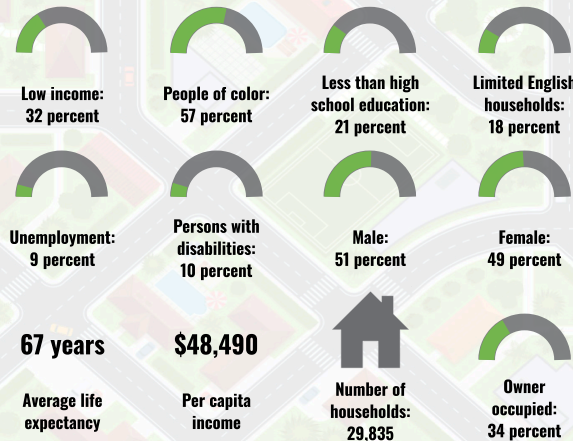
Logan Airport, Boston, MA

the User Specified Area
Population: 79,838
Area in square miles: 15.41

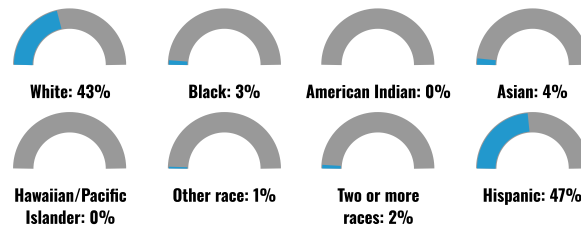
A3 Landscape



COMMUNITY INFORMATION



BREAKDOWN BY RACE



BREAKDOWN BY AGE

LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	45%
Spanish	44%
French, Haitian, or Cajun	1%
Other Indo-European	5%

Chinese (including Mandarin, Cantonese)	2%
Vietnamese	1%
Arabic	1%
Other and Unspecified	1%
Total Non-English	55%



LIMITED ENGLISH SPEAKING BREAKDOWN



Notes: Numbers may not sum to totals due to rounding. Hispanic population can be of any race. Source: U.S. Census Bureau, American Community Survey (ACS) 2017-2021. Life expectancy data comes from the Centers for Disease Control.

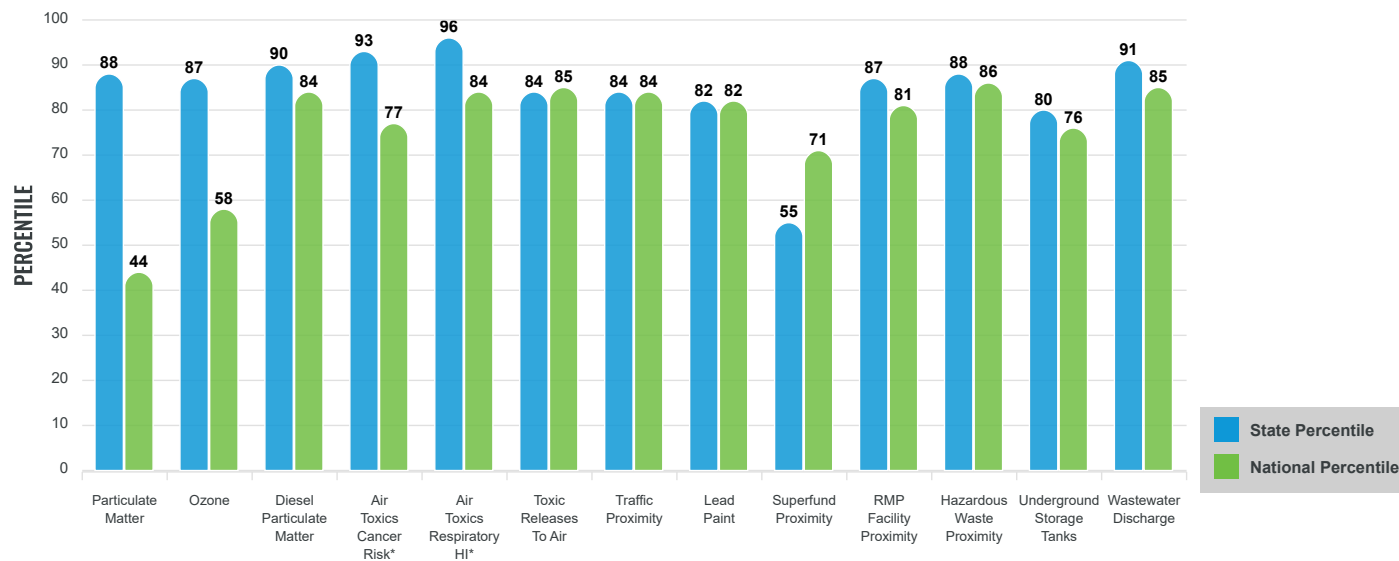
Environmental Justice & Supplemental Indexes

The environmental justice and supplemental indexes are a combination of environmental and socioeconomic information. There are thirteen EJ indexes and supplemental indexes in EJScreen reflecting the 13 environmental indicators. The indexes for a selected area are compared to those for all other locations in the state or nation. For more information and calculation details on the EJ and supplemental indexes, please visit the [EJScreen website](#).

EJ INDEXES

The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.

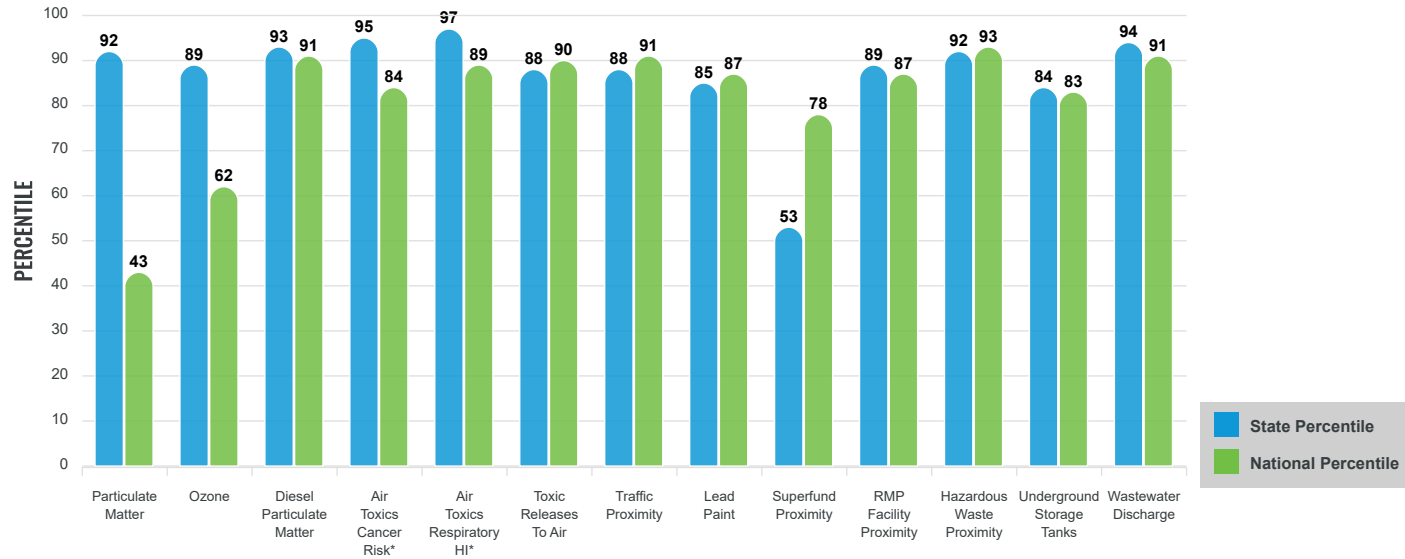
EJ INDEXES FOR THE SELECTED LOCATION



SUPPLEMENTAL INDEXES

The supplemental indexes offer a different perspective on community-level vulnerability. They combine data on percent low-income, percent linguistically isolated, percent less than high school education, percent unemployed, and low life expectancy with a single environmental indicator.

SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION



These percentiles provide perspective on how the selected block group or buffer area compares to the entire state or nation.

Report for the User Specified Area

EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
POLLUTION AND SOURCES					
Particulate Matter ($\mu\text{g}/\text{m}^3$)	7.11	6.62	74	8.08	22
Ozone (ppb)	59.4	58.3	73	61.6	35
Diesel Particulate Matter ($\mu\text{g}/\text{m}^3$)	0.492	0.253	90	0.261	90
Air Toxics Cancer Risk* (lifetime risk per million)	29	21	3	25	5
Air Toxics Respiratory HI*	0.39	0.26	49	0.31	31
Toxic Releases to Air	3,200	2,800	60	4,600	80
Traffic Proximity (daily traffic count/distance to road)	1,200	630	86	210	96
Lead Paint (% Pre-1960 Housing)	0.65	0.51	64	0.3	83
Superfund Proximity (site count/km distance)	0.066	0.18	23	0.13	53
RMP Facility Proximity (facility count/km distance)	0.56	0.36	81	0.43	78
Hazardous Waste Proximity (facility count/km distance)	19	6.7	90	1.9	99
Underground Storage Tanks (count/km ²)	4.1	3.4	71	3.9	73
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.21	0.2	96	22	85
SOCIOECONOMIC INDICATORS					
Demographic Index	45%	26%	81	35%	69
Supplemental Demographic Index	20%	12%	85	14%	80
People of Color	57%	30%	83	39%	70
Low Income	32%	22%	75	31%	58
Unemployment Rate	9%	5%	78	6%	77
Limited English Speaking Households	18%	6%	89	5%	92
Less Than High School Education	21%	9%	87	12%	82
Under Age 5	6%	5%	66	6%	60
Over Age 64	11%	17%	29	17%	31
Low Life Expectancy	17%	17%	48	20%	29

*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: <https://www.epa.gov/haps/air-toxics-data-update>.

Sites reporting to EPA within defined area:

Superfund	0
Hazardous Waste, Treatment, Storage, and Disposal Facilities	15

Other community features within defined area:

Schools	19
Hospitals	3

Water Dischargers 182
Air Pollution 54
Brownfields 4
Toxic Release Inventory 11

Places of Worship 7

Other environmental data:

Air Non-attainment Yes
Impaired Waters Yes

Selected location contains American Indian Reservation Lands* No
Selected location contains a "Justice40 (CEJST)" disadvantaged community Yes
Selected location contains an EPA IRA disadvantaged community Yes

Report for the User Specified Area

EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	17%	17%	48	20%	29
Heart Disease	4.7	5.4	26	6.1	22
Asthma	10.9	10.8	59	10	75
Cancer	4.9	6.6	15	6.1	22
Persons with Disabilities	9.9%	11.9%	40	13.4%	31

CLIMATE INDICATORS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	23%	12%	87	12%	88
Wildfire Risk	0%	0%	0	14%	0

CRITICAL SERVICE GAPS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	12%	10%	68	14%	54
Lack of Health Insurance	6%	3%	89	9%	43
Housing Burden	Yes	N/A	N/A	N/A	N/A
Transportation Access	Yes	N/A	N/A	N/A	N/A
Food Desert	Yes	N/A	N/A	N/A	N/A

Report for the User Specified Area

www.epa.gov/ejscreen