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LETTER FROM THE CEO



The Sustainability, Net Zero, and Resiliency Report for 2022-2023 highlights our progress towards becoming a sustainable organization on all fronts. We have long been committed to advancing environmental stewardship, social responsibility, economic viability, and efficient operations. This report not only reflects our current sustainability efforts, but also serves as documentation of their evolution. The publication of the Boston Logan International Airport (Logan Airport) Sustainability Management Plan (SMP) in 2015 laid the groundwork for a scalable sustainability framework for Massport-wide initiatives. Since its release, we have continuously expanded our sustainability scope to capture our operations beyond Logan Airport, spanning other facilities in aviation, maritime, real estate and asset management, and parks and open spaces. In recent years, we have enhanced the focus of our reporting to include climate resiliency and decarbonization. As outlined in our Roadmap to Net Zero by 2031, we have set an ambitious goal to achieve net zero greenhouse gas (GHG) emissions with offsets by 2031, our 75th anniversary.

This report highlights significant advancements across comprehensive sustainability categories, contributing to our holistic approach, with a new emphasis on the journey towards net zero emissions. Given the challenges of climate change and the critical need for decarbonization, we continue to advance the deployment of renewable energy sources at our facilities, enhance energy efficiency,

and work with our business partners to pioneer innovative initiatives and technologies. With climate change inducing more frequent and severe weather events, our commitment to resilience is paramount. To that effect, this report provides an overview of our efforts to protect our infrastructure and operations and surrounding communities from the impacts of such events.

Community engagement and social responsibility continue to be central to our model. We engage with local communities through a myriad of initiatives to foster positive relationships, enhance social equity, create economic and workforce development opportunities, and mitigate operational impacts on our neighbors. These efforts help ensure that we operate as a responsible and integrated member of the community, contributing positively to the region's social fabric, economy, and environment.

We are pleased to share with you how we have continued to deliver on our promise of sustainability and our journey towards that vision. Looking ahead, this report also sets a clear direction for continuous improvement.

Richard Davey
Chief Executive Officer and Executive Director

INTRODUCTION

How Does Massport Define Sustainability?

In the development of the Boston Logan International Airport (Logan Airport) Sustainability Management Plan (SMP) in 2015 and Massport's Sustainability Design Guidelines (SDGs) in 2018, we adopted a definition of sustainability and corresponding goals in accordance with Airports Council International-North America (ACI-NA). We define our holistic approach to managing Logan Airport and other facilities as follows: to ensure economic viability, operational efficiency, natural resource conservation, and social responsibility (EONS). Further, in response to the increasing frequency and intensity of extreme weather conditions that threaten our operations and assets, we define resiliency as our ability to prepare for disruptive events, recover within a reasonable timeframe with minimal damage, and emerge stronger when possible.

Integral to sustainability and resiliency at Massport is mitigating climate risk through decarbonization. In March 2022, we published Net Zero by 2031, an ambitious Massport-wide program to achieve net zero emissions with offsets by 2031 for the activities under our control. Achieving this net zero emissions target would put us nearly two decades ahead of the 2050 deadline called for in the 2015 Paris Agreement enacted by the United Nations (U.N.) and An Act Creating a Next-Generation Roadmap for Massachusetts Climate Policy signed into law at the state level in 2021. As a key economic entity within the Commonwealth, we will be a leader in achieving net zero emissions in the transportation sector and in Massachusetts as a whole.

Collectively, these concepts inform our sustainability vision of maintaining our 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."

History of Sustainability and Environmental Stewardship at Massport

Comprehensively began tracking Logan Airport's environmental impacts, a process that has since evolved into the regular production of Environmental Status and Planning Reports (ESPRs) and Environmental Data Reports (EDRs)



Commenced the Logan Airport Edge Buffer Program in the community



Began to equip all terminal gates with 400 Hz power and pre-conditioned air. reducing the use of auxiliary power units and ground power units

2000

1979 1986

> Started the Logan Airport **Residential Soundproofing** Insulation Program, the first to utilize FAA funding



1998

Purchased Massport's first fleet of Compressed Natural Gas (CNG) buses to reduce emissions and improve air quality

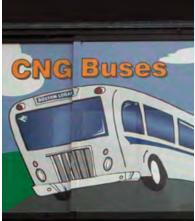
sustainability initiatives

Began reporting

on Massport's

in the 1999 ESPR

1999



- Published and documented Massport's first Sustainability Plan in the 2004 ESPR
- MBTA opened the Airport
 Blue Line Station and started
 the Silver Line service
 to facilitate transit ridership
 to Logan Airport
- Developed the Logan Airport Landscaping Plan
- Implemented sustainable construction guidelines for contractors
- Began implementing the EPA's Clean Air Construction Initiative (CACI)

Terminal A Redevelopment certified as the first LEED certified airport terminal in the world

2001

 Presented Massport's sustainability strategy in the Logan Airport 2001 EDR 2004

 Implemented an Alternative Fuel Vehicle Policy, which included taxis and limos accessing Logan Airport

2005



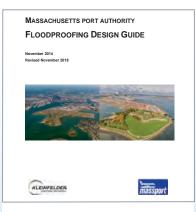
2006

2007

Approved an Environmental Management Policy





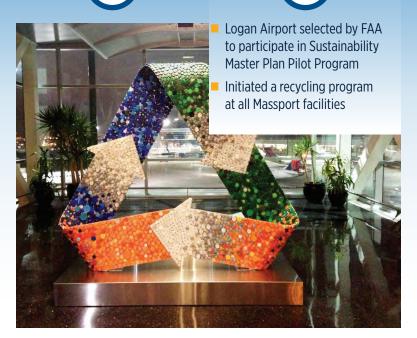


- Developed an Authority-wide Climate Resiliency Program, one of the first among U.S. airports
- Completed a comprehensive risk assessment and released our first Floodproofing Design Guide

2014



2015 2017



Published the 2015
 Logan Airport SMP, which initiated recurring sustainability reports to document the plan's implementation

 Published the first Sustainable Massport Calendar
 Launched composting





 Published Net Zero by 2031, committing Massport to decarbonizing sources of GHG emissions under our control

- Established the Net Zero
 Program Management Office
 to implement Net Zero by 2031
- Published an updated Floodproofing Design Guide
- Awarded a grant from the Massachusetts Clean Energy Center—Accelerating Clean Transportation for All program—to plan and facilitate the transition to EVs for ride-for-hire companies

2018 2021 2022 2023

- Conducted a comprehensive waste assessment at Logan Airport
- First "real-life" emergency deployment of flood barriers at Maritime properties in preparation for nor-easter



- Began assessing building conditions at all Massport facilities, with a focus on building efficiency and electrification
- Achieved Level 1
 Airport Carbon Accreditation
 (ACA) status from ACI
 at Logan Airport



Undertook a fleet decarbonization program, including a capacity and infrastructure needs assessment, and converted several State Police vehicles to hybrids

Conducted Sustainable Aviation

- Identified on-site solar project opportunities
- Became a founding member of the MIT-led Zero Impact Aviation Alliance along with Boeing, Delta Airlines, Pratt & Whitney, and World Energy
- Opened Piers Park II







2022 Awards

Logan Airport

Terminal C Canopy

Construction Management Association of America (CMAA) New England (NE) Project Achievement Award (Projects less than \$100 million)

Terminal B to C

Roadway Improvements

CMAA-NE Project Achievement Award (Projects less than \$30 million)

Rehabilitation of Runway 14-32 and Taxiway J/11

CMAA-NE Project
Achievement Award (Projects less than \$10 million)

Terminal E Modernization

Suffolk County Safest Project Award 2022

Terminal B Entrance Roadways

American Council of Engineering Companies (ACEC)/ Massachusetts (MA) Engineering Excellence Gold Award

Maritime

Conley Terminal Modernization— New Berth 10

CMAA-NE Project Achievement Award (Projects greater than \$100 million)

Conley Terminal Modernization— New Berth 10

Project Excellence Award by the Board of Governors of the Coasts, Oceans, Ports, and Rivers Institute of the American Society of Civil Engineers (ASCE)

Conley Terminal Modernization-New Berth 10

Project of the Year and Best Specialty Construction by ENR

Best Project Excellence in Sustainability by ENR

2023 Awards

Logan Airport

Terminal B to C Roadway Improvements

ACEC/MA Engineering Excellence Silver Award

Terminal B to C Connector

CMAA-NE Mark H. Hasso Project Excellence Award

Terminal B to C Connector

CMAA-NE Project Excellence Award (Infrastructure Projects Greater than \$100 million)

Terminal B to C Connector

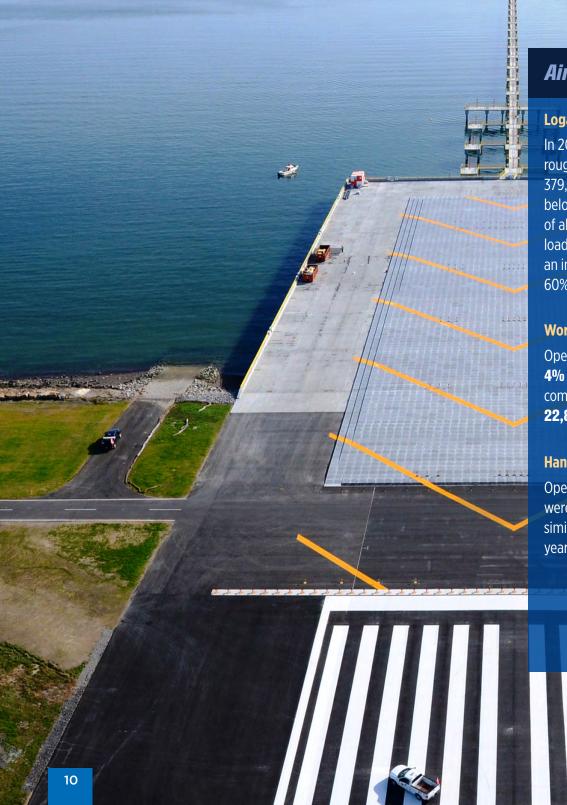
2023 Best Project of the Year in the Airport/Transit Category by ENR NE

Maritime

Conley Terminal Modernization-New Berth 10

ACEC/MA Grand Conceptor Award





Aircraft Operations

Logan Airport

In 2023, operations reached roughly 400,000, up from 379,000 in 2022, but still well below the historical peak of about 500,000. Additionally, load factors exceeded 80%, an increase compared to 60% in 2000.

Worcester Regional Airport

Operations increased **4%** in 2023 to **23,700** compared to **22,800** in 2022.

Hanscom Field

Operations in 2023 were **122,800**, similar to the previous year at **122,200**.

Passengers

Logan Airport

Passengers increased by
13.1% in 2023 to
40.8 million compared to
36.1 million in 2022.
Passenger recovery continued in 2022/2023, but passengers remained 4% below the pre-pandemic level.

Worcester Regional Airport

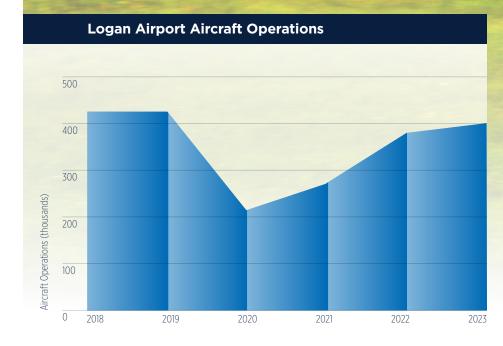
Passenger volume reached a new record since Massport became owner of the Airport in 2010 with **204,400** passengers in 2023, up by **27.2%** from **160,700** in 2022.

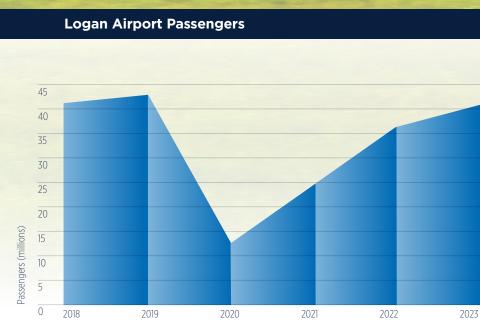
Flynn Cruiseport Boston

Passenger volume increased by **25%** in 2023 to **373,000** compared to **298,400** in 2022.

Logan Airport celebrated its 100th







Cargo

Logan Airport

Cargo tonnage in 2023 totaled **282,560**, a **12.5%** decrease from **322,845** in 2022.

Conley Terminal

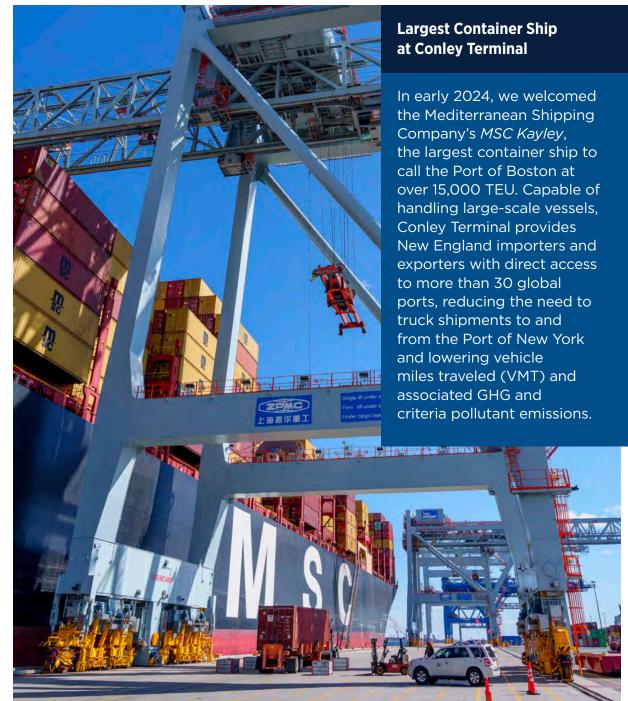
In 2023, Conley Terminal handled **237,000 twenty-foot equivalent units** (TEU), which is a **36.2%** increase from 2022 when **174,000** TEU were handled.

Parks and Open Space

Total acreage of our parks and open space increased by **4.5 acres** to approximately **40 acres** in 2023 due to the opening of Piers Park II.

Real Estate

Our real estate portfolio consists of approximately **9 million** square feet of commercial and maritime developments in the South Boston Waterfront, East Boston, and Charlestown. This includes hotel, residential, office, lab space, restaurants, retail, and maritime industrial facilities such as the historic Boston Fish Pier.





Terminal E Modernization

Officially completed in October 2023, the Logan Airport Terminal E Modernization Project stands as a testament to our commitment to sustainability and innovation. The project involved the renovation of the existing Terminal E and the addition of an approximately 390,000-square-foot, state-of-the-art building with four new gates. At the time of this report, the Terminal E Modernization Project is pursuing Gold Certification through the Leadership in Energy and Environmental Design (LEED*) green building certification program.

The design of the Terminal E Modernization Project emphasized the minimization of GHG emissions by maximizing energy efficiency and integrating renewable energy and electrification technologies. The building shape and orientation were optimized to manage solar heat gain while harnessing daylight to reduce heating and cooling demands. The energy efficiency benefits of such passive design are amplified by the high-performance building envelope, which is not only wellinsulated but also designed to be resilient against extreme weather events, including high winds and rare and intense storms. Following our Floodproofing Design Guidelines, all critical infrastructure was elevated.



This modernized facility also features a high-efficiency displacement ventilation system that is demand-controlled, meaning air delivery is based on space occupancy. Additionally, a signature feature of the terminal is the solar photovoltaic (PV) and dynamic glass, which automatically tints to reduce solar heat gain while generating on-site solar power. The solar PV glass generates enough electricity to power an average home for one year, while also eliminating the GHG emissions typically associated with producing that much electricity.

Collectively, these design features produce an estimated 25 percent reduction in energy use compared to baseline energy efficiency standards, outperforming Massachusetts
Stretch Energy Code requirements. To further mitigate fossil fuel combustion, the terminal includes electric vehicle (EV) charging stations to serve electric-powered ground support equipment (GSE). Recycled materials were also used throughout the building to address the challenge of embodied carbon emissions.

Additional features minimize the terminal's environmental footprint through water conservation, air quality improvements, and noise abatement. Use of water-efficient fixtures inside the terminal and drought-tolerant.



native and adaptive plants in the landscaping reduces water consumption by approximately 41 percent compared to baseline measures. Air quality and noise benefits are achieved by powering the airplanes at the gate with electricity from the terminal, eliminating the need for aircraft idling and therefore curbing noise and emissions from aircraft exhaust. The building's unique shape also acts as a sound barrier, reducing noise from airside operations in nearby East Boston communities.

These sustainability features were partially funded through proceeds generated from the issuance of \$120 million in environmentally certified green bonds. The use of green bonds underscores our commitment to integrating sustainability into our core business model. It also exemplifies the role of innovative financial tools in efficiently achieving sustainability goals.





Terminal B to C Connector

The Terminal B to C Connector at Logan Airport opened in 2022, providing a postsecurity link between terminals to reduce congestion and improve efficiency, functionality, and connectivity for passengers, tenants, and airport operators. The connector achieved LEED Gold certification in 2023 based on its sustainability features and GHG emissions reductions. For example, the project features energy-efficient transparent curtain wall glazing that intelligently responds to the sun's intensity to increase daylight access while minimizing heat and glare. To counter the site's urban heat island effect and associated cooling demand, the connector utilizes roofing materials that have a high Solar Reflectance Index (SRI) and light-colored concrete for the tarmac.

In addition to passive design strategies, building energy usage was optimized through the integration of high-performance HVAC systems that collectively resulted in total energy cost savings of 21 percent. The connector also uses exterior and interior LED lighting with dimmable zones to conserve electricity and employs efficient WaterSense-labeled fixtures to reduce water use by 33 percent. On-site fossil fuel combustion is further avoided through the deployment of six airside charging units for airline electric GSE (eGSE), promoting the use of EV alternatives over internal combustion engine (ICE) vehicles.

The project used Environmental Product Declarations (EPDs), a resource for understanding the quantified environmental impacts of a product, to uphold sustainable sourcing of the construction materials for the seating area outside of Gate B40. This underscores our commitment to encompassing sustainability in all aspects of the construction process.



We continue to promote sustainability in our real estate portfolio through ground leases with private developers, requiring LEED certification for new developments and renovations.

Sustainable Revitalization of Commonwealth Pier

The revitalization of Commonwealth Pier, part of our real estate portfolio, will create a vibrant place to work, visit, relax, and dine as Boston's newest waterfront destination. Anticipated to be completed in 2025, the project will feature a dynamic mix of retail offerings, new public spaces overlooking the harbor—including an expansive new Harbor Plaza and an improved and expanded Harborwalk with covered "niches"—and innovative and flexible office space for Fidelity Investments. The design integrates the preservation of the pier's iconic features with modern enhancements focused on sustainability and resiliency.

Targeting LEED Gold certification, the Commonwealth Pier revitalization incorporates best practices for reducing energy use intensity, water use, construction waste, and embodied carbon. The project also includes resiliency measures to adapt and protect against projected climate hazards out to 2070, including rare and significant storms. These measures include significant fortification of the structure, a resiliency wall with deployable

A revitalized
Commonwealth Pier
will feature modern
enhancements with
a strong emphasis
on sustainability and
resiliency, aiming for LEED
Gold certification.

barriers, and elevation of all critical systems. Blending a rich history with innovative design, the revitalization of Commonwealth Pier will create an exciting mixed-use environment for all.

10 World Trade

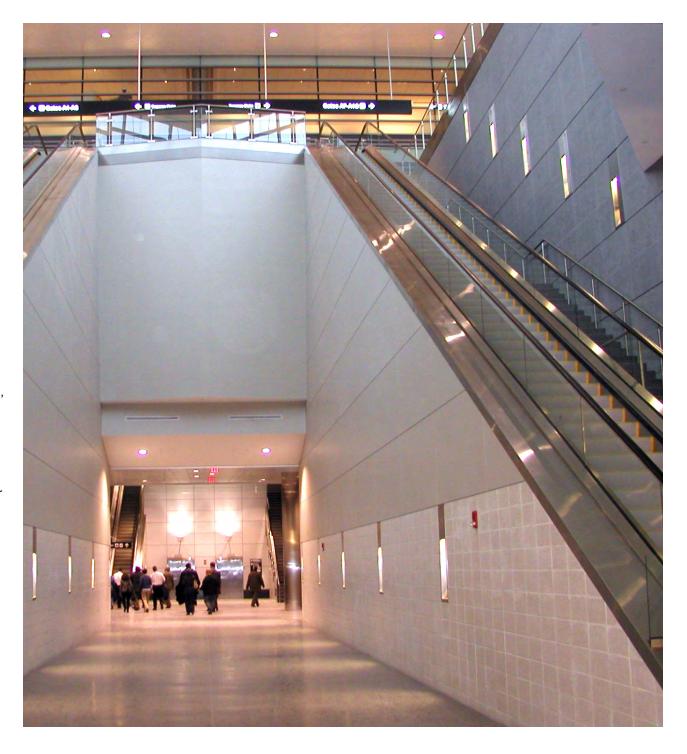
Scheduled for completion in 2025, the 10 World Trade project aims for LEED Gold certification and integrates advanced sustainability and wellness technologies. A key feature of the project is its adaptable window system for enhanced energy efficiency and occupant comfort. The building integrates smart and sustainable design inside and out, poised to achieve Gold

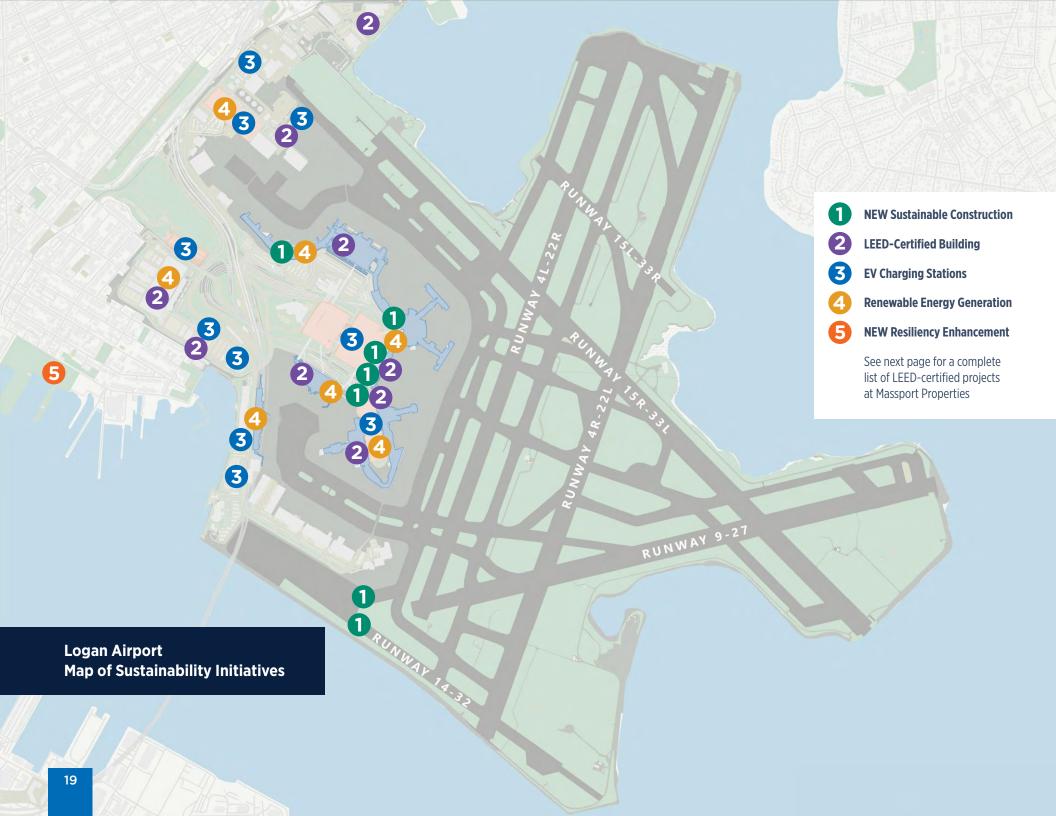
level certification under both the Sustainable SITES Initiative (SITES) by Green Business Certification, Inc. (GBCI) and the WELL Building Standard by the International WELL Building Institute (IWBI). Additionally, the project aims to achieve both Platinum WiredScore and SmartScore certifications. WiredScore recognizes buildings with the highest standards of internet connectivity, resilience, and future-proof digital infrastructure. Similarly, SmartScore certification is awarded to buildings that excel in smart technology integration, demonstrating advanced capabilities in safety, sustainability, and occupant well-being through intelligent building systems and connectivity.

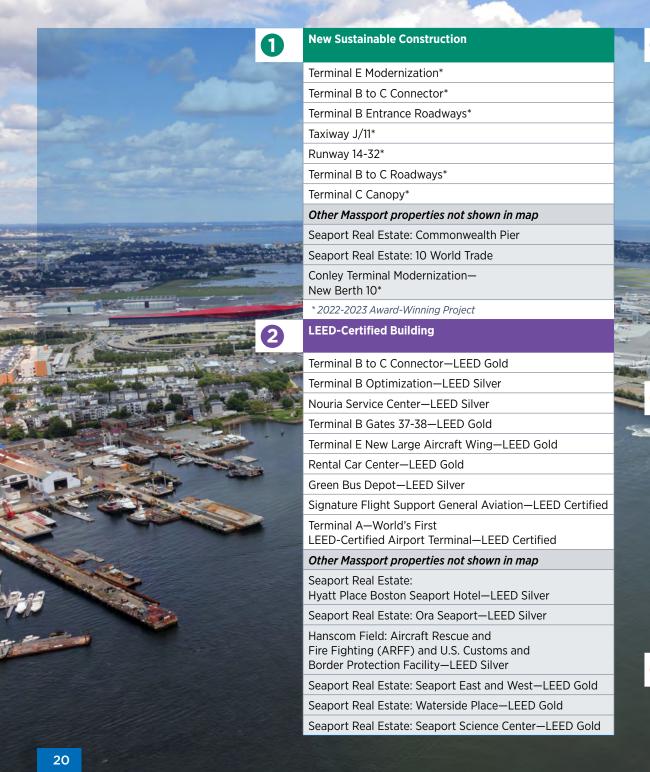
LEED Projects at Massport Properties

The LEED program is a globally recognized certification system for sustainable building design, construction, operation, and maintenance. Developed by the U.S. Green Building Council (USGBC), LEED provides a framework for environmentally responsible building practices, aiming to improve energy efficiency, water conservation, indoor environmental quality, and resource stewardship. Projects earn points across several areas, including energy use, materials, and site sustainability, to achieve different levels of certification—Certified, Silver, Gold, and Platinum.

Massport has consistently integrated LEED principles into our major projects, striving for further certifications. The map on the next page shows the buildings at Logan Airport that have earned LEED certification.







EV Charging Location

Central Parking Garage

Economy Garage

Facilities Building
Gas Station

General Aviation

Limo Pool

Logan Office Center Garage

Ride App Pool

Taxi Pool

Terminal B Garage

Other Massport properties not shown in map

Hanscom Field: ARFF

Logan Express Framingham

Seaport Real Estate: South Boston Waterfront Transportation Center

Worcester Regional Airport: Upper Parking Lot

Renewable Energy Generation

Economy Parking Garage

Rental Car Center

Terminal A

Terminal A Satellite

Terminal B Garage

Terminal C Canopy

Terminal E

Other Massport properties not shown in map

Hanscom Field: Boston Med Flight

Hanscom Field: Terminal Building

Seaport Real Estate: South Boston Waterfront

Transportation Center

New Resiliency Enhancement

East Boston: Piers Park II



To assess our progress towards achieving net zero emissions, we established a GHG emissions baseline across our organizational footprint. As is standard, we inventoried and then categorized our emissions sources into Scopes 1, 2, and 3, which are defined below:

Scope 1

Massport Controlled

GHG emissions sources under our direct control, such as emissions associated with our buildings and facilities, Logan Airport's Central Heating Plant, and our vehicle fleet and equipment.

Scope 2

Purchased Electricity

GHG emissions sources not directly within our control, but that we have some ability to limit or remove. This includes purchasing electricity from an electric utility or electricity supplier.

Scope 3

Massport Influenced

GHG emissions sources not under our control, like those belonging to airport tenants and users. We encourage and support these groups to voluntarily implement GHG emission reduction initiatives.



Since its inception in March 2022, our Net Zero by 2031 program has evolved to include the following:

Establishment of a Net Zero Program Management Office (PMO)

To achieve net zero emissions by 2031, we have established a dedicated PMO. The PMO is tasked with implementing Net Zero by 2031 and overseeing the progress of various emissions reduction initiatives across the Roadmap's pathways. By meticulously monitoring and tracking advancements through priority projects, the PMO ensures that we are continually aligned with our decarbonization targets.

Net Zero Roadshows and Employee Education

To foster a culture of sustainability and innovation in the organization, we launched an extensive series of roadshows and educational workshops to engage our employees. Throughout October and November 2023, over 500 employees

across Massport participated in 30 sessions. These workshops aimed to inform staff not only about how Net Zero initiatives will impact our business, our partners, travelers, and neighbors but also about how they can be involved in the Net Zero by 2031 program as employees. Internal Net Zero communications and trainings allow us to integrate sustainability into the fabric of our culture, which promotes understanding, active engagement, innovative thinking. and cohesive actions across all levels and departments. By cultivating a sustainability-driven culture, we continue to enhance our ability to implement initiatives effectively, achieve our ambitious environmental targets, and reinforce our leadership in climate action.

Sustainability Design Guidelines (SDGs)

To ensure that sustainability is optimized and integrated into all capital projects (building and non-building) on our property, we continue to refine our SDGs. The SDGs guide architects, engineers, planners, and contractors to develop a more sustainable product for all projects beyond standard practice, including those that are not eligible under the USGBC's LEED green building program. The SDGs integrate the sustainability goals we have committed to

as part of the SMP, including reducing energy consumption in buildings we operate and implementing resiliency measures where necessitated.

In 2022, we initiated a major update to our SDGs to ensure that capital projects deliver on the decarbonization targets outlined in Net Zero by 2031. Accordingly, this update focuses on energy-efficient technologies, systems electrification, and renewable energy sources. While the Roadmap primarily addresses GHG emissions under our direct control (i.e., Scopes 1 and 2), this update will take a broader approach to also reduce the embodied carbon emissions of construction materials and mitigate other indirect (i.e., Scope 3) emissions sources. Another area of heightened focus will be human health and wellness, including limiting exposure to pollutants.

Massport Infrastructure Conditions Assessment (MICA) Building Conditions Assessment (BCA)

In 2022, we initiated MICA-BCA, a program to assess the condition of Massport-owned buildings at all of our properties, with more than 170 buildings assessed during the initial phase of the program. In addition to investigating standard areas, such as structural and building systems, this project assesses each building and makes associated improvement recommendations from a sustainability and net zero-readiness perspective. The MICA-BCA also includes American Society of Heating, Refrigerating and Air-Conditioning Engineers

We are refining our Sustainability Design Guidelines with the aim of integrating sustainability into all capital projects on our property.





(ASHRAE)-level energy audits to identify energy efficiency measures (EEMs). All collected data, building condition ratings, and recommendations/EEMs are being compiled into a centralized dashboard for ongoing tracking purposes. The recommended EEMs identified during the energy audits are now being implemented in a recent project.

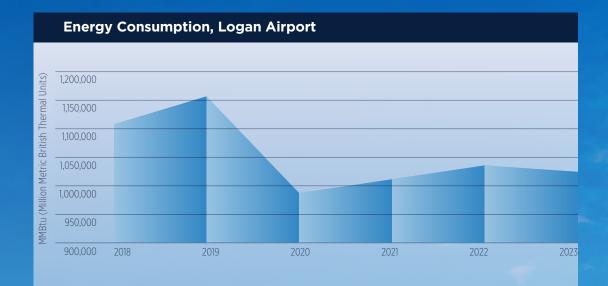
Zero Impact Aviation Alliance (ZIAA)

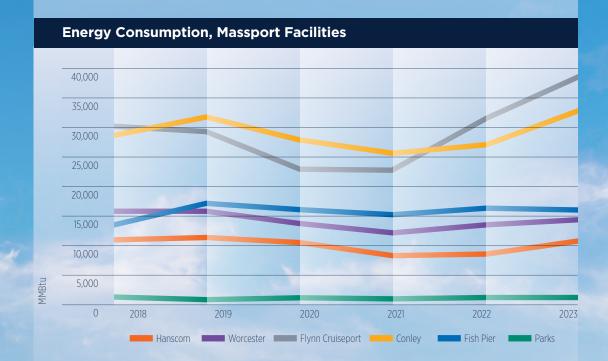
Although not under our direct control, aircraft operations are the largest source of GHG emissions associated with activities conducted at Logan Airport, Worcester Regional Airport, and Hanscom Field.

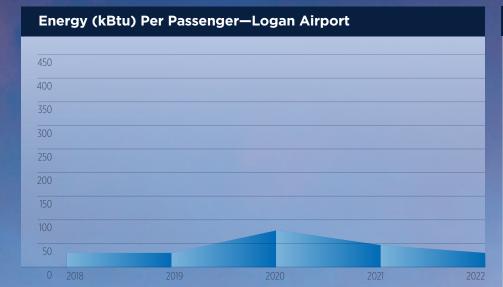
To advance our commitment to sustainable practices and the transition towards a more climate-friendly future for air travel, we have joined the Massachusetts Institute of Technology (MIT) ZIAA as a founding member. The alliance, which includes members from all sectors of the aviation

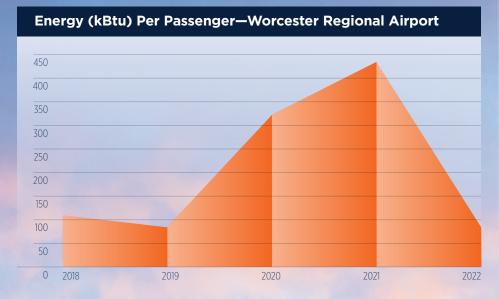
value chain—Boeing, Delta Air Lines,
Pratt & Whitney, and World Energy
(a producer of sustainable aviation fuel
(SAF))—aims to address the challenge
of decarbonizing air transportation through
innovative, research-driven solutions,
including the production, delivery, and
use of SAF. By fostering workshops,
problem-solving sessions, and knowledgesharing initiatives, ZIAA leverages academic
insights and industry expertise to advance
ways to significantly reduce aviation's
carbon footprint.

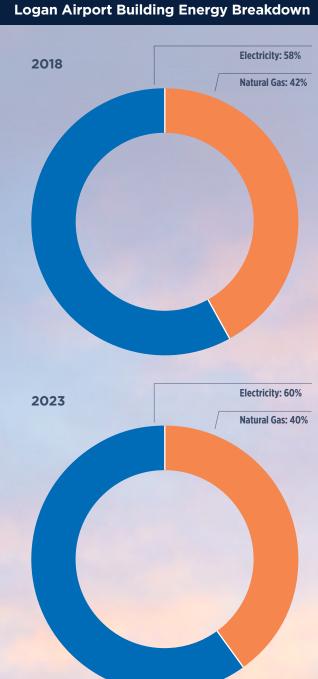
Energy Consumption











As we progressively switch to electrical building systems and equipment at Logan Airport, the proportion of our total energy consumption that comes from electricity is rising. Consequently, the proportion derived from fossil fuels is decreasing.

GHG emissions per passenger decreased by 14.6% between 2019 and 2022 at Logan Airport.

GHG Emissions

GHG emissions inventories for calendar year 2022 were conducted for Logan Airport and Hanscom Field, with the following results:

Logan Airport

GHG emissions totaled **585,720 MTCO₂e**.

GHG emissions in 2022 were **0.016** MTCO₂e per passenger, which represents a **6.4%** decrease from 2021. GHG emissions for only Scopes 1 and 2 were **0.0021** MTCO₂e per passenger.

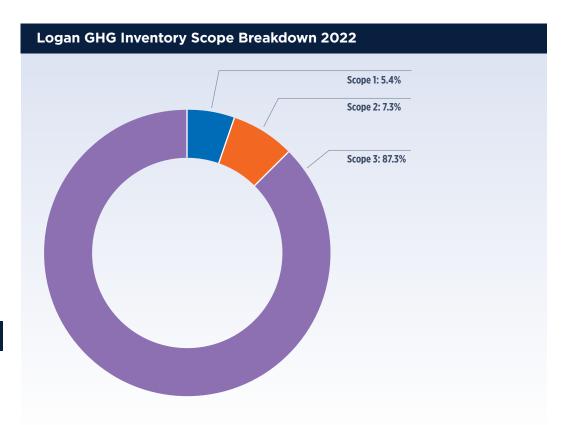
Between 2019 and 2022, GHG emissions per passenger (all scopes) decreased by **14.6**%.

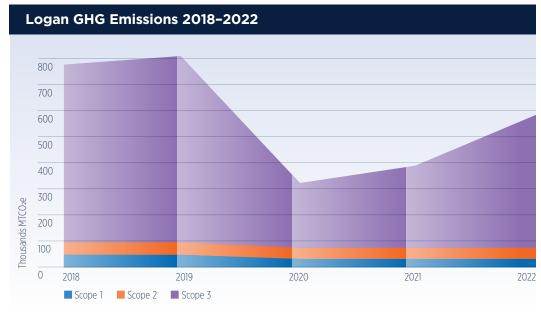
Hanscom Field

GHG emissions totaled **22,344 MTCO₂e.**

Total GHG emissions decreased by **6.5%** between 2017 and 2022.

The results from the 2023 GHG emissions inventory were not available at the time of this report. Emissions data from 2023 will be included in the next report.







Massport Electric Vehicle Count (2023)

Site	Battery Electric Vehicles (BEVs)	Plug-In Hybrid Electric Vehicles (PHEVs)	Hybrid Electric Vehicles (HEVs)
Logan Airport	6	9	94
Hanscom Field	1	0	0
Maritime Operations	1	0	4

Massport's non-electric alternative fuel vehicle (AFV) fleet is not represented in this table. For example, Massport has 31 compressed natural gas (CNG) buses in operation.

Fleet Decarbonization

Electric Fleet Vehicle Procurement

Per the Sustainable Ground Transportation pathway established by Net Zero by 2031, we have continued to advance the electrification of our vehicle fleet. A significant milestone was achieved in fall 2023 when State Police vehicles at Logan Airport began transitioning to hybrid electric models. The 2022 Ford Police Interceptor HEV was selected due to its emergency response and low-emission idling capabilities, with a potential reduction of 2.4 metric tons of CO₂e per vehicle annually. An initial purchase of 55 Ford Interceptors was made, with 30 of these HEVs set to replace their ICE counterparts, giving priority to those nearing the end of their operational lifespan.

We are also tackling the challenge of electrifying our heavy-duty vehicles, including unique use cases such as street sweeping. We have procured an all-electric street sweeper that is currently in operation at Logan Airport, marking the first of many heavy-duty fleet vehicles that will be transitioned to zero-emission alternatives. The electric street sweeper will save between 25 and 30 metric tons of GHG emissions per year, compared to a diesel vehicle.

Across Massport, we have advanced electrification of our broader vehicle fleet, including the procurement of 7 BEVs and 3 PHEVs ranging from passenger vehicles (e.g., Chevrolet Bolt) to light-duty pickup trucks (e.g., Ford F-150 Lightning) and vans (e.g., Ford E-Transit).



Fleet Electrification Study

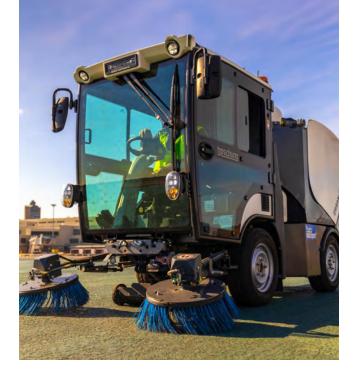
A major element of all net zero programs is the transition away from fossil fuel-powered equipment. While it may be simple to replace one or two standard cars or trucks with electric vehicles, the phased conversion of an entire fleet can be a huge challenge due to a lack of direct replacement equipment, potentially insufficient power supply, and charging time requirements.

To help meet this challenge, we collaborated with National Grid to conduct a comprehensive study to inform the strategic electrification of our owned and operated fleet, encompassing both on-road vehicles and non-road equipment. This assessment, which charts a course from 2024 to 2038. aligns with our ambitions laid out in Net Zero by 2031. The fleet electrification study, which we are currently refining with greater detail on a vehicle-by-vehicle basis, focused on transitioning from ICE vehicles to suitable BEV and PHEV alternatives. The study also explores the economic viability and environmental benefits of this transition to ensure financial sustainability.

Massport's Renewable Diesel Bridging Strategy

Under the pathway of Sustainable Ground Transportation, we are planning for the widespread use of renewable diesel in our buses; light-duty, medium, and heavy-duty vehicles; and equipment as an alternative to conventional diesel fuel. This is considered a bridging strategy to significantly lower non-biogenic GHG emissions (i.e., from fossil fuels) in the short term as we work to transition our fleet to battery-electric and hydrogen alternatives. Empirical tests have shown renewable diesel can reduce particulate matter (PM) and nitrogen oxides (NOx) in certain vehicle types while offering up to an 80 percent reduction in lifecycle GHG emissions, depending on the feedstock and production process. By transitioning to renewable diesel, we could cut 27 percent of our Scope 1 emissions from 2019 levels.

Our all-electric street sweeper currently in operation at Logan Airport will save between 25 and 30 metric tons of GHG emissions per year, compared to a diesel vehicle.



Data and Trends

Logan Airport

In 2023, there were 405 total EV charging ports located at Logan Airport with 292 ports on airside and 113 on landside.

Worcester Regional Airport

In 2023, we installed four Level 2 EV charging ports at the main parking lot. These chargers are available free of charge to all drivers visiting the facility.

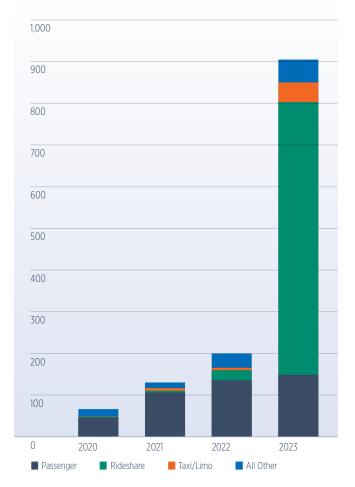
Real Estate

The South Boston
Waterfront Transportation
Center (SBWTC) is a
1,550-space multimodal
transportation center that
includes a bike storage
area, 48 EV charging ports,
and eight rooftop solar
PV panels to help power
the facility.

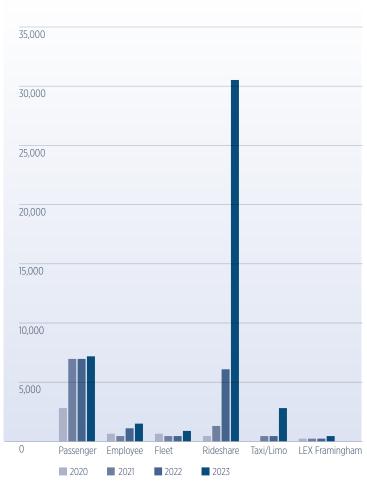
EV Charging

EV charging infrastructure is integral to achieving net zero emissions, ensuring that all of our aviation facilities can accommodate the shift to EVs.

Logan GHG Savings from EV Charging (MTCO₂e)



Logan EV Charging Sessions by Group



Landside and Airside EV Charging Station Expansion

To support the scale-up of vehicle electrification, we have made significant strides in deploying EV charging stations to meet immediate and future charging needs across our facilities. Of the 113 landside chargers installed, 63 are freely accessible to the public and 16 are reserved for ride-for-hire services like taxis, limos, and ride app companies such as Uber and Lyft. The 292 airside charging ports are located across Terminals A, B, C, and E, as well as non-terminal areas. Collectively, our landside and airside infrastructure enables the electrification of fleet vehicles and supports a sustainable ground transportation system that reduces emissions from employee, tenant, passenger, and visitor travel.





User groups of all types have increased their use of Logan's EV chargers from 2020 to 2023.



Data and Trends

Logan Airport

Solar energy generation in 2023 at Logan Airport totaled more than 642,400 kWh. Solar energy was generated from arrays located at Terminal A, Terminal A Satellite, Terminal B Parking Garage, Terminal C Canopy, **Economy Parking Garage,** and the Rental Car Center. We expect solar generation to increase with the operation of the new Terminal E PV glass and future additions of solar generation capacity across our properties.

Hanscom Field

The Hanscom Civil Air Terminal generated approximately 18,250 kWh in 2023, which was a 1.6% increase from 2022.

Renewable Energy Generation

Solar PV Expansion at Hanscom Field

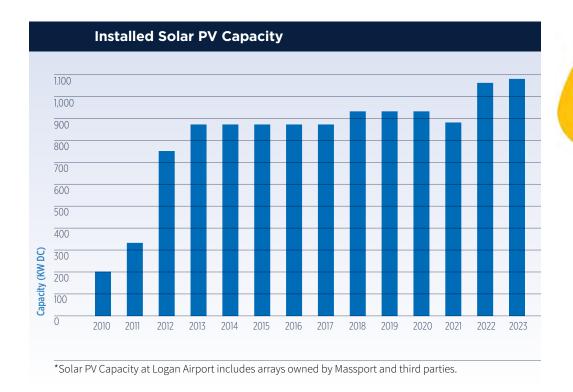
Massport is evaluating the potential for on-site solar PV generation to advance the sustainability of the Hanscom Airfield Rescue and Fire Fighting/Customs and Border Protection (ARFF/CBP) facility and the North Airfield hangars. If found viable, this solar PV system would boost Hanscom Field's renewable energy portfolio, complementing the existing 51-kilowatt (KW) capacity solar PV array mounted on the terminal facility and tenant-owned arrays like the Boston Med Flight rooftop array.

Airport Carbon Accreditation

Based on 2021 emissions reporting, Logan Airport became an accredited airport under the Airport Carbon Accreditation (ACA) program at Level 1 and renewed that accreditation based on 2022 emissions reporting. Level 1 requires the quantification of emissions under the Airport's control as well as a policy commitment to reduce those emissions. We intend to achieve progressively ambitious levels of accreditation for Logan Airport in the future. The ACA program, launched by Airports Council International, is the only voluntary global standard for airport carbon management.

airport

accredited





Massport Climate Resiliency Program

The Massport Climate Resiliency Program continues to support local and regional adaptation initiatives while advancing efforts to ensure our preparedness for severe weather. Beginning in 2022, we supported the effort to complete the five-year update of the Massachusetts State Hazard Mitigation and Climate Adaptation Plan and participated in the City of Boston Coastal Storm Risk Management Feasibility Study conducted with the U.S. Army Corps of Engineers. In response to the increased frequency and intensity of flooding hazards caused by climate-induced sea level rise and extreme storms, we have incorporated a Floodproofing Design Guide into our capital planning and real estate development processes to ensure our infrastructure and operations are more resilient to these anticipated flooding events. Established in 2014, these guidelines are continually applied and updated, working in concert with other resilience initiatives to address various aspects of enhancing our overall resilience. This integrated approach ensures the sustained protection and functionality of

With climate-induced flooding events becoming more frequent, we are making our infrastructure and operations more resilient by applying guidelines from our Floodproofing Design Guide.

critical assets, including Logan Airport, South Boston maritime properties, and East Boston properties. Additional Massport resiliency initiatives are provided below.

Heavy Weather and Flood Operations Plan for Maritime Facilities, a flood response plan that outlines specific roles, actions, timings, and locations for responding to floods across all Maritime facilities.

Logan International Airport Coastal Flood Operations, a flood response plan detailing the responsibilities, actions, timelines, and areas of response for addressing floods across airside and landside facilities at Logan.

Logan International Airport Stormwater and Flood Risk Modeling Study, which involved creating a model of the Airport's stormwater drainage systems. It simulated different storm

scenarios to verify system components, determined risks, and identified stormwater management needs within the drainage system.

Urban Heat Program, a study examining the effects of rising temperatures on airport operations and employee well-being. It includes a case study aimed at reducing cooling loads, thermal imaging to understand temperature variation on different surfaces, and research into how other airports mitigate heat.

Disaster Infrastructure Resiliency Planning Study, an initial examination of coastal flood risks affecting over 100 facilities. It categorized facilities into risk tiers, ensuring all Tier 1 (highest risk) facilities are now protected and provided recommendations for physical hardening to prevent flood damage.



We are committed to preserving Massachusetts' unique ecosystems, enhancing open spaces, and contributing to the Commonwealth's environmental and climate resilience goals. As detailed in the Massachusetts Clean Energy and Climate Plan for 2025 and 2030*, protecting and expanding recreational and open spaces, such as wetlands and urban green areas, significantly aids in carbon storage. These natural landscapes absorb carbon dioxide and store it in biomass and soil. By conserving these areas, we enhance biodiversity, provide recreational opportunities, and reduce GHG concentrations, promoting a healthier environment locally and globally.

Piers Park II

Piers Park II is a shining example of our commitment to sustainability, community enhancement, and climate resilience. Officially opened in December 2023, this park spans 4.5 acres on the East Boston waterfront, marking considerable progress in expanding the region's open space. Throughout the park development process, we actively engaged the community to co-create spaces that offer both recreational opportunities and ecological benefits, including several sustainable and resilience-focused features.

To combat potential flooding, the park's elevation was raised and complemented with strategically placed landscape berms. The existing gravel lot was replaced with an expansive green space that includes 72 new trees, which not only contribute to the park's aesthetic appeal but also mitigate the urban heat island effect and improve air quality. Additionally, Piers Park II is equipped with drinking fountains and bottle-filling stations to encourage the use of reusable bottles, reduce plastic waste, and provide accessible

^{*} Massachusetts Clean Energy and Climate Plan for 2025 and 2030, available at https://www.mass.gov/doc/clean-energy-and-climate-plan-for-2025-and-2030/download



hydration, which is increasingly important in the face of extreme heat conditions. Further enhancing the park's sustainability, energy-efficient lighting was installed throughout the space and in the building housing the Piers Park Sailing Center, a 501(c)(3) charitable nonprofit organization. The Piers Park Sailing Center's new 1,600 square foot building, which was constructed

as part of the Piers Park II project, features a highly efficient heating and cooling system to minimize energy use and GHG emissions. By transforming an underutilized area into a vibrant, ecologically resilient space, Piers Park II not only enriches the local community, but also sets a precedent for integrating sustainability into urban public space development.

Emerald Tutu

The Emerald Tutu project is an environmental initiative aimed at protecting coastal areas from the impacts of climate change, particularly sea level rise and storm surges. The project involves the installation of a network of floating structures made from biodegradable materials that look like "tutus" and are designed to act as floating wetlands to protect shorelines. These structures support the growth of aquatic plants and shellfish, which can help to stabilize the soil and absorb wave energy, thereby reducing erosion and flood damage while improving near-shore water quality. The project, which combines principles of engineering, ecology, and sustainability, installed about 10 floating biomasses in the waters off the Boston Harbor Shipyard and Marina. This pilot project is being continuously monitored through 2024, and is intended to serve as a prototype for a larger project in the future.





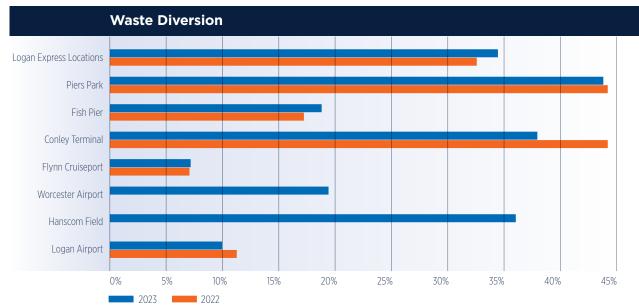
Waste Diversion

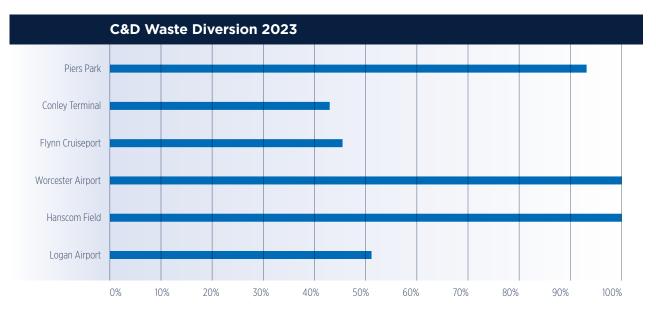
Total waste consists of trash, recycling, and compost. The diversion rate is the percentage of waste that was recycled or reused rather than being sent to a landfill or incineration facility.

Construction and Demolition (C&D) Waste Diversion

Massport's overall C&D recycling rate for projects constructed in 2022 and 2023 was 79 percent.







Waste Initiatives

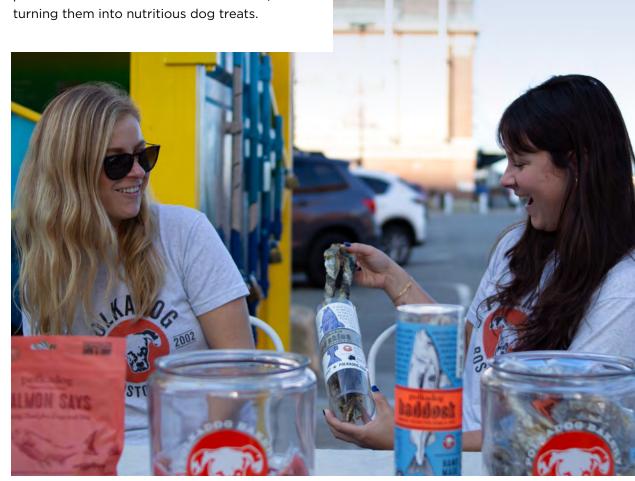
Waste Cooking Oil Recycling

We aim to drive sustainability not only through our operations but also among our broader community, including our tenants. A notable example of this effort is the successful waste cooking oil recycling initiative at Logan Airport, conducted by our tenants in collaboration with Baker Commodities, a company specializing in waste oil recycling. In 2022, 45,530 gallons of waste cooking oil were recycled, and by 2023, the amount increased to 59,325 gallons. By ensuring that the recycled oil is repurposed, we reduce waste and support the shift towards a circular economy.

In addition to our single-stream recycling and compost programs, we have implemented creative ways to recycle and reuse our unique waste streams.

Circular Waste Management—Polkadog

At our Boston Fish Pier, Polkadog Bakery is making sustainability an integral part of its business model by transforming seafood waste into pet treats. Polkadog collaborates with local vendors to repurpose residual fish parts that would otherwise be discarded, turning them into nutritious dog treats





Data and Trends

Logan Airport

Water usage per passenger decreased in 2023 to 6.9 gallons, which was a 10% reduction from 7.6 gallons per passenger in 2022.

Worcester Regional Airport

Water consumption per passenger in 2023 was 8.6 gallons, which was an 18% increase from 7.3 gallons per passenger in 2022.

Maritime Operations

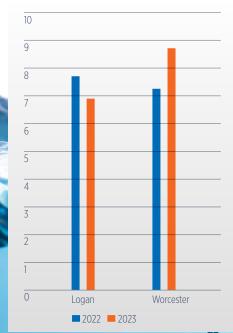
Total water consumption at Massport's maritime facilities, including Flynn Cruiseport Boston, Conley Terminal, and Boston Fish Pier, increased by 14% from 2022 to 2023. We are dedicated to conserving water across our properties through a variety of initiatives. At Logan Airport, we have embraced water-efficient landscaping by incorporating native and drought-resistant plants to minimize the need for irrigation. We have installed advanced water-saving fixtures throughout our terminals and have launched a comprehensive water recycling program. These efforts not only reduce our overall water consumption but also

support our commitment to sustainability and effective natural resource management across all our facilities.

Slurry Water Recycling—GlobalCycle

As part of our water conservation and waste reduction efforts, we recycled approximately 25,357 gallons of industrial water from January 2022 through December 2023, helping to preserve local aquifers. To ensure the quality of this achievement, we received third-party certification from GlobalCycle, the operator of the only fully permitted industrial wastewater treatment recycling and non-hazardous solid waste handling facilities in Massachusetts.

Water Use (Gallons) Per Passenger





We recycled approximately 25,357 gallons of slurry water over a two-year period, receiving certification from Massachusetts' only fully permitted industrial wastewater treatment operator.







Ground Access Initiatives

Back Bay Logan Express Relaunch

In October 2022, we relaunched the Back Bay Logan Express (LEX) Service that had been suspended during the pandemic. The urban Back Bay service has reestablished itself as a key transport mode enabling accessible and efficient travel for Boston area students, businesses, and leisure travelers. With free rides from Logan Airport to Back Bay and integrated service alignment with the Massachusetts Bay Transportation Authority (MBTA) at Back Bay Station, this service reduces GHG emissions by decreasing private car usage and encouraging transit use.

Promoting Commuter Benefits for Logan Airport Employees

To improve ground access and reduce GHG emissions, we provide HOV transit commuting options to employees, including Massport and non-Massport employees and airline staff. Non-Massport employees can purchase discounted LEX tickets and parking passes, and Massport employees receive a transportation benefit of up to \$300 per month to cover public transportation costs. This initiative supports our sustainability goals by lowering single-occupancy car usage and associated emissions while also giving back to employees who are integral to the Airport's operations.

ridership of 2.3 million, a 36% increase over the 1.7 million riders in 2022.

The proportion of passengers accessing Logan Airport in high-occupancy vehicles (HOVs), such as buses and other commercial vehicles with two or more passengers, was 38.4% in 2022. This exceeded our goal of 35.5% HOV utilization in 2022.

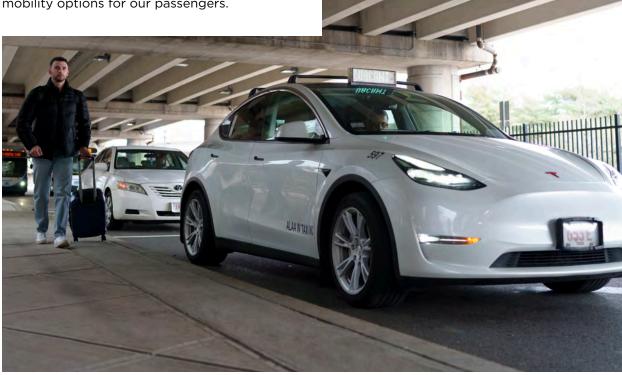
MassCEC Grant Supports Ride-for-Hire Fleet Electrification

Ride-for-hire services (i.e., taxis, limos, and ride-app companies such as Uber and Lyft) accounted for almost half of the passenger arrivals at Logan Airport in 2022, highlighting the potential decarbonization impact if these services were to be provided by electric alternatives. In recognition of this opportunity, we partnered with the Massachusetts Clean Energy Center (MassCEC), through a \$615,000 Accelerating Clean Transportation for All (ACT4All) grant, to drive the transition to electric vehicles in the ride-for-hire and rental car industries at the Airport. This funding has thus far been used to understand the challenges and opportunities facing the ride-for-hire industry (e.g., charging requirements, available incentives, etc.), identify opportunities to build upon our current policies and programs (e.g., head-of-line privileges and dedicated EV charging station infrastructure), and install direct current fast charging (DCFC) stations at the Ride App lot.

EVs Among Rental Car Fleets

At Logan Airport, 16.2 percent of passengers utilize rental cars to access the Airport.

Therefore, electrification of these vehicles presents a significant opportunity to promote decarbonization beyond Massport-owned and operated assets. We are working diligently with rental car companies to expand their EV fleets and charging infrastructure. At the time of this report, there are approximately 1,000 EVs available for rent at Logan Airport, promoting greater access to sustainable mobility options for our passengers.





Diversity, Equity, and Inclusion

We continue to enhance and build partnerships that extend economic opportunities to diverse groups, organizations, and businesses throughout the Commonwealth. We also focus on cultivating DE&I within our organization by fostering a culture of inclusiveness and engaging employees through cultural awareness programs and other diversity initiatives.

Workforce Diversity

We assess our outreach, recruitment, retention, and other employment practices every two years in the Workforce Diversity Business Plan. During CY 2022 - 2023, we identified underutilization for females in one job group out of 21 Authority-wide job groups. Below are the end-of-calendar-year workforce percentages Massport-wide for both women and employees of color.

	CY 2022	CY 2023
Female	28.9%	29.6%
Minorities	23.7%	25.6%



Scholarships and Learning

Diversity STEM and Memorial Scholarships

We provide scholarships to graduating high school seniors residing or attending school in the City of Boston and other impacted communities. As of 2023, we have awarded Diversity STEM scholarships to 48 students of color who plan to pursue degrees in a STEM field. The scholarship amount was increased from \$3,000 to \$5,000 in 2023. Since 2011, we have also awarded Memorial Scholarships to 38 students.

Pathways Internship Program

In 2023, we extended the program to UMass Boston, aiming to attract diverse talent, including students of color and women. Since the start of the program, three students have been hired full-time.

Junior Achievement of Greater Boston

In December 2023, we participated in the "JA Inspire" career fair, engaging over 1,200 eighth graders from the Greater Boston area. Massport employees provided safety demonstrations, a virtual reality terminal tour, cybersecurity exercises, and information on scholarships and internships.

Aviation and Maritime STEM Expo

In 2023, we resumed the annual on-site STEM Expo in collaboration with the Federal Aviation Administration (FAA) after a three-year COVID-19 hiatus. The event at Logan Airport featured over 50 exhibits and 35 aircraft, and attracted more than 1,000 students interested in aviation, technology, transportation, and sustainability careers.

Women in Construction

In March 2022, we celebrated Women in Construction Week to honor the contributions of women involved in our projects. Women represent 43 percent of the workforce in Massport's Capital Programs and Environmental Affairs Department, which oversees all phases of construction projects—from planning and design to construction and maintenance.

Women in Construction Week highlighted the critical roles that women play in shaping our infrastructure. A diverse group of women are part of the decision-making process in every construction project at Massport.

Massport Welcomed the 114th Annual NAACP to Boston

We participated in welcoming the 114th Annual National Association for the Advancement of Colored People (NAACP) to Boston; hosted a special event honoring Ernest "Ernie" Green, a member of the Little Rock Nine, a Civil Rights leader, and Massport "Diversity" Model collaborator; collaborated with the Boston Black Hospitality Coalition for their multi-day "Wind Down" series; and participated in and supported several conference programs, including the Career Summit and the Networking Signature Soiree.



Cultural Programs

We introduced several programs to nurture a culture of belonging and deepen the sense of community at Massport.

- Our inaugural Caribbean Art Festival
 & Open Mic showcased employee talents
 and various artists.
- The Multicultural Employee Resource Group (ERG) hosted Massport's first Lunar New Year celebration with performances by the Southeast Asian Coalition of Central Massachusetts Worcester Youth Nian Dancers and engaging guest speakers.
- Held several celebrations featuring fireside chats with Leverett Wing, Commonwealth Seminar President; Pratt Wiley, President and CEO of The Partnership, Inc.; and Dr. Patricia Jacobs, Massport Board Chair.
- Launched a Diversity, Equity, & Inclusion Book and Media Club for Massport employees, which included discussing diversity, equity, & inclusion social issues such as disability awareness, diversity in the workplace, Justice Ruth Bader Ginsburg, and Progressions of LGBTQ+.

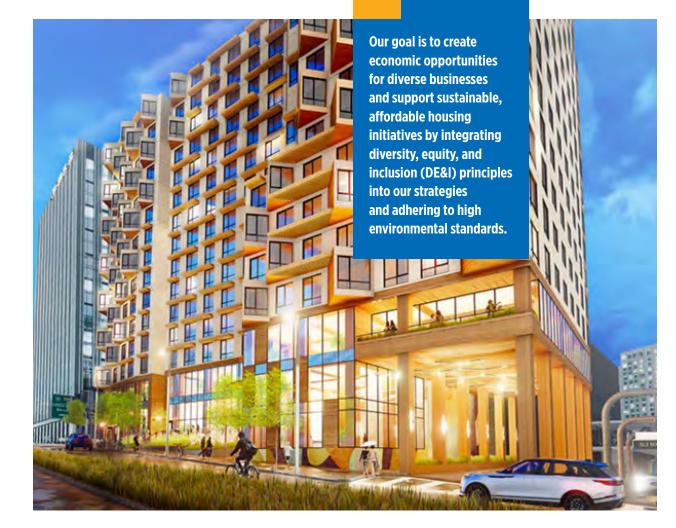
Creating Economic Opportunities

Hosting outreach events is an integral part of our strategy to help small, diverse businesses learn about opportunities, understand the process of doing business with Massport, and connect with other businesses.

In 2023, we hosted the 10th Annual Business Diversity Summit, bringing together approximately 300 businesses owned by people of color, women, and other diverse groups to learn about our business opportunities and procurement requirements under the theme "Businesses Navigating Through Change, Challenge, & Opportunity." The event featured a panel discussion with business leaders and Yvonne Hao, Secretary of the Executive Office of Economic Development, who delivered the keynote address on the Commonwealth's economic development strategy.

Sustainable Affordable Housing in South Boston Waterfront

Recognizing that our sustainability impact extends beyond aviation and maritime activities, we have adopted a holistic approach to sustainability across our entire business model. Central to this philosophy is the "Massport Model," which incorporates DE&I into our commercial real estate developer selection process. Using DE&I as



one criterion, along with other equally weighted selection criteria, including ability to execute, levels of affordability, and design and programming, we selected a diverse team which included The Community Builders (TCB), The Menkiti Group, Sinclair Real Estate Group and Ionic Development Company to develop the first mixed-income residential development in the South Boston Waterfront.

Community Engagement and Well-Being

We have and will continue to champion community benefits and robust community engagement. Working in concert with government, community, and civic leaders, we are actively engaged in advancing environmental initiatives and expanding community programs for residents living near our facilities. The following initiatives are representative of some of the programs we have pioneered in surrounding communities:

- The Charitable Contribution Program exceeded its goal of providing 50 percent of funds to organizations that predominantly serve people of color, enhancing access to education, culture, and social services in 2022 (69 percent) and 2023 (56 percent).
- Each summer, the Community Summer
 Jobs Program supports local employment
 by funding approximately 280 youth
 positions in community agencies,
 promoting accessibility to valuable
 work experiences.
- We collaborated with local leaders and charitable organizations to establish and fund the East Boston Foundation, the South Boston Foundation, and the Winthrop Foundation. Beginning with the East Boston Foundation in 1997, we have provided over \$16 million in funds for



vital programs in these highly impacted communities, awarding monies to local organizations with a proven ability to improve the quality of life for residents.

We annually fund the East Boston
Neighborhood Health Center's Pediatric
Asthma and Chronic Obstructive
Pulmonary Disease (COPD) Prevention and
Treatment Program, which offers vital
services such as screenings, asthma kit
distributions, and home visits to improve
the health of children in East Boston
and Winthrop.

 Our employees volunteer year-round in various initiatives, including a children's winter coat drive, Veterans Day events, food and backpack drives, women's shelter donations, and beautification projects, underscoring a steadfast dedication to civic engagement and community support and blending employee welfare and community well-being.

Wings for Autism®

Our Wings for Autism® program, a partnership with the Charles River Center that started in 2011, allows the families of children with autism to practice the airport and flight experiences in a safe and controlled environment at Logan and Worcester Airports. The program familiarizes children and their families with checking in, passing through security, waiting at the gate, and boarding/deplaning an aircraft. The underlying goal is to minimize the stress and unpredictability that can often accompany air travel and help families prepare for future travel. Wings for Autism® serves a dual purpose by providing a valuable training opportunity for airport, airline, and Transportation Security Administration (TSA) personnel. Through these events, staff gain firsthand experience in accommodating and understanding the needs of neurodivergent travelers, thus fostering a more inclusive and accessible airport environment. This increased awareness and staff training helps to ensure that all visitors are met with knowledgeable and empathetic assistance, aligning with our vision of hospitality and reliability in travel. Over 10,500 children and family members have participated in Massport-hosted events. The success of this program has resulted in nearly 70 other airports adopting the model.



Continued Noise Abatement Program

Our commitment to reducing airport noise pollution is demonstrated through our comprehensive noise abatement program, which includes initiatives like optimizing flight tracks to prioritize over-water routes, especially during nighttime hours. This program is bolstered by our investment of over \$170 million in one of the nation's oldest airport sound insulation initiatives, which has provided enhancements for 11.515 residential units and 36 schools, improving the living and learning environments for the community around Logan Airport. We also house a dedicated Noise Abatement Office that utilizes a Noise and Operations Monitoring System (NOMS) to track noise pollution.

Additionally, identifying opportunities to reduce noise through cutting-edge technological collaborations, we concluded a significant project with MIT in June 2022 to implement next-generation precision-based aircraft procedures. This work, a first-in-thenation endeavor involving the FAA and an airport operator, focuses on addressing community noise concerns through technical innovations and continues under the purview of the FAA's Aviation Sustainability Center (ASCENT), aiming to refine flight procedures and monitor air quality impacts related to ultrafine particles. This multi-faceted approach not only underscores our dedication to community welfare, but also highlights our role as a leader in innovative airport operations.

Boxes at the Fish Pier

The Boxes at the Boston Fish Pier is an installation on Northern Avenue that creates a front door to the Boston Fish Pier and the working waterfront. The installation, made from recycled shipping containers, serves as an engaging amenity for pedestrians. The interior of the main container features a mural by Artists for Humanity (https://www. afhboston.org/) and six permanent educational panels that highlight the businesses and people that have made the Fish Pier the heart of Boston's seafood industry for over a century. This informal "mini museum" shares the history of fishing in the area, the past and present of the Fish Pier, and the local and global dynamics of the seafood industry today.

The Boxes also house a seasonal seafood market and are available for organizations interested in pop-up events. We were proud to partner with our seafood tenants to host over a dozen seafood markets during the 2023 season. For the 2024 season, we will partner with Mass Farmers Markets to open the weekly "Fish & Farm Market" at the Boston Fish Pier. Aligned with our mission, a key goal of the market is to support and promote Boston's seafood industry while also offering a diverse mix of vendors and local food sources to residents, workers, and visitors in the area.



