



Sustainable Massport



EARTH DAY 2016

BOSTON-LOGAN INTERNATIONAL AIRPORT Annual Sustainability Report



In 2015, 320 high school and college students earned a paycheck, valuable work experience, and perhaps the start of a career thanks to Massport's Community Summer Jobs Program. Winthrop Parks and Recreation, pictured with Massport staff and CEO, is a participant of the program.

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To Members of the Community

At Massport,
our vision for sustainability
extends far beyond Earth
Day - we strive to be
a good neighbor and
environmental steward in
everything that we do.

On Earth Day 2015, Massport published its first Sustainability Management Plan for Logan Airport. We are proud to continue the momentum this year with the publication of our first Logan Airport Annual Sustainability Report. This report reflects on our progress over the past year and looks ahead at our plans for a sustainable airport in the future.

Logan Airport experienced record-breaking passenger levels in 2015 with over 33 million passengers. As we continue to grow, we strive to engage our passengers, employees, and the community in a sustainable manner. We are proud of a number of sustainability successes in 2015 and early 2016, including energy efficiency investments, the opening of the Bremen Street Dog Park in East Boston, and the publication of our second annual *Sustainable Massport* calendar. We also faced challenges during our first full year of implementation and have used these invaluable "lessons learned" to refocus and improve on a number of key programs and initiatives.

This report focuses on the key resource areas identified in the Sustainability Management Plan, including:

- Energy and Greenhouse Gases;
- Water Conservation;
- Community, Employee, and Passenger Well-being;
- Materials, Waste Management, and Recycling; and
- Resiliency.

For each of these resource areas, we provide a snapshot report on progress towards our goals and targets.

As we celebrate our successes this year, we hope that the excitement for sustainability efforts continues to grow throughout the year. At Massport, our vision for sustainability extends far beyond Earth Day - we strive to be a good neighbor and environmental steward in everything that we do.

Sincerely,

Thomas P. Glynn, Ph.D

CEO and Executive Director, Massachusetts Port Authority

Introduction

Massport's Sustainability Vision

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

This 2016 Logan Airport Annual Sustainability Report provides a progress summary of sustainability efforts at Boston-Logan International Airport based on the Massachusetts Port Authority's (Massport's) sustainability goals and targets established in the 2015 Logan Airport Sustainability Management Plan. This report highlights notable actions and achievements since the 2015 Sustainability Management Plan was published and characterizes Massport's plans for a *Sustainable Massport*. For more than three decades, Massport has been committed to pursuing an innovative sustainability program. Massport has always embraced transparency in reporting on its successes and addressing its challenges; this Annual Sustainability Report is the latest chapter in sharing information with our stakeholders.

This report focuses on progress towards each of Massport's sustainability goals in the following ten resource areas:

- Energy and Greenhouse Gas Emissions
- Water Conservation
- Community, Employee, and Passenger Well-being
- Materials, Waste Management, and Recycling
- Resiliency
- Noise Abatement
- Air Quality Improvement
- Ground Access and Connectivity
- Water Quality/Stormwater
- Natural Resources

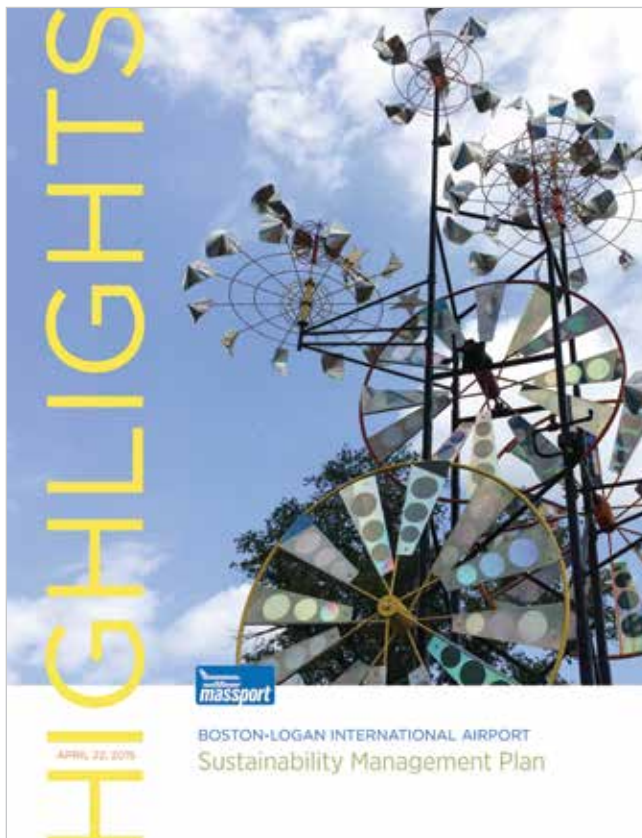


Massport sponsors several scholarship programs and also supports internship programs.



Massport employees clean a local park as part of Boston Shines.

Logan Airport Sustainability Management Plan Overview



As part of a Federal Aviation Administration-funded pilot program to support sustainability planning, Massport was selected for its long-standing commitment to sustainability, the environment, and the community. After a two-year comprehensive planning effort, Massport published its first Sustainability Management Plan for Logan Airport in 2015. Built on Massport's rich history of action on sustainability, the Logan Airport Sustainability Management Plan serves as a catalyst to minimize the effect of Logan Airport's operations on the environment and community, while continuing to enhance passenger experience and the well-being of stakeholders. The Logan Airport Sustainability Management Plan established a sustainability framework, with performance targets, to measure progress and environmental benefits over time.

A full copy of the Logan Airport Sustainability Management Plan is available on Massport's website at www.massport.com/environment/sustainability-management-plan.

Sustainability Milestones 2012-2015

Massport's commitment to sustainability has a long history and a proven track record. The timeline below illustrates Massport's notable sustainability achievements since 2012.

2015

- **Bremen Street Dog Park opened** – providing a resource to community members
- **Neptune Road Airport Edge Buffer opened** – creating another open space facility for public use
- **New 1,100 car parking garage opened at Framingham Logan Express** – promoting high occupancy vehicle use and dedicating four electric vehicle charging stations
- **First Logan Airport Sustainability Management Plan released** – showcasing Massport's sustainability efforts and identifying future actions
- **Second Annual Sustainable Massport Calendar distributed** – engaging employees and creating awareness throughout the Authority
- **Rental Car Center received Leadership in Energy and Environmental Design (LEED®) Gold certification** – recognized as a "Project of Note" by the Massachusetts Chapter of the U.S. Green Building Council

2015 (cont.)

- **Four new compressed natural gas buses put into service** – bringing the compressed natural gas bus fleet total to 22 buses
- **Composting Pilot Program began at the Logan Office Center** – includes two locations for composting with associated signage
- **Completion of Conservation Moorings Program at seven harbors** – an innovative mitigation response to the unavoidable loss of 1.5 acres of eelgrass habitat from the construction of a runway safety area improvement project
- **Partial completion of Central Garage Lighting Retrofit** – reducing energy consumption and associated greenhouse gas emissions
- **Airports Going Green Award** – Received in recognition of Massport's Conservation Moorings Program and Airport Sustainability Leadership
- **Massachusetts Environmental Business Council Award** – Received in recognition of the Logan Airport Sustainability Management Plan

2014

- Back Bay Logan Express Bus service began
- Conservation moorings installation began along select Massachusetts coastal harbors
- East Boston Greenway opened
- Renovations and improvements at Logan Airport Terminal B Connector completed, which included many sustainable features
- Central Heating and Cooling Plant switched to cleaner, lower emissions #2 fuel oil from #6 for backup fuel
- Energy efficient LED (light emitting diode) lighting retrofits in the Terminal C ticketing hall and to Airport street lighting
- Terminal B, Pier A upgrades to lighting and the heating, ventilation, and air conditioning system
- **American Council of Engineering Companies of Massachusetts Award** – Engineering Excellence: Received in recognition of the new Rental Car Center and its many sustainable features



A dog plays at the recently completed Bremen Street Dog Park.



Sam Sleiman receiving an Environmental Business Council award for the 2015 Logan Airport Sustainability Management Plan.



Recently completed Neptune Road Airport Edge Buffer.

2013

- Single-stream recycling program at Logan Airport began
- VALE Grant received to install pre-conditioned air systems at Terminal B Connector Gates
- LEED®-Gold Rental Car Center opened
- **Associated General Contractors of America Award**
- **Build New England Awards Program – Merit Award:** in recognition of the Terminal B parking garage structural repairs, lighting replacement, and roadway rehabilitation.
- **Construction Management Association of America Award**
- **Building Project of the Year – Renovation/Modernization:** in recognition of the Terminal C checkpoint consolidation and heating, ventilation, and air conditioning improvements

2012

- Logan Airport Rental Car Center solar power online
- LEED®-Silver Green Bus Depot opened at Logan Airport
- Logan Airport Central Heating and Cooling Plant upgraded, reducing greenhouse gas emissions of upgraded equipment by 33 percent
- 18 new compressed natural gas and 32 hybrid diesel-electric bus fleet began operation at Logan Airport
- 26 electric vehicle charging stations installed at Logan Airport
- **National Terrazzo & Mosaic Association Award Honor Award –** in recognition of the Terminal B common area improvements, including use of sustainable terrazzo materials
- **Construction Management Association of America Award**
- **Building Project of the Year – Renovation/Modernization:** Received in recognition of the Terminal B Parking Garage structural repairs, lighting replacement (with energy efficient LED fixtures), and roadway improvements



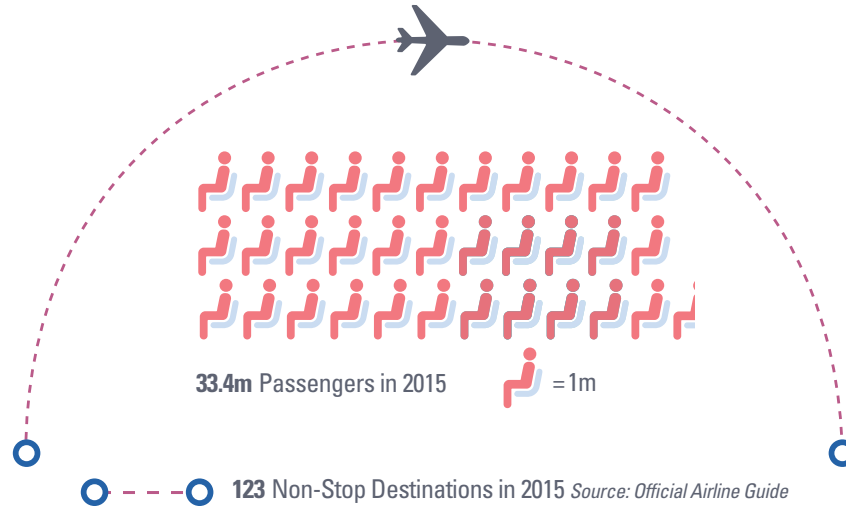
The 2016 *Sustainable Massport* calendar was distributed to Massport employees, tenants, and partner agencies in December 2015.

Logan Airport by the Numbers

FOUNDED
SEP 8, 1923

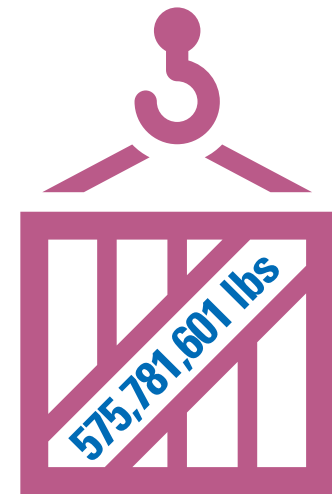
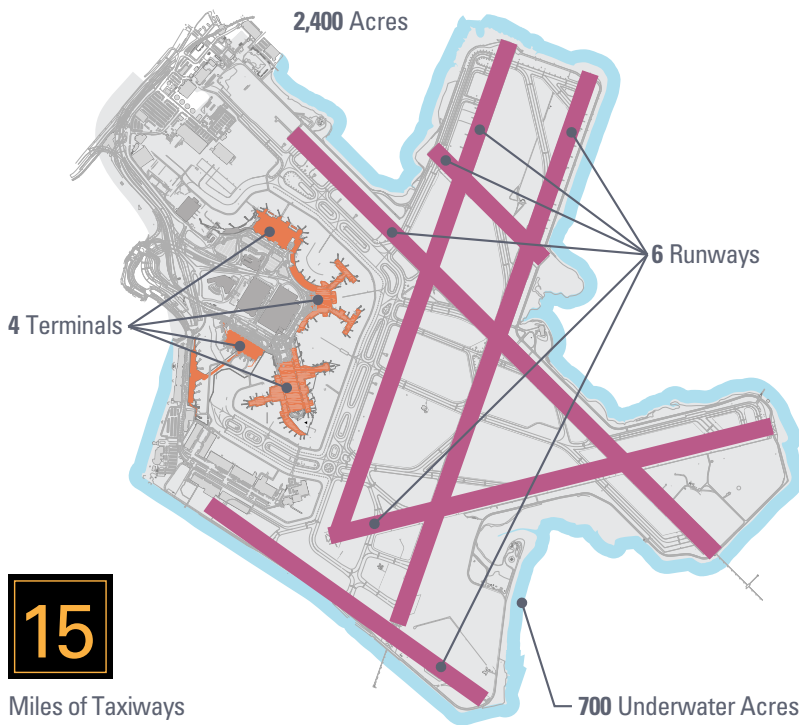


372,928 Aircraft Operations in 2015



RANK
18

in terms of busiest
U.S. Airports in 2014
(Passengers)
Source: ACI-NA



Volume of Cargo in 2015

Logan Airport's Sustainability Performance

This section provides a progress summary of sustainability efforts based on Massport's sustainability goals and targets established in the 2015 Logan Airport Sustainability Management Plan for the ten resource areas listed below. This report focuses primarily on the five key resource areas (left column) identified in the Logan Airport Sustainability Management Plan. The other five resource areas (right column) are already well-reported in the annual Logan Airport Environmental Data Reports, available online at www.massport.com/environment.



Energy and Greenhouse Gas Emissions

Goal: Reduce energy intensity and greenhouse gas emissions while increasing the portion of Logan Airport's energy generated from renewable sources



Water Conservation

Goal: Conserve regional water resources through reduced potable water consumption



Community, Employee, and Passenger Well-being

Goal: Promote economically prosperous, equitable, and healthy communities and passenger and employee well-being



Materials, Waste Management, and Recycling

Goal: Reduce waste generation, increase the recycling rate, and utilize environmentally sound materials



Resiliency

Goal: Become an innovative and national model for resiliency planning and implementation among port authorities



Noise Abatement

Goal: Minimize noise impacts from Logan Airport's operations



Air Quality Improvement

Goal: Decrease emissions of air quality criteria pollutants from Logan Airport sources



Ground Access and Connectivity

Goal: Provide superior ground access to Logan Airport through alternative and high occupancy vehicle travel modes



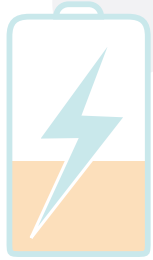
Water Quality/ Stormwater

Goal: Protect water quality and minimize pollutant discharges



Natural Resources

Goal: Protect and restore natural resources near Logan Airport



Energy and Greenhouse Gas Emissions

Massport voluntarily sets goals and develops plans to reduce greenhouse gas emissions associated with its operations at Logan Airport. Some highlighted initiatives include, but are not limited to: the implementation of energy saving programs, the purchase of renewable energy credits, and other capital investments that will reduce fossil fuel consumption in both the short- and long-term.

Goal

Reduce energy intensity and greenhouse gas emissions while increasing the portion of Logan Airport’s energy generated from renewable sources

Objectives

- Reduce energy consumption
- Increase the portion of Massport’s energy being generated from renewable sources
- Reduce greenhouse gas emissions associated with energy consumed in Massport-operated facilities at Logan Airport
- Reduce greenhouse gas emissions from Massport-operated mobile sources

Key Performance Indicators	Target	Trend
Total MMBtu ¹	n/a	Total energy use varies based on the annual number of passengers
kBtu ² per passenger	25 percent reduction by 2020 (FY 2004 baseline)	kBtu per passenger has decreased by 14.8 percent since FY 2004
kBtu per square foot	25 percent reduction by 2020 (FY 2004 baseline)	kBtu per square foot has decreased by 20.5 percent since FY 2004
Greenhouse gas emissions per passenger	40 percent reduction by 2020, 80 percent reduction by 2050 (FY 2002 baseline)	Greenhouse gas emissions per passenger have decreased by 38.1 percent since FY 2002

¹ Million British Thermal Units
² Thousand British Thermal Units

Progress Summary

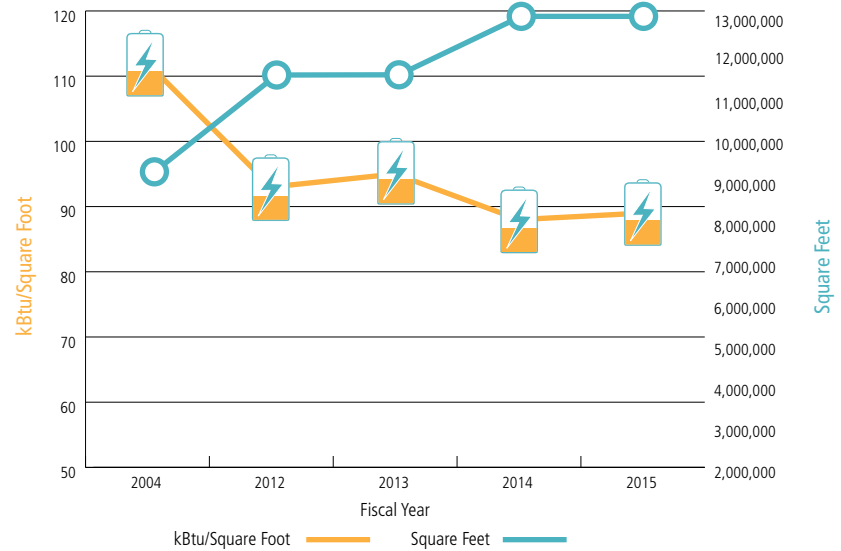
Massport's progress on energy conservation and greenhouse gas emissions reduction to date can be attributed to energy efficiency improvements and increased use of renewable energy sources. Since Fiscal Year (FY) 2004, energy use intensity (kBtu per square foot) at Logan Airport has decreased by approximately 20.5 percent.

The annual energy use per passenger has also been decreasing despite record high passenger levels in recent years. Since FY 2004, energy use per passenger (kBtu per passenger) has decreased by approximately 14.8 percent - a testament to the Airport's ability to grow sustainably.

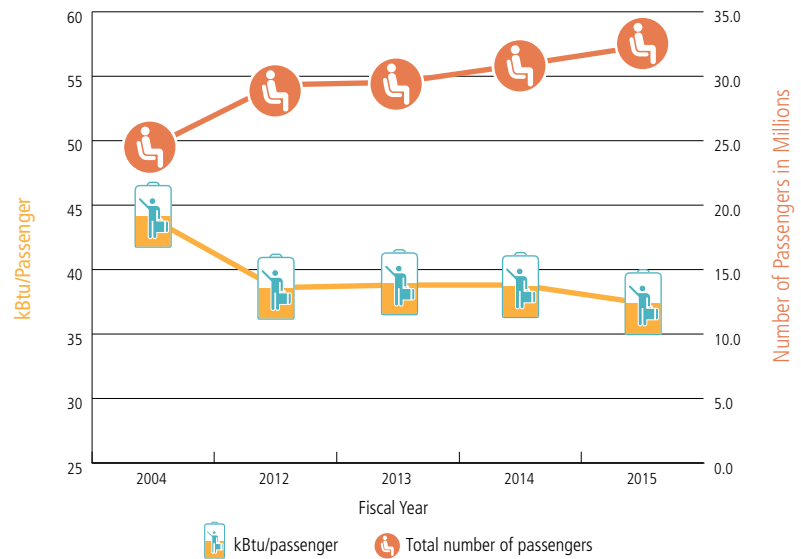


Solar panels at the Green Bus Depot.

Logan Airport Energy Use Intensity



Logan Airport Energy Use per Passenger



Project Highlight



Massport aims to improve energy efficiency and increase its capacity for onsite renewable energy generation. Since FY 2012, onsite renewable energy generation has increased by approximately 97.9 percent – from 467,358 kWh in FY 2012 to 924,874 kWh in FY 2015. To improve energy efficiency, Massport has been working to replace heating, ventilation, and air conditioning (HVAC) equipment. This initiative replaces aging equipment with more reliable, energy efficient equipment. This effort, along with other energy efficiency improvements, has reduced Logan Airport energy use intensity by 20.5 percent since FY 2004.

Sustainability Champion

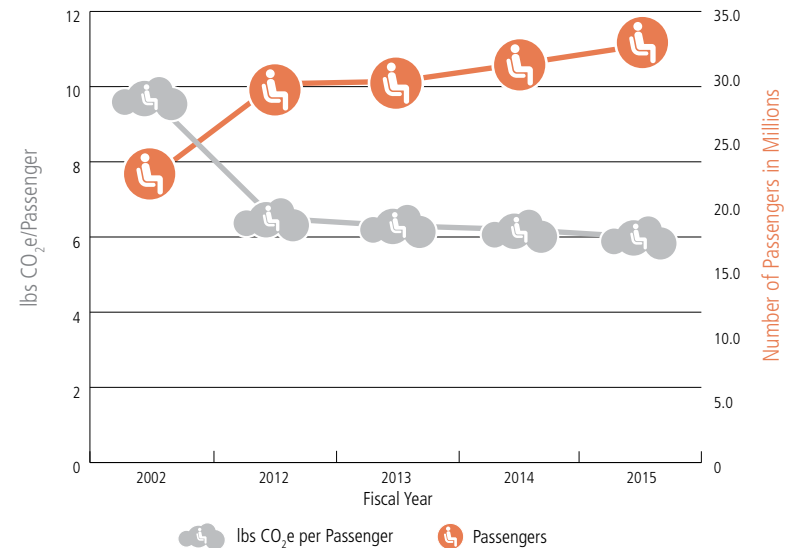


Jason W. Survilas
 Manager
 HVAC/Mechanical/Water

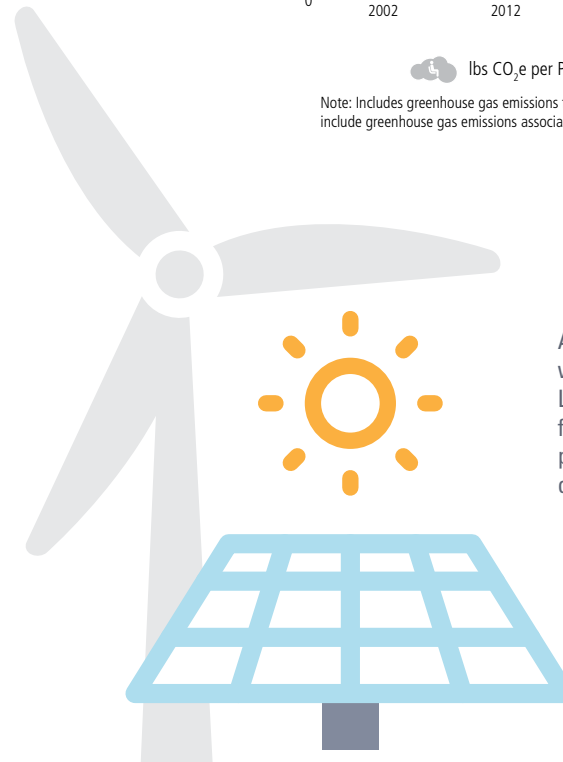
"I've been a leader in identifying more reliable, lower maintenance, highly energy efficient equipment and control schemes while providing the best possible indoor air quality for the traveling public, tenants, and employees."

Greenhouse gas emissions per passenger have been steadily decreasing. Since FY 2002, greenhouse gas emissions per passenger have decreased by approximately 38.1 percent.

Greenhouse Gas Emissions per Passenger



Note: Includes greenhouse gas emissions from all Logan Airport buildings and Massport operated vehicles. Does not include greenhouse gas emissions associated with aircraft, passenger travel to/from the Airport, or tenant vehicles.

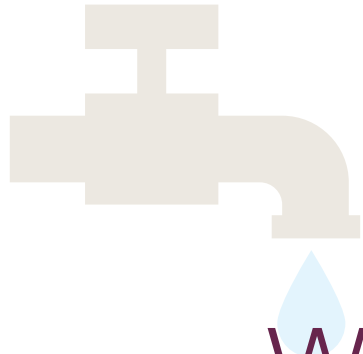


Approximately **924,874 kWh** of solar and wind power were generated at several buildings and facilities at Logan Airport in FY2015. The electricity produced from these renewable energy sources is enough to power nearly **125** typical Massachusetts homes for one year.





Back Bay Logan Express service to Logan Airport started in April 2014.



Water Conservation

Water use at Logan Airport is associated with a wide range of activities, including cooling towers at the Central Heating and Cooling Plant, kitchens in the terminals, and washing facilities at the Rental Car Center. Employees, tenants, and customers also use water for a variety of purposes. While Massport has incorporated water use conservation practices into many of these activities, it continues to look for innovative approaches that may yield even greater use and cost reductions.

Goal

Conserve regional water resources through reduced potable water consumption

Objectives

Encourage efficient water use and reduce water waste

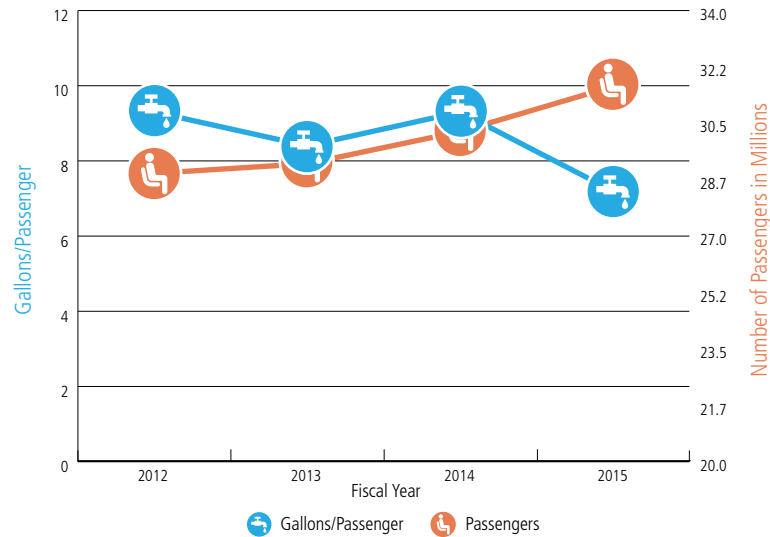
Reduce potable water used for landscaping

Increase water reclamation and reuse activities

Track and monitor water usage

Key Performance Indicators	Target	Trend
Annual gallons of water per passenger	Reduce potable water use per passenger by 1 percent annually over 10 years (FY 2012 baseline)	Water use per passenger is trending downward - 22.6 percent reduction since FY 2012

Logan Airport Water Use (gallons) per Passenger



Note: The spike in 2014 water use is likely attributable to several leaks, which were promptly identified and repaired.

Progress Summary

Massport’s water conservation efforts have contributed to a reduction in water use per passenger. Since FY 2012, the number of gallons of water per passenger has decreased by approximately 22.6 percent – surpassing Massport’s target of a 1 percent reduction per year. Massport included specifications and requirements for water conserving devices and systems in recent capital projects at Logan Airport, including landscaping, terminal restroom fixtures, cooling towers, and vehicle washing facilities. The majority of terminal restroom fixtures have been retrofitted with

low-flow toilets, urinals, and faucets. Massport also installed low-flow sprinkler heads on airside grounds to reduce water use by up to one-third during summertime peak water consumption (compared to conventional sprinklers). As a result, between FY 2012 and FY 2015, both the total water usage at the Airport and the water use per passenger has decreased.

Project Highlight



Debuting in 2012, the Green Bus Depot, servicing Logan Airport’s fleet of compressed natural gas shuttle buses, earned U.S. Green Building Council LEED® Silver certification for its sustainable design, including water recycling. Approximately 80 percent of the water Massport uses during the bus washing process at the Green Bus Depot is recycled through a water reclamation system and is reused onsite for bus washing. Another sustainable design feature of this facility is native, drought-tolerant landscaping, which requires minimal to no irrigation.



Community, Employee, and Passenger Well-being

Massport strives to offer a world-class air travel experience and act as a good neighbor. Some of Massport's top priorities include encouraging and supporting sustainable transportation choices for passengers, investing in a dynamic workforce, and encouraging employee collaboration with local community leaders. Massport supports many community programs and initiatives to enhance the overall quality of life for neighboring communities – in 2015, Massport contributed approximately \$770,000 to support local community projects.

Goal

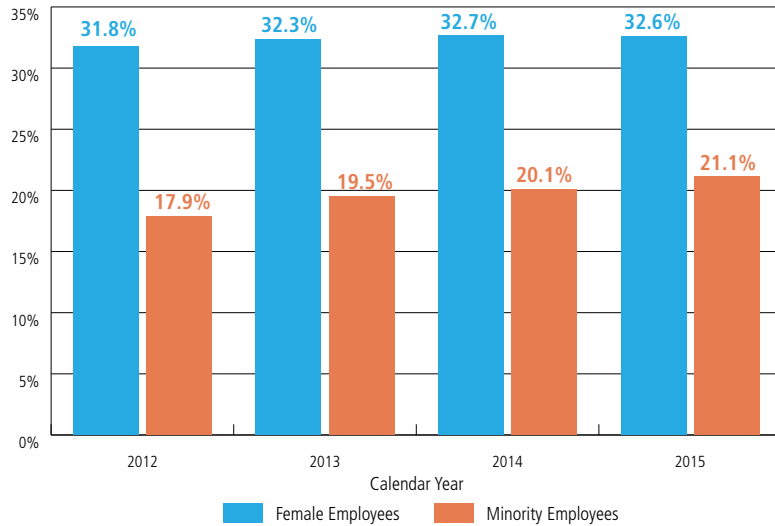
Promote economically prosperous, equitable, and healthy communities and passenger and employee well-being

Objectives

- Continue to support the local and regional economy
- Engage employees and community stakeholders in Logan Airport sustainability activities
- Continue to support the provision and upkeep of community open space
- Continue to support employee programs that promote health and professional development
- Continue to provide opportunities for passengers to make sustainable transportation choices
- Provide amenities throughout the Airport to enhance passenger experience
- Encourage concessionaires to serve healthy, locally grown, and/or produced food options
- Continue to support workforce diversity at Massport

Key Performance Indicators	Target	Trend
Number of full-time equivalent jobs through design and construction expenditure	Sustain 800 full-time equivalent job opportunities through design and construction expenditure	Exceeding target - there were 4,160 full-time equivalent job opportunities in FY 2015
Amount of economic impact to community	Continue to contribute to regional economy each year	Logan Airport contributes nearly \$13.4 billion to the local economy each year
Percentage of hires in each of the categories outlined by the Inclusion and Diversity Department	25 percent minority employees, 40 percent female employees by 2016	The percent of minority and female employees has increased by 3.2 percent and 0.8 percent, respectively, since 2012

Massport Workforce Diversity



Progress Summary

In 2014, Logan Airport supported approximately 132,000 jobs in Massachusetts. Overall, Logan Airport contributes nearly \$13.4 billion to the local economy annually – the total economic impact includes on-Airport, visitor-related, construction, and all associated multiplier impacts.¹ In 2015, over 17,000 people were employed at Logan Airport, about 1,037 of which were Massport staff and administration employees.

Massport strives to promote workforce diversity and has targets to increase both its minority and female workforce. From 2012 to 2015, Massport has increased the percentage of female and minority employees throughout the organization by approximately 0.8 percent and 3.2 percent respectively. Massport continues to work with all departments to ensure a strategic hiring process to help achieve the workforce diversity target of 25 percent minority and 40 percent female employees by 2016.

¹ MassDOT Statewide Airport Economic Impact Study, 2014.

Project Highlight



Massport coordinates a backpack drive at Logan Airport for homeless children every summer. In 2015, nearly 40 kids, aged 4 to 17, at Crossroads Family Shelter in East Boston and St. Ambrose Family Shelter in Dorchester started the school year with a backpack filled with school supplies and new clothes thanks to the generosity of Massport employees. This gift helps children's self esteem, encourages them to look forward to the new school year, and sends a strong message that others care about them and their education.

Sustainability Champion



Alaina Coppola
Senior Manager
Charitable Giving Programs

"For eight years, Massport has helped to make the start of the school year a little easier for homeless families."



Materials, Waste Management, and Recycling

Massport has identified materials management, waste management, and recycling as one of its top sustainability priorities over the next few years. The 2015 Logan Airport Sustainability Management Plan set aggressive targets for recycling rates at Logan Airport: 20 percent by 2016, 40 percent by 2018, and 60 percent by 2020. To get there, Massport is developing a multi-year waste management strategy specifically focused on increasing the diversion rate and reducing the total amount of waste generated per passenger.

Goal

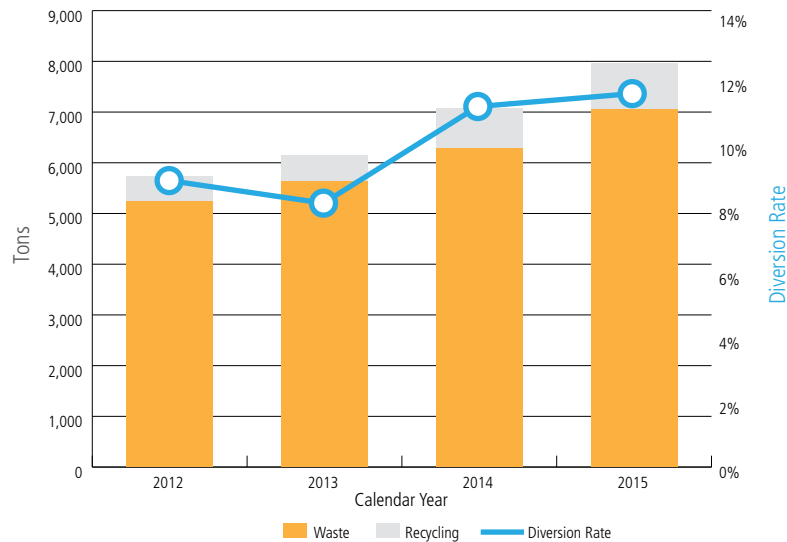
Reduce waste generation, increase the recycling rate, and utilize environmentally sound materials

Objectives

- Reduce the total amount of waste generated at Logan Airport
- Increase the amount of (non-construction) material recycled
- Continue to have a high amount of construction waste recycling and reuse
- Procure local, ecologically-friendly, non-toxic products and materials whenever possible
- Encourage tenant composting of organic material and develop capacity for composting or recovering energy from food scraps and other compostable waste

Key Performance Indicators	Target	Trend
Waste per passenger rate	Reduce waste generation per passenger by 2 percent per year through 2030 (excluding construction and demolition waste) (2012 baseline)	Massport is currently developing a waste tracking plan to account for all waste generated at Logan Airport; this key performance indicator will be included in future reports
Diversion rate	Increase recycling rate to 20 percent by 2016, 40 percent by 2018, and 60 percent by 2020	The diversion rate has increased by 2.7 percent since 2012
Percentage of construction and demolition waste recycled/reused	Maintain construction and demolition waste diverted close to 100 percent	Remains close to 100 percent
Percentage of organic materials composted	20 percent of organic materials composted by 2016	Massport will report on this key performance indicator once the composting program is implemented

Logan Airport Waste, Recycling, and Diversion Rate



Progress Summary

Massport’s successful construction and demolition waste recycling program continues to divert nearly 100 percent of all waste, meeting the target identified in the 2015 Sustainability Management Plan. With the implementation of the single-stream recycling program in 2013, Logan Airport’s recycling rate has been on the rise. Since 2012, the recycling rate has increased by 2.7 percent.

Massport is proud to share this improvement; however, it recognizes the challenge of meeting its aggressive diversion targets. To meet these targets, Massport is currently working to implement several of the short-term initiatives developed in the 2015

Sustainability Management Plan, including providing liquid collection units at the Terminal C checkpoint in April 2016, improving tracking and data management, and developing an Airport-wide organics management plan. In 2015, Massport began a composting pilot program at the Logan Office Center. Organic waste diversion will be a key focus of Massport’s waste management strategy over the next several years and Massport will work to expand composting to other facilities. Massport will continue to assess its waste management and recycling program and will identify new initiatives, as needed.

Project Highlight



The Logan Airport Field Maintenance Team has begun using a high-pressure water blasting machine, the Cyclone. The Cyclone machine uses reclaimed water and has allowed Massport to eliminate the use of caustic rubber removal chemicals used to remove accumulated rubber from the Airport’s runways. Additionally, this machine has increased the reflectivity in runway pavement markings, reducing the amount of paint applied to Logan Airport’s runways. The Cyclone also recaptures old paint chips to allow proper disposal and reduce the amount of paint entering surrounding ecosystems.

Sustainability Champion



Paul Brean
 Manager
 Airside/Landside/Fleet Maintenance

“I am proud that we have been able to implement a sustainable and environmentally conscious process into the maintenance of our runways. Eliminating the use of a corrosive chemical and having the ability to use high pressure reclaimed water to remove our runway rubber build up has been a successful green initiative and safer work practice.”



Resiliency

Understanding and managing potential climate impacts is of particular interest to Massport, as much of Logan Airport's most critical facilities and infrastructure are located in relatively low-lying coastal areas. In addition to mitigating the effects of climate change through greenhouse gas reduction measures at Logan Airport, Massport has launched a comprehensive resiliency initiative. The intent of this initiative is to enable Massport to maintain and quickly restore operational capabilities at Logan Airport during and after major disruptions, and to adapt and enhance its facilities and infrastructure to be more resilient to the effects of extreme weather events. Through robust planning and prudent investment, Massport aims to reduce the impacts and related costs of potential natural disasters at Logan Airport.

Goal

Become an innovative and national model for resiliency planning and implementation among port authorities

Objectives

Incorporate a scientifically sound understanding of climate change impacts and vulnerabilities into the management of Massport's assets and operations

Enhance the resiliency of Massport's critical assets and operations at Logan Airport to withstand the potential effects of climate change

Educate staff at Logan Airport on the potential effects of climate change and Massport's efforts to improve organizational and operational resiliency

Collaborate with Massport's internal and external partners to prepare for the potential effects of climate change

Key Performance Indicators	Target	Trend
Number of capital projects that address resiliency of Massport facilities at Logan Airport	25 percent of critical assets and/or key resources enhanced by 2020; 100 percent of critical assets and key resources enhanced with resiliency measures by 2025	Two resiliency projects were completed in 2015

Progress Summary

Recognizing the potential effects of climate change on Logan Airport's operations, Massport focuses on enhancing the resiliency of critical assets and operational requirements at Logan Airport. Massport completed two capital improvement projects in 2015 that included the caulking and waterproofing of all critical asset utility conduit entry points and the purchase of temporary flood barriers (AquaFence®) to protect critical equipment and facilities from major flooding events. Massport also incorporated resiliency elements into the Terminal E Renovation and Enhancements Project, which is currently underway. This project will raise critical systems in Terminal E, such as electrical supply, above the design flood level.

Massport also encourages staff participation in its climate preparedness efforts by providing educational and training opportunities on improving organizational and operational resiliency. In 2015, Massport co-conducted a series of tabletop exercises on its Flood Operations Plans with the Massachusetts Emergency Management Agency. Massport also hosted an educational speaker series in which it invited local officials and climate experts to discuss local and regional climate preparedness efforts.

In addition to internal preparation, Massport is actively participating in regional collaborations focused on climate preparedness. Such collaborations, in which Massport is either a member or part of an advisory committee, include:

- Metro Mayors Climate Smart Region Technical Advisory Team (Member),
- Metro Boston Climate Preparedness Taskforce (Advisory Committee),
- Association of Climate Change Officers 2015 Rising Seas Summit (Advisory Committee),
- Boston Harbor Beneficial Reuse Working Group (Member), and
- City of Boston Mayoral Climate Action Committee (Advisory Committee).

Massport is also joining the local, regional, and national conversation on climate preparedness through speaking engagements. In 2015 these included:

- American Port Authorities Association Annual Environmental Meeting: New Orleans, LA, April 2015,
- Global Awareness, Education and Action Summit on Climate Resiliency: Dartmouth, MA, December 2015, and
- Boston Society of Civil Engineers Keynote Speaker, Boston, MA, December 2015.

Project Highlight



Massport completed an Authority-wide climate change risk assessment in 2014 and has issued a Floodproofing Design Guide. As a result, Massport is focused on enhancing the resiliency of critical assets and operational requirements at Logan Airport. Two projects were completed in 2015, including the purchase of temporary flood barriers and waterproofing critical asset utility conduit entry points.

Sustainability Champions



From left to right:

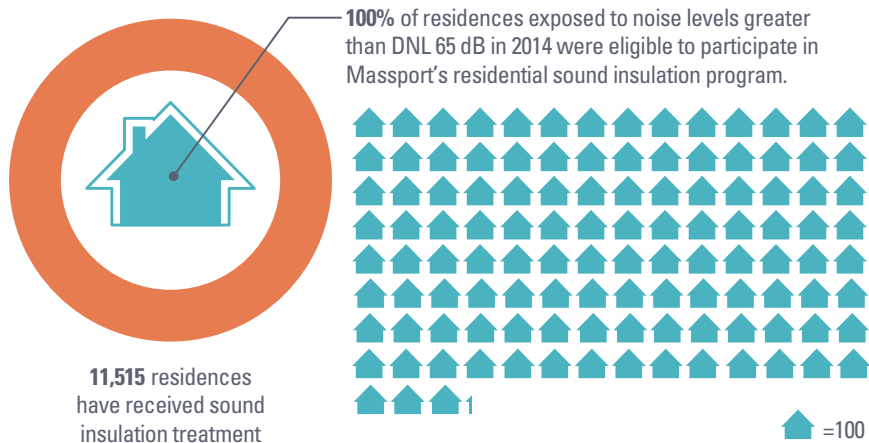
Patrick Minihane, *Assistant Director, Facilities Services*
Gary Tobin, *Deputy Director, Airport Facilities*
John Doherty, *Assistant Director, Technical Services*
William Wieners, *Assistant Director, Facilities Operations*
(not pictured)

Progress on Additional Resource Areas



Noise Abatement

Logan Airport has one of the most extensive noise abatement programs in the nation that encompasses a variety of programs, procedures, and tools to minimize the noise effects of Logan Airport operations on its neighbors. In 2014, an additional 106 residential units received sound insulation bringing the program total to 11,515 residential units treated, amongst the highest in the nation. As a result of Massport's noise abatement efforts, the number of people exposed to sound levels of 65 decibels (dB) or higher has decreased by approximately 50 percent since 2000 and 90 percent since 1980. Overall, Massport continues exploring measures to work with surrounding communities to minimize the effects of noise from operations at Logan Airport.



Air Quality Improvement

Total air quality emissions from all sources (vehicles, ground support equipment, aircraft, other) associated with Logan Airport in 2014 are significantly less than they were a decade ago. Since 2000, modeled emissions of volatile organic compounds, oxides of nitrogen, and carbon monoxide from all sources have decreased by 33.8 percent, 29.2 percent, and 46.7 percent, respectively. More specifically, during the past 14 years, harmful vehicle emissions from cars and buses at Logan Airport - volatile organic compounds, oxides of nitrogen, and carbon monoxide - are down a combined average of 83 percent (87.6 percent; 86.5 percent; and 76.3 percent, respectively).



Ground Access and Connectivity

Massport has continued to invest in and operate Logan Airport with a goal of increasing the number of passengers arriving by transit or other high occupancy vehicle/shared-ride modes. Logan Airport continues to rank at the top of U.S. airports in terms of high occupancy vehicle/transit mode share. Since the 2013 Logan Airport Air Passenger Ground Access Survey, Massport has implemented new initiatives, such as the opening of the new Framingham Logan Express parking garage, to encourage high occupancy vehicle use. Due to the success of these initiatives, Massport currently estimates that approximately 30 percent of air passengers use high occupancy vehicle/shared-ride modes to access the Airport. Massport continues to provide and actively promote high occupancy vehicle/shared-ride options to air passengers, including Logan Express bus service, free Silver Line boardings, water shuttle service, and free, frequent shuttle bus service to and from the MBTA Blue Line Airport Station.



~30% of public access via high occupancy vehicle



Water Quality/Stormwater

Massport strives to protect water quality and enhance natural resources with Airport-wide sustainability practices. Massport continues to comply with water quality and other environmental regulations with 99 percent of water samples in compliance with standards. Massport's primary water quality goal is to prevent or minimize pollutant discharges, thus limiting adverse water quality impacts associated with Airport activities.



Natural Resources

In 2015, Massport received the Airports Going Green award for its Conservation Moorings Program. The program was developed as an innovative mitigation strategy to respond to the unavoidable loss of 1.5 acres of eelgrass habitat from the construction of a runway safety area improvement project for Runway 33L. The conservation moorings replace conventional, seafloor disturbing moorings, which help to protect and promote eelgrass growth on 192 acres in seven harbors.



An aircraft lands at Logan Airport.



Children play at the Bremen Street Park.



Maverick Street Mothers plaque dedication ceremony.



Bike racks at the Logan Office Center.

Invitation to Follow Ongoing Efforts and Progress

This Annual Sustainability Report truly underscores Massport’s commitment to sustainability by showcasing notable actions, champions, and progress across the identified resource categories. At the same time, Massport realizes that there remains many opportunities to improve upon and to further advance sustainability through the organization’s operations and development. Massport invites all stakeholders and community members to follow these sustainability efforts, and stay tuned for more progress updates in the near future.

Sustainability Communications



Annual Sustainable Massport Calendar

Employees, tenants, public, Federal Aviation Administration, vendors, regulators, community



Annual Sustainability Reports

Employees, tenants, public, Federal Aviation Administration, vendors, regulators, community



Sustainable Massport Website

Employees, tenants, public



Employee Newsletter

Employees, tenants, regulators



Committed to enhancing the health and well-being of its employees, Massport sponsors a health and wellness program, which has three main components: prevention, fitness, and education. Massport organizes regular employee fitness events such as walks along the Harborwalk or friendly sport competitions.



EARTH DAY 2016

ANNUAL SUSTAINABILITY REPORT

