

1

Introduction/ Executive Summary

Introduction

Boston-Logan International Airport (Logan Airport), owned and operated by the Massachusetts Port Authority (Massport), is New England's primary international and domestic airport. This *Boston-Logan International Airport 2005 Environmental Data Report (2005 EDR)* is part of a series of environmental review documents submitted pursuant to the Massachusetts Environmental Policy Act (MEPA) to report on the cumulative effects of Logan Airport's operations and activities. Massport prepares EDRs annually. They are intended to provide a snapshot of environmental conditions for the reporting year compared to the previous year. Every five years Massport prepares an Environmental Status and Planning Report (ESPR) which provides an historical and prospective view of Logan Airport.

The scope of this *2005 EDR* is set out in the Secretary of the Executive Office of Environmental Affairs' (EOEA) Certificate dated August 16, 2006, which is included in *Appendix A, MEPA Certificate and Responses*. This *2005 EDR* updates the data presented in the *2004 Environmental Status and Planning Report (2004 ESPR)*, and presents activity levels (including aircraft operations and passenger activity) and environmental conditions at Logan Airport for calendar year 2005. Activity levels and environmental conditions in calendar year 2005 are compared to those in 2004. To enhance the usefulness of the *2005 EDR* as a reference document for reviewers and Massport staff, this *2005 EDR* also presents historic data on the environmental conditions at the airport dating back to 1990. An update on the projects underway at the airport in 2005 and the mitigation measures being implemented are also provided. An overview of Massport's sustainability initiatives are described in this chapter.

2005 EDR

LOGAN INTERNATIONAL AIRPORT

EOEA # 3247

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Logan Airport Environmental Review Process

This 2005 EDR is part of an on-going state-level environmental review process that assesses Logan Airport's cumulative environmental impacts. The process provides a context against which individual projects meeting state and federal environmental thresholds are evaluated on a project-specific basis. The airport-wide and project-specific environmental review processes are discussed below.

Logan Airport-Wide Review

In 1979, the Secretary of the EOEA issued a Certificate requiring Massport to define, evaluate, and disclose, every three years, the impact of long-term growth at the airport through a Generic Environmental Impact Report (GEIR). The Certificate also required interim Annual Updates to provide data on conditions for the years between the GEIRs. The GEIR evolved into an effective planning tool for Massport and provided projections of environmental conditions where the cumulative effects of individual projects could be understood.

EOEA eliminated GEIRs following the 1998 revisions to its MEPA Regulations. However, the Secretary's Certificate on the 1997 *Annual Update*¹ proposed a revised environmental review process for Logan Airport. As a result, Massport evaluates the cumulative impacts associated with airport activities through preparation of an ESPR every five years and provides data updates annually through the EDRs. The next EDR will be filed in 2007

¹ Certificate of the Secretary of the Executive Office of Environmental Affairs on the *Logan Airport 1997 Annual Update*, issued on October 16, 1998.

2005 EDR

LOGAN INTERNATIONAL AIRPORT

and will report on the 2006 calendar year. The next ESPR will be filed in 2010, and will report on the 2009 calendar year.

Project-Specific Review

While this airport-wide review provides the broad planning context for proposed projects and future planning concepts, airport projects are also subject to a project-specific, public environmental review process when state environmental review thresholds are met. When necessary, Massport and airport tenants submit Environmental Notification Forms and Environmental Impact Reports pursuant to MEPA.

Similarly, where National Environmental Policy Act (NEPA) environmental review thresholds are triggered, projects are reviewed under the Federal Aviation Administration (FAA) environmental review process.

Overview of Logan Airport

Logan Airport is New England's primary domestic and international airport. Logan Airport is primarily an origin-destination airport, not a connecting hub for major airlines. The airport plays a key role in the metropolitan Boston and New England passenger and freight transportation networks and is a significant contributor to the regional economy. In 2005, Logan Airport employed a total of approximately 12,000 people (a full time equivalency of 10,879 jobs) and activities associated with the Airport contributed an average of \$19 million a day into the local economy.² According to Airports Council International (ACI), in 2005 Logan Airport was the 17th busiest commercial aviation facility in the United States (US) ranked by aircraft operations.

The Airport boundary encompasses approximately 2,400 acres in East Boston and Winthrop, including 700 acres of Boston Harbor. Logan Airport, shown in Figures 1-1 and 1-2, is one of the most land-constrained airports in the nation and is surrounded on three sides by Boston Harbor.

Logan Airport is conveniently close to downtown Boston and is accessible via public transit and a well-connected roadway system. The airfield comprises six runways, 14 miles of taxiway, and approximately 240 acres of concrete and asphalt apron. In late 2004, construction commenced on the sixth runway, the 5,000 foot unidirectional Runway 14-32. This runway was available for operation on Thanksgiving, November 23, 2006. With the opening of the new Delta Air Lines Replacement Terminal A on March 16, 2005, Logan Airport now has four passenger terminals (Terminal A, B, C and E) each with its own ticketing, baggage claim, and ground transportation facilities.

Massport, Logan Airport's owner and operator, continues to evaluate and implement enhancements to Logan Airport's security, operational efficiency, and accessibility to and from the Boston metropolitan area, while carefully monitoring the environmental effects of Logan Airport operations.

² *Economic Impact Report 2006*, Massachusetts Port Authority, 2006.

2005 EDR
LOGAN INTERNATIONAL AIRPORT

Figure 1-1 Logan Airport looking toward Boston Harbor



2005 EDR

LOGAN INTERNATIONAL AIRPORT

Figure 1-2 Logan Airport



Source: US Geological Services

2005 EDR

LOGAN INTERNATIONAL AIRPORT

2005 Highlights and Accomplishments

This section provides a brief overview of key events and accomplishments at Logan Airport in 2005. Additional information concerning all aspects of airport activities is provided in subsequent chapters.

Activity Levels

- Air passenger traffic at Logan Airport continued to rebound in 2005, but remained below the peak year level reached in 2000. The total number of passengers using Logan Airport in 2005 increased by 3.6 percent over the prior year to 27.1 million passengers. Although the recovery in passenger demand was underway in 2005 throughout the industry and at Logan Airport, legacy commercial airlines continued to struggle financially in the face of increased competition from low cost carriers (LCCs)³ and rising fuel prices.
- In 2005, total aircraft operations (409,066 operations) at Logan Airport increased by 0.9 percent over 2004 levels. Reductions in operations by legacy carriers at Logan Airport were accompanied by rising load factors; growth by LCCs accounted for the modest increase in operations from 2004.
- While 2005 passenger traffic at Logan Airport was approximately equal to 1999 levels, in 2005 these passengers were being carried on approximately 86,000 fewer flights (495,000 flights in 1999 versus 409,066 flights in 2005).
- In 2005, Logan Airport ranked 18th among US airports in total cargo volume. All-cargo operations at Logan Airport declined by 7.1 percent in 2005. However, total cargo volume, including cargo carried in the belly compartments of passenger aircraft, fell by only 2.8 percent.

Planning

Several projects were completed in 2005:

- The majority of construction of the main terminal and satellite concourse of Delta Air Lines' Replacement Terminal A Project was completed in 2004, with final fit up and commissioning in 2005. The new Terminal A opened on March 16, 2005, consolidating all of Delta Air Lines' flights, including the Delta Shuttle and Song, into one terminal building. Overhead walkways with moving sidewalks connect Terminal A to the West Garage, Hilton Hotel, and Terminal E, as well as to the Central Garage and Terminal B.
- Massport launched Exit Express, Massport's fast and easy way to pay for parking. Patrons pay at conveniently located Parking Pay Stations in the terminals and use the prepaid ticket to exit the garage via the Exit Express lanes. This feature is part of Massport's on-going program to improve parking facilities and improve air quality through enhanced circulation and reduced idling at the toll booths. This program was fully operational in 2005.
- The Silver Line is the most recent addition to the metropolitan area transit system and is Boston's first Bus Rapid Transit (BRT) line. One section of the Silver Line travels through a tunnel between South Station and the South Boston waterfront where it enters the surface road system with branches to City Point, Boston Marine Industrial Park, and Logan Airport. As part of a cooperative venture between the Massachusetts Bay Transportation Authority (MBTA) and Massport, initial Silver Line service to the airport began in December 2004, operating every 15 minutes from 4:00 PM to 10:00 PM on Sundays and stopping at

³ Major low cost carriers (LCCs) operating in the US during 2005 were Air Tran, American Trans Air, America West, Frontier, Independence Air, JetBlue, Song, Southwest, and Spirit Airlines.

2005 EDR

LOGAN INTERNATIONAL AIRPORT

Terminals B, C, and E. Full Silver Line service to Logan Airport began on June 1, 2005. Full service operates on 10-minute headways on weekdays between 6:50 AM and 8:00 PM and serves Terminals A through E at dedicated bus stops. Off-peak and weekend service operates on 12 to 15-minute headways.

Both Massport and Logan Airport's tenants are proposing projects or exploring planning options to modernize and carry out future improvements at Logan Airport. Massport's planning criteria for Logan Modernization are based on accommodating 45 million annual passengers in airport terminals, facilities, and on airport roadways. Future projects and planning concepts include:

- Both Massport and Logan Airport's tenants are proposing projects or exploring planning options to modernize and carry out future improvements to the existing terminal facilities. Some projects and planning concepts include ongoing expansion and upgrade of Terminal E and completion of West Garage Phase II (Central Garage Expansion).
- Massport continues to explore more efficient ways of using the limited land resources in the service areas. Some projects and planning concepts that are underway or under consideration include consolidating flight kitchen facilities in the North Service Area, constructing new multi-tenant maintenance facilities for ground service equipment (GSE), and constructing replacement cargo and hangar facilities in the North Cargo Area.
- Airside improvements include upgrades and improvements to the airfield to enhance the operations efficiency and safety of Logan Airport. Some projects and planning concepts that are underway or under consideration include installing a security wall along the perimeter of the air operations area, providing additional aircraft parking for certain types of aircraft, and an airside improvements planning program including unidirectional Runway 14-32, a new Centerfield Taxiway, and other taxiway and operational enhancements.
- Buffer areas are being designed in consultation with Logan Airport's neighbors and other interested parties in an open community planning process. Some airport buffer projects and planning concepts include landscaping the former Navy Fuel Pier at Jeffries Point and installing a landscaped border in conjunction with the north service area Economy Parking Lot construction.
- Massport is considering a parking strategy to address future on-airport parking demands. Some ongoing and future parking projects and planning concepts include redeveloping three parcels into a combined economy parking facility with the capacity for up to 1,750 vehicles and a new consolidated facility for all car rental operations.

Regional Transportation

In addition to Logan Airport, which is the primary domestic and international airport, New England's primary commercial service airports include the following ten regional commercial service airports: T.F. Green Airport, RI; Manchester Airport, NH; Bradley International Airport, CT; Burlington Airport, VT; Bangor Airport, ME; Portland International Jetport, ME; Pease International Tradeport, NH; Worcester Regional Airport, MA; Hanscom Field, MA; and Tweed-New Haven Airport, CT.

Overall, the number of air passengers utilizing New England's primary commercial service airports in 2005 rose by 5.3 percent over 2004. When measured by aircraft operations, however, activity levels fell by 0.6 percent. This reflects sweeping changes in both the commercial aviation and general aviation (GA) sectors of the industry.

- Major airlines reduced capacity in 2005 as they continued to restructure their operations in an effort to reverse financial losses. Passenger numbers rose despite capacity reductions as airlines operated at higher load factors.

2005 EDR

LOGAN INTERNATIONAL AIRPORT

- Carriers flew fewer flights to the regional airports than in 2004, but used larger aircraft on average in 2005, and carried more passengers. At Tweed-New Haven and Bangor Airports, growth in scheduled seat capacity outpaced increases in operations; at T.F. Green Airport, Portland International Jetport, and Burlington Airport, seat capacity declined less (compared to 2004 levels) than scheduled operations; and at Manchester Airport seat capacity increased while the number of scheduled passenger flights declined. This reflects the use of larger regional jets and the increased importance of LCCs, which generally operate narrow-body aircraft.
- GA operations at New England airports declined by 3.8 percent from 2004 levels. The pace of the decline is more rapid than for the US as a whole, where GA operations declined 2.5 percent. The nationwide decrease in the number of operations, however, is offset by an increase of 3.8 percent in the number of hours flown by GA aircraft.⁴ The combination of these trends suggests that the GA fleet is becoming longer-range and more jet-focused. The national GA jet fleet grew by 2.6 percent in 2005 while the total number of GA aircraft, including both jets and non-jets, grew by 1 percent.

Ground Transportation

- Ground transportation activity levels increased from 2004 to 2005 as a result of a 3.6 percent increase in the number of air passengers.
- Traffic volumes on airport roadways increased by 5.8 percent, while the vehicle miles traveled (VMT) on the airport increased by 4.2 percent. VMT is an indicator of trip lengths. The lower VMT growth when compared to overall traffic volume growth suggests that more direct connections over shorter roadway distances are provided. The opening of Terminal A and the associated access roadways that provide a more direct connection to external airport access points resulted in a decrease in the average trip length for passengers shifting from Terminals B and C (which housed Delta Air Lines during construction) to Terminal A in 2005. This is also due, in part, to an increase in traffic destined to other airport uses via the Harborside Drive exit from the Ted Williams Tunnel.
- The facilities at the MBTA Blue Line Airport Station were substantially improved in 2005, including the conversion from a manual to an automated fare collection system. The automated system replaces subway tokens with Charlie Tickets which provide more convenient fare payment along with improved customer service. Airport Station was one of the first to receive new automated fare collection equipment during the spring of 2005.
- Full MBTA Silver Line service to Logan Airport began on June 1, 2005 with 10-minute headways during weekdays between 6:50 AM and 8:00 PM to Terminals A through E. Daily average boardings at the airport increased by 38 percent from June to December 2005.
- As of 2004, all major construction activity associated with the Central Artery/Tunnel (CA/T) and Logan Modernization projects was completed, including opening of all new regional connections and the permanent removal of Route 1A traffic from the airport roadway system. In 2005, Terminal A and its associated access roadways were fully opened for operation. There were no other roadway modifications completed in 2005.
- Contract negotiations began between Massport and the C & J Bus Company in New Hampshire to expand early morning transportation between New Hampshire and Logan Airport. This service began in 2006.
- Massport re-bid its Logan Airport Transportation Management Association (Logan TMA) contract with the Executive Office of Transportation (EOT) through the MassRIDES program. This new contract will allow Massport to expand Logan TMA services to better meet the needs of companies that are members of the Logan TMA and to encourage all Logan Airport tenants to become members.

4 FAA Aerospace Forecast 2006 - 2017.

2005 EDR

LOGAN INTERNATIONAL AIRPORT

Noise

- In 2005, the number of people exposed to Day-Night Sound Level (DNL) values greater than 65 decibels (dB) decreased compared to 2004. An estimated 6,477 people were exposed to DNL levels greater than 65 dB in 2005, compared to 9,438 in 2004, and 7,183 in 2003. The total count of people exposed to 65 dB Day-Night Sound Level (DNL) and above was 55 percent lower than in 2001.
- Winthrop, which has always experienced the highest levels of noise exposure of any community around Logan Airport, continued its decline in the number of people exposed to levels greater than 65 DNL. This number has dropped 81 percent since reaching its peak in 1998. The number of residents exposed to noise over 75 DNL increased from 2004 but still remained below 2001 levels.
- The 2005 Cumulative Noise Index (CNI) of 153.2 Effective Perceived Noise Level (EPNdB) remained well below the cap of 156.5 EPNdB. The CNI decreased slightly compared to 2004 even with a slight increase in the number of operations in 2005. This decrease is primarily due to decreased use of recertified aircraft by cargo operators.
- Massport provided sound insulation for 471 residential dwelling units in 2005. Since the program's inception, Massport has sound insulated a total of 9,086 dwelling units. The majority of the units insulated in 2005 were in Winthrop.

Air Quality

- The emissions inventory results are driven by the small increase in aircraft operations at Logan Airport compared to 2004 levels. Associated changes in GSE activity and surface traffic volumes are also contributing factors. However, the resultant increases in emissions are partially offset due to the change in the aircraft fleet mix and the improved efficiencies of aircraft, motor vehicle, and GSE engines. The in-place air quality initiatives at the airport and other ongoing efforts by Massport to minimize emissions also play a role.
- Compared to 2004 levels, total emissions of volatile organic compounds (VOCs) are estimated to have decreased by approximately 6 percent to 1,285 kilograms per day (kg/day).
- In 2005, total emissions of oxides of nitrogen (NO_x) were estimated to be 4,187 kg/day, which is a 2 percent decrease from 2004 levels.
- Total emissions of carbon monoxide (CO) in 2005 were 9,556 kg/day, or 3 percent lower than 2004 levels.
- For the first time, estimates of particulate matter emissions associated with Logan Airport are reported in this 2005 EDR in response to the recent availability of an FAA-approved method for computing particulate matter emission factors for aircraft. Total emissions of particulate matter (PM_{2.5}) at Logan Airport in 2005 were approximately 83 kg/day [33 tons/year (tpy)].
- NO_x emissions at Logan Airport in 2005 were approximately 662 tpy lower than 1999 levels—a 28 percent decrease. Therefore, there was no need to purchase NO_x emissions credits in 2005 to meet the goals of the Air Quality Initiative (AQI).
- There is an ongoing trend of decreasing nitrogen dioxide (NO₂) concentrations at both the Massport and Massachusetts Department of Environmental Protection (MDEP) monitoring sites located in the general vicinity of Logan Airport. In addition, annual NO₂ concentrations at all monitoring locations were well below the NO₂ air quality standards in 2005.

2005 EDR

LOGAN INTERNATIONAL AIRPORT

Water Quality/Environmental Compliance

- Of the 97 spills reported in 2005, 15 (15 percent) were ten gallons or greater in quantity. Jet fuel spills accounted for 66 (68 percent) of the total spills, with 12 of the jet fuel spills (18 percent) being ten gallons or greater in quantity. The remaining 31 spills involved gasoline, hydraulic oil, diesel fuel, and other substances. Of these spills, only three (10 percent) were ten gallons or greater.
- In 2005, only eight samples exceeded the regulatory limits. The North Outfall had two samples which exceeded the 15 milligrams per liter (mg/L) National Pollutant Discharge Elimination System (NPDES) limit for oil and grease, and the Porter Street Outfall had one sample exceed this limit. The North Outfall had two samples which exceeded the 0.3 milliliters per liter (ml/L) daily maximum limit for settleable solids, and the West Outfall had three samples exceed this limit. No other exceedances occurred.
- In accordance with the Massachusetts Contingency Plan (MCP), Massport continues to assess, remediate, and bring to regulatory closure areas of subsurface contamination.

Sustainability at Logan Airport

This section describes Massport's airport wide sustainability goals. The new Delta Air Lines Replacement Terminal A, which opened in 2005, provides an example of Massport's commitment to sustainability.

Sustainability Goals

Logan Airport is a complex of interconnected buildings, transportation facilities, utility infrastructure, natural environments, and management systems. As such, the long-range planning, ongoing development, and day-to-day operations can present opportunities to adopt sustainable practices that mirror Massport's environmental goals and demonstrate its leadership within New England and the aviation industry.

In October 2000, the Massport Board approved an Authority-wide Environmental Management Policy, which articulates Massport's commitment to protect the environment and to implement sustainable design principles.⁵

"Massachusetts Port Authority (Massport) is committed to operate all of its facilities in an environmentally sound and responsible manner.

Massport will strive to minimize the impact of its operations on the environment through the continuous improvement of its environmental performance and the implementation of pollution prevention measures, both to the extent feasible and practicable in a manner that is consistent with Massport's overall mission and goals."

In October 2004, the Massport Sustainability Team produced the *Massachusetts Port Authority Sustainability Plan* (Sustainability Plan). The Sustainability Plan presents Massport's long-term and short-term goals in relation to sustainability. It also identifies the actions necessary to achieve the goals, the staff members responsible for each sustainability goal, and the timeline for achieving the goals. The Environmental Management Policy is incorporated in the Sustainability Plan as Massport's long-term sustainability goal or vision. The short-term goals set out in the Sustainability Plan are described below.

⁵ The entire Environmental Management Policy is on Massport's website at http://www.massport.com/business/envir_polic.html.

2005 EDR

LOGAN INTERNATIONAL AIRPORT

Massport-wide sustainability goals are:

- Develop a policy that states that new development projects obtain Leadership in Energy and Environmental Design (LEED™) certification and include LEED™ Certified professionals on the design team.
- Establish and implement an Alternative Fuel Vehicle Policy (AFV) Policy that requires key personnel to review and consider AFVs when there is a request for a new or replacement vehicle and to select AFVs unless there is a pressing reason not to.
- Increase construction waste recycling and reuse.
- Implement process to consider environmental impacts when making purchases.

Additional sustainability goals relating specifically to Logan Airport are:

- Establish a recycling program in airport terminals.
- Retrofit or purchase heavy-duty equipment with diesel oxidation catalysts (DOCs) or particulate filters.

Sustainability is incorporated into many aspects of Massport's activities: Planning and Design; Construction; Operations, Maintenance and Management; and Monitoring of Environmental Performance. Some of the sustainability initiatives undertaken by Massport in these categories are described below.

Planning and Design

The Delta Air Lines Replacement Terminal A is an excellent example of planning and design sustainability initiatives being undertaken at Logan Airport. In 2000, Massport and Delta Air Lines developed sustainable and green technology design objectives for Terminal A. Terminal A opened on March 16, 2005. Delta Air Lines, the developer of Terminal A, was committed to ensuring the facility was built and operated in conformance with sustainable design principles. During the pre-design phase of the project, Delta Air Lines and Massport committed to compliance with a number of LEED™ Green Building Rating System criteria. The LEED™ Green Building Rating System is a building rating system developed by the U.S Green Building Council (USGBC).⁶

The following sustainable elements were incorporated into the design of Terminal A:

- Water Conservation
 - Low-flow toilets were installed in the terminal and waterless urinals were installed in the operational office area restrooms, which will reduce restroom water use by more than 30 percent.⁷ There are also sensor faucets in all restrooms.
 - Drip rather than a spray irrigation system was installed in the landscaped areas around the terminal to reduce the water required for irrigation by more than 50 percent.⁸

⁶ The USGBC was formed in 1993, and it includes product manufacturers, environmental groups, building and design professionals, retailers, building owners, and financial services firms. The mission of the USGBC is to accelerate the adoption of green building practices, technologies, policies, and standards.

⁷ *Terminal A Green Site Features* available at <http://www.massport.com/planning/featu5.html> on April 7, 2005.

⁸ *Ibid.*

2005 EDR

LOGAN INTERNATIONAL AIRPORT

- Atmosphere Protection
 - Zero use of chloroflourocarbon (CFC)-based, hydrochloroflourocarbon (HCFC)-based, or halon refrigerants in heating, ventilation, air conditioning and refrigeration systems.
- Energy Conservation
 - Special roofing and paving materials that reflect solar radiation were installed to help control heating and cooling requirements.⁹
 - Low-emission glass was installed that reflects heat away from the windows. This minimizes heat loss in the winter and heat gain in the summer, thereby reducing the energy used to heat and cool the terminal.¹⁰
 - The concourse spaces of Terminal A have large windows and other features that utilize natural daylight, minimizing the need for artificial lighting. The terminal is equipped with photoelectric sensors to automatically dim interior lighting when natural light is able to provide adequate illumination. The sensors also automatically increase artificial illumination when natural light is inadequate.¹¹
- Materials and Resources Conservation
 - More than 10 percent of all the building materials used to construct the terminal were from recycled materials.¹² For example, the columns and portions of the walls are covered in Trespa, which is a recycled plastic that is durable, affordable, and easy to clean.¹³ The floors are constructed of terrazzo, a shiny mixture of cement, crushed stone, granite, and epoxy resin.
 - An estimated 20 percent of the building materials used to construct the terminal were manufactured within the local area.
 - Wood from renewable forests was used at the terminal.
 - Over 75 percent of the construction and demolition waste was reused, recycled or otherwise diverted from landfills.
 - Mixed paper, glass, aluminum and plastic are recycled at the terminal.
- Enhanced Indoor Environmental Air Quality
 - Low and VOC free adhesives, sealants, paints, and carpets were used.
 - Composite wood materials were specified to use an alternative to urea formaldehyde.¹⁴
 - Carbon dioxide monitors have been installed to ensure superior air quality inside the terminal.
 - Smoking is prohibited inside the terminal building.

⁹ *Terminal A Green Site Features* available at <http://www.massport.com/planning/featu5.html> on April 7, 2005.

¹⁰ *Ibid.*

¹¹ *New Delta Terminal Aiming to be Nation's First "Green" Jetway*, Ted Frier, March, 2005.

¹² *Terminal A Green Site Features* available at <http://www.massport.com/planning/featu5.html> on April 7, 2005.

¹³ *Terminal A Takes Flight*, Boston Globe, April 17, 2006.

¹⁴ *Terminal A Green Site Features* available at <http://www.massport.com/planning/featu5.html> on April 7, 2005.

2005 EDR

LOGAN INTERNATIONAL AIRPORT

- Stormwater Treatment
 - Stormwater filtration devices that remove total suspended solids and total phosphorous from site runoff were installed in the ramp areas.
- Sustainable Sites
 - Bicycle racks in proximity to bus and subway systems promote the use of mass transit by passengers and employees.

In Spring 2006, Delta Air Lines and Massport submitted an application for LEED™ certification for Terminal A. LEED™ certification was subsequently awarded in June 2006, making Terminal A the first airport terminal in the US to be awarded LEED™ certification. Obtaining LEED™ certification for Terminal A is consistent with Massport's short-term sustainability goals set out in the Sustainability Plan. Views of the terminal are provided below.



Terminal A - A Showcase for Sustainability at Logan Airport



Large Windows that Utilize Natural Daylight in Terminal A Pedestrian Walkways

2005 EDR

LOGAN INTERNATIONAL AIRPORT

Sustainable Construction

Massport is committed to sustainable practices to help reduce impacts associated with construction. For example, Massport requires contractors to adhere to construction guidelines relating to demolition waste recycling, soil reuse, air emissions from construction equipment etc.

Sustainable Operations and Maintenance

Massport has several programs in place that contribute to the sustainable operation and maintenance of Logan Airport and its facilities. Massport also encourages its tenants to do the same. These programs include:

- An alternative fuel vehicle program (refer to *Chapter 7, Air Quality/Emissions Reduction* for details on this program).
- Equipping aircraft gates with 400 Hz power and pre-conditioned air (PCA) that reduces the emission of air pollutants.
- A recycling program.
- Reduced use of toxic materials and substitution with non-toxic alternatives.
- Promoting high occupancy vehicle ridership by employees and passengers (refer to *Chapter 5, Ground Transportation Improvement* for details).

Monitoring Environmental Performance

Massport has in place, or is in the process of developing, the following environmental monitoring and audit programs:

- An environmental Audit Program to track and promote consistent compliance by Massport facility managers and tenants with the many regulatory requirements relating to air quality, water quality, fueling practices, solid waste and hazardous waste, among others.
- In 2005, Massport continued its voluntary involvement with the Clean State Initiative established under Executive Order 350 that requires state agencies to come into compliance with state and federal environmental laws. There are currently two outstanding environmental matters under the Clean State Initiative that Massport is working to resolve. The first relates to replumbing of stormwater/sanitary piping in both the Central and Terminal B garages. Massport anticipates that the work in the Central Garage will be completed in 2007 and work in the Terminal B garage will be completed in 2009. The second matter relates to a MCP site that is impacted by the CA/T Project. Massport expects to remediate and close out the MCP site in 2007. Massport continues to work with facility representatives and tenants to identify pollution prevention, recycling, and reuse opportunities. Massport remains a committed advocate of and participant in the Clean State Initiative, continuously striving to meet the EOEAs' goals and milestones.
- In 2005, Massport began developing an Environmental Management System (EMS) for Logan Airport. Massport intends for the EMS to be ISO 14001 certified by December 2006.

2005 EDR

LOGAN INTERNATIONAL AIRPORT

Organization of the 2005 EDR

The remainder of this 2005 EDR is organized as follows:

- *Chapter 2, Activity Levels*, presents aviation activity statistics for Logan Airport in 2005 and compares activity levels to the prior year. The specific activity measures discussed include air passengers, aircraft operations, fleet mix, and cargo/mail volumes.
- *Chapter 3, Airport Planning*, provides an overview of planning, construction, and permitting activities that occurred at Logan Airport in 2005. It also describes known future planning, construction, and permitting activities.
- *Chapter 4, Regional Transportation Context*, describes activity levels at New England's regional airports in 2005 and updates recent planning activities.
- *Chapter 5, Ground Transportation Improvement*, reports on transit ridership, roadways, traffic volumes, and parking for 2005.
- *Chapter 6, Noise Abatement*, updates the status of the noise environment at Logan Airport in 2005, and describes Massport's efforts to reduce noise levels.
- *Chapter 7, Air Quality/Emissions Reduction*, provides an overview of airport-related air quality issues in 2005 and efforts to reduce emissions.
- *Chapter 8, Water Quality/Environmental Compliance*, describes Massport's ongoing environmental management activities including NPDES compliance, stormwater, fuel spills, activities under the Massachusetts Contingency Plan, and tank management.
- *Chapter 9, Project Mitigation Tracking*, reports on Massport's progress in meeting its MEPA Section 61 mitigation commitments for specific airport projects.

Supporting appendices include the following:

- **MEPA Appendices:** The MEPA Certificate on the 2004 *ESPR*, comment letters received on the 2004 *ESPR* and responses to those comments, City of Boston Environment Department's comment letter on the 2003 EDR and Massport's responses to the comments raised in the letter, a list of reviewers to which the 2005 EDR was distributed, and a proposed scope for the 2006 EDR.
- **Technical Appendices:** These include detailed analytical data and methodological documentation for the various environmental analyses presented in and conducted for this 2005 EDR.