Newark Liberty International Airport

2013 Sustainability Report

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About this Report

This Sustainability Report is the first to be published by Newark Liberty International Airport. The report was written in accordance with the Global Reporting Initiative Airport Operators Sector Supplement, Version 3.1, Reporting Level C.

The report period covers primarily the calendar year, January 1, 2013 to December 31, 2013. The Port Authority intends to release sustainability reports biennially. Some metrics in this report cover the calendar year 2012 and are reported thus as (1) reporting data for 2013 is not yet available at time of publication and (2) no significant changes are expected for CY2013.

No restatements of information are provided from earlier reports. There are no significant changes to the report or facility from previous reporting periods. A table identifying the location of all standard disclosures is within Appendix A of this report.

At time of publication, the Corporate Headquarters of the Port Authority of New York and New Jersey are located at:
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This report is a progress report covering activities completed under the Sustainable Management Plan completed for EWR in 2012. Therefore, the topics covered in this report are directly related to the focus areas, goals, targets, and initiatives identified in the Sustainable Management Plan. The airport identified all of these items with a stakeholder group that included Port Authority staff from a wide range of departments at the airport, as well as staff from the Engineering and Environmental disciplines at the agency. There were two stakeholder workshops with airport tenants to gather tenant input for the sustainability plan. The agency intends for sustainability reports to be used as benchmarks for internal performance; as well as demonstration of performance to tenants, airport employees, the aviation industry at large, and the travelling public.

This report covers Port Authority of New York and New Jersey controlled activities within Newark Liberty International Airport. While some tenant influenced activities are captured in this report, tenant activity falls outside the boundary of sustainability reporting. The Port Authority reports on those activities that it directly controls. Where appropriate, tenant activities and leased facility activity will be captured, but will be clearly noted.

Letter from the General Manager

We are pleased to present our first sustainability report for Newark Liberty International Airport (EWR) for calendar year 2013. In 2012, we released our first Sustainable Management Plan. We focused on nine target areas that would improve various aspects of airport operations.

With timeframes assigned, responsibilities delegated, and more than 50 initiatives underway, we have come a long way. This report will outline the progress we have made toward the goals and targets laid out from the Sustainable Management Plan. To name a couple of major achievements, 2013 saw the groundbreaking for two major energy conservation projects at the airport: the installation of solar photovoltaic panels on airport buildings; and lighting, HVAC, and controls upgrades that will save the airport almost $1m in energy costs per year.

Since the publication of our sustainability plan, we have seen first-hand that climate risks are becoming a major consideration for coastal airports. While we placed particular emphasis on emissions reduction initiatives in the Sustainable Management Plan, we are now focusing both on mitigation initiatives and long-term climate adaptation measures.

At the Port Authority, the idea of sustainability is not limited to environmental initiatives. A sustainable operation allows us to focus on what we need to do best—allow for the efficient transport of passengers and goods through our facilities, while providing high quality service and functioning as an economic engine for the region. We want our facilities and most importantly our communities to work together to maintain this region's economic vitality. We are working not just towards regional environmental sustainability, but also economic and social sustainability—our triple bottom line.

As we work toward the achievement of our goals and objectives in the Sustainable Management Plan, the airport will continue to identify cutting-edge solutions that can be implemented in the future, and continually refine our sustainability targets. We have found that the targets in our sustainability plan are very effective tools for measuring new projects, and the measurement of progress against those targets has helped us organize our airport metrics and information into a centrally located database. Our philosophy is one of continuous improvement, and we look forward to sharing future accomplishments as we innovate for the future at our airports.

Richard Heslin
General Manager
New Jersey Airports

Sustainability

Maximizing the economic viability and operational efficiency of an airport, while conserving natural resources and contributing to social responsibility to the greatest extent possible.

What Sustainability Means to Us

The Port Authority of New York and New Jersey (the Port Authority) is a bi-state agency that operates Newark Liberty International Airport (EWR), in addition to John F. Kennedy International Airport, LaGuardia Airport, Stewart International Airport, Teterboro Airport, and numerous other non-aviation properties in the New York City and New Jersey areas.

The Port Authority made its first formal sustainability commitment two decades ago: In 1993, the Port Authority formally issued an environmental policy statement recognizing its long-standing commitment to provide transportation, terminal and other facilities of commerce to the greatest extent practicable, in an environmentally sound manner. Additionally, the Port Authority expressed its commitment to manage its activities consistent with applicable environmental laws and regulations and to deal with identified environmental matters in a responsible, timely and efficient way.

In 2006, the Port Authority adopted an agency-wide sustainable design policy "to reduce adverse environmental impacts of the design, construction, operation and maintenance and occupancy or leasing of new or substantially renovated buildings and facilities, reconstruction projects, and programs." The policy established guidance addressing the sustainability qualities of a project's site decisions, water and energy resources, construction practices, materials use, and indoor air quality as well as maintenance and operations. In 2007, the Port Authority developed the *Sustainable Design Guidelines* to meet this policy's sustainable design and construction goals. The *Sustainable Design Guidelines* take into account the US Green Building Council's LEED® 2.1 Green Building Rating System, New York State Executive Order 111 and the New York State Green Building Tax Credit.

The *Sustainable Building Guidelines* have been successfully applied to projects at EWR since 2007. The *Sustainable Infrastructure Guidelines* have been developed to complement the Sustainable Building Guidelines, as part of an Authority-wide revision collaboration with representatives from each Line Department. The continued application of the *Sustainable Building Guidelines* alongside the implementation of the Sustainable Management Plan is critical for the Port Authority to achieve its sustainability goals at EWR.

In 2008, the Port Authority enhanced its original environmental policy to include a sustainability component that explicitly addressed the issue of global climate change and maintained the Port Authority's aggressive position in its efforts to reduce greenhouse gas (GHG) emissions, which are tracked through regular greenhouse gas (GHG) inventories. The resulting Sustainability Policy established the following Port Authority-wide sustainability goals:

- An 80% reduction in all greenhouse gas emissions related to facilities by 2050, from a 2006 baseline
- Eventually, net zero greenhouse gas emissions from Port Authority operations
- Encouraging tenants, customers and partners to reduce emissions
- Development of strategies for climate change resilience

The Port Authority's sustainability program and the Sustainable Management Plan are based on both John Elkington's triple bottom line and the EONS approach that was developed by Airports Council International – North America (ACI-NA) and the Transportation Research Board (TRB) in 2005. The triple bottom line acknowledges that organizational success must not be measured using just financial performance; it must also include the effects on the local, regional and global economy, environment, and society. The **triple bottom line** seeks to balance the following:

1. Environmental Stewardship
2. Economic Growth
3. Social Responsibility

Port Authority airports follow the approach to sustainability codified by Airports Council International-North America, known as **EONS**, which takes into account four key considerations when sustainability programs are designed and implemented:

Economic Viability
Operational efficiency
Natural resource conservation
Social responsibility

The Port Authority developed strategic focus areas, conducted a sustainability baseline assessment and developed a sustainable management plan. The following nine categories are the main focus areas for this sustainability report. These are the same focus areas used from the EWR sustainable management plan. The focus areas were developed with consideration to the EONS considerations, as well as the vision statement that the airport created for the sustainability plan.

1. Operational efficiency
2. Climate Change Adaptation
3. Water Management
4. Air Quality and Greenhouse Gases
5. Solid Waste Management and Recycling
6. Ground Transportation
7. Community Outreach
8. Contract and Lease Management
9. Health and Welfare of Employees

Organizational Profile

30 airlines
114 aircraft gates
153 concessionaires

Founded in 1921, the Port Authority builds, operates, and maintains many of the most important transportation and trade infrastructure assets in the country. The agency's network of aviation, ground, rail, and seaport facilities is among the busiest in the country, supports more than 550,000 regional jobs, and generates more than $23 billion in annual wages and $80 billion in annual economic activity. The Port Authority also owns and manages the 16-acre World Trade Center site, where construction crews are building the iconic One World Trade Center, which is now the tallest skyscraper in New York. The Port Authority receives no tax revenue from either the state of New York or New Jersey or from the City of New York. The agency relies on revenues generated by facility users, tolls, fees and rents as well as loans, bond financing, and federal grants to fund its operations. The agency has almost 7,000 full time staff members. The Port Authority operates Newark Liberty International Airport (EWR), as well as John F. Kennedy International Airport and LaGuardia Airports in New York City; Stewart International Airport in Newburgh, NY; and Teterboro Airport in Teterboro, NJ; as well as a management agreement with Atlantic City Airport. The Port Authority is headquartered in New York City with offices in Manhattan. The Port Authority's assets are solely located in the states of New York and New Jersey in the United States.

EWR was originally built on 68 acres of marshland by the City of Newark and quickly became the world's busiest commercial airport after its opening on October 1, 1928. The Port Authority has operated the Airport under a lease with the City of Newark since November 10, 1948. In 2002 the Port Authority and the City of Newark entered into an agreement to extend the lease through 2065. Currently, the Airport is located on 2,027 acres, 880 acres of which are owned by the Port Authority. No changes to the lease agreement or property ownership on the airport occurred in 2013. The Airport is now within the city limits of both Newark and Elizabeth, New Jersey, roughly 15 miles (24 km) southwest of downtown Manhattan.

EWR is the 15th busiest airport in the United States and is ranked 38th in the world. In 2013, more than 35 million passengers used EWR, including more than 11 million international passengers, and the airport accommodated over 413,000 aircraft movements. Currently there are 30 scheduled airlines (including regional affiliates) that operate out of the airport, serving 170 nonstop destinations using its three runways (two north-south runways and one crosswind).

Airport Facilities

There are three major passenger terminals, each with three finger/pier concourses: Terminal A (33 gates), Terminal B (24 gates), and Terminal C (57 gates). Terminal A is operated by AvPorts on behalf of the Port Authority and a group of four airlines. Approximately one third of Terminal B (B-1) is operated by Delta Airlines, and the other two thirds (B-2 and B-3) are operated by the Port Authority. Terminal C is operated exclusively by United Airlines. Major cargo facilities include FedEx Express and UPS, both south of Terminal A. The minimum connection time at EWR is 30 minutes for an intra-terminal domestic connection.

Other airport facilities include:

Runway 4L-22R: 11,000 x 150 ft

Runway 4R-22L: 10,000 x 150 ft

Runway 11-29: 6,733 x 150 ft

Helipad

Extensive taxiway system

Parking located throughout the Airport

- Public garages
- Employee parking lots
- Rental car facilities

Large aircraft apron area

Cargo facilities

- FedEx Express and two multi-tenant buildings in the south end of the property
- Five (5) additional buildings are located in the north

Additional hangars (5)

Ancillary/Support buildings

- FAA and Port Authority administrative
- Maintenance buildings
- Guard booths
- Marriott Hotel
- Flight kitchens
- Airtrain maintenance yard

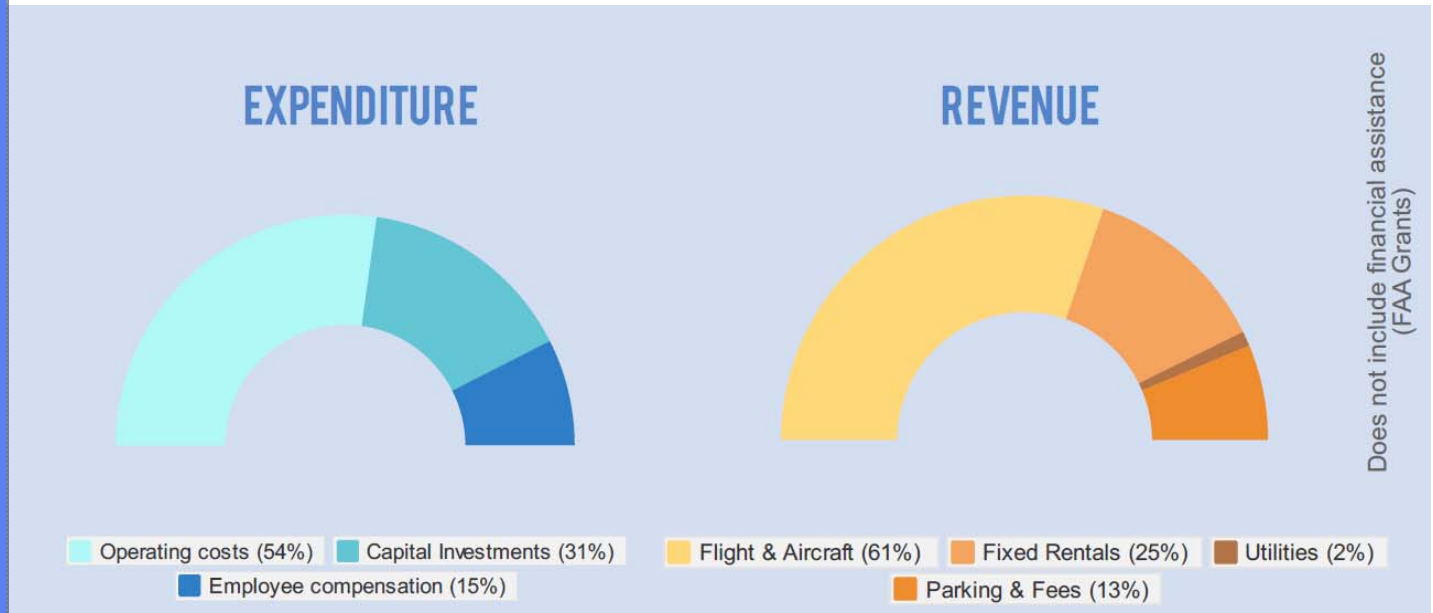
Vehicle road network around the perimeter of the property

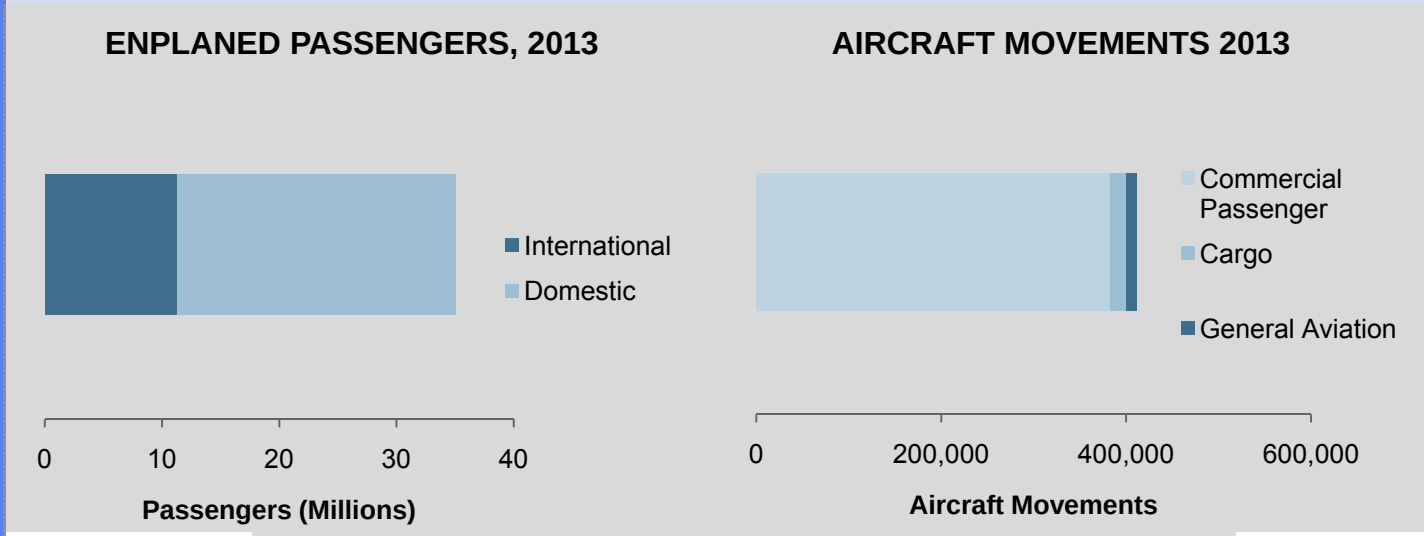
Fuel Farm

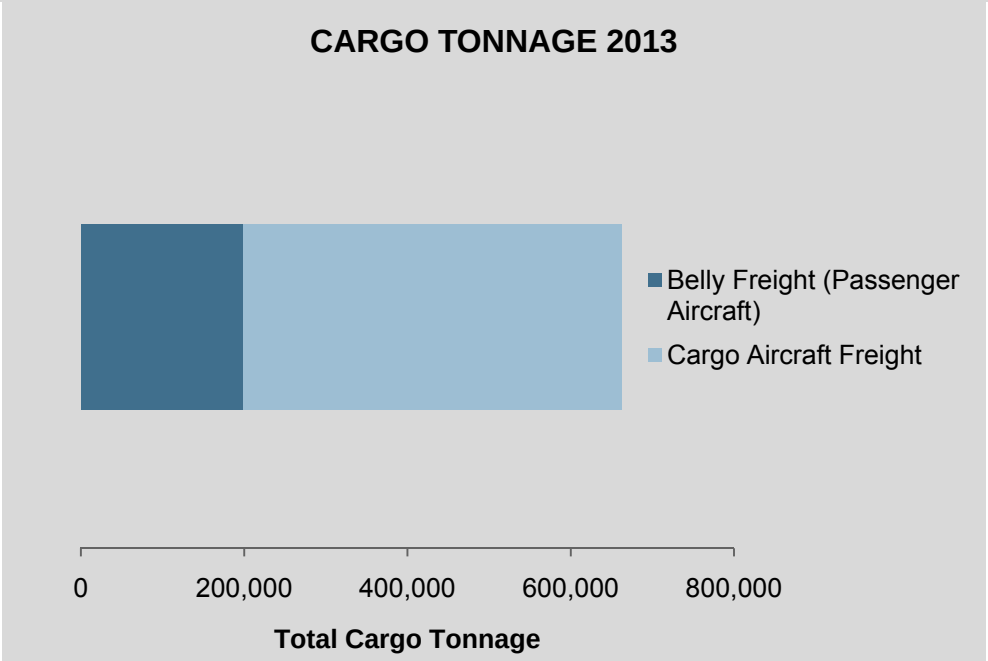
Signature Flight Support Corporation (Fixed Base Operator)

AirTrain monorail connecting passengers to the Northeast Corridor train station for Amtrak and New Jersey Transit rail service, as well as between terminals, rental car facilities, and parking lots

Economic Performance







EWR plays a pivotal role in the commercial and aviation interests of the region. About 19,700 people are employed at EWR, while airport activity supports roughly 162,000 jobs total. The airport contributes about $22.9 billion in economic activity to the NY/NJ metropolitan region, including more than $8.3 billion in wages and salaries.

EWR markets served include domestic flights within the United States, as well as international flights to Canada, Bermuda and the Caribbean, Mexico, Latin America and trans-Atlantic. Trans-Atlantic flights serve Europe, the Middle East and Asia. In 2013, the airport saw many firsts, including the introduction of international Boeing 787 Dreamliner Service with British Airways. A complete listing of airlines and destinations served by the airport is shown in Appendix B.

The airport also hosts a cargo operation and is a large base for FedEx, UPS, and many other major cargo operators. There is a Fixed Based Operator (FBO) at the airport that serves general aviation and charter operations. Signature Flight Support operates the FBO, and recently completed a renovation of its Terminal. Signature is applying for LEED certification for the terminal and expects to receive a LEED Gold certification.

The City of Newark initially spent more than $8.2 million on construction and development of the Airport. The U.S. government spent more than $15.1 million prior to 1948. Since that time, the Port Authority has invested more than $4.3 billion in the Airport.

Through the Airport Improvement Program (AIP), the Port Authority receives financial assistance from the Federal Aviation Administration (FAA). AIP provides grants for the planning and development of public-use airports, such as EWR, that are considered significant to national air transportation and thus eligible to receive federal grants.

In 2013, the FAA and the Port Authority contributed $22 million to soundproof Kearny High School from aircraft noise. The funding went towards a new heating and air-conditioning system, which allows the school to keep windows closed and avoid disruption from aircraft noise. The funding also helped provide additional soundproofing for doors and windows.

The Port Authority also engaged in various projects, including the Rehabilitation of Runway 11-29, Rehabilitation of Taxiways A, B, D, W, and PA, the replacement of guard posts and the creation of a Sustainable Management Plan for EWR, the costs of all of which were offset but FAA AIP funding. Total FAA funding for these projects was approximately $7 million.

The Port Authority has committed to maximizing business opportunities for minorities, women, and small entrepreneurs in the New York and New Jersey region. Current Port Authority construction contracts include the following goals for minority- and women- owned and disadvantaged business enterprises: 17% total participation, 12% minority, and 5% women. In addition, the Port Authority has a $1 million program to encourage tenants to employ locally and another $1 million program to encourage them to buy locally.

Management & Governance

The Port Authority of NY & NJ is a bi-state agency that relies solely on user fees and does rely on tax dollars for operation. The Port Authority undertakes projects and activities in accordance with the Port Compact in 1921, and amendatory and supplemental legislation.

The governor of each state appoints six members of the agency's Board of Commissioners, subject to state senate approval. Commissioners serve as public officials without pay for overlapping six-year terms. The governors retain the right to veto the actions of the Commissioners from his or her own state. Board meetings are public. The Board of Commissioners is governed by the Port Authority's code of ethics, which details the stringent rules that apply to commissioners to avoid conflicts of interest.

Of the twelve current commissioners, two are minority members and there is one female commissioner. All board members are independent, and are not Port Authority executives. The Executive and Deputy Executive Directors do not vote in board meetings.

An Executive Director, appointed by the New York State Governor, is responsible for managing the operation of the Port Authority in a manner consistent with the agency's policies, as established by the Board. The Port Authority undertakes projects and activities in accordance with the Port Compact of 1921, and amendatory and supplemental legislation.

For board meetings, transparency initiatives include posting an advance listing of items on the agenda, opening up more meetings to the public, disclosing reasons for discussing or acting upon matters in executive session, webcasting all public meetings, and providing for public comment at the public Board meeting. Presentations from board meetings are available on the public website. Presentations are generally completed for each project authorized by the board, and detail the impacts (economic and if applicable, environmental and social) of each proposed project.

More than two thirds of Port Authority's 6,777 employees are represented by trade unions. Some of the major unions representing employees at the Port Authority are:

- The International Union of Journeymen and Allied Trades
- The International Union of Operating Engineers
- International Brotherhood of Electrical Workers
- Transport Workers Union
- Port Authority Police Benevolent Association
- Communications Workers of America

The Port Authority consults regularly with external stakeholders on a variety of issues. Port Authority stakeholders at EWR include regulators, municipalities, community groups, airport tenants, employee unions, and others. The Port Authority engages all stakeholders who are affected by the Port Authority's business lines in some way. There are multiple approaches for stakeholder engagement, including civic participation, public meetings, community events, and other forums. A sample of stakeholder groups regularly in contact with the airport is below.

- New Jersey Department of Environmental Protection (NJDEP)
- Federal Aviation Administration Eastern Region
- Federal Aviation Administration-New York Airports District Office
- City of Newark, NJ
- City of Elizabeth, NJ
- Tenant Airlines
- Concessionaires
- Air Services Development Office
- Council for Airport Opportunity
- Rental Car Companies
- Hotel Operators
- Cargo Operators
- Flight Kitchens

Stakeholder groups engage with the Port Authority on such issues as tenant and leasehold responsibilities, community connectivity and engagement, aircraft noise issues, and others.

The Port Authority is also engaged in several industry groups and organizations such as:
- Airports Council International
- National Alliance to Advance NextGen (co-founder)
- American Association of Airport Executives
- US Green Building Council
- Transportation Research Board
- And others

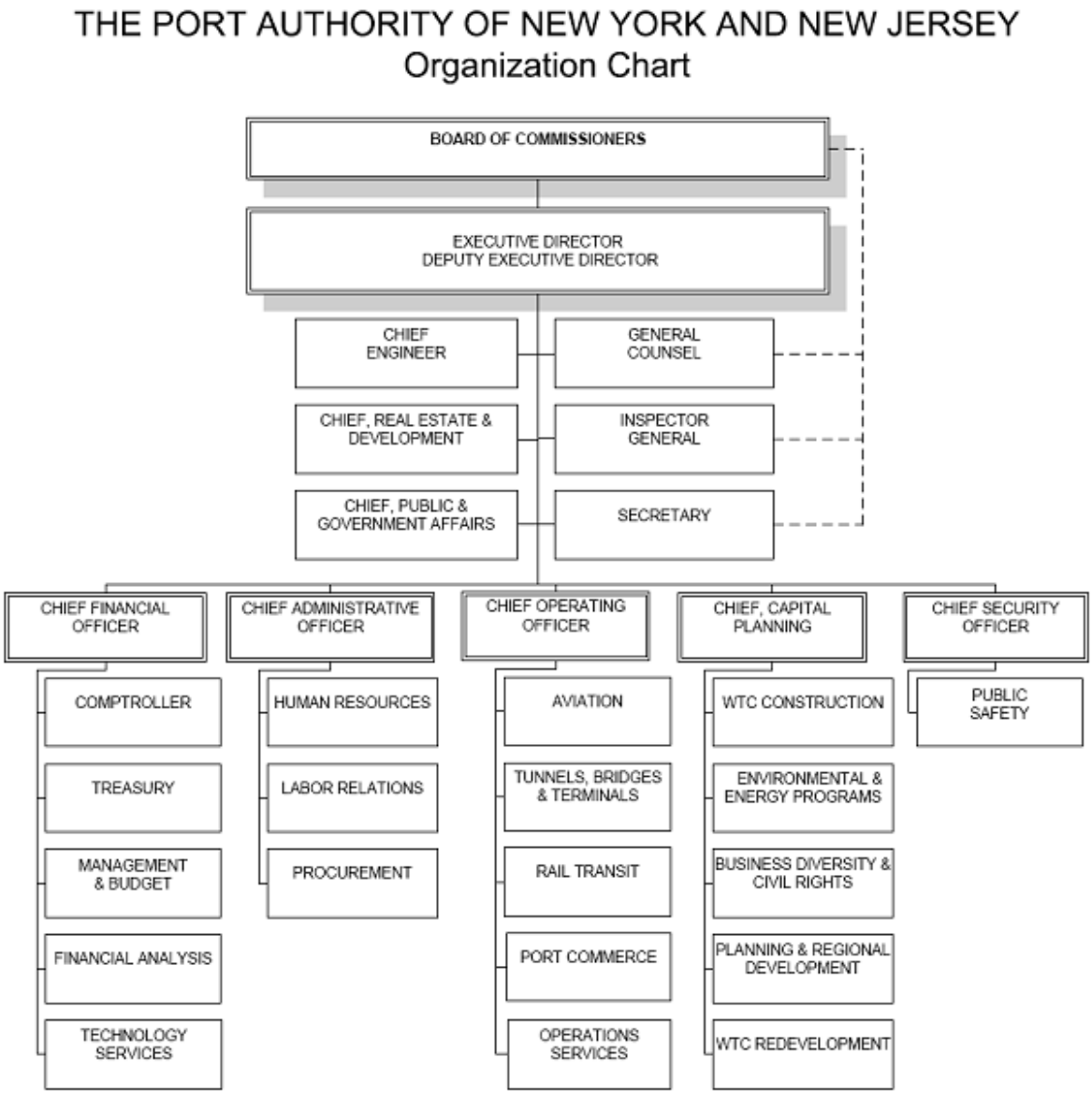
The board has several committees that ensure the delivery of results across key areas of the agency. The board and all committees are governed by the agency By-Laws, which establish rules for the operations of the authority and the board. The committees and their respective charters are listed below.

Port Authority Board of Commissioners Committees

Committee	Function
Audit	The Committee shall be governed by the By-Laws and assist the Board in fulfilling its oversight responsibilities relating to the accounting, auditing, financial reporting processes, and internal controls of the Port Authority.
Capital Planning, Execution, and Asset Management	The Committee shall be governed by the By-Laws and assist the Board in fulfilling its oversight responsibilities relating to the planning and execution of capital projects and the management of assets of the Port Authority.
Finance	The Committee shall be governed by the By-Laws and assist the Board in fulfilling its oversight responsibilities relating to the financial affairs of the Port Authority.
Governance and Ethics	The Committee shall be governed by the By-Laws and assist the Board in fulfilling its oversight responsibilities relating to the development of, and compliance with, the governance and ethics principles of the Port Authority.
Operations	The Committee shall be governed by the By-Laws and assist the Board in fulfilling its oversight responsibilities relating to the operations of the Port Authority.
Security	The Committee shall be governed by the By-Laws and assist the Board in fulfilling its oversight responsibilities relating to the reform and continuing development of the Port Authority's policies and practices related to security and the implementation and ongoing performance thereof.

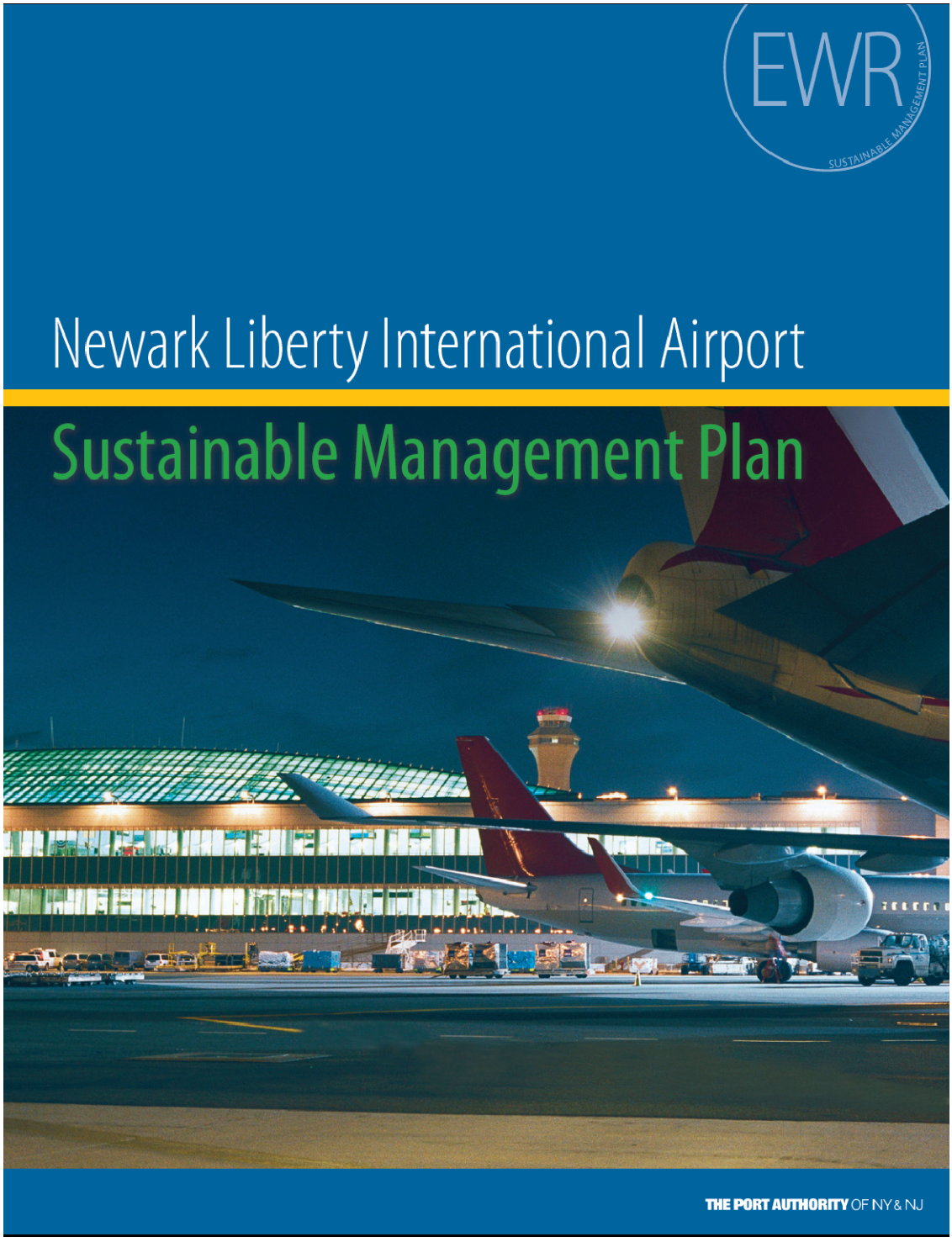
Port Authority Organizational Structure

All Port Authority staff are accountable to the Board of Commissioners, through the Executive Director. At the Port Authority, the main business lines or line departments are accountable to the Chief Operating Officer. The line departments include Aviation; Tunnels, Bridges, and Terminals; Port Commerce; Rail Transit; and Operations Services. The remaining departments, called staff departments, support the line departments and core business. The Port Authority's Real Estate assets are managed through the Real Estate Development Office, and the World Trade Center site is managed through the Capital Planning department. An organizational chart is below. The Port Authority has 6,777 permanent employees.



Reporting on Progress: 2013

This report will be organized based on the focus areas, goals, targets, and initiatives established in the EWR Sustainable Management Plan. Each section introduction will highlight the goal and major accomplishments within each section, and will be followed by a summary of the targets established in the plan with initiatives that lead to those targets below them.



Operational Efficiency

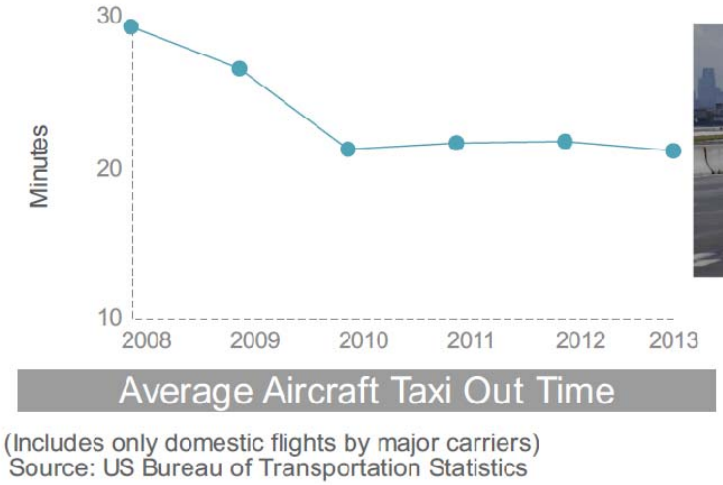
Goal: Incorporate sustainability principles into the long-term business strategy and day-to-day operations of the airport, building on existing systems and standard operating procedures

Background

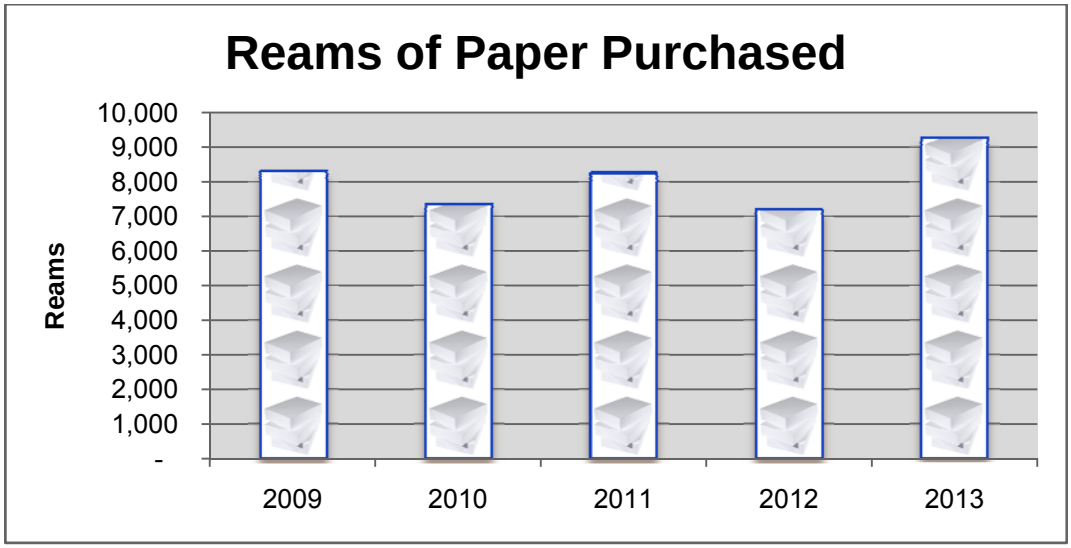
The Port Authority incorporates operational efficiency principles in all current and future projects and procedures. Actions taken in the last few years include:

- EWR installed a Ground Based Augmentation System (GBAS) to allow for more precise flight sequencing to support NextGen procedures
- The Port Authority made extensive airfield modifications to enhance safety and accommodate larger aircraft, giving the air traffic control tower more flexibility in the movement of aircraft
- A study explored further modifications for delay reduction, including Technology Acceptance Model (TAM) improvements
- EWR is working on strategies to reduce paper use, including a default double sided printer setting on all PCs.

Operational Efficiency



28% REDUCTION
In Aircraft Taxi Out Time
From 2008 Baseline



Target

Reduce aircraft idling, taxiing, and approach times.

Modify approaches using Ground-Based Augmentation System (GBAS) and Required Navigation performance (RNP)

With the use of FAA's Next Generation Air Transportation System (NextGen), satellite-based precision approach procedures allow aircraft to follow more direct flight paths and approaches, helping to reduce miles travelled and amount of fuel used. Aircraft operation has improved in low visibility conditions, thanks to the Global Positioning Landing Systems (GLS) that has been installed in conjunction with the Ground Based Augmentation System (GBAS). The GLS system is the one of the first commissioned systems installed in the United States. United Airlines and several foreign carriers are equipping aircraft to fly approaches with GLS, and usage is expected to increase in the future.

Future Initiatives

Support additional NextGen activities while advocating that new procedures support environmental goals of organization

Target

Reduce airport paper purchases by 5% by 2015

Establish default double-sided printing procedures

In the office environment, paper is a resource that is highly valued and constantly used. With the onset of an operating system upgrade for our office computers in late 2013, new printer settings will allow for double-sided printing procedures to be the default setting. When employees hit “Print” or “Copy,” their default print setting is double sided. These upgrades are being introduced on a rolling basis throughout 2014.

Develop paperless systems for day-to-day port Authority processes

In 2013, the Office of Environmental and Energy programs kicked off an effort to reduce the amount of paper used on a day to day basis within the agency by targeting routine forms used for business processes. The Office identified the most-used forms and contacted responsible departments to initiate the process of moving to paperless systems. This process is ongoing and will take several years to complete.

Future Initiatives

Establish extensive teleconference/webex/shared document systems for intra- and inter-facility communication; increase teleconferencing

Airport employees have saved fuel and reduced emissions by deploying web-based meeting capabilities such with the use of tele- and videoconferencing technology. This reduces the amount of time spent commuting to other Port Authority facilities and improves employee productivity. There are "smart" meeting facilities at the main administration building at EWR that can be used to share presentations and videoconference with other airports and the Port Authority central office in New York City.

Investigate potential to streamline data logging, reporting and inspecting

Climate Change Resilience

Goal: Address the impacts of predicted changes in climate and weather conditions for smooth operations at the Airport

Background

The Port Authority has participated in discussions with state governments and municipalities on the issue of climate resilience since 2006. We have collaborated with the New York Climate Action Council and NYC Sea Level Rise Task Force to evaluate the effects of climate change impacts, including increases in mean annual air temperature, mean annual precipitation and increases in sea level.

In 2012, Hurricane Sandy drove home the importance of resilience to our facilities. EWR is working to ensure operational and physical resiliency in the face of climate impacts.

Climate Change Resilience

Target

By December 2015, have in place a site-specific risk assessment and climate change adaptation action plan for EWR that addresses physical and operational resiliency related to potential climate change impacts

Superstorm Sandy in 2012 dramatically increased awareness to how vulnerable New York and New Jersey are to flooding. Several of the Port Authority's airports shut down due to airfield flooding. The experience and dedication of facility staff allowed EWR to open less than 48 hours after the storm had passed, receiving flights on the morning of Wednesday, October 31, 2012. The airport recognizes that stronger and/or more frequent storms in the future could expose the airport to additional risk.

In 2013, the Aviation Department initiated a comprehensive flood risk assessment at EWR, which is detailed below.

Aviation Department Flood Risk Assessment

The Port Authority's Aviation Department has initiated a departmental flood risk assessment effort that is producing the following products for John F. Kennedy International, Newark Liberty International, LaGuardia, and Teterboro Airports:

Existing 1% annual chance flood elevations; future 1% annual chance flood elevations for 2020, 2035, and 2050, including future airport infrastructure possibilities; a drainage system assessment for future storm conditions; and a prioritized list of flood risk management strategies and mitigation actions, with order of magnitude cost estimates and potential funding sources.

The results of the study will be used for planning purposes and will ensure that facility planning and critical infrastructure deployment is completed with an eye to potential future flood levels, to mitigate the airport's long term flood risk profile.

Flood risk management strategies and mitigation actions

The FEMA Public Assistance Program is a program to provide assistance to State, Tribal and local governments, and certain types of private nonprofit organizations so that communities can quickly respond to and recover from major disasters or emergencies declared by the President. Following Superstorm Sandy, the Port Authority used this program to fund flood risk mitigation actions. Mitigation funds are used to fund hazard mitigation for Sandy-damaged elements of a facility to reduce the potential for damage from a future disaster event.

As part of the mitigation projects, EWR is in the process of installing approximately 2,200 square yards of marine mattress along affected outfall areas to prevent future erosion. The marine mattress is designed to stabilize steep slopes, stream or canal banks for erosion control armoring. The mattress system's high mass and porosity, flexibility and hydraulic stability, and energy dissipation characteristics allow it to withstand saltwater environments and wave conditions. This project is estimated to be completed by November 2014. EWR is also installing a backflow preventer at the outfall of a 36-inch outfall pipe to reduce the risk of flooding during heavy rain events.

Future Initiatives

EWR staff are considering mitigation strategies that may include the following:

- The installation of a backup generator at the City of Newark Pump station to prevent flooding at the airport and surrounding area when the primary feed is not in service.
- Upgrading the trench drain size at Terminal B to prevent the lower level areas from flooding
- Installation of backflow preventers on all peripheral ditch outfalls
- Upgrading the peripheral ditch drainage system

Water Management

Goal: Minimize water consumption and protect water quality in Newark Bay

Background

As a coastal agency, the Port Authority values its role in protecting water resources in the New York and New Jersey region. The Port Authority is continually evaluating methods to improve airport water quality and reduce water consumption at all of its facilities in the region.

A Stormwater Best Management Practices (BMP) Plan in place at EWR outlines potential sources of stormwater contamination as well as practices and procedures to minimize contamination. The Airport is within New Jersey Watershed Management Area (WMA) 7, Arthur Kill, which includes large portions of Essex, Union and Middlesex Counties. The Airport is in the northeastern part of the WMA and is just west of Newark Bay. Most of the Airport drainage flows into the Peripheral Ditch, which extends around much of the perimeter of the Airport. The Peripheral Ditch was constructed in 1964 as a "replacement in kind" of existing drainage on Airport property. From its point of origin in Weequahic Park beyond the northwestern corner of the Airport, the ditch flows counter-clockwise around the Airport's western, southern and eastern sides for approximately four miles before emptying into the Port Elizabeth Channel through a tide gate located just west of the New Jersey Turnpike.

The Peripheral Ditch drains an area of approximately 8.7 square miles on and around the Airport. Airport stormwater runoff is conveyed to the Peripheral Ditch via surface swales and a subsurface network of drains and pipes. The Airport is located at the downgradient end of the Peripheral Ditch, with other contributors discharging to the ditch as upgradient sources. Areas to the north and west of the Airport contribute runoff and combined sewer overflows via tributary swales, drains and pipes, as well as direct outfalls from storm sewer connections in Newark and Elizabeth.

The Airport holds a New Jersey Pollutant Discharge Elimination System (NJPDES) permit through NJDEP for discharges of stormwater associated with industrial activity at the Airport (Permit No. NJ0134791). The permit authorizes industrial stormwater discharges to Newark Bay via the Peripheral Ditch and Newark and Elizabeth Channel. All operating entities at the Airport performing permit related activities, including those that conduct airline transportation and/or vehicle maintenance, are co-permittees under the Airport's permit.

Discharges to the Peripheral Ditch from 75 outlets at the Airport are regulated by the NJPDES permit. Under the permit, the facility is required to monitor and sample three outfalls (011A, 014A, 022A) for the following indicators: (1) pH (effluent), (2) total suspended solids (TSS), (3) chemical oxygen demand (COD), (4) total petroleum hydrocarbons (TPHC), (5) biological oxygen demand (BOD), and (6) Total Kjeldahl Nitrogen (TKN). In 2009 and 2010, there was one exceedance of the permit standard for TPHC.

The Airport is required to implement and maintain a Stormwater Pollution Prevention Plan (SPPP) and submit a monthly discharge monitoring report and annual inspection report. The Airport is also subject to annual inspections conducted by the State under the permit. In May 2002, the Port Authority completed an operational SPPP for Newark Airport to facilitate compliance with the requirements of the NJPDES permit. Combined with individual SPPPs for the tenants, the SPPP serves as the master SPPP for the Airport and addresses all industrial activities there.

The Port Authority has developed a Stormwater Best Management Practices (BMP) Plan for the Airport that outlines potential sources of stormwater contamination as well as practices and procedures to minimize contamination. The Authority uses several tools to manage stormwater, including:

- Water quality monitoring outflow results, including pH, TSS, TKN, TPHC, CBOD, and COD.
- Maps of outfalls with discharges to surface waters on airport ground, including information on the locations of cross ditch booms, outfall booms, and proposed outfall booms.
- Basic storm drainage maps.

The Airport's operators and tenants conduct a variety of activities supporting the Airport's operation. Some of the activities that occur have the potential to release pollutants to the stormwater drainage system, including:

- Deicing/anti-icing operations
- Vehicle, equipment and aircraft fueling
- Vehicle, equipment and aircraft maintenance
- Vehicle, equipment and aircraft washing
- Aircraft lavatory service operations
- Material and waste handling and storage

The Airport and its tenants have identified strategies that mitigate the detrimental effects of these activities through the following actions:

- Using sodium acetate as the solid pavement deicer and no longer using liquid deicers containing ethylene glycol on airfield pavement.
- Following best management practices established in the SPPP to minimize discharge of deicing fluids to surface waters.
- Purchasing multi-function vehicles for plowing, brooming, and snow blowing to reduce the amount of deicers needed as part of the Airport's Enhanced Snow Removal Program.

Spill Prevention

In April 2005, the Airport completed a Spill Prevention Control and Countermeasure (SPCC) Plan, which was updated in August 2011. The Port Authority records all fuel spills each year, including the date, volume and reason for fuel spill to analyze ways to counteract spills. The Port Authority and its tenants are currently monitoring ground water due to current and historical fuel spill issues that they are continually seeking to resolve.

Target

By 2016, increase pervious areas at the Airport

Target

By 2014, have in place a deicing chemical use, collection and treatment plan that responds to the airport industry's Voluntary Pollution Reduction Program and emphasizes minimized chemical use and maximum deployment of environmentally friendly alternatives.

Develop terminal wide aircraft deicing fluid controls for proposed Terminal A project

During the 2013-2014 winter season, airlines applied 2,192,744 gallons of neat Type I propylene glycol deicing fluid at EWR, and 264,571 gallons of neat Type IV propylene glycol deicing fluid. Deicing aircraft is an important safety procedure at airports during winter operations. Minimizing the amount of deicing fluid that enters local waterways is a priority. The largest carrier at EWR, United Airlines, has been capturing spent deicing fluid by blocking drains on its deicing pad, and capturing and recycling fluid rather than letting deicing fluid enter the local waterways. Signature Flight Support has added the capability to capture deicing fluid at its deicing facility, as part of the larger project to renovate the general aviation ramp and terminal at EWR.

The Port Authority would like to integrate the ability to capture spent deicing fluid into infrastructure design, rather than relying on the current system of drain traps for collection. The Port Authority is planning a major redevelopment project that will replace or substantially renovate the current Terminal A. Currently, the design for Terminal A specifies that deicing fluid can be captured and collected as needed, through the drainage system on the ramp. This would dramatically increase the amount of deicing fluid captured and diverted at the airport.

Explore options to capture and re-use stormwater

Stormwater can be reused for irrigation and as greywater in buildings. In drought-prone areas and in areas where wastewater treatment plants are reaching their design capacity, stormwater recycling can minimize the facility's water consumption and reduce the quantity of water entering a treatment facility after a storm. EWR has incorporated rainwater capture and reuse capability into the design of the new Terminal A, and will incorporate stormwater detention and reuse capabilities into new buildings when feasible.

Enhance program for reducing sediment in peripheral ditch through improved maintenance operations

As part of the post-Sandy flood resilience projects, the Marine Mattress project initiated at EWR should help reduce sediment infiltration into the peripheral ditch. To the greatest extent possible, EWR is designing sediment control into any new construction around the peripheral ditch.

Future Initiatives

Increase stormwater education BMPs

EWR takes a proactive stance in stakeholder education as it relates to spill response, stormwater management, and good housekeeping on the ramp and around the airport. Proactive pollution prevention training helps stakeholders prevent pollutants from entering the stormwater system. The Port Authority will review its stormwater best management practices and develop training materials and signage to educate stakeholders and the public at EWR. The Port Authority will also host events such as rampwide housekeeping days to reinforce its training and educational materials.

Explore incorporating pervious pavement areas

EWR seeks to minimize runoff from storms to surrounding waterways. Several strategies can minimize the volume and improve the quality of airport runoff by increasing detention capacity on-airport. Due to the operating characteristics of an airport, there are large amounts of impervious surfaces on the airport. To date, the FAA has not approved use of pervious pavement for active taxiway surfaces, or any other surfaces where aircraft operate. However, Stewart International Airport has installed pervious pavement in a parking lot. The installation of pervious pavement helps reduce runoff during storms, and eliminated the need for permits to connect to stormwater system. This saved time, complexity, and cost for the project. In 2013, EWR did not install new pervious areas on the airport, but will include this consideration when pursuing redevelopment projects.

Develop whole airport airfield deicing strategy (deicer reduction stipulations in snow plan/BMP). Perform pilot tests on alternate pavement deicier other than Potassium Acetate

During the winter of 2013-14, EWR used 568,107 gallons of potassium acetate and 176 tons of salt to deice roadways, taxiways, and runways on the airport. Airfield deicing fluids and salts drain into surrounding waterways and soils. We will inventory current deicing practices on the airfield and determine methods for increasing the efficiency of the deicing operation. The Port Authority will also conduct an evaluation of deicing equipment to determine whether efficiency gains can be made through equipment retrofits or replacement. EWR will also test alternative deicing products that have a smaller impact on surrounding soils and waterways.

Establish active management of landscape contracts to ensure correct planting times and minimize water use and weed growth

Increase stormwater education BMPs where applicable

Air Quality and Greenhouse Gases

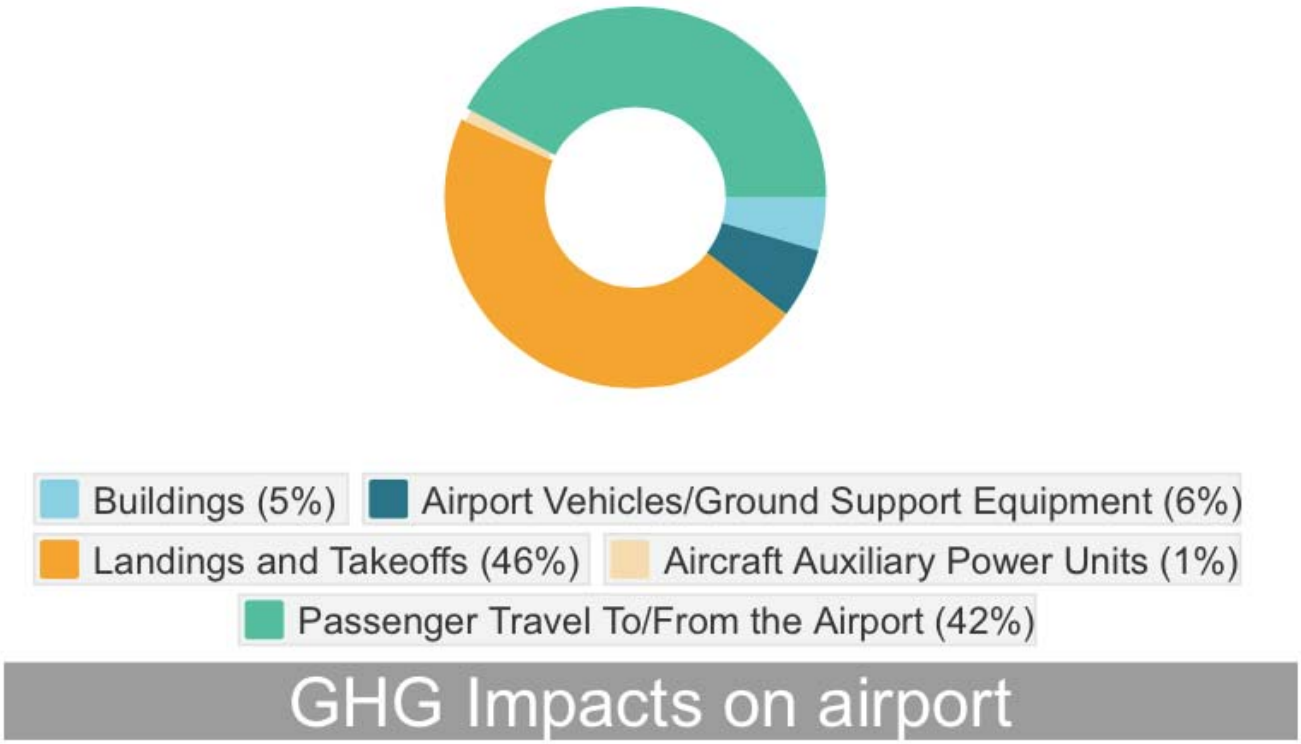
Goal: Minimize EWR's contribution to climate change, air pollution, and depletion of the ozone layer

Background

The Port Authority has a major role in addressing regional greenhouse gas emissions and improving air quality for the residents of New York and New Jersey. To address criteria air pollutant emissions, the Port Authority has conducted periodic GHG and criteria pollutant inventories for EWR since 2006. The Port Authority and its tenants have implemented many initiatives to reduce emissions of criteria air pollutants, GHGs and ozone-depleting substances. Energy and fuel management strategies, including reducing energy demand, increasing the use of renewable energy and alternative fuels and transitioning to more efficient equipment and aircraft, have been successful in reducing emissions associated with energy and fuel use at EWR. The following initiatives have already been implemented at EWR:

- EWR has implemented extensive efficiency retrofits in buildings and the Central Heating and Refrigeration Plant (CHRP) and continues to evaluate its physical plant for further efficiency opportunities
- Hybrid and alternative fuel vehicles comprise 82% of the Port Authority vehicle fleet at EWR
- The large holding area known as the "The Yankee Ballpark" gives more flexibility for airlines to maneuver aircraft around Terminal C and reduces taxiing, enables aircraft to shut engines off and can be used for remain overnight (RON) aircraft. It has space for approximately ten aircraft
- All gates at the Airport are electrified to reduce the use of aircraft auxiliary power units and mobile ground power units at the gates
- Preconditioned air is provided at the majority of gates at the airport to reduce the need for aircraft to use their auxiliary power units for air conditioning and heating purposes

Air Quality and Greenhouse Gases

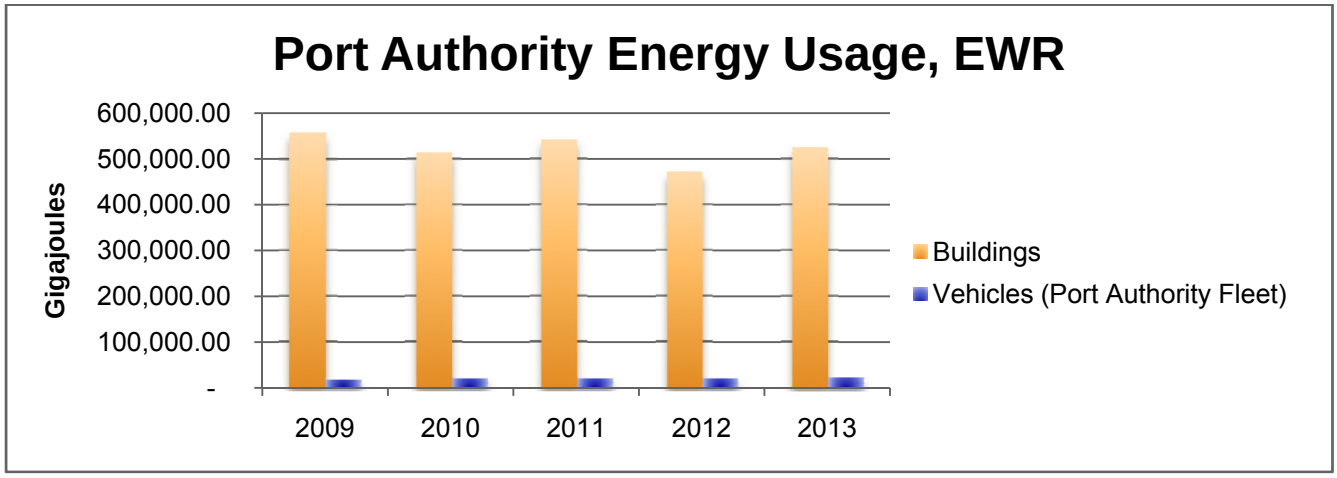


Source: 2012 GHG Inventory, Port Authority of NY & NJ

Aircraft Landings and Takeoffs account for almost half of all airport GHG emissions

Target

Improve the efficiency of Airport utility use by 10% for electricity, by 10% for natural gas, and by 5% for water by 2015 over Port Authority controlled floor area using 2009 as the baseline year



Source: EWR Energy Reports, 2009-2013

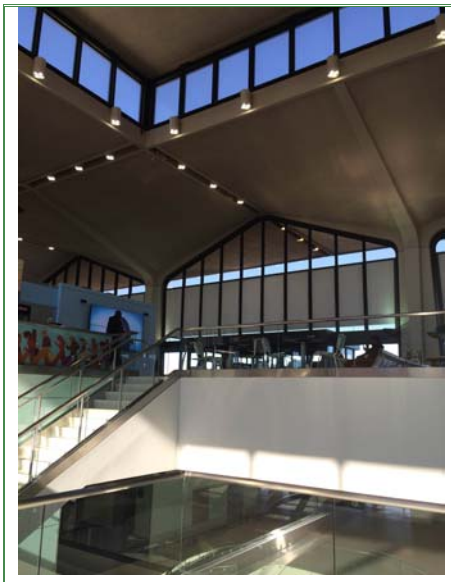
Target

Reduce Scope I and II absolute greenhouse gas (GHG) emissions by 10% by 2016 compared to the 2006 baseline inventory to help meet the overall Port Authority goal of an 80% reduction by 2050.

Develop standardized methods for recording and tracking energy use

The first step to making a building more efficient is to understand how much energy it uses and how its usage compares with that of similar buildings. In 2013, the Port Authority entered utility data into the U.S. Environmental Protection Agency's (EPA) Portfolio Manager, an online tool that aids in measuring energy consumption. This tool will aid in measuring and understanding energy end uses in buildings to work towards achieving energy use reduction goals. For particular building types, this tool can provide percentile ratings that compare a building to similar buildings nationwide in terms of energy efficiency. However, because most of EWR's buildings are not characterized as the space types offered in Portfolio Manager, a rating cannot be provided. Entering utility data will, however, allow us to benchmark energy usage against our own facilities to see change throughout time.

To date, the Port Authority has obtained utility data and building characteristics for Building 1 Administration, Terminal B (FIS, B2, B3), Parking C, and Parking Garage P4.



New Energy Efficient LED Lighting in EWR Terminal B

Evaluate use of gate power and pre-conditioned air (PCA)

All gates at the Airport employ gate power (400 hz) and most gates provide preconditioned air (PCA) to reduce the use of aircraft auxiliary power units (APUs) and mobile ground power units at the gates. Gate Power and PCA reduce the need for aircraft to use APUs to supply electricity while waiting at the gates. Anecdotal field observations at Port Authority airports indicate that some aircraft continue to operate APUs while connected to ground power and PCA. The EWR Sustainability plan indicated a need to conduct more in-depth surveys to understand why this was the case.

The Port Authority conducted Auxiliary Power Unit (APU) surveys on the airfield at various aviation facilities in 2013 to establish a baseline for APU usage and PCA usage. The APU survey found that often the APU, PCA and ground power units (GPU) are all used concurrently when the aircraft is parked by the jet bridge. Surveys of airline operations managers indicate that if ground operations are not precisely coordinated, aircraft can get excessively hot or cold and will require the use of the APU to supplement the PCA. This results in unnecessary emissions as well as easily avoided consumption of energy.

As a result of the survey, the Port Authority is conducting the following steps: developing an inventory of airline APU rules and guidance; and working to establish best practices guidance for ground operations staff, as well as communications for pilots, to minimize the unnecessary use of APUs.

Investigate energy efficiency and renewable energy opportunities

In 2013, the Port Authority initiated a project in conjunction with Honeywell that will result in $15m of total project energy savings through lighting retrofits, HVAC improvements, and controls improvements to several Port Authority buildings at EWR. The Port Authority will continue to investigate the feasibility of renewable energy installations at the airport through various financing mechanisms. New capital projects utilizing the Port Authority *Sustainable Building Guidelines* will see significant decreases in energy use.

Target

Reduce ground vehicle emissions of particulate matter and NOx by 5% and 15% by 2016 compared to the 2009 baseline.

Employee Ride-Sharing Program

In 2012, Port Authority implemented an employee ride-sharing program to reduce reliance on single occupancy vehicles for transportation to and from the airport. The Port Authority has collaborated with 511NY Rideshare and NJ EZ Ride to support sustainable employee commuting to Port Authority facilities, including EWR. This program turns morning and evening commutes into ones that save money and help the environment. Ride-matching services give our employees personalized car-pool/van-pool matching assistance based on commute route and travel preferences. Subsidies are available to reduce pooling costs. Databases are available to provide locations of where to meet car-pool/van-pool partners. In 2013, EWR had the largest number of employee sign-ups for the ride-share program.

Target

Increase the production and/or use of energy from sustainable sources at the airport to 200 kilowatts (or equivalent) by 2015.

Evaluate re-roofing projects for all sustainable roofing options, including green roofs, cool roofs, or solar energy installations

In October 2013, construction began on the first of four solar photovoltaic power generating facilities at EWR. Installations will occur on the rooftops of Buildings 121, 60, 157, and 79, with commercial operation anticipated by the second quarter of 2014. Total rated capacity across all installation sites is approximately 630 kilowatts; average annual production is estimated at 747,000 kWh. The Port Authority has made no contributions toward project capital costs, but will purchase all power output through a 20-year Power Purchase Agreement at a discount to utility grid-power. Project savings are achieved through the use of the Public Service Electric & Gas (PSEG) Solar Loan program and the elimination of utility delivery charges (power will be generated and delivered on-site, bypassing the electric grid).

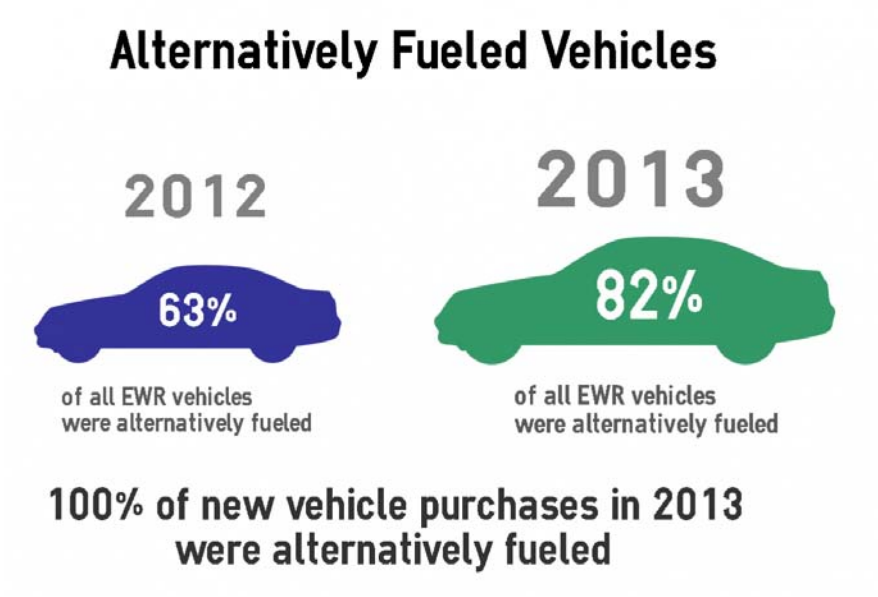
Because roofs make up a large portion of airport property and can contribute to storm water runoff and the heat island effect, using roof space to house solar photovoltaic cells is a great option that helps generate electricity for the building. It minimizes the detrimental effects that roofs have on the environment by using the space productively. This project is being completed in accordance to the Port Authority *Sustainable Building Guidelines*.

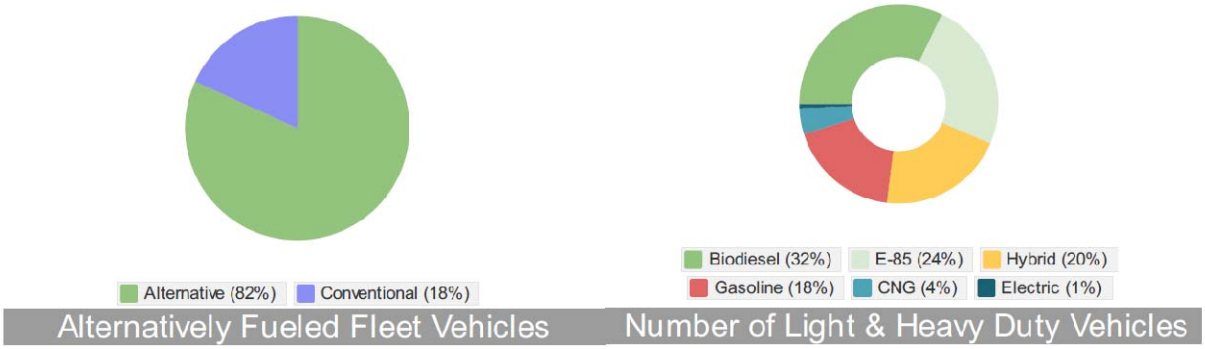
Target

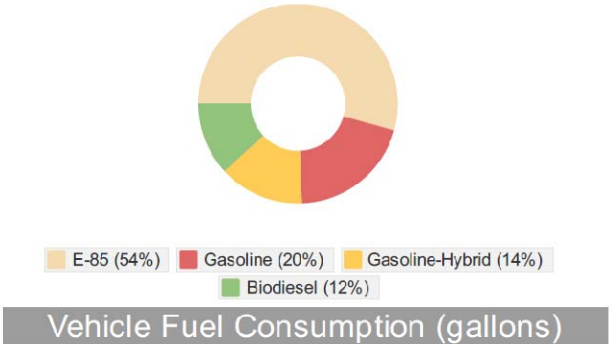
Continue conversion of the Port Authority fleet at Newark Airport to hybrid/alternative fuels, such that 100% of light duty vehicles are hybrid/alternative fuel by 2015.

Target

Reduce vehicle fuel consumption of Port Authority vehicles at Newark Airport by 10% per employee by 2015.







Source: Port Authority Central Automotive Division

Continue to purchase alternative fuel vehicles and incorporate life cycle costs

In 2012, 63% of EWR's fleet vehicles were alternative fuel vehicles. In 2013, 82% of EWR vehicles were alternatively fueled. The Port Authority is committed to converting its entire light duty fleet to alternative fuel vehicles. Several types of alternative vehicles are available, including electric vehicles, plug-in hybrid electric vehicles, compressed natural gas, biodiesel-capable, flex-fuel, and bi-fuel. When purchasing vehicles, the Port Authority chooses technologies that help it meet its GHG reduction goals while satisfying the operational needs of the airport. The Port Authority aims to ensure that vehicle technologies provide the lowest life cycle costs compared to other technologies, and reduce the agency's exposure to fluctuating energy costs to the maximum extent possible.

In 2013, 100% of new vehicle purchases were alternatively fueled.

Establish airport-wide vehicle anti-idling program

In 2013, the Port Authority developed anti-idling materials and guidelines for airport vehicle operators. Stickers are placed on the steering wheels of all vehicles at all airports to remind operators of the anti-idling policy. This will increase awareness of New Jersey's anti-idling law, which prohibits vehicle idling for periods longer than three minutes at EWR.

In cooperation with airport business partners, the Port Authority will initiate outreach programs and an educational campaign and establish training programs at EWR. The Port Authority will conduct anti-idling outreach programs for external shuttle and livery companies through curbside signage and driver education.

Future initiatives/Next Steps

Use outside funding to expand alternative fuel fleet vehicle program

Agency-wide, the Port Authority is replacing operations and other light-duty vehicles with hybrid and alternative fuel vehicles as they reach the age of retirement. As part of this process, the Port Authority will pursue outside funding to acquire vehicles that minimize GHG emissions. The Port Authority will research existing funding mechanisms and apply for grants to purchase alternative fuel vehicles.

Investigate opportunities to increase alternative fuel vehicles in tenant fleets

The Port Authority will work with tenants to develop airside and landside infrastructure that supports tenant acquisition of alternative fuel vehicles. The Port Authority will specifically work with airline tenants to advance efforts in electrifying tenant fleets of GSE and other airside vehicles to improve air quality for airport employees. The Port Authority will identify any barriers to entry for e-GSE acquisition and explore funding mechanisms to remove those barriers.

Port Authority Hybrid Vehicle

Ground Transportation

Goal: Reduce emissions from ground transportation and reduce reliance on single occupancy vehicles as a means of traveling to and from Newark Airport

8.5%
USE MASS TRANSIT
Passengers & Employees

20%
BIODIESEL USED BY COMMERCIAL SHUTTLES

Sources: 2013 *Air Traffic Report*, PANYNJ (transit)

Port Authority Central Automotive Division (fuel use)

Target

Reduce vehicle fuel consumption by operators providing access to the Airport (taxis, hotel and rental car shuttles) by 10% by 2020.

Revise Shared Ride Permit for next Award

Several companies provide shared ride services to the airport for customers. These services transport passengers in 10 to 15 seat vans for a fixed price from various locations around the region. The Port Authority charges a fee for these vehicles to access the airport, based on available seats per vehicle. The permits are generally awarded on a five year basis. In 2013, the Port Authority developed language language for all future permits that allows for a fee reduction if the operator uses alternatively-fueled vehicles. The fee reduction is allowed for Compressed Natural Gas (CNG), hybrid-electric, or full electric vehicles only.

Develop sustainability standards for off-airport parking shuttles

In 2013, the Port Authority awarded formal permits with operators providing parking services to the public off airport property. These operators transport passengers to the airport terminals using vans or other vehicles, and this practice was previously not regulated by the Port Authority. The first permits specify that no vehicle operated by off-airport parking operators shall be more than seven years old, in order to ensure the best customer service and reduce air emissions from older vehicles. Upon permit extension, the Port Authority will incorporate additional sustainability standards.

Future Initiatives:

Explore methods of encouraging fuel efficient cab programs

Taxis at EWR are operated by two different jurisdictions: the City of Newark governs cab operations at Terminals B and C; and the City of Elizabeth governs cab operations at Terminal A. Unlike New York City, where more than half of the cab fleet is comprised of hybrid vehicles, there are relatively few fuel efficient or hybrid cabs operating at EWR. This is due to the less stringent regulations imposed by the two municipalities at the airport. In 2013, the Port Authority initiated a discussion with the City of Newark's Office of Sustainability to explore this issue.

Establish program to encourage increased use of hybrid/alt fuel commercial shuttles (or consolidation/reduced use of existing)

High-volume motor coach service to the airport is provided by Golden Touch (Veolia Transportation). The current permit with Golden Touch stipulates that all high volume motor coaches on airport property must be alternatively fueled vehicles and equipped with the latest exhaust treatment technology. Motor coaches operating at the airport use the same B-20 biodiesel supplied to airport vehicles. The Port Authority will explore incorporating additional sustainability language during the next permit cycle, as no permits were up for renewal in 2013.

Solid Waste Management and Recycling

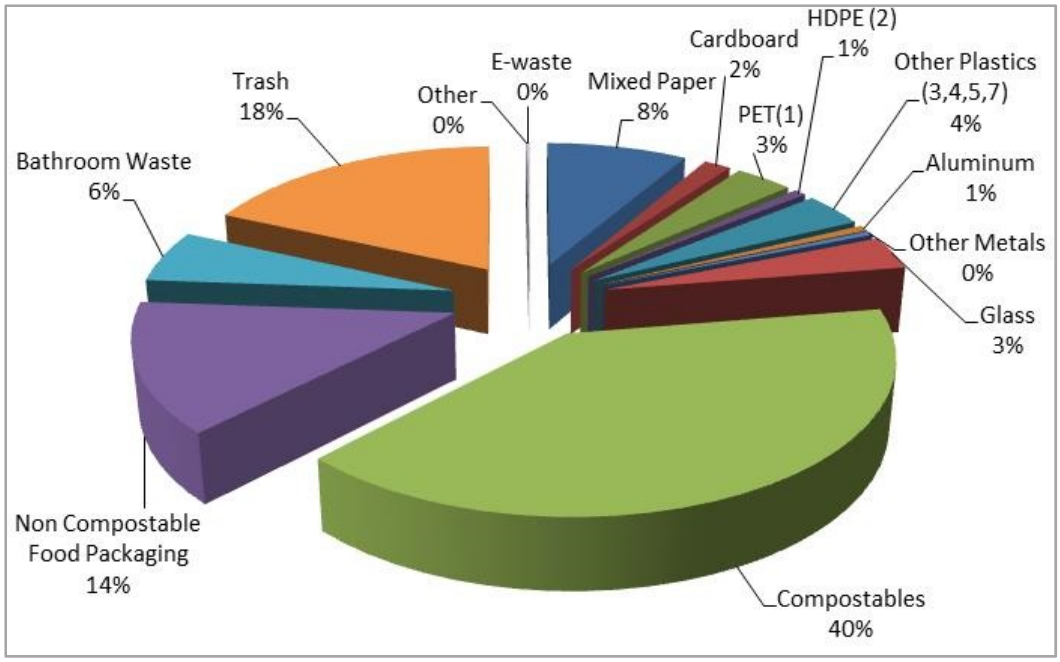
Goal: Minimize the generation of solid waste (including universal, hazardous, and construction wastes), and reuse and recycle collected waste to the maximum extent possible

Background

At EWR, airport tenants (and not Port Authority operations) generate the majority of solid waste. The Port Authority and its tenants have instituted the following activities to recycle and reduce waste:

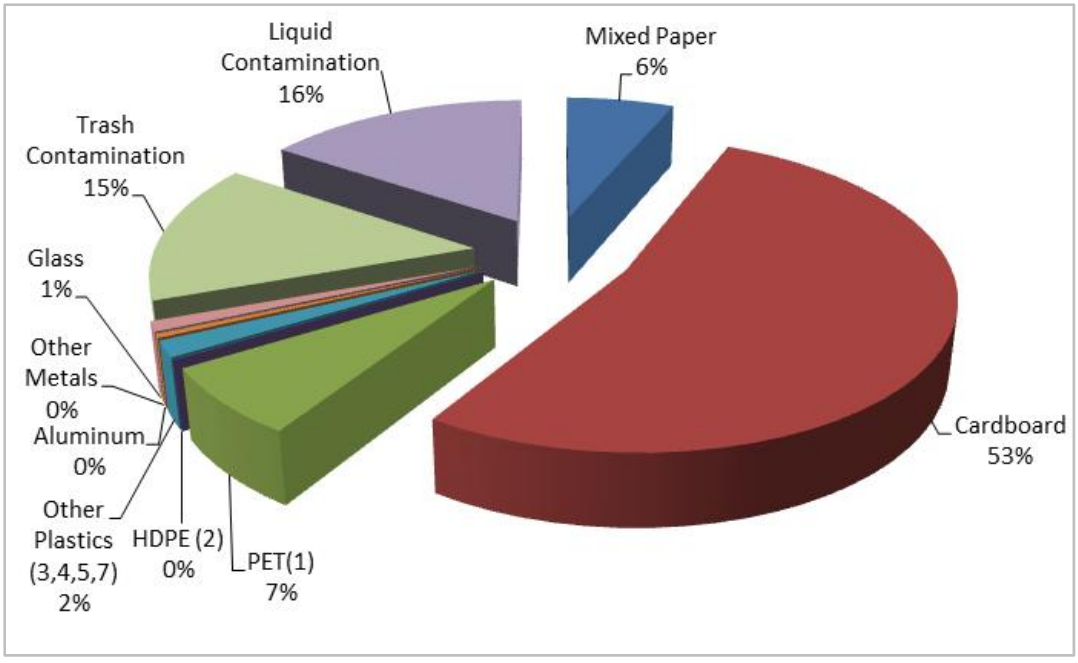
- Terminals A, B, C, and Buildings 1, 79, and 80 provide public area recycling for mixed paper, bottles, and cans
- Terminal A concessionaires recycle cardboard
- Cooking oil and fats are recycled in all three terminals
- Terminal B concessionaires separate food waste for off-site composting

Solid Waste Management and Recycling



Composition of Materials in Trash, EWR, 2013

Source: 2013 Newark Liberty International Airport Waste Audit



Composition of Materials in Recycling, EWR, 2013

Source: 2013 Newark Liberty International Airport Waste Audit

10 TONS
OF FOOD WASTE COMPOSTED

6,320
LBS OF HAZARDOUS WASTE
RECYCLED

314
TONS OF LANDFILL WASTE
RECYCLED

Source: EWR Maintenance Contracts Unit records, 2013

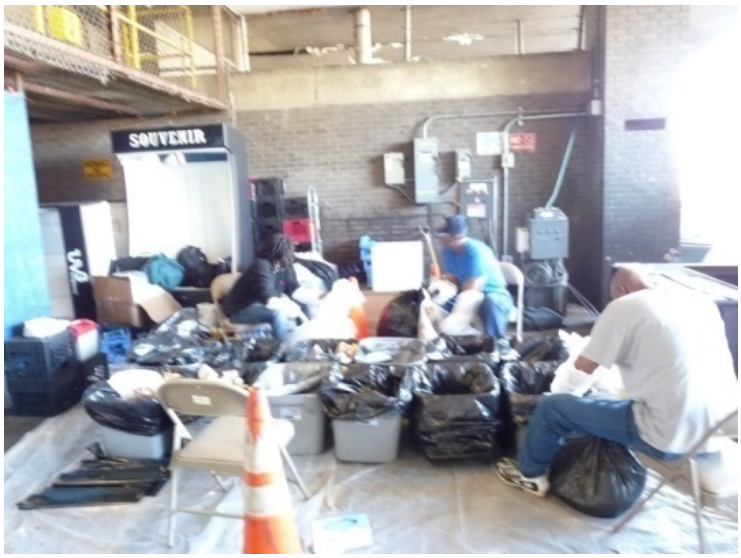
Target

Reduce landfilled waste generated by PANYNJ operations at the Airport by 15% per passenger by 2016 using a 2009 baseline.

Perform a waste composition study to identify additional ways to reduce/recycle waste

The Port Authority conducted our first comprehensive waste audit at EWR in June 2013. This helped us gain an understanding of the waste generated and recycled and identify opportunities for increased recovery of recyclable materials. Conducting the waste audit allowed us to create a baseline for how much we are recycling and helped us catch "under the radar" inefficiencies related to waste removal. This study also allowed us to compare waste contractor bill data with actual data obtained from the audit.

Terminal A, Terminal B, administrative buildings (building 1, 79, 80), Marriott Hotel, Hertz and Enterprise car rental properties were audited for this waste composition study, which took a week to complete. It was found that for all of the properties, compostable waste comprised most of the waste stream, averaging 40%. The next big component of the waste stream was food packaging (non-compostable). Of the recyclable waste, over half of the bulk was cardboard. Bottles and cans were found to be a small percentage of the waste stream



Waste Composition Study at EWR

The Waste Composition Study was conducted according to LEED protocol under MRc6 Solid Waste Management. The team inspected, categorized, and quantified the trash stream and diverted waste streams generated at each of the

designated locations. For large volume locations, the Scope of Work allowed for full inspection and categorization of 25% of the waste stream and visual inspection of 75%. However the audit teams were successful in inspecting, sorting and cataloguing 100% of the waste and recyclable streams from each location audited.

With the results of the Waste Composition Study, the Port Authority hopes to explore the potential for consolidation of waste hauling and to improve diversion ratios. With a large percentage of the waste stream being compostable material, the Port Authority has implemented back-of-house food waste collection with terminal concessionaries at EWR. See below initiative for more details.

Future Initiatives

Develop and implement office waste minimization program

The Port Authority believes that developing and implementing an office waste minimization program in conjunction with other paper use reduction efforts will reduce the amount of office waste generated. Using the results of the waste audit discussed below, the Port Authority will identify major sources of ongoing consumables waste and establish source reduction efforts.

Target

By 2016, establish a food waste composting program among terminal concessionaires.

Target

By 2020, expand the recycling of construction waste to include all feasible materials

Expand recycling efforts to include additional materials such as composting of food waste and/or recycling of restaurant grease.

Three years ahead of schedule, the Port Authority established a food waste composting program at Terminal B at EWR that initiated in September 2013. Food waste collection occurs in back-of-house in kitchens and preparation areas with specially designated bins for food waste. Concessionaire staff members take the unused portions of food preparation as well as food left over from customer plates and place them into the specially designated food waste bins. Most food scrap items can be industrially composted with the exclusions of plastic gloves and plastic wrap. These bins are collected every other day by the waste contractor on a cost-neutral basis. The food waste is then transported to an industrial composting facility in Delaware to be turned into nutrient-rich soil. This soil is used as fertilizer for farms to aid in crop nutrition. EWR's Terminal B collected nearly 10 tons of food waste from September-December 2013.

Participating Restaurants

Terminal B

Dunkin' Donuts

Champs

McGinley's

Chilli's

Belgian Beer Bar

Future Initiatives:

Work with concessionaires to reduce packaging and minimize/shift bag use

The pilot Sustainable Business Partner framework, established in 2013. focuses on sustainability issues affection our business partners, including the large amount of packaging and plastic bags used at airport concessions. There are plans to recognize reductions in packaging and bag use through the Sustainable Business Partner program, along with a number of other categories where concessionaires can show leadership in the area of sustainability.

Set up and run annual e-waste collection event for employees

Recycle more construction waste streams beyond current guidelines and requirements

The current requirements for construction waste recycling specify that 75% of all construction waste materials should be recycled at Port Authority facilities. In practice, over 90% of construction waste is recyclable in the Northeast, due to robust secondary markets and sorting capabilities for construction waste materials.

Explore potential for consolidation of waste hauling

Community Outreach

Goal: Enhance communication with, and in support of, the airport community

Background

The Port Authority has conducted numerous successful community engagement activities, including the actions listed below:

- EWR works with the Aviation Development Council (ADC) to promote and manage the Airport community watch program. ADC has also launched the Airports Do Care community outreach program
- ADC meets with local officials to ensure that the communities surrounding the Airport have an open dialogue with a representative of the region's aviation industry on matters such as aircraft noise abatement, traffic congestion, airport construction projects, and other important quality of life issues
- The Port Authority has committed to maximizing business opportunities for minorities, women, and small entrepreneurs in the New York/New Jersey region. Current construction contracts include the following goals for M/W/DBE: 17% total participation, 12% minority, and 5% women
- The Port Authority has installed sound insulation in several local schools

Community Outreach

Target

By June 2014, expand community engagement activities to serve a broad representation of Airport and off-Airport communities

Develop job fairs for members of surrounding communities

In 2013, EWR held its annual Career and Education Exposition for 7th and 8th grade students from the surrounding area schools. The event is designed to expose students to aviation related careers. Exhibits included Fed-Ex operations, University Hospital's Medical helicopter, a brand new deicing machine, aircraft tour and an aircraft maintenance tour along with ARFF displays, K9 and other demonstrations. The expo was held at the FedEx ramp and at the United Hangar 54. An essay contest was held entitled "Heroes of Aviation" in which the first place winner received two round trip tickets donated by JetBlue Airways.

Target

Agree on key performance metrics and implement a data reporting system at the Airport by January 2013 so progress toward sustainability targets can be tracked and reported to stakeholders.

Develop an internal and external communication plan to report on sustainability performance

This report serves as Port Authority's first internal and external report on sustainability performance. Metrics used include internal Port Authority developed sustainability metrics as well as general guidance using the reporting framework established by the Global Reporting Initiative G3.1. This report on sustainability performance includes reporting on Port Authority's organizational profile, governance, and performance indicators. Performance indicators include economic, environmental, and social categories.

Target

By January 2014, have at least one program in place which addresses sustainability training, education or awareness for each of the following stakeholder groups: 1) employees, 2) tenants, 3) passengers and 4) the community

Future Initiative:

Initial and recurring sustainability training for employees; continual improvement process

The Port Authority's Office of Environmental and Energy Programs (OEEP) released agency wide screensavers in 2013 that increase awareness of specific sustainability initiatives; and encourage employees to deploy sustainable practices in the workplace. Recent screensavers have promoted the employee rideshare program; reminded employees about double sided printing protocols; and increased awareness of the Sustainable Design Guidelines.

The airport also hosts community exhibits at Terminal B. The latest 3-D video exhibit deployed at Terminal B in 2013 is entitled New Work, and is a six minute video about the "elegance, beauty, and hidden treasures of modern day Newark." It was produced by local filmmakers Marylou Tibaldo-Bongiorno and Jerome Bongiorno.

Target

By January 2014, have procedures in place to measure and communicate annual cost savings from sustainability initiatives to monitor and improve progress

The Global Reporting Initiative metrics allow for the capture of energy savings metrics in yearly reporting. Based on the energy savings resulting from energy efficiency retrofits, the airport has been able to report on expected energy savings for the first time in 2013. In addition, the development of building benchmarking through ENERGY STAR Portfolio Manager will allow facilities managers to monitor and track weather normalized building energy and water use information on a month basis. Through yearly metrics reporting and communication, the airport is developing a data-driven case for sustainability that can be communicated to employees and stakeholders.

Contract and Lease Management

Integrate sustainable practices into internal policies, business processes, and written agreements.

Background

The Port Authority is one of many organizations operating at EWR. In order to fully advance airport-wide sustainability priorities, tenants and other businesses must become fully part of the airport's sustainability framework. The Port Authority has encouraged tenant sustainability priorities in the past through the following mechanisms:

- Sustainability Design Guidelines
- Construction Debris Recycling Program
- GHG emission reduction activities
- Alternative Fuel Vehicle Program
- Integration of aviation department recycling policy into Airport Rules and Regulations

Many airport tenants participate in corporate sustainability programs of their own. The Port Authority intends to leverage the strengths of tenant sustainability programs to advance sustainability initiatives on the airport. Many of these priorities can be advanced through mutually beneficial lease agreements or contracts, such as the shared-ride contracts that incentivize the use of alternatively-fueled vehicles. Recycling coordination can reduce waste removal costs on the airport.

Provide sustainability information and incentives to employees, tenants and contractors; Investigate and develop partnerships with tenants to advance sustainability priorities

In 2013, the Port Authority developed a draft certification framework for tenants and concessions who wish to distinguish themselves as Sustainable Business Partners. This is a designation consistent with the agency sustainability policy and targets established in Sustainable Management Plans. Sustainable Business Partner programs will exist for the following specific categories: terminal concessions; terminal operators; cargo operators; airlines; Fixed Base Operators (FBO's); rental car companies; and hotels. Partnership requirements will vary based on the type of business, but tenants will need to satisfy a minimum amount of requirements in each category:

- Energy and greenhouse gases
- Solid waste management
- Water quality and water conservation
- Community engagement
- Employee and passenger health

The first pilot for this program will kick off early in 2014 for concessions.

As the sustainability program progresses, the Port Authority will memorialize and publicize tenant progress on sustainability initiatives. Tenants at the airport are very engaged in sustainability on a corporate or facility level. This will advance sustainability priorities.

Health and Welfare of Employees

Provide opportunities and incentives to improve the health and welfare of employees.

Background

The Port Authority has several programs that increase workplace satisfaction:

- The Port Authority seeks a dedicated and diverse workforce that is broadly reflective of the working population of the region that it serves. The Port Authority equal opportunity employment policy goes beyond federal equal opportunity employer protections by including the additional protected categories of sexual orientation and gender identification
- The Port Authority further supports diversity through sponsored Employee Resource Groups and diversity summits, through which employees can weigh in on agency wide diversity and inclusion issues
- Employees can attend open enrollment training workshops and various career development classes and workshops sponsored by the Port Authority
- The Port Authority hosts financial planning workshops for employees
- The Port Authority remembers the victims of the September 11, 2001 attacks on the World Trade Center through the “9/11 Remembrance Through Renewal” volunteer program, in which all employees are invited to participate in volunteer activities throughout the communities in which the Port Authority operates.

Health and Welfare of Employees

Increase the use of environmentally preferable products and services at the Airport by 2015

EWR is committed to ensuring that the health and welfare of employees are in excellent standing. In October 2013, we hosted our first ever Port Authority green cleaning demonstration at EWR. The demonstration helped raise awareness of the health and environmental benefits of certified green cleaning products. The informational session boosted interest and knowledge of green cleaning products. The participants in the demonstration included the Port Authority's warehouse supplier, Circle Janitorial Supplies Inc., with representatives from Kimberly-Clarke, EcoLogic, National Chemical Laboratories, 3M, and Ecolab to discuss products. In addition, two cleaning contractors participated. Cristi Cleaning Service, which services Teterboro Airport and the New Jersey Marine Terminal attended with representatives from Burke Supplies and Wausau Paper/Baywest. Modern Facilities Services, which services EWR and PATH also participated. The participants discussed an array of green cleaning products with Port Authority staff, performed product demonstrations, answered questions, and provided trial samples. Approximately 30-35 Port Authority facility and line department staff as well as tenants attended the demonstration. The Port Authority hopes to host a similar demonstration for New York facilities in the near future.

This demonstration was hosted to increase awareness of the benefits of green cleaning products, as well as to educate on the widely available options for various green cleaning products. The Port Authority hopes to engage facility, line department and tenant staff so that more green cleaning products may be added to the approved products list and to contracts for use at facilities.

Future Initiatives

Conduct annual sustainability events for employees, tenants, and the public

Introduce employee health competition to improve motivation

Develop internal Indoor Air Quality (IAQ) Management plan and increase use of environmentally preferable cleaning products

Work with food service operators to provide education on healthy eating and food choices

IAQ Management contract enforcement for facility alterations and additions and regular stakeholder outreach

Appendix A: GRI Disclosure and Sustainability Metrics

Section 1. GRI Airport Operators Sector Supplement Disclosures				
Indicator	**Description**	**Reported**	**Notes**	Page Number
1.1	Statement from most senior decision maker of the organization about the relevance of sustainability to the organization and its strategy	✓		4
1.2	Key Impacts, Risks, and Opportunities	✓		19-47
2.1	Name of the organization	✓		6
2.2	Primary Brands, Products, or Services	✓		8
2.3	Organizational Structure	✓		17
2.4	Location of the organization's headquarters	✓		3
2.5	Number of countries where the organization operates	✓		8
2.6	Nature of ownership and legal form	✓		14
2.7	Markets served	✓		11
2.8	Scale of the reporting organization	✓		8
	Number of employees	✓		17
	Number of operations	✓		9
	Net revenues	✓		10
	Size of airport	✓		8
	Number and length of runways	✓		9
	Minimum connection time between flights	✓		9
	Number of airlines served	✓		11
	Number of destinations served	✓		11
2.9	Significant changes during the reporting period	✓		3
2.10	Awards received in reporting period	✓		None
3.1	Reporting period for information provided	✓		3
3.2	Date of most recent report	✓		3
3.3	Reporting cycle	✓		3
3.4	Contact point for questions regarding the report and its contents	✓		3
3.5	Process for determining report content			
3.6	Boundary of the report	✓		3
3.7	State any specific limitations on the scope or boundary of the report	✓		3
3.8	Basis for reporting joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that may significantly affect comparability from period to period or between organizations	✓		3
3.9	Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations			

	applied to the compilation of the Indicators and other information in the report			
3.10	Explanation of the effect of any re-statements of information provided in earlier reports	✓		3
3.11	Significant changes from previous reporting periods	✓		3
3.12	Table Identifying Location of standard disclosures	✓		3
3.13	Policy and current practice with regard to seeking external assurance for the report			
4.1	Governance structure of the organization	✓		14
4.2	Is the chair of the governance body also an executive officer	✓		14
4.3	State the number and gender of members of the governance structure that are independent and non executive	✓		14
4.4	Mechanisms for shareholders and employees to provide recommendations to the highest governance structure	✓		15
4.5	Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure arrangements), and the organization's performance (including social and environmental performance)			
4.6	Processes in place for the highest governance body to ensure that conflicts of interest are avoided	✓		14
4.7	Process for determining the composition, qualifications, and expertise of the members of the highest governance body and its committees, including any consideration of gender and other indicators of diversity	✓		14
4.8	Internally developed statements of mission or values relating to sustainability	✓		6
4.9	Procedures of the highest governance body for overseeing the organization's identification and management of economic environmental, and social performance, including relevant risks and opportunities and adherence or compliance with internationally agreed standards, codes of conduct, and principles			
4.10	Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance			
4.11	Explanation of whether and how the precautionary approach or principle is addressed by the organization			
4.12	Externally developed economic, environmental, and social charters, principles and other initiatives to which the organization subscribes or endorses	✓		6 and 7
4.13	Memberships in associations (such as industry associations) and/or national/international advocacy organizations in which the organization participates	✓		15

4.14	List of stakeholder groups engaged by the organization	✓		15
4.15	Basis for identification of stakeholder groups with whom to engage	✓		15
4.16	Approaches to stakeholder engagement	✓		15
4.17	Key topics and concerns that have been raised through stakeholder engagement	✓		15
Economic Performance Indicators				
EC1	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments.	✓		Appendix A
EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change			
EC3	Coverage of the organization's defined benefit plan obligations			
EC4	Significant financial assistance received from government.	✓		Appendix A
EC5	Range of ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation			
EC6	Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation			
AO1	Total number of passengers annually, broken down by passengers on international and domestic flights and broken down by origin-and-destination and transfer, including transit passengers.	✓		Appendix A
AO2	Annual total number of aircraft movements by day and by night, broken down by commercial passenger, commercial cargo, general aviation and state aviation flights.	✓		Appendix A
AO3	Total amount of cargo tonnage.	✓		Appendix A
EC7	Procedures for local hiring and proportion of senior management hired from the local community at locations of significant operation			
EC8	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement			
EC9	Understanding and describing significant indirect economic impacts, including the extent of impacts			
Environmental Performance Indicators				
EN1	Materials used by weight or volume			
EN2	Percentage of materials used that are recycled input materials			
EN3	Direct energy consumption by primary energy source.	✓		Appendix A
EN4	Indirect energy consumption by primary	✓		Appendix A

	source.			
EN5	Energy saved due to conservation and efficiency improvements.	✓		Appendix A
EN6	Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives.	✓		26
EN7	Initiatives to reduce indirect energy consumption and reductions achieved.	✓		26
EN8	Total water withdrawal by source			
AO4	Quality of storm water by applicable regulatory standards.	✓		Appendix A
EN9	Water sources significantly affected by withdrawal of water			
EN10	Percentage and total volume of water recycled and reused			
EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas			
EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas			
EN13	Habitats protected or restored			
EN14	Strategies, current actions, and future plans for managing impacts on biodiversity			
EN15	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk			
EN16	Total direct and indirect greenhouse gas emissions by weight.	✓		Appendix A
EN17	Other relevant indirect greenhouse gas emissions by weight.	✓		Appendix A
EN18	Total direct and indirect greenhouse gas emissions by weight			
EN19	Emissions of ozone-depleting substances by weight.	✓		Appendix A
EN20	NOx, SOx, and other significant air emissions by type and weight.	✓		Appendix A
EN21	Total water discharge by quality and destination			
EN22	Total weight of waste by type and disposal method.	✓		Appendix A
EN23	Total number and volume of significant spills.	✓		Appendix A
AO5	Ambient air quality levels according to pollutant concentrations in microgram per m3 or parts per million (ppm) by regulatory regime			
AO6	Aircraft and pavement de-icing/anti-icing fluid used and treated by m3 and/or metric tonnes.	✓		Appendix A
EN24	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally.	✓		Appendix A

EN25	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff			
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation			
EN27	Percentage of products sold and their packaging materials that are reclaimed by category			
EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.	✓		Appendix A
EN29	Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce			
AO7	Number and percentage change of people residing in areas affected by noise.	✓		Appendix A
EN30	Total environmental protection expenditures and investments by type			
Social: Labor Practices and Decent Work Performance Indicators				
LA1	Total workforce by employment type, employment contract, and region, broken down by gender			
LA2	Total number and rate of new employee hires and employee turnover by age group, gender, and region			
LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation			
LA15	Return to work and retention rates after parental leave, by gender			
LA4	Percentage of employees covered by collective bargaining agreements	✓		9
LA5	Minimum notice period(s) regarding operational changes, including whether it is specified in collective agreements			
LA6	Percentage of total workforce represented in formal join management-worker health and safety committees that help monitor and advise on occupational health and safety programs			
LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender			
LA8	Education, training, counseling, prevention, and risk-control			

LA9	Health and safety topics covered in formal agreements with trade unions			
LA10	Average hours of training per year per employee by gender, and by employee category			
LA11	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings			
LA12	Percentage of employees receiving regular performance and career development reviews, by gender			
LA13	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity			
LA14	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation			
Social: Human Rights Performance Indicators				
HR1	Percentage and total number of significant investment agreements and contracts that include clauses incorporating human rights concerns, or that have undergone human rights screening			
HR2	Percentage of significant suppliers contractors, and other business partners that have undergone human rights screening, and actions taken			
HR3	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained			
HR4	Total number of incidents of discrimination and corrective actions taken			
HR5	Operations and significant suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and actions taken to support these rights			
HR6	Operations and significant suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor			
HR7	Operations and significant suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor			
HR8	Percentage of security personnel trained in the organization's policies of procedures concerning aspects of human rights that are relevant to operations			
HR9	Total number of incidents of violations involving rights of indigenous people and actions taken			

HR10	Percentage and total number of operations that have been subject to human rights reviews and/or impact assessments			
HR11	Number of grievances related to human rights filed, addressed and resolved through formal grievance mechanisms			
Social: Society Performance Indicators				
SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs			
SO9	Operations with significant potential or actual negative impacts on local communities			
SO10	Prevention and mitigation measures implemented in operations with significant potential or actual negative impacts on local communities			
AO8	Number of persons physically or economically displaced, either voluntarily or involuntarily, by the airport operator or on its behalf by a governmental or other entity, and compensation provided			
SO3	Percentage of employees trained in organization's anti-corruption policies and procedures			
SO4	Actions taken in response to incidents of corruption			
SO5	Public policy positions and participation in public policy development and lobbying			
SO6	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by county			
SO7	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes			
SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations			
Social: Product Responsibility Performance Indicators				
PR1	Life cycle stages in which health and safety impacts and products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures			
PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes			
AO9	Number of wildlife strikes per 10,000 aircraft movements	✓		Appendix A
PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements			
PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information			

	and labeling, by type of outcomes			
PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction			
PR6	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship			
PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes			
PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data			
PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services			

GRI Airport Operators Sector Supplement Performance Metrics

EC1: Economic Performance		2008	2009	2010	2011	2012	2013
Revenues							$799,553,000
Operating Costs							$413,517,000
Capital Investments							$233,126,765
FAA Grants (AIP)							$7,200,000
Employee Compensation (including benefits)							$113,579,000
Donations/Community Investment							$2,183,000
Retained earnings							n/a
Payments to capital providers/governments (gross taxes)							$1,532,890
	Total Revenue						$806,753,000
	Total Expenditure						$763,938,655
AO1: Passenger Traffic		2008	2009	2010	2011	2012	2013
Domestic Flights	Arriving Passengers						11,820,626
	Departing Passengers						11,896,211
	Total						23,716,837
International Flights	Arriving Passengers						5,643,414
	Departing Passengers						5,655,985
	Total						11,299,399
Total Passengers						33,993,962	35,016,236
A02: Aircraft Movements		2008	2009	2010	2011	2012	2013
Commercial Passenger Aircraft Movements	Domestic	305,950	288,945	282,056	280,969	288,248	291,136
	International	89,491	88,863	92,552	94,691	93,189	91,047
	Total	395,441	377,808	374,608	375,660	381,437	382,183
Cargo Aircraft Movements	Domestic	21,799	18,475	19,008	18,736	17,690	16,677
	International	3,363	3,122	3,134	3,142	2,406	1,643
	Total	25162	21,597	22,142	21,878	20,096	18,320
Government and General Aviation Aircraft Movements	Domestic	13316	12,269	12,285	12,312	12,392	11,341
	International	131	147	259	176	136	0
	Total	13447	12,416	12,544	12,488	12,528	11,341
Total Movements		434,050	411,821	409,294	410,026	414,061	411,844

A03: Cargo Volumes		2008	2009	2010	2011	2012	2013
Arriving Cargo Tonnage	Freighter Aircraft						218,085
	Passenger Aircraft						131,689
Departing Cargo Tonnage	Freighter Aircraft						244,900
	Passenger Aircraft						67,651
Total Cargo Tonnage							662,325
EN3-Direct Energy Consumption (Vehicle fuel and building natural gas and fuel oil)		2008	2009	2010	2011	2012	2013
Energy Consumption-Renewable Sources (GJ)		0	1,786	3,757	4,875	6,766	8,886
Energy Consumption-Non-Renewable Sources (GJ)			259,903	262,566	215,870	225,869	227,131
Energy Consumption-Total (GJ)			261,688	266,324	220,746	232,635	236,018
EN4-Indirect Energy Consumption (Electricity)		2008	2009	2010	2011	2012	2013
Energy Consumption-Renewable Sources (GJ)		0	0	0	0	0	0
Energy Consumption-Non-Renewable Sources (GJ)			297,046	268,390	341,227	259,632	308,617
Energy Consumption-Total (GJ)			297,046	268,390	341,227	259,632	308,617
EN5-Energy Saved through Conservation		2008	2009	2010	2011	2012	2013
Energy Conserved (kJ)							20,987
A04-Quality of Stormwater by Regulatory Standards		2008	2009	2010	2011	2012	2013
Sample Locations (number)							3
Sample Frequency							Varies, quarterly, or monthly
Incidences of non-compliance							0
EN16-Total Direct and Indirect GHG Emissions by Weight		2008	2009	2010	2011	2012	2013
Direct GHG Emissions -Scope I - Tons CO2e						16,095	
Indirect GHG Emissions - Scope II & III - Tons CO2e						1,754,838	
Total GHG Emissions -Tons CO2e			1,168,430			1,770,933	
EN17-Other Relevant Indirect GHG Emissions by Weight		2008	2009	2010	2011	2012	2013
Aircraft LTO Emissions -Tons CO2e						533,556	
EN19-Emissions of Ozone Depleting Substances by Weight		2008	2009	2010	2011	2012	2013
Ozone Depleting Substances- Tons CO2e					1,881	2,052.52	

EN22-Waste by Type and Disposal Method	2008	2009	2010	2011	2012	2013
Waste for Landfill-Tons		3,026				2,467
Waste for Incineration-Tons		n/a				0
Waste for Recycling-Tons		234				314
Waste for Composting-Tons	0	0	0	0	0	10
Diversion Ratio-Deplaned Waste						Not reported
International Waste-Tons						Not reported
EN23-Total Number and Volume of Significant Spills	2008	2009	2010	2011	2012	2013
Number of Significant Spills						0
Volume (total) of Significant Spills						0
A06-Aircraft and Pavement Deicing/Anti-Icing Fluid	2008	2009-10	2010-11	2011-12	2012-13	2013-14
Aircraft Deicing Fluid Used as Neat Fluid, Gallons	1,183,561	1,193,149	1,307,310	163,502	713,906	2,447,315
Airfield Pavement Deicing Fluid used (gallons e36 Cryotech)			728,730	130,199	314,447	568,107
EN28-Environmental Fines	2008	2009	2010	2011	2012	2013
Monetary value of fines paid for non-compliance with environmental regulations and sanctions		$ 4,000	0	0	0	0
A07-Noise Impacts	2008	2009	2010	2011	2012	2013
Number of people residing within DNL 65	25,400			n/a		25,400
Percentage change of people residing within DNL 65						0

Additional Key Performance Indicators

Airport Profile		2008	2009	2010	2011	2012	2013
Total number of passenger airlines		33					30
Square footage of Terminals	Terminal A	572,947	572,947	572,947	572,947	572,947	572,947
	Terminal B	865,562	865,562	865,562	865,562	865,562	865,562
	Terminal C	1,850,000	1,850,000	1,850,000	1,850,000	1,850,000	1,850,000
Number of aircraft gates	Terminal A	33	33	33	33	33	33
	Terminal B	24	24	24	24	24	24
	Terminal C	57	57	57	57	57	57
	Total Number of Gates	114	114	114	114	114	114
Number of concessionaires	Terminal A	29					41
	Terminal B	32					47
	Terminal C	79					65
Total terminal and PA office treated floor area (sq. ft)	PA buildings	386,050	386,050	386,050	386,050	386,050	386,050
	PA terminals	720,143	720,143	720,143	720,143	720,143	720,143
	PA hangars	132,635	132,635	132,635	132,635	132,635	132,635
Construction Spending		$1,891,000,000					$130,458,615

GHG Emissions Summary		2008	2009	2010	2011	2012	2013
Total Direct and indirect GHG emissions (MT CO_2e)		1,168,430				1,158,027	
CO_2e emissions per operation (MT CO_2e/operation)		2.69				2.80	
Scope I & II CO_2e emissions (MT CO_2e)		18,631				58,677	
Scope III CO_2e emissions (MT CO_2e)		1,149,799				1,099,350	
Tons per year savings (compared to 2006) (MT CO_2e)		20,181				30,584	
Building Energy Usage		2008	2009	2010	2011	2012	2013
Electricity (kWh)			82,512,791	74,552,711	94,785,168	72,120,046	85,726,924
	Electricity/Floor Area (kwh/ft2)		22.28	20.13	25.59	19.47	23.14
	Sustainable Electricity (kW)						0
Natural Gas (therms)			2,480,328	2,337,926	1,915,301	2,016,157	2,042,218
Renewable energy generated on-site (kWh output)			0				0
MMBTU			529,566	488,166	514,937	447,689	496,722
Air Quality		2008	2009	2010	2011	2012	2013
Criteria air pollutant emissions	SO_2	1107				434	
	NO_x	3892				2,994	
	$PM_{2.5}$	230				110	
	PM_{10}	264				136	
Electric Power at gates (% of total gates)	Terminal A		100%	100%	100%	100%	100%
	Terminal B		100%	100%	100%	100%	100%
	Terminal C		100%	100%	100%	100%	100%
Preconditioned air at gates (% of total gates)	Terminal A		92%	92%	92%	92%	92%
	Terminal B		21%	21%	21%	21%	21%
	Terminal C		100%	100%	100%	100%	100%
Average Taxi-out Times (mins) (only domestic flights by major carriers)*		29.28	26.43	21.18	21.55	21.6	21.07
Average Taxi-in Times (mins) (only domestic flights by major carriers)*		10.16	9.18	8.72	9.18	9.08	8.6

**Major carriers include: UA, DL, Jetblue, Virgin America, US Air, American Airlines, Alaska, AirTran, Southwest and a number of their respective regional feeder airlines: Pinnacle, American Eagle (Envoy), SkyWest, ExpressJet, and Mesa.*

Vehicle Fleets (# of vehicles, light and heavy duty)		2008	2009	2010	2011	2012	2013
Bifuel							0
Biodiesel							99
CNG							13
Electric							2
E-85							75
Gasoline							56
Hybrid							63
Hydrogen							0
	Subtotal Alternative Fuel Vehicles						252
	Total of all Vehicles						308
	Alternative Fuel % of Total						81.82
Vehicle Energy Consumption		2008	2009	2010	2011	2012	2013
Gasoline (gal)			92,239	88,754	60,568	51,731	37,886
Bifuel (gal)			1,159	1,526	91	119	not available
Biodiesel (gal)			26,381	26,547	23,737	21,999	22,302
E-85 (gal)			13,249	37,630	52,432	76,452	102,625
Gasoline-Hybrid vehicles (gal)			6,508	13,811	25,464	27,766	26,056
CNG (gge)			n/a	n/a	n/a	n/a	n/a
Aircraft Fuel		2008	2009	2010	2011	2012	2013
Total fuel loaded onto aircraft (Jet A, million gals)		726.95	673.96	677.43	692.13	686.01	685.15
AvGas (gal)		5,728	2,512	3,452	2,875	4,253	2,490
Alternative aviation fuel consumed (gal)			0	0	0	0	0

Safety	2008	2009	2010	2011	2012	2013
Total wildlife strikes	88	49	84	98	93	129
Damaging wildlife strikes	5	2	3	5	6	8
A09: Number of wildlife strikes per 10,000 aircraft movements	1.99	1.23	1.63	2.11	2.36	2.99
Waste	2008	2009	2010	2011	2012	2013
Total non-hazardous waste produced in PA areas (tons)		3,260				2,467
Composted materials (pounds)						10 tons (estimated)
Hazardous waste recycled (gal)						3,600
Hazardous waste recycled (lbs)						6,321
Total hazardous waste produced (tons) PA produced		15.56				40.8
Total hazardous waste produced (gallons) PA produced						665
Total construction waste recycled		n/a				
Volume of Waste to Landfill (tons)						2,467
Volume of Material Recycled (tons)						314
Paper Purchased (reams)		8,322	7,362	8,269	7,202	9,285
Ground Transportation	2008	2009	2010	2011	2012	2013
Number of Bus Trips to Airport	668,108	637,234	632,469	624,869	579,779	567,703
Number of AirTrain Trips	1,933,100	1,863,718	1,870,237	2,055,623	2,136,446	2,386,467
Percentage of passengers using mass transit		8.5%				8.5%
Percentage of alternatively fueled PA shuttles		30%				100%
Economic Impacts	2008	2009	2010	2011	2012	2013
Direct jobs created by airport	22,449	20,304	20,091	20,716	20,283	19,700
Indirect jobs created by airport	135,246	140,800	122,149	122,510	126,821	161,712

Appendix B: List of Airlines and Destinations from EWR

Airlines	Destinations	Terminal
Air Canada	Calgary, Toronto-Pearson, Vancouver	A
Air Canada Express operated by Jazz Air	Montréal–Trudeau, Toronto–Pearson	A
Air Canada Express operated by Sky Regional Airlines	Toronto–Pearson	A
Air India	Ahmedabad, Mumbai	B
Alaska Airlines	Seattle/Tacoma	B
American Airlines	Dallas/Fort Worth, Los Angeles (ends March 5, 2014), Miami	A
American Eagle operated by Envoy	Chicago–O'Hare	A
American Eagle operated by Republic Airlines	Chicago–O'Hare	A
Austrian Airlines operated by Tyrolean Airways	Vienna (begins July 2, 2014)	B
Avianca El Salvador	San Salvador	B
British Airways	London–Heathrow	B
Cathay Pacific	Hong Kong (begins March 2, 2014)	B
Delta Air Lines	Amsterdam, Atlanta, Detroit, Minneapolis/St. Paul, Paris–Charles de Gaulle, Salt Lake City	B
Delta Connection operated by Compass Airlines	Minneapolis/St. Paul	B
Delta Connection operated by Endeavor Air	Detroit, Minneapolis/St. Paul	B
Delta Connection operated by ExpressJet	Cincinnati, Detroit, Minneapolis/St. Paul	B
El Al	Tel Aviv–Ben Gurion	B
Icelandair	Reykjavík–Keflavík	B
Jet Airways	Brussels, Mumbai	B

JetBlue Airways	Boston, Fort Lauderdale, Fort Myers, Orlando, San Juan, Santiago de los Caballeros (begins May 1, 2014), Tampa, West Palm Beach	A
La Compagnie	Paris (begins July 21, 2014)	B
Lufthansa	Düsseldorf, Frankfurt, Munich	B
OpenSkies	Paris–Orly	B
PEOPLExpress	Newport News/Williamsburg (begins June 30, 2014)	B
Porter Airlines	Toronto–Billy Bishop Seasonal: Mont Tremblant	B
Scandinavian Airlines	Copenhagen, Oslo–Gardermoen, Stockholm–Arlanda	B
Southwest Airlines	Austin, Chicago–Midway, Denver, Houston–Hobby, Nashville, New Orleans, Phoenix, St. Louis	A
Swiss International Air Lines	Zürich	B
TAP Portugal	Lisbon, Porto	B
United Airlines	Aguadilla, Amsterdam, Antigua, Aruba, Atlanta, Austin, Barcelona, Beijing–Capital, Belfast–International, Berlin–Tegel, Bermuda, Birmingham (UK), Bogotá, Boston, Brussels, Cancún, Chicago–O'Hare, Cleveland, Dallas/Fort Worth, Delhi, Denver, Dublin, Edinburgh, Edmonton, Fort Lauderdale, Fort Myers, Frankfurt, Geneva, Glasgow–International, Guatemala City, Hamburg, Hong Kong, Honolulu, Houston–Intercontinental, Las Vegas, Lima, Lisbon, London–Heathrow, Los Angeles, Madrid, Manchester (UK), Mexico City, Miami, Milan-Malpensa, Montego Bay, Mumbai, Munich, Nassau, New Orleans, Orange County, Orlando, Oslo–Gardermoen, Panama City, Paris–Charles de Gaulle, Phoenix, Port of Spain, Portland (OR), Providenciales, Puerto Plata, Puerto Vallarta, Punta Cana, St. Thomas, San Antonio, San Diego, San Francisco, San José de Costa Rica, San José del Cabo, San Juan, San Pedro Sula, San Salvador, Santo Domingo–Las Americas, São Paulo–Guarulhos, Seattle/Tacoma, Shanghai–Pudong, Shannon, St. Lucia, St. Maarten, Stockholm–Arlanda, Stuttgart, Tampa, Tel Aviv–Ben Gurion, Tokyo–Narita, West Palm Beach, Zürich Seasonal: Acapulco, Anchorage, Belize City, Bonaire, Bozeman, Cozumel, Eagle/Vail, Grand Cayman, Hayden/Steamboat Springs, Jackson Hole, Liberia (Costa Rica), Montrose, Roatán, Rome–Fiumicino, St. John's, St. Thomas, Vancouver	C
United Express operated by CommutAir	Albany (NY), Baltimore, Buffalo, Harrisburg, Hartford, Ithaca, Manchester (NH), Providence, Rochester (NY), Syracuse, Wilkes-Barre/Scranton Seasonal: Nantucket	C

United Express operated by ExpressJet	Albany (NY), Asheville, Atlanta, Baltimore, Boston, Buffalo, Burlington (VT), Charleston (SC), Charlotte, Cincinnati, Cleveland, Columbia (SC), Columbus (OH), Dayton, Des Moines, Detroit, Fayetteville (AR), Grand Rapids, Greensboro, Greenville/Spartanburg, Halifax, Indianapolis, Jacksonville (FL), Kansas City, Knoxville, Louisville, Madison, Manchester (NH), Memphis, Milwaukee, Minneapolis/St. Paul, Moncton, Montréal–Trudeau, Myrtle Beach, Nashville, Norfolk, Oklahoma City, Omaha, Ottawa, Pittsburgh, Portland (ME), Providence, Québec City, Raleigh/Durham, Richmond, Rochester (NY), St. John's, St. Louis, Savannah, Syracuse, Toronto–Pearson, Tulsa, Washington–Dulles, Washington–National Seasonal: Traverse City	A, C
United Express operated by Republic Airlines	Albany (NY), Baltimore, Boston, Buffalo, Burlington (VT), Columbus (OH), Myrtle Beach, Norfolk, Pittsburgh, Portland (ME), Providence, Raleigh/Durham, Syracuse, Toronto–Pearson, Washington–Dulles, Washington–National	C
United Express operated by Shuttle America	Atlanta, Austin, Baltimore, Boston, Buffalo, Burlington (VT), Charlotte, Chicago–O'Hare, Cleveland, Columbus (OH), Dallas/Fort Worth, Des Moines, Detroit, Halifax, Hartford/Springfield, Indianapolis, Jacksonville (FL), Kansas City, Minneapolis/St. Paul, Montréal–Trudeau, Nashville, New Orleans, Norfolk, Omaha Pittsburgh, Raleigh/Durham, Rochester (NY), St. John's, St. Louis, Toronto–Pearson, Washington–Dulles, Washington–National, West Palm Beach Seasonal: Fort Myers, Miami, Myrtle Beach	A, C
US Airways	Charlotte, Phoenix	A
US Airways Express operated by Mesa Airlines	Charlotte	A
US Airways Express operated by Piedmont Airlines	Philadelphia	A
Virgin America	Los Angeles, San Francisco	A
Virgin Atlantic	London–Heathrow	B