



# **Teterboro Airport**

## **2013 Sustainability Report**

**THIS PAGE IS INTENTIONALLY LEFT BLANK**

# Table of Contents

## Our Airport

About this Report.....	A
Letter from the Manager.....	1
What Sustainability Means to Us.....	2
Organizational Profile.....	4
Economic Performance.....	6
Management & Governance.....	8

## Sustainability Indicators

Operational Efficiency.....	13
Climate Change Resilience.....	16
Air Quality & Greenhouse Gases.....	19
Solid Waste Management & Recycling.....	23
Community Outreach.....	25

## Appendix

Appendix A: GRI Disclosures and Sustainability Metrics.....	27
---	----

## About this Report

This Sustainability Report is the first to be published by Teterboro Airport (TEB). 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.

No restatements of information provided in earlier reports are in this report, due to it being the first report for the airport. There are no significant changes to report or airport from previous reporting periods

A table identifying location of Standard Disclosures is in 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:  
225/233 Park Avenue South  
New York, New York, 10003  
United States

Teterboro Airport is located at:  
90 Moonachie Avenue  
Teterboro, NJ 07608  
United States

The primary contact in regard to content in this report is:  
Nathaniel Kimball  
Airport Environmental Specialist  
Aviation Department, PANYNJ  
Email: [nkimball@panynj.gov](mailto:nkimball@panynj.gov)  
Phone: (212) 435-3783  
United States

This report is a progress report covering activities completed under the Sustainable Management Plan completed for TEB 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 most 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 and AvPorts controlled activities within Teterboro 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 Manager

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

With timeframes assigned, responsibilities delegated, and more than 20 initiatives underway, we have come a long way. This report will outline the progress we have made toward the goals and targets laid out in the Sustainable Management Plan. To name a couple of major achievements, 2013 saw the rollout of an upgraded recycling program for our offices, the collection of important sustainability metrics, and a major flood protection structure for our airfield lighting vault.

Since the publication of our sustainability plan, we have seen first-hand that climate risks are becoming a major consideration for coastal airports such as TEB. 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 to protect our assets from future climate risk.

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. Our efforts will improve our relationship with our passengers, employees, the community, and the environment.

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. The airport team will continue developing cutting-edge solutions that will help achieve our goals and targets outlined in our sustainability plan.



**Renee Spann**  
Manager  
Teterboro Airport



## 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 TEB 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 TEB.

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 five categories are the main focus areas for this sustainability report. These are the same focus areas used in TEB’s 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. Air Quality and Greenhouse Gases 
4. Solid waste management and recycling 
5. Community outreach 

## Organizational Profile



**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.

The Port Authority has owned TEB since 1949, leasing the property to private companies for a period of time until the agency reassumed full responsibility for Airport operation in 2000. TEB is the oldest operating airport in the New York and New Jersey metropolitan area, only 12 miles from downtown Manhattan. Designated by the Federal Aviation Administration (FAA) as a reliever airport, TEB's focus is on minimizing general aviation air traffic from the Port Authority's commercial airports, thus alleviating congestion. Today, Teterboro Airport continues to play a vital role in the aviation interests of the region.

The Port Authority, in conjunction with a contract operator (currently AvPORTS), operates the Airport as a general aviation facility. In addition, support services are provided by the Port Authority's Aviation Department Central Office, which synchronizes certain tasks and responsibilities for all Port Authority airports. Port Authority personnel who are assigned to TEB airport oversee the contract operator, and coordinate directly with Aviation Department Central Office staff, the FAA, and industry and community leaders. The Port Authority is responsible for setting policy and managing the operating budget, capital plan, property development and community relations. AvPORTS is responsible day to day operations and maintenance. AvPORTS currently has 37 full-time employees assigned to work at the Airport.

TEB consists of 827 acres—498 acres are for aeronautical use (including aircraft hangars, maintenance and office facilities) and 329 acres are undeveloped. There are five fixed-based operators (FBOs) at TEB, including Atlantic Aviation, Landmark Aviation, Jet Aviation, Meridian, and Signature Flight Support. Tenants are responsible for (1) maintenance and operation of facilities that they own or operate, (2) aircraft traffic on individual aprons, (3) all deicing of aircraft, (4) complying with Port Authority guidance and policy, (5) complying with FAA regulations and (6) fueling aircraft. Tenants must meet or exceed the Port Authority's strict sustainable building guidelines for all construction and leasehold improvements.

## Airport facilities

### Buildings

- Twenty-three hangars on the airport have a total area of approximately 572,000 square feet.
- One large office building located at 90 Moonachie Avenue.
- Additional office spaces and shop space have a total area of 252,000 square feet.
- The airport has an operations building, maintenance facility and three fuel farms.
- Aircraft rescue and fire fighting (ARFF) operations are also located at the airport.

### Control Tower

The current control tower, built in 1975, which is open 24 hours a day, was constructed on the east side of the airport by the FAA. A new tower is in design and expected to start construction in 2018.

### Runways

Runway 6-24 is 6,013 feet long and 150 feet wide and runway 1-19 is 7,000 feet long and 150 feet wide. Runway 6-24 underwent a complete rehabilitation in 2009, and Runway 1-19 was rehabilitated in 2011.

All runways have High Intensity Runway Edge Lights, Centerline Lights, Threshold lights, and Runway End Identification Lights. Both Runways 6 and 19 have Instrument Landing Systems (ILS). Runways 19 and 24 have Precision Approach Path Indicators (PAPIs) and Runway 1 has a Visual Approach Slope Indicator (VASI).

Runway 1 is the preferred noise abatement runway for arrivals and Runway 19 is the preferred noise abatement runway for departures.

### Taxiways

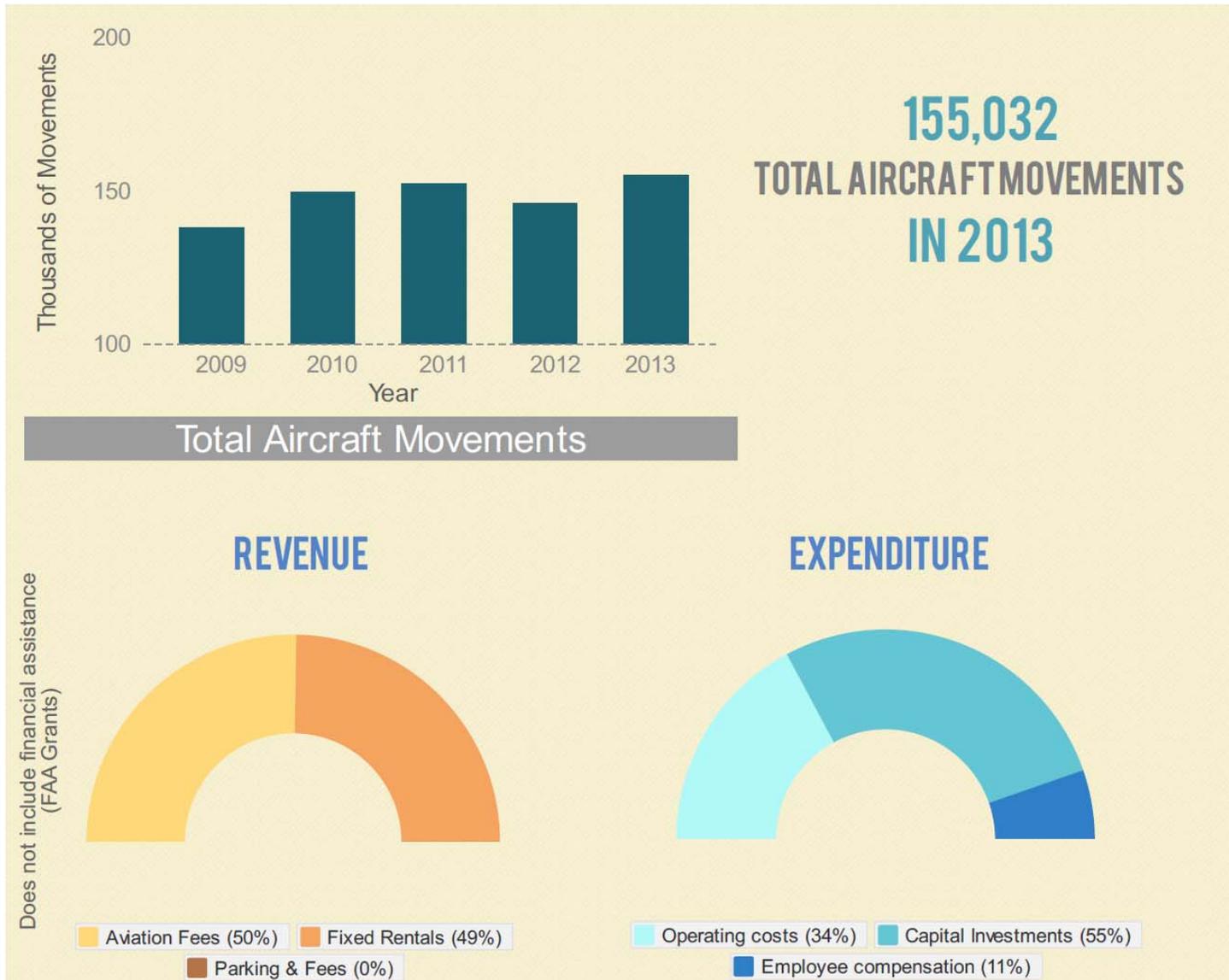
Approximately 5.7 miles of taxiways exist at the airport. Most are 60 feet wide, and many are equipped with centerline lights and edge lighting systems.

### Other Facilities

The Aviation Hall of Fame of New Jersey is on the airport grounds. Founded in 1972, it is the first state aviation hall of fame in the nation, honoring the men and women who brought outstanding aeronautical achievements to the state. The recently expanded museum offers visitors an opportunity to view historic air and space equipment and artifacts, photographs, fine art and an extensive model collection.

Teterboro Airport became the first civilian airport to receive International Organization for Standardization (ISO) certification for its Quality Management System (QMS). The QMS is currently registered as conforming to the requirements of ISO 9001:2008. The ISO establishes standards for ideal business practices and is recognized worldwide. Certification requires reviews of airport management's procedures and responsibilities, corrective and preventative actions, and internal quality control measures.

# Economic Performance



Teterboro Airport supports more than 14,900 jobs paying \$868 million in annual wages, and generates more than \$2.3 billion in annual sales activity. Teterboro Airport is a major economic engine in Bergen County. More than 1,800 men and women work at Teterboro Airport.

TEB is a general aviation airport and does not serve commercial or cargo aviation needs. However, it does serve as the primary receiving point for hearts and other organs used for life-saving transplant operations at hospitals and other medical facilities in the region. The airport primarily serves as the hub for general aviation in the New York/New Jersey region. Both light and heavy general aviation aircraft use the facility, which has the ability to receive international flights with the presence of US Customs and Border Protection facilities. TEB takes the burden off the main commercial airports in the region for processing general aviation activity.

TEB engages with a wide variety of community, governmental, and other stakeholders to ensure that community and regional needs are considered in the context of airport business operations.

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

In 2013, the Port Authority contributed \$7.1 million to soundproof Henry P. Becton High School from aircraft noise and received a reimbursement of \$5.7 million, at a rate of 80% through AIP.

The Port Authority also engaged in various construction projects, including taxiway improvements, and the relocation of Redneck Avenue. The FAA contributed \$7.6 million to these projects.

TEB suffered major damage from flooding caused by Superstorm Sandy on October 29, 2012. The airport has since taken several efforts to mitigate risks from flooding and extreme storms. More detail on these projects is provided in the Climate Change Resilience section of this report.

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 not 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.

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 on the next page.

## 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.

The Port Authority consults regularly with external stakeholders on a variety of issues. Port Authority stakeholders at TEB include regulators, municipalities, community groups, airport tenants, employee unions, and others. The Port Authority engages with any stakeholder group that is affected by the Port Authority's operations. At TEB, the major stakeholder groups handle issues such as airport operations and leasing, economic development, noise, air quality, and other issues. A description of stakeholder groups regularly in contact with the airport and stakeholder programs is below.

### **Teterboro Aircraft Noise Abatement Advisory Committee (TANAAC)**

Teterboro Airport is one of a handful of airports with an enforceable and stringent noise limitation program. Teterboro Airport's program became effective in 1987, three years before the 1990 Aircraft Noise and Capacity Act. This act severely limits an airport's ability to restrict aircraft based solely on subjective noise criteria.

Under Teterboro's program, if an aircraft receives three noise violations within a two-year period, it is prohibited from using Teterboro. When the permanent noise monitoring system was installed, a unique committee, the Teterboro Aircraft Noise Abatement Advisory Committee (TANAAC), consisting of the airport operator, elected officials from the fourteen neighboring towns, FAA representatives and airport users, was formed to oversee noise abatement. This group has served as an example for other airports to follow, proving that airports can co-exist and be sensitive to the needs of their surrounding neighborhoods.

## Soundproofing Schools

Since 1983, nearly \$400 million in federal and Port Authority funds have been committed to soundproofing 77 schools in communities surrounding Port Authority airports. As part of this voluntary program, the Port Authority has committed the funding and scheduled soundproofing measures for six schools near Teterboro Airport: H. P. Becton High School, Bergen County Vocational School, Jackson Avenue School, Memorial School, St. Francis School and Sylvan School.

## TEB 5K Run

Teterboro sponsors an annual 5K "Runway" Run to benefit the Bergen County United Way.

## Playing Fields

The airport provides playing fields to local municipalities, who use the fields for local softball, baseball, and other sports team needs.

## TEB Community Benefit Fund

The airport community sponsors an annual Golf Scholarship Tournament to raise funds for local high school seniors from Teterboro, Little Ferry, Moonachie, Secaucus, Rutherford, Hackensack, Hasbrouck Heights, Lodi, Bogota, Carlstadt, Ridgewood Park, Maywood, South Hackensack, and Teaneck to use towards their continuing education in the fields of aviation and aerospace, engineering, mathematics, and science.

## Earth Day

Each year on Earth Day, the airport community reaches out to the neighboring towns to help plant trees, clean up roadside trash and waste, provide recycling opportunities, and promote green practices.

## Career EXPO

Teterboro Airport hosts a Career Day Event for the communities in and around Teterboro Airport. The expo is designed to provide students with an opportunity to learn about aviation-related careers. The Port Authority spearheads the Expo with the support and assistance of the of the Teterboro Airport Community including the Fixed Based Operators (FBOs) and federal agencies as well as colleges, trade schools and a host of other businesses, organizations and countless volunteers.

Stakeholders involved in the above activities include, but are not limited to:

- New Jersey Department of Environmental Protection (NJDEP)
- Federal Aviation Administration Eastern Region
- Federal Aviation Administration-New York District Office
- Teterboro Aircraft Noise Abatement Advisory Committee (TANAAC) and member municipalities
- Teterboro Users Group (TUG)
- Fixed Base Operators
- Air Services Development Office
- Council for Airport Opportunity
- New Jersey Aviation Hall of Fame & Museum
- NJ 9th congressional district
- Other tenants
- And many more

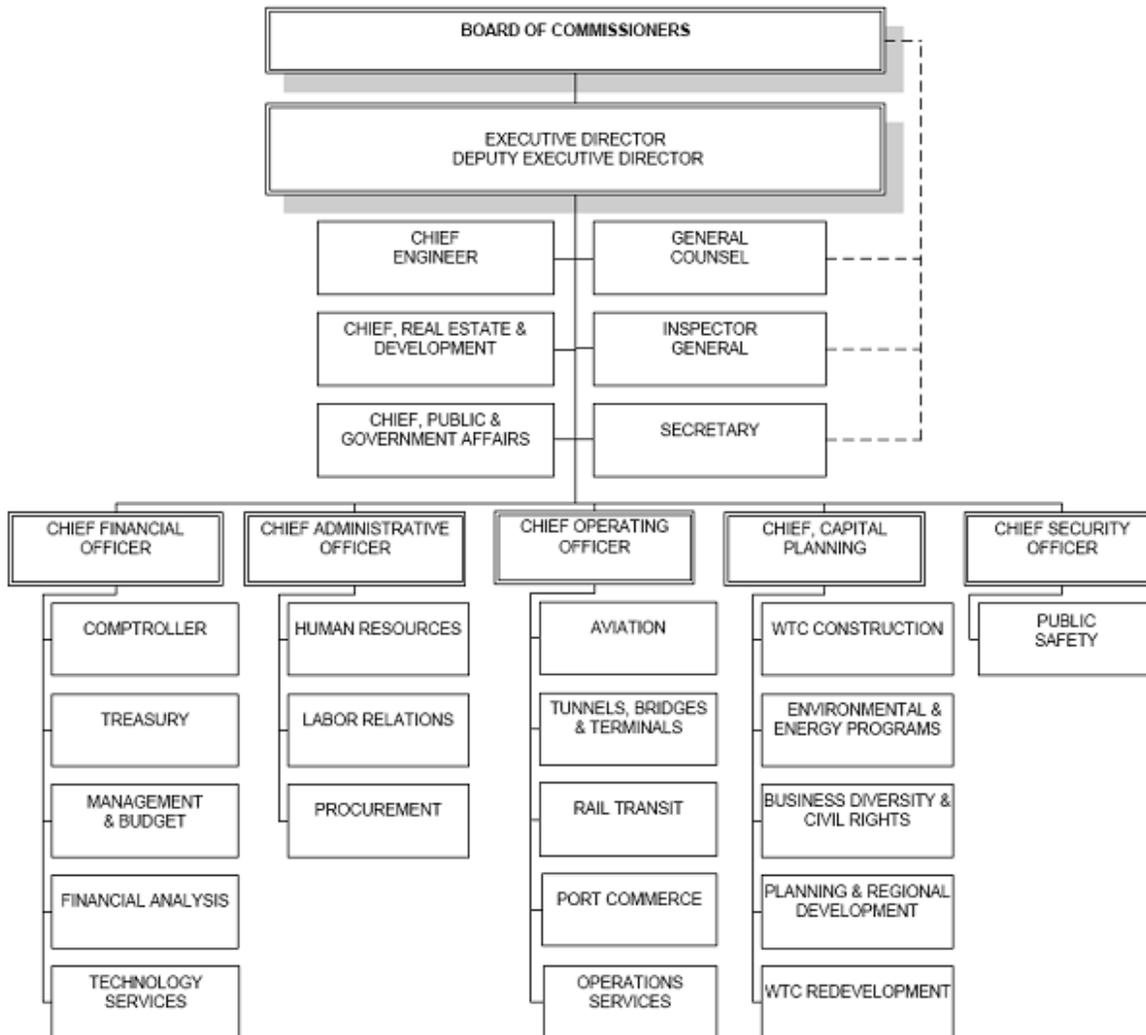
The Port Authority is also engaged in several industry groups and organizations including, but not limited to:

- Airports Council International-North America
- National Alliance to Advance NextGen (co-founder)
- American Association of Airport Executives
- US Green Building Council
- Transportation Research Board
- National Business Aviation Association (NBAA)
- National Air Transportation Association (NATA)

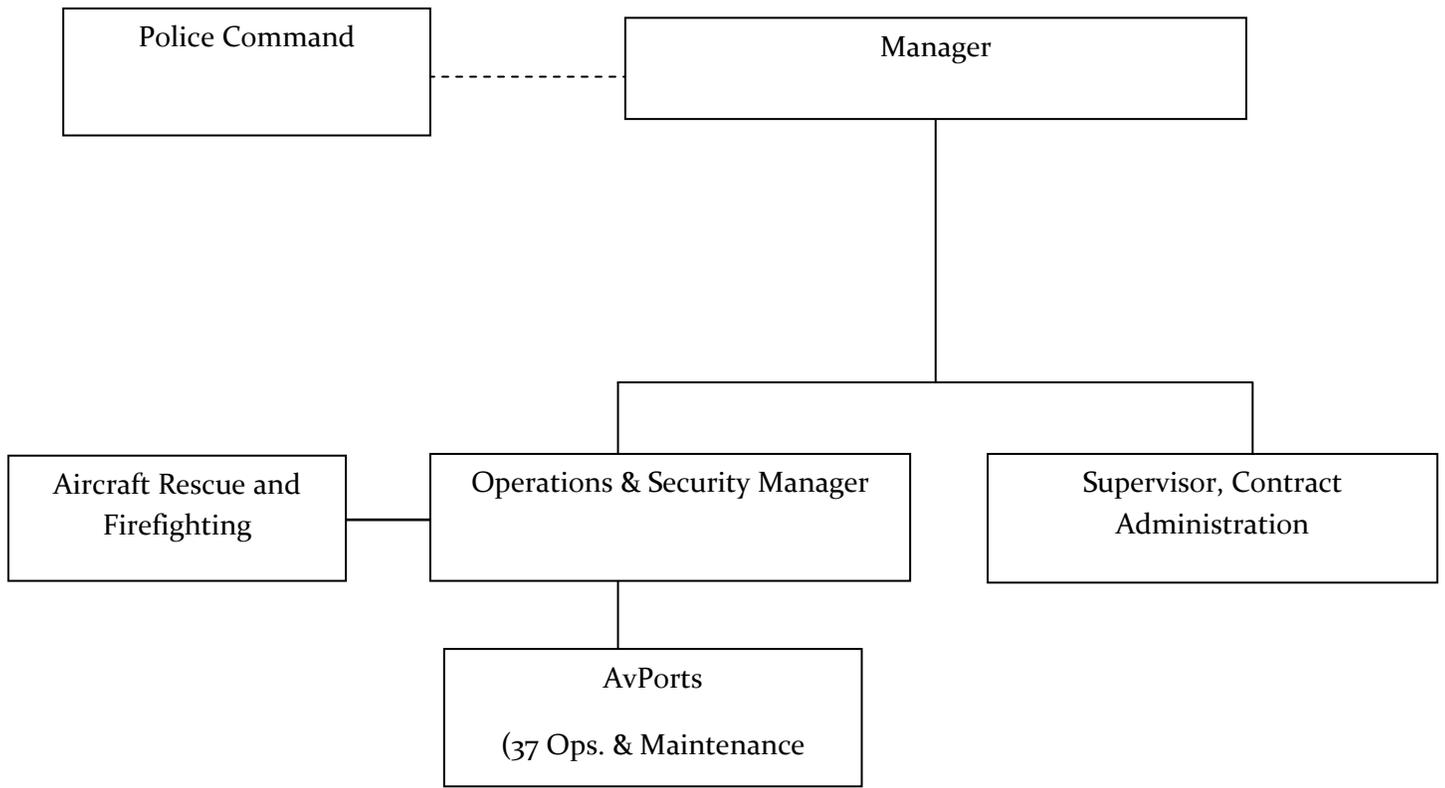
## Port Authority Organizational Structure

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.

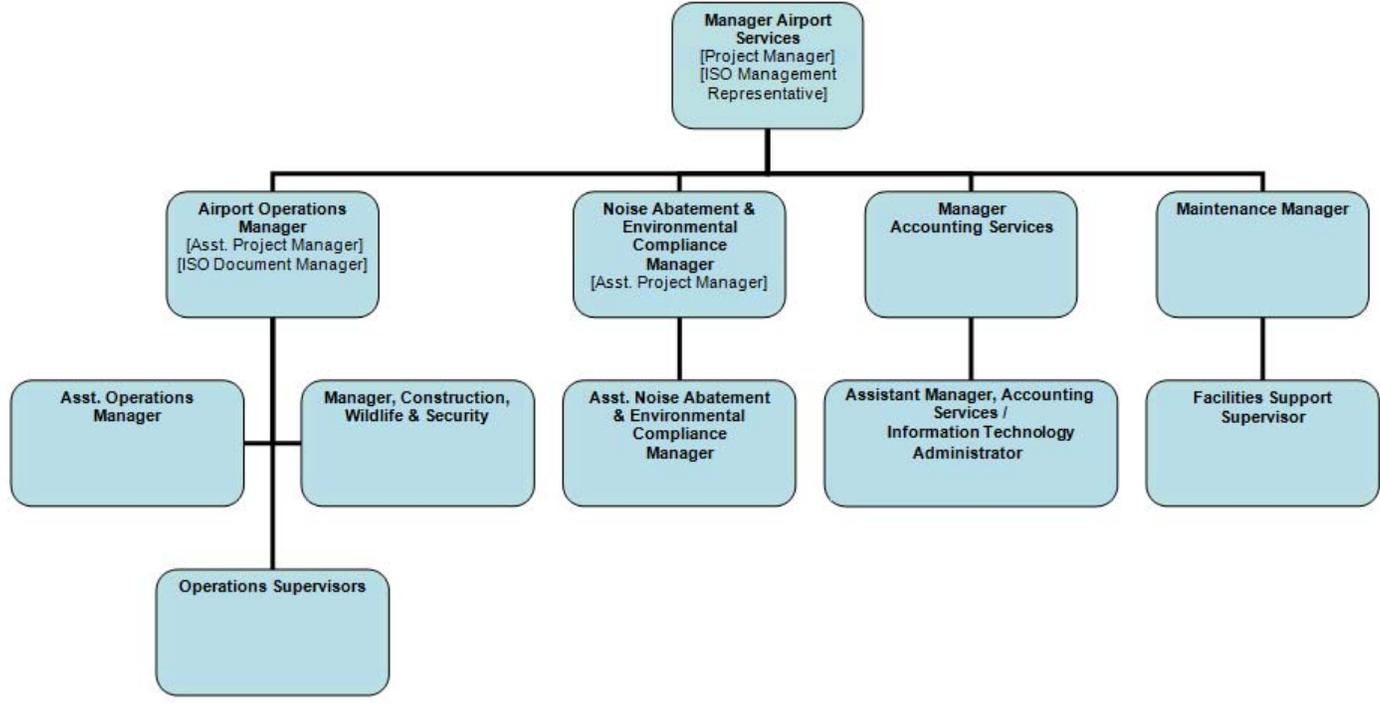
### THE PORT AUTHORITY OF NEW YORK AND NEW JERSEY Organization Chart



As mentioned above, daily operations and maintenance needs are contracted to AFCO AvPorts LLC. The airport and AvPorts organizational charts are on the next page.



**AvPORTS'**  
**TETERBORO AIRPORT PROJECT**  
**MANAGEMENT LEVEL ORGANIZATIONAL CHART**





## **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**

Teterboro Airport identified a number of initiatives to increase operational efficiency relating to regional air traffic, delays, and jet fuel use; as well as Port Authority operations and internal cost containment. Operational efficiency has benefits that cross cut other focus areas within the sustainability plan, so many of the initiatives within the Air Quality and Greenhouse Gas and Waste Minimization and Recycling parts of this report will contribute towards achieving operational efficiency targets. Progress on our targets and initiatives is detailed on the following pages.

# Operational Efficiency

## Target

Reduce aircraft idling, taxiing, and approach times.

### Coordinate with FAA to identify and implement modified approach procedures

Due to congested airspace in the vicinity of TEB, some approaches to the airport are several miles longer than necessary, causing excessive aircraft fuel use. Additionally, some approaches overfly areas sensitive to aircraft noise. To minimize the amount of fuel and approach times, the Port Authority is working with FAA to support the development of procedures that will demonstrate environmental benefits including fuel savings, emissions reductions, and area noise reductions. This collaboration has resulted in four new procedures that will be implemented at TEB in 2014 that add GPS and poor-weather capability to existing flight paths. This will help reduce congestion, delays, and instances where aircraft are delayed in-flight or need to divert due to weather. While not an approach procedure, the FAA published a modified Dalton 2 departure procedure in 2013 that can help reduce congestion at TEB when Newark Liberty International Airport is operating on a southerly flow.

### Encourage the FAA to implement automatic aircraft releases

Aircraft waiting for a departure release consume fuel while idling. Implementing automatic release procedures provides advance notification of anticipated departure times for pilots. Given a defined wheels up time, pilots can minimize fuel burn by delaying engine start until the appropriate time. Over the course of 2013, the FAA has dramatically increased the percentage of automatic aircraft releases. Delays due to the individual aircraft releases have dramatically decreased over the last ten years as the percentage of automatic releases increases. The Port Authority is working with FAA to optimize automatic release procedures to further reduce delays caused by individual aircraft releases.

### Work with the FAA to initiate measures that promote NextGen agenda

As part of the FAA's program of enhanced safety and efficiency at US airports, the Port Authority will work with the FAA to implement NextGen air traffic control technologies. With NextGen, the FAA plans to make air travel more convenient and dependable, while maximizing the safety and security of each flight. Specifically, the Port Authority will coordinate with the FAA to further refine departure and approach procedures to maximize fuel savings using advanced navigation and weather information systems. The FAA estimates that NextGen improvements will reduce delays 38 percent by 2020 throughout the country. The new procedures described above help advance the rollout of cockpit technologies that aid aircraft operations in poor weather and encourage operators to equip their cockpits with the latest technology. The Port Authority supports this effort through the *NextGen Now!* effort, part of the Port Authority's National Alliance to Advance NextGen.

## Target

Improve the efficiency of airport utility use by 10% for electricity and by 5% for natural gas by 2015 compared to the 2009 baseline.

### Evaluate roofing projects for potential of solar/green roof/white roof installation in accordance with the Port Authority's Sustainable Design Guidelines

White roofs provide benefits that may allow decreases in ambient air temperatures. White roofs can reduce summer energy use as well as reduce the total urban heat island effect. TEB has installed a 137,000 square feet white roof on its 90 Moonachie Avenue administration building. It was completed in December 2013, with an estimated cost of \$4 million. The top surface of the roof, the cap sheet, has a white manufactured granular finish with a solar reflective coefficient (SRC) > 78. The SRC indicates that the roof reflects most of the heat and reduces building solar gain in the summer. The R-value, which denotes the capacity of an insulating material to resist heat flow, has been increased to an average of 80, whereas prior to the white roof installation, the R-value was 8. This increased R-value reduces summer cooling and winter heating bills by increasing the insulation capacity of the roof. The roof



replacement for Hangar 1, the Port Authority's operations and maintenance facility, is in planning stages. Hangar 1's new roof surface will be a cool white surface, similar to 90 Moonachie's roof.

#### **Future Initiatives:**

##### **Establish more extensive videoconference/WebEx/shared document systems for intra- and inter-facility communication**

The use of tele- and videoconferencing technology allows TEB employees to save fuel and reduce emissions since it will reduce the need to travel to other facilities. TEB interacts with departments located in Newark, NJ; Manhattan; Jersey City; and other airports. The airport has videoconferencing capability when an in-person meeting is not necessary. The airport has integrated Port Authority shared document systems between facilities; but this has not extended to AvPorts employees. In 2014, the airport will work with Port Authority Technology Services to determine how to further streamline document sharing systems.

##### **Implement efficient turf management procedures**

TEB has extensive turf cover on the airfield and in surrounding property. These areas are seeded to make TEB's grounds aesthetically pleasing to the surrounding community and mowed to minimize potential wildlife strikes by aircraft. The turf is maintained to be a certain height; the height is fixed and established in the beginning of the season. TEB utilizes set mowing heights and consistent planting times. These consistent planting times ensure that planting happens during times when minimal water and fertilizer use is necessary to help seeds germinate and encourage plant growth. TEB will focus on communicating these procedures to tenants and ensuring that the current practices are effective moving forward.

##### **Conduct analysis of environmental and operational benefits of a perimeter road project and construct perimeter road around airport**

Ground vehicles should not impede the flow of aircraft traffic on the airfield. Vehicles travelling between certain FBOs and airport buildings must drive either on public roads or active taxiways, and cross active runways. The Port Authority will conduct an analysis to examine the impact of airport vehicles on the airport's operational efficiency as well as traffic and congestion impacts that the vehicles cause in the surrounding community. The construction of a perimeter road following the Port Authority's Sustainable Infrastructure Guidelines, should reduce fuel use, reduce air emissions and increase employee productivity for airport staff. The Port Authority's plans include a patrol road. This should reduce runway incursion hazards, improve airfield safety, efficiency, and provide for better wildlife control. The project is underway. This improvement will be built in conjunction with construction of a new runway safety area for Runway 1.

##### **Construct additional taxiways and holding bays to ease congestion and idling on the airfield**

Minimizing the amount of time aircraft spend waiting for takeoff and moving around the airfield is an important step toward developing a sustainable airport that facilitates the reduction of fuel consumption and emissions. Furthermore, reducing taxiway congestion is an important safety management consideration. The Port Authority believes that constructing additional taxiways and developing improved turning areas and holding areas will allow for increased airfield efficiency and should be designed and built following the Port Authority's Sustainable Infrastructure Guidelines. The Port Authority authorized a \$27.6 billion capital plan on February 19, 2014. The plan includes improvements to Taxiway B that will facilitate more efficient aircraft operations as well as potential for runway incursions.

*Inundated runways at TEB during Hurricane Sandy*



## Climate Change Resilience

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

### **Current Activities**

On October 29, 2012, Superstorm Sandy dealt a blow to all Port Authority facilities as a thirteen foot storm surge inundated large parts of the region. TEB lies in a tidal estuary and elevations of critical equipment range from just 3 feet to about 8 feet above mean sea level (NAVD 88). The airport experienced extensive inundation during the storm, and large areas of the airfield and landside areas were flooded. Despite these setbacks, the airport was back up and running less than three days after the storm hit, due to the efforts taken by staff on the ground. Unfortunately, several buildings and extensive amounts of electrical infrastructure sustained damage, indicating the need for protective measures against future storms.

The Port Authority is an active participant in New York City and New York State climate change efforts. As part of this involvement, the Port Authority collaborates with the New York Climate Action Council and the NYC Climate Change Adaptation Task Force to identify actions and proposed strategies for climate change adaptation. The Port Authority is committed to participating in these discussions in both New York and New Jersey as they develop, and will work collaboratively with municipalities and state governments on the issue of climate change adaptation. The Port Authority is

engaged in developing lists of at-risk infrastructure at all of its facilities. The Port Authority has committed to evaluating the effects the following climate change impacts will have on new construction and major rehabilitation projects at its facilities so that the project scopes anticipate climate change effects:

- Increase in mean annual air temperature
- Increase in mean annual precipitation
- Increase in sea level and associated storm surge

TEB did not wait for the next storm to hit before taking action to protect its most vulnerable infrastructure. In 2013, the airport installed a protective flood barrier around three critical assets: the airfield lighting vault, which controls electrical circuitry for airfield lighting; an emergency generator; and a diesel tank used for fueling critical airport vehicles. The airport incorporated removable AquaFence© to allow access to the facilities when needed.

Through ongoing flood risk assessments (described below) the airport is evaluating how to minimize risk to critical assets in the future.



*Flood Barrier Surrounding Airfield Lighting Vault and Diesel Tank, TEB*

# Climate Change Resilience

## Target

By December 2014, have in place a site-specific risk assessment and climate change adaptation action plan for TEB that addresses physical and operational resiliency related to potential climate change impacts  
The sustainability plan established three initiatives related to this target:

**Modify cost tracking mechanisms for potential climate change impacts**

**Implement pilot initiative to assess potential TEB capital projects for their sensitivity to climate change impacts**

**Perform stormwater study for climate change/ flooding**

### ***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.

### ***Capital Project Resiliency Initiatives***

TEB is also participating in an agency effort to develop Resiliency Design Guidelines and a comprehensive agency-wide policy addressing resiliency in all capital projects. Capital projects must comply with New Jersey State regulations regarding flood risk, and the Port Authority will also assess the relative criticality of an asset; as well as the useful life and expected risk from sea level rise.

### ***External Funding for Resilience Projects-Future Initiatives***

Since Superstorm Sandy, several pathways for resilience funding have been established by FEMA and other agencies. The Port Authority's Storm Mitigation and Resilience Office is leading the effort to identify immediate candidate projects for external funding.

The FEMA Public Assistance Program provides funding for hazard mitigation of damaged elements of a facility to reduce the potential for damage from a future disaster event. Capital projects being investigated include elevating generators, batteries, exhaust fan louvers, and other equipment above the anticipated flood elevation. Future flood mitigation strategies for the airfield lighting vault include sealing water entry points at concrete and communication conduits at manholes, installing sump pits, elevating electrical conduits, constructing plug valves on floor drains, and coordinating with PSE&G (the local utility) to elevate a switch and transformer west of the lighting vault.

404 Mitigation funds are used to facilitate hazard mitigation for locations that have been declared part of a Federal Disaster Declaration region. The 404 program for TEB is administered by the State of NJ. While the Port Authority has submitted proposals for 404 projects for TEB, at the time of writing for this report there have been no actions to approve or implement the proposed projects. They should be considered potential flood mitigation strategies, and are detailed below.

#### ***Upgrade the Resiliency of Teterboro Airport Back-up Electrical and Power System***

This proposal includes installing four generators for two operationally critical buildings and two sanitary lift stations.

#### ***Upgrade the Teterboro Airport Stormwater Drainage System***

This flood mitigation element includes recommendations outlined in the existing Teterboro Airport Stormwater Drainage Study in overall airport planning efforts.



## Air Quality and Greenhouse Gases

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

### Background

TEB has an important role related to regional air quality as well as greenhouse gas (GHG) emissions. Air travel is a significant contributor to worldwide GHG emissions and airports have a role in addressing this impact. Additionally, airports affect regional air quality through criteria air pollutant emissions from aircraft engines, airport vehicles, buildings, and other ancillary activities.

To address criteria air pollutant emissions, the Port Authority has conducted criteria pollutant inventories for TEB since 2006. In addition, the Port Authority worked closely with the New Jersey Department of Environmental Protection (NJDEP) to complete a detailed air quality evaluation at TEB, the results of which were published in 2008. The study results helped identify TEB's contribution to local air quality effects and enhance the activities aimed at reducing emissions from TEB operations. Annual GHG emission inventories are conducted to understand the contributions from various sources.

In addition to the inventories, studies and policies, the Port Authority and its tenants have implemented several 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, are successful in reducing emissions associated with energy and fuel use at TEB. Between the switch to more efficient aircraft and these initiatives, total facility CO2 emissions have decreased by 12.3% since 2009. The following initiatives have already been implemented at TEB:

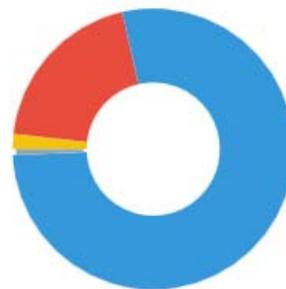
- Annual inventories of criteria air pollutant and GHG emissions
- Completion of an air quality monitoring study
- Use of hybrid-electric light duty vehicles
- Use of biodiesel for all heavy duty diesel equipment
- LED lighting for Taxiway A
- Automatic light controls to increase energy efficiency
- Adjusted temperature set points to reduce energy usage (tenant initiative)



**12.3% REDUCTION**

**IN GREENHOUSE GAS EMISSIONS**

Compared to 2009 Baseline



Buildings (2%)

Airport Vehicles/Ground Support Equipment (20%)

Landings and Takeoffs (78%)

Aircraft Auxiliary Power Units (1%)

**2012 GHG Emissions Sources**

Source: 2012 GHG Inventory, PANYNJ

## Target

Reduce Scope I and II greenhouse gas (GHG) emissions from all buildings and vehicles by 10% by 2016 compared to the 2006 baseline inventory, on a normalized basis

### Pursue all paths for energy efficiency using outside funding

The Port Authority has explored options for improving energy efficiency using available outside funding to deliver financial and environmental savings to TEB. Incentives that are available from state, utility and local funding resources will be used to complete energy projects. The Port Authority is participating in the 2012 Direct Install program led by PSE&G. PSE&G Direct Install provides on-bill financing for energy efficiency initiatives. In 2013, utility upgrades began for Hangar 1 to replace and retrofit lighting fixtures and heating, ventilation, and air-conditioning units with energy efficiency units. This will result in energy and cost savings, as well as a greener footprint, with the utility absorbing 80 percent of the costs. The rest of the costs will be paid by the Port Authority via on-bill financing, so that there are net savings from day 1.

### Develop standardized methods for recording, tracking, and benchmarking energy use

Measuring and understanding energy end uses in buildings and on the airfield is an important first step to achieving energy use reduction goals. The Port Authority has developed a method of recording and tracking energy used at all Port Authority-controlled facilities at TEB. The Port Authority has entered utility data into the U.S. Environmental Protection Agency's (EPA) Portfolio Manager, an online tool that aids in measuring energy consumption.

Portfolio Manager allows users to understand how energy efficient a building space is, and how it compares with similar buildings nationwide. It evaluates the Energy Use Intensity (EUI) of a space based on the total energy use per square foot. These buildings are compared against average efficiency ratings for similar buildings. However, because most of TEB's buildings are not characterized as the space types offered in Portfolio Manager, a rating cannot be provided. Entering utility data does allow us to benchmark energy usage against our own facilities to see change throughout time. This tool will also aid in understanding energy end uses in buildings and track efficiency investments. In 2013, the Port Authority entered utility data and building characteristics for Buildings 27, 72, 73 and Hangar 1.

## Target

Reduce Airport emissions of particulate matter and NO<sub>x</sub> by 5% and 15% by 2016, respectively.

## Target

Reduce Port Authority-controlled use of energy at the Airport by 5% by December 2015.

### Establish an airport-wide anti-Idling program for Port Authority and tenant vehicles

In cooperation with tenants, the Port Authority has developed and implemented a program to reduce the unnecessary idling of vehicles at TEB. The goal is to reduce fuel consumption and greenhouse gas emissions while improving local air quality. The program requires that diesel or gasoline vehicles cannot idle for more than three minutes while on Airport property, unless in an emergency. The guidance covers Port Authority contractor, and tenant ground vehicles both on the airside and landside of TEB and is consistent with the State of New Jersey laws N.J.A.C 7:27-14 and N.J.A.C. 7:27-15. AvPORTS employees; Port Authority employees operating vehicles at TEB; and tenants were briefed on the policy. Formal training was provided for staff, managers and tenants in a formal training presentation. An Airport Manager's Bulletin was sent to all tenants with signage placed at Port Authority facilities. The guidance was posted on the Teterboro Users Group (TUG) website. Signage is being currently developed for the tenant facilities. Anti-idling stickers are also placed on the steering wheels of vehicles to remind drivers of the policy.

### Future Initiatives:

#### Use outside funding to continue/expand the alternative fuel fleet vehicle program

The Port Authority owns a fleet of forty-six vehicles at TEB. Twenty two vehicles are on-road vehicles and the remaining twenty-four vehicles are off-road vehicles. Six of the vehicles are hybrid-electric. 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 replace the existing vehicles with efficient alternative fuel vehicles, and pursue vehicles that minimize GHG emissions. The Port Authority will research existing funding mechanisms and apply for grants to purchase alternative fuel vehicles.

**Develop and implement measures to reduce vehicle fuel use**

# Waste Minimization and Recycling

Goal: Minimize the generation of solid waste and recycle waste to the maximum extent possible

## Background

At TEB, the FBOs generate the majority of solid waste. Certain FBOs have instituted the following activities to recycle and reduce waste:

- Segregate waste streams on site for recycling (paper, bottles and cans, cardboard)
- When feasible, segregate newspapers taken off aircraft for recycling.
- Send cardboard box packaging from outside catering companies back to flight kitchen or catering facility to minimize this waste stream on site

## Target

Increase recycling and landfill diversion by 10% by 2015 compared to the 2009 baseline.

### Set up and run annual electronic waste (e-waste) collection events for employees

Electronic waste is collected at TEB in accordance with New Jersey and federal law, and the Port Authority is committed to expanding e-waste collection. In 2013, the airport held an annual e-waste collection event for employees in conjunction with Earth Day activities. This collection activity will keep heavy metals and other contaminants from entering the environment.

### Perform a waste audit to determine the recycling opportunities at TEB

The Port Authority performed a waste audit at TEB in October 2012 and follow up in October 2013 covering Port Authority operations at the airport. In addition to understanding the breakdown of materials discarded on a daily basis, the Port Authority was able to verify tonnage reports from the waste hauler and determine how best to adjust the waste pick up schedule to reduce hauling fees. The Port Authority found that there was an opportunity to recycle almost 50% of the Port Authority's waste at the airports if office and pantry recycling programs were expanded.

The Port Authority took action based on the results of the audit and implemented a new recycling program for all office, maintenance, and public areas in April 2013. TEB initiated the use of new, standardized recycling signage that is now being rolled out to other Port Authority facilities. The new recycling set up for all areas is outlined below. Analysis of our existing metrics does not reflect the improvements that have been made and AvPorts is investigating the waste and recycling vendor's reporting framework. The Port Authority and AvPorts will be investigating the accuracy of the reported waste and recycling metrics.

<b>Recycling Recommendations</b>	<b>Bins</b>	<b>Liners</b>	<b>Markings</b>
Deskside	1 black deskside	Clear or black	Trash Only
	1 blue deskside	Clear	Mixed Paper, Bottles, Cans
Pantry	1 Black Slim Jim	Clear or black	Trash Only
	1 Blue Slim Jim	Clear	Mixed Paper, Bottles, Cans
Maintenance Area	1 Black Brute	Clear or black	Trash Only
	1 Blue Brute	Clear	Mixed Paper, Bottles, Cans
Public Space	1 Black Slim Jim	Clear or black	Trash Only
	1 Blue Slim Jim	Clear	Mixed Paper, Bottles, Cans

Recycling Recommendations, TEB, 2012

**Future Initiatives**

**Explore opportunities to consolidate waste and recycling system for FBO and Port Authority waste**

The Port Authority has reached out to FBOs to initiate discussions on how a consolidated waste program at the airport could work. The Port Authority believes that a consolidated waste and recycling contract will allow for significant cost savings for the Port Authority and tenants. Additionally, streamlining waste collection areas will allow for correct sizing and use of waste removal containers and efficient waste removal sequencing, reducing truck traffic and associated emissions on surface roads. These actions will help the Port Authority maximize the recycling rate and minimize the amount of waste entering landfills in the region.



## Community outreach

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

### Background

The Port Authority currently conducts several successful community engagement activities, including the actions listed below:

- TEB has supported Bergen County's United Way by hosting a 5k run; raising more than \$330,000 in 13 years
- The Teterboro Aircraft Noise Abatement Advisory Committee (TANAAC) was created in 1987 and establishes dialogue between the Airport Community and surrounding residential communities. Membership is open to locally elected officials from fourteen neighboring towns. The airport prepares quarterly and year-end reports for TANAAC and conducts quarterly meetings
- The Teterboro Airport Community Benefit Fund raises funds for college scholarships for local students majoring in aviation, engineering or other science-related fields through an annual golf tournament
- 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

# Community Outreach

## Target

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

### Establish a sustainability coordinator role at TEB

As part of the development of this sustainable management plan, TEB has designated a sustainability coordinator. The sustainability coordinator has taken the lead in sustainability program implementation and stakeholder engagement at TEB with support from all airport staff as well as others within the Port Authority.

### Develop an internal and external sustainability communication plan

The Port Authority has developed and implemented a plan to report on sustainability performance to both internal and external stakeholders. The TEB sustainability plan was released in 2012. As part of the sustainability program, a set of key sustainability metrics has been established—the same metrics being reported on in this report. 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.

### Develop and implement sustainability awareness program

In June 2013, TEB released its first Tenant Sustainability Handbook as part of the sustainability awareness program. Recognizing that the roll out of internal initiatives such as a revamped recycling program, waste audit, anti-idling initiative, and energy efficiency initiatives does not impact the whole airport, the tenant handbook provides the tools for tenants to deploy programs outlined in the sustainability plan. The Port Authority is encouraging FBOs to evaluate their waste streams with a goal of consolidated waste removal efforts in the future. Additionally, the Port Authority is working to facilitate programs such as a food donation program that would capture unused flight catering and donate it to area food pantries. The initial tenant sustainability meeting was held in June 2013 and the Port Authority will continue to host discussions on a yearly basis.

## Future Initiatives

### Expand current Earth Day activities

Every year the Port Authority hosts Earth Day celebrations at many of its facilities. Each year on Earth Day, the airport community reaches out to the neighboring towns to help plant trees, clean up roadside trash and waste, provide recycling opportunities, and promote sustainability awareness. TEB staff will expand its Earth Day activities to further promote opportunities for sustainability and community awareness of sustainability issues.

## Appendix

### Section 1. GRI Airport Operators Sector Supplement Disclosures for Level C

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	✓		1
1.2	Key Impacts, Risks, and Opportunities	✓		1
2.1	Name of the organization	✓		A
2.2	Primary Brands, Products, or Services	✓		4
2.3	Organizational Structure	✓		10
2.4	Location of the organization's headquarters	✓		1
2.5	Number of countries where the organization operates	✓		1
2.6	Nature of ownership and legal form	✓		4
2.7	Markets served	✓		4
2.8	Scale of the reporting organization	✓		4
	Number of employees	✓		7
	Number of operations	✓		6
	Net revenues	✓		6
	Size of airport	✓		4
	Number and length of runways	✓		5
	Minimum connection time between flights			N/A
	Number of airlines served			N/A
	Number of destinations served			N/A
2.9	Significant changes during the reporting period	✓		A
2.10	Awards received in reporting period	✓		None
3.1	Reporting period for information provided	✓		A
3.2	Date of most recent report	✓		A
3.3	Reporting cycle	✓		A
3.4	Contact point for questions regarding the report and its contents	✓		A
3.5	Process for determining report content			
3.6	Boundary of the report	✓		A
3.7	State any specific limitations on the scope or boundary of the report	✓		A

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	✓		A
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	✓		A
3.11	Significant changes from previous reporting periods	✓		A
3.12	Table Identifying Location of standard disclosures	✓		Appendix Section 2
3.13	Policy and current practice with regard to seeking external assurance for the report			
4.1	Governance structure of the organization	✓		8
4.2	Is the chair of the governance body also an executive officer	✓		8
4.3	State the number and gender of members of the governance structure that are independent and non executive	✓		8
4.4	Mechanisms for shareholders and employees to provide recommendations to the highest governance structure	✓		8
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	✓		8
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	✓		8
4.8	Internally developed statements of mission or values relating to sustainability	✓		2

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	✓		2
4.13	Memberships in associations (such as industry associations) and/or national/international advocacy organizations in which the organization participates	✓		10
4.14	List of stakeholder groups engaged by the organization	✓		9
4.15	Basis for identification of stakeholder groups with whom to engage	✓		10
4.16	Approaches to stakeholder engagement	✓		10
4.17	Key topics and concerns that have been raised through stakeholder engagement	✓		10
<b>Economic Performance Indicators</b>				
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 Section 2
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 Section 2

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		N/A: General Aviation Airport	
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 Section 2
AO3	Total amount of cargo tonnage			
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			
<b>Environmental Performance Indicators</b>				
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 Section 2
EN4	Indirect energy consumption by primary source.	✓		Appendix Section 2
EN5	Energy saved due to conservation and efficiency improvements			
EN6	Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives			
EN7	Initiatives to reduce indirect energy consumption and reductions achieved			
EN8	Total water withdrawal by source			
AO4	Quality of storm water by applicable regulatory standards.	✓		Appendix Section 2

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 Section 2
EN17	Other relevant indirect greenhouse gas emissions by weight.	✓		Appendix Section 2
EN18	Total direct and indirect greenhouse gas emissions by weight			
EN19	Emissions of ozone-depleting substances by weight.	✓		Appendix Section 2
EN20	NOx, SOx, and other significant air emissions by type and weight.	✓		Appendix Section 2
EN21	Total water discharge by quality and destination			
EN22	Total weight of waste by type and disposal method.	✓		Appendix Section 2
EN23	Total number and volume of significant spills.	✓		Appendix Section 2
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 Section 2
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			

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 Section 2
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	Noise impacts	✓		Appendix Section 2
EN30	Total environmental protection expenditures and investments by type			
<b>Social: Labor Practices and Decent Work Performance Indicators</b>				
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			
LA5	Minimum notice period(s) regarding operational changes, including whether it is specified in collective agreements			
LA6	Percentage of total workforce represented in formal joint 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			
<b>Social: Human Rights Performance Indicators</b>				
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			
<b>Social: Society Performance Indicators</b>				
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			
<b>Social: Product Responsibility Performance Indicators</b>				
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	Total annual number of wildlife strikes per 10,000 aircraft movements.	✓		Appendix Section 2
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			

<b>GRI Airport Operators Sector Supplement Metrics</b>							
<b>EC1: Economic Performance</b>		2006	2009	2010	2011	2012	2013
Revenues							\$38,901,000
Operating Costs							\$24,640,000
Capital Investments							\$39,424,090
FAA Grants (AIP)							\$13,300,000
Employee Compensation							\$7,623,000
Donations/Community Investment							N/A
Retained earnings							N/A
Payments to capital providers/governments							\$40,000
Non aeronautical income as percentage of total revenues							
		Total Revenue					\$38,901,000
		Total Expenditure					\$32,303,000
<b>EC4</b>		2006	2009	2010	2011	2012	2013
Financial Assistance Received from Government (AIP Funding)							\$13,300,000
<b>A02: Aircraft Movements</b>		2006	2009	2010	2011	2012	2013
Commercial Passenger Aircraft Movements	Domestic						
	International						
	Total	0	-	-	-	-	-
Cargo Aircraft Movements	Domestic						
	International						
	Total	0	0	0	0	0	0
Government and General Aviation Aircraft Movements	Domestic	187,840	137,890	149,530	152,247	145,690	
	International						
	Total	187,840	137,890	149,530	152,247	145,690	0
Total Movements (all aircraft types)		187,840	137,890	149,530	152,247	145,690	155,032
Day/Night Ratio							
<b>EN3-Direct Energy Consumption (Vehicle fuel and Building Natural Gas)</b>		2006	2009	2010	2011	2012	2013
Energy Consumption-Renewable Sources (GJ)			0	0	0	0	0
Energy Consumption-Non-Renewable Sources (GJ)			10,907	12,576	13,846	8,193	8,322
Energy Consumption-Total (GJ)		0					
<b>EN4-Indirect Energy Consumption (Electricity)</b>		2006	2009	2010	2011	2012	2013
Energy Consumption-Renewable Sources (GJ)			0	0	0	0	0
Energy Consumption-Non-Renewable Sources (GJ)			7,272	6,402	7,586	6,977	8,140
Energy Consumption-Total (GJ)		0					
<b>EN5-Energy Saved through Conservation</b>		2006	2009	2010	2011	2012	2013
Energy Conserved (kJ)							
<b>A04-Quality of Stormwater by Regulatory Standards</b>		2006	2009	2010	2011	2012	2013
Sample Locations (number)		2	2	2	2	2	2
Sample Frequency		Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
Incidences of non-compliance		0	2	2	0	2	3

<b>EN16-Total Direct and Indirect GHG Emissions by Weight</b>	2006	2009	2010	2011	2012	2013
Direct GHG Emissions -Tons CO2e					415	
Indirect GHG Emissions -Tons CO2e		90,725			78,747	
Total GHG Emissions -Tons CO2e		90,725			79,162	
<b>EN17-Other Relevant Indirect GHG Emissions by Weight</b>	2006	2009	2010	2011	2012	2013
Aircraft LTO Emissions -Tons CO2e	120,198	88,230			61,924	
<b>EN19-Emissions of Ozone Depleting Substances by Weight</b>	2006	2009	2010	2011	2012	2013
Ozone Depleting Substances-Tons CO2e					34.72	
<b>EN22-Waste by Type and Disposal Method</b>	2006	2009	2010	2011	2012	2013
Waste for Landfill-Tons						198
Waste for Recycling-Tons						16
<b>EN23-Total Number and Volume of Significant Spills</b>	2006	2009	2010	2011	2012	2013
Number of Significant Spills	8	3	6	5	6	3
Volume (total) of Significant Spills	290	55	125.5	86	202	16
<b>A06-Aircraft and Pavement Deicing/Anti-Icing Fluid</b>	2006	2009	2010	2011	2012	2013
Aircraft Deicing/Anti Icing Fluid Used, Gallons (neat fluid)		28,504	42,183	73,171	21,384	85,050
Pavement deicers, Gallons	56,300	133,225	110,500	162,500	119,360	235,000
Pavement deicers, tons	0	19	32	43	13	15
<b>EN28-Environmental Fines</b>	2006	2009	2010	2011	2012	2013
Monetary value of fines paid for non-compliance with environmental regulations and sanctions						0
<b>A07-Noise Impacts</b>	2006	2009	2010	2011	2012	2013
Number of people residing within DNL 65		680				680
Percentage change of people residing within DNL 65						0

<b>Section 2. Additional Sustainability Metrics</b>		2006	2009	2010	2011	2012	2013
<b>Airport Profile</b>		20,000	26,500	26,500	26,500	26,500	26,500
Total number of fixed-base operators	Number of FBO's	5	5	5	5	5	5
	Square Footage Area		798,900	798,900	798,900	798,900	798,900
<b>GHG Emissions Summary</b>		122,538	90,708			79,535	
Total Direct and indirect GHG emissions (MT CO2e)		122,538	90,708			79,535	
CO2e emissions per operation (MT CO2e/operation)		0.652	0.658			0.546	
Scope I & II CO2e emissions (MT CO2e)		5	2			1,379	
Scope III CO2e emissions (MT CO2e)		122,538	90,706			78,156	
Tons per year savings (compared to 2006) (MT CO2e)			31,830			44,382	
Offsets procured - including RECs (MT CO2e)		0	82,500				
<b>Air Quality</b>		43	36		26	30.2	30.2
Criteria air pollutant emissions	SO <sub>2</sub>	43	36		26	30.2	30.2
	NO <sub>x</sub>	260	159		152	147.6	147.6
	PM <sub>2.5</sub>	46	42		6	9.6	9.6
	PM <sub>10</sub>	49	43		6	9.6	9.6

<b>Vehicle Fleets (# of vehicles)</b>		2006	2009	2010	2011	2012	2013
Bifuel		--	--	--	--	--	--
BioDiesel		25	25	23	23	23	27
CNG		--	--	--	--	--	--
Flex Fuel		--	--	--	--	--	--
Gasoline		17	14	15	15	14	14
Hybrid		5	5	6	8	8	8
Hydrogen		--	--	--	--	--	--
		Subtotal Alternative Fuel Vehicles					35
		Total of all Vehicles					49
		Alternative Fuel % of Total					71.43%
<b>Vehicle Energy Consumption</b>		2006	2009	2010	2011	2012	2013
Gasoline (gal)			11,600	11,777	15,010	10,547	12,298
Biodiesel (gal)		--	--	--	--	--	--
Diesel fuel (gal)		5,058	8,669	8,880	10,466	6,975	8,707
E-85 (gal)		--	--	--	--	--	--
Hybrid (gal)		--	--	--	--	--	--
CNG (gge)		--	--	--	--	--	--
<b>Building Energy Consumption</b>		2006	2009	2010	2011	2012	2013
		kWh		1,470,000	2,020,000	1,778,352	2,107,272
Electricity (kWh, kWh/sq. ft)		kWh per square foot		73.5	76.2	67.11	79.52
		44,000	90,000	105,617	113,920	69,611	68,830
Natural Gas (therms, therms/pax, therms/ft2)							
Renewable energy generated on-site (kWh output)			286,000				
<b>Noise</b>		2006	2008	2010	2011	2012	2013
Number of noise related complaints		894	715	520	2,687	2,436	1,999
Number of complainants		239	196	160	188	186	150
<b>Safety</b>		2006	2009	2010	2011	2012	2013
Total wildlife Strikes		71	95	54	65	73	92
Damaging wildlife Strikes		3	3	3	1	1	1
A09: Number of wildlife strikes per 10,000 aircraft movements		3.47	6.53	3.85	4.10	4.87	5.57
<b>Waste</b>		2006	2009	2010	2011	2012	2013
Total non-hazardous waste produced in PA areas (tons)		401.4	682.2				198
Total hazardous waste produced (gal)		150	150	150	150	150	150
Total construction waste recycled (tons)			0				0
Total composted (tons)		0	0				0
<b>Water Quality</b>		2006	2009	2010	2011	2012	2013
Total number of permit exceedances		0	2	2	0	2	3
Total number of spills			27	28	37	37	31

<b>Community Engagement</b>		2006	2009	2010	2011	2012	2013
Number of events for the community hosted by the airport		5	5	5	5	5	5
<b>Economic Impacts</b>		2006	2009	2010	2011	2012	2013
Direct jobs created by airport		1,200					1,834
Indirect jobs created by airport		16,000					13,071
Actual percent of DBE business over total contracts	MBE	14.9%	16.1%				12.0%
	WBE	6.3%	3.4%				5.0%