



Seattle-Tacoma International Airport

A VISION FOR 2014 AND BEYOND

Environmental Strategy Plan 2009



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“It wasn’t a matter of telling our story better,
it is a matter of creating a better story.”

H. LEE SCOTT JR. CEO, WALMART on the company’s approach to sustainability

A VISION FOR 2014 AND BEYOND

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Port of Seattle Commissioners

Bill Bryant
John Creighton
Patricia Davis
Lloyd Hara
Gael Tarleton

Chief Executive Officer

Tay Yoshitani

Airport Managing Director

Mark M. Reis

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Message from the Airport Director

At Seattle-Tacoma International Airport (Sea-Tac) we are committed to creating a sustainable airport that minimizes the environmental impacts of our operations. To achieve this vision, Sea-Tac is continually implementing actions that improve air and water quality, reduce pollution and conserve natural resources. Why is environmental stewardship important to us? Because we understand that airports are the front doors of our communities and thus have an extraordinary opportunity to promote change and educate members of our community. We also understand that in order for our region to continue to grow and thrive in the 21st Century, we must find ways to do more while using fewer of our planet's scarce natural resources. This isn't just an environmental strategy; it is of paramount importance for our economic future and the vitality of the Pacific Northwest community that we serve.

Environmental stewardship isn't a new idea at Sea-Tac. We already have a range of highly successful environmental programs in water quality, recycling, wildlife management, air quality and noise reduction. Many of these programs have been recognized nationally as models for other airports. Despite our accomplishments, our commitment to environmental quality and sustainable development remains as strong as ever.

I am pleased to announce the completion of this Five-Year Environmental Strategy Plan for Sea-Tac. This plan details the goals for environmental improvement which we aim to accomplish, and strategies and actions to achieve them. Our vision to be a green gateway for air travel and commerce is ambitious and comprehensive. Achieving it will require a concerted and sustained effort by the Port of Seattle, and the cooperation and collaboration of our business partners and the local community. The reward, however, is a more sustainable airport that is prepared to thrive in the years to come.



MARK REIS
Managing Director
Aviation Division
Port of Seattle

“This isn't just an environmental strategy; it is of paramount importance for our economic future...”

Message from the Director - Airport Planning and Environmental

Welcome to Sea-Tac's Five-Year Environmental Strategy Plan (Plan). This Plan is intended to serve as a roadmap for achieving our environmental vision. It provides a framework for annual planning, budgeting and accountability by identifying the measurable environmental outcomes that we aspire to achieve by 2014.

The Plan is organized around three themes: *Moving People and Goods Efficiently*, *Managing Natural Resources Wisely*, and *Promoting Sustainable Communities*. These themes embody the aspirations of Sea-Tac's environmental agenda. Within each of the three focus areas the Plan:

- Identifies key environmental indicators,
- Summarizes ongoing environmental improvement efforts,
- Establishes aspirational goals for continued environmental improvement, and
- Identifies performance metrics for each environmental indicator area.

The performance metrics will allow us to measure our progress in the key environmental indicator areas across time and against our goals.

In developing the Plan, staff was mindful of the ongoing efforts to update the Port's long-term strategic plan through the Century Agenda. In particular, staff developed this document consistent with the "Green Port" guiding principles recommended by the Century Agenda expert panel.

Achieving the goals set forth in this document will not be easy and must be done in a manner that enhances Sea-Tac's economic competitiveness. Although the Plan identifies specific actions and strategies that move Sea-Tac towards achievement of its environmental goals, the Plan does not identify or commit any financial resources. All projects and actions will be evaluated to ensure that they provide value for money spent, and obtain any necessary Port Commission approvals.

In the past, Sea-Tac has demonstrated that the application of energy, water and waste reduction measures can achieve significant cost savings. In a future defined by greater cost and scarcity of natural resources, the economic benefits of sustainability initiatives will continue to grow and create new benefits and business opportunities for Sea-Tac.



ELIZABETH LEAVITT
Director
Aviation Planning & Environmental
Port of Seattle

"This Plan is intended to serve as a roadmap for achieving our environmental vision. It provides a framework for annual planning, budgeting, and accountability."

WHO WE ARE AND WHAT WE DO

About the Port of Seattle

The Port of Seattle develops and maintains facilities for the transportation of cargo and passengers by air, water, land through Sea-Tac International Airport and Seattle’s seaport. We foster a prosperous regional economy and environmental stewardship for the long-term benefit of King County citizens.

Sea-Tac International Airport

The Port owns and operates Seattle-Tacoma International Airport - the 17th busiest in the nation – handling more than 32 million passengers in 2008. Twenty-seven passenger airlines operate at Sea-Tac, offering domestic and international services.

Sea-Tac’s Commitment to the Environment

Our record as an environmental steward will distinguish us from other ports and give us an edge in the very competitive battle for international commerce. The Port of Seattle: Where a Sustainable World is Headed.

Tay Yoshitani, CEO, Port of Seattle

Mission Statement

Seattle-Tacoma International Airport aims to be the national leader among peer airports in demonstrating environmental stewardship and reducing the environmental impacts of airport operations.

Sea-Tac Environmental Leadership Strategy Team





Sea-Tac Int'l Airport

Statistics - 2008

Air Passengers	2008
Annual passengers	32,196,528
U.S. rank by passengers	#17
World ranking by passengers	#35
Air Cargo	
Metric tons	290,653
U.S. rank by air cargo	#19
Aircraft Operations	
Aircraft operations	345,242
Average daily operations	945
U.S. Rank by operations	#24
Regional Economic Impact	
Regional economic impact	\$13.2 billion
Jobs created	161,000 (89,902 direct jobs)

ENVIRONMENTAL FOOTPRINT

Sea-Tac’s 2008 environmental footprint is depicted on the following page. The footprint portrays a range of air, water, waste and noise impacts that Sea-Tac operations have on the environment. The environmental footprint is a useful tool for Sea-Tac to assess its impacts on the local and global environment, and to develop strategies to reduce the footprint over time. The performance metrics included in Appendix A of this Plan provide additional detail to the footprint. Going forward, Sea-Tac intends to keep this environmental footprint and its performance metrics current. In doing so, the concept will be honed and the data refined in order to maintain as accurate a narrative as possible.



What is Sustainability?

Despite the number and variants of definitions, common themes run through most definitions of sustainability. They usually deal with the natural environment, the economy, society, or perhaps most often, all three together. One of the first and most widely utilized definitions of sustainability comes from the United Nations World Commission on Environment and Development, which defined sustainable development in 1987 as “[D]evelopment that meets the needs of the present generation without compromising the ability of future generations to meet their own needs.” Another commonly used definition of sustainability, and one that incorporates the “triple bottom line” concept, comes from the World Business Council on Sustainable Development, which defines the term as “the simultaneous pursuit of economic prosperity, environmental quality and social equity.”



Environmental Performance Indicators



Gasoline 127,094 gallons



Diesel 20,218 gallons



Compressed Natural Gas 168,675 gge



Electricity 148,715,000 kWh



Natural Gas 2,813,851 therms



Greenhouse Gases 46,079 tons



Potable Water 229,232,828 gallons



Solid Waste 6,350 tons



Hazardous Waste 1,842 lbs



Noise 4,118 acres in 65 dB day-night average sound level area

Environmental Footprint

The term "environmental footprint" describes the impact that an individual, organization or society has on the natural world. Typically, an environmental footprint depicts, through representative data, how an organization uses natural resources or its intensity of use.

Moving People and Goods Efficiently

For Sea-Tac to be an environmental leader it must be economically efficient. That is why we continually look for opportunities to improve our environmental performance through operational efficiencies. By taking actions that reduce our fossil fuel use, conserve electricity, and integrate “green” design into our facilities are simultaneously improve the environment and our bottom line. Put simply, we believe that improving efficiency is a fundamental instrument in achieving economic and environmental sustainability.

efficient (ĭ-fish'ənt) *adj.* 1. Acting effectively with a minimum of waste or effort.

Managing Natural Resources Wisely

At Sea-Tac, we understand that the responsible use of the world’s dwindling supply of natural resources is everybody’s business. That is why we have identified strategies that aim to reduce or limit the airport’s impact on the region’s natural resources. Whether managing water resources, improving fish and wildlife habitat, or purchasing environmentally preferable products, we are committed to being responsible stewards of our precious natural resources.

wise (wīz) *adj.* 3. Sensible; prudent

Promoting Sustainable Communities

As one of the region’s largest employers, Sea-Tac plays an important role in the strength and sustainability of local communities. For Sea-Tac, promoting sustainable communities goes beyond creating jobs and economic development; it also requires leadership in improving the livability of local communities. On this front, Sea-Tac’s engagement in the areas of environmental education, community outreach and noise mitigation demonstrate a commitment to the communities that it serves.

sustain (sə-stān') *v.* 4. To support the spirits, vitality, or resolution of; encourage

Moving People and Goods Efficiently

Air Quality and Climate Change



Goal 1a: Air Quality

Sea-Tac will improve the overall efficiency of its vehicle fleet by 30 % over 2006 levels by 2015.

Goal 1b: Air Quality

Sea-Tac will continue to work with its business partners to consolidate trips, reduce vehicle miles travelled, and promote clean vehicles from taxis, shuttles, buses, construction vehicles, service equipment, and ground support equipment.

Goal 2: Greenhouse Gas Emissions

Sea-Tac will reduce airport owned and controlled greenhouse gas emissions by 15% below 2005 levels by 2020.

Goal 3: Transportation

Sea-Tac will increase the average occupancy of passenger vehicles accessing the airport from 2.6 in 2009 to 3.6 in 2015.

Goal 4: Adaptation Planning

Sea-Tac will complete a risk analysis of potential climate change impacts and implications for the airport, and develop a strategy plan for avoiding/mitigating risks.

Energy Use and Conservation



Goal 5: Electricity Use

Sea-Tac will meet all future load growth through conservation measures and renewable energy.

Goal 6: Natural Gas Use

Sea-Tac will continue to reduce natural gas consumption per square foot of terminal space through cost-effective conservation and efficiency measures.

Goal 7: Technology Deployment

Sea-Tac will serve as a leader in identifying and implementing leading-edge technologies and process improvements that reduce energy demand and improve efficiency.

Buildings and Infrastructure



Goal 8: Sustainable Buildings

Sea-Tac will integrate Leadership in Energy and Environmental Design (LEED™) or other “green” building performance measures into all projects.

Goal 9: Asset Management

Sea-Tac will continue to improve its asset management practices in a manner that minimizes the total cost of owning and operating facilities and maximizes environmentally-sustainable development.

Managing Natural Resources Wisely

Materials Use and Recycling



Goal 10: Recycling

Sea-Tac will increase the solid waste recycling rate from the current 21% in 2008 to 50% by 2014.

Goal 11: Construction Debris

Sea-Tac will implement Best Management Practices (BMP) that reduce construction, demolition and land clearing debris generated by the airport and its contractors.

Goal 12: Hazardous Materials and Waste

Sea-Tac will continue to reduce its use of hazardous materials and the generation of hazardous wastes.

Goal 13: Environmentally Preferable Products

Sea-Tac will increase the use of green products throughout the organization by implementing a robust environmental purchasing program.

Water Resources and Wildlife



Goal 14: Water Quality

Sea-Tac will achieve and maintain Best Management Practices for water quality treatment and flow control over 100% of airport industrial areas.

Goal 15: Wildlife Habitat

Sea-Tac will identify and implement actions to: (a) improve wildlife habitat and protections for native species not in conflict with aviation safety, and (b) develop biologically sound approaches for managing hazardous wildlife in the context of reducing the need for direct control actions such as scare devices (e.g., pyrotechnics).

Goal 16: Water Conservation

Sea-Tac will reduce the potable water consumption rate 5% below 2008 levels by 2015.



Sea-Tac Airport – Waste Audit 2008

Promoting Sustainable Communities

Noise



Goal 17: Noise Mitigation

Sea-Tac will complete the Part 150 update including FAA review and approval by the end of 2011.

Education and Integration



Goal 18: Education and Community Outreach

Sea-Tac will institute an environmental education campaign to promote environmental stewardship and raise awareness of airport environmental and sustainability initiatives.

Goal 19: Integration

Sea-Tac will integrate environmental and sustainability considerations into core business operations.

Goal 20: Working with Business Partners

Sea-Tac will work with its business partners to extend environmental and sustainability initiatives beyond its own operations.



Sea-Tac Airport staff teaching high school students about stormwater management



AIR QUALITY AND CLIMATE CHANGE

Summary of Trends and Current Conditions

Regional Air Quality

Working to maintain and improve regional air quality is an important priority for Sea-Tac. Pollutants of major concern in the region include ozone, fine particulate matter and air toxics. Many airport functions impact air quality, though vehicles are the single largest source of air pollution at Sea-Tac and in the Puget Sound region. Sea-Tac has a history of working together with our business partners and the local air agency to reduce the airport's impact on regional air quality. Some of the more significant recent accomplishments include:

- The adoption of the Port's Clean Fleets Policy that resulted in the conversion of more than 75 Sea-Tac vehicles to clean fuels;
- Implementation of a Clean Taxi Program that requires Seattle-Tacoma International Taxi Association (STITA) taxis serving Sea-Tac to convert to compressed natural gas or gas-electric hybrid vehicles;
- Promotion of transit use and ridesharing by employees;
- Installation of a fuel hydrant system that reduces aircraft fuel truck emissions;
- Installation of charging stations for electric vehicles; and
- Gate electrification that provides airlines the ability to power their on-aircraft electrical needs, such as lighting and instruments, at nearly all gates instead of using auxiliary engines.

These and other actions combine to make Sea-Tac a leader, both regionally and nationally, in reducing the impacts of its operations on air quality. Looking forward to the next five years, Sea-Tac will continue to seek cost-effective emission reduction opportunities. In addition, the airport will continue to participate in regional air quality planning work focused on keeping the region in attainment for all criteria pollutants.



Pre-conditioned air and 400Hz being supplied at gates

Currently, the Puget Sound region is struggling to remain in attainment for ozone. Should the region fall out of attainment for this pollutant, Sea-Tac is prepared to develop and implement strategies for complying with new requirements imposed by state and federal regulators. Developing and growing a business or organization like Sea-Tac in a region not meeting attainment would be a significant challenge with additional costs and environmental permit approval times.



Light rail to Sea-Tac Airport to begin December 2009

Transportation Emissions

Emissions from transportation-related activities account for nearly half of the total greenhouse gas emissions in Washington. Transportation emissions also contribute significantly to criteria pollutant levels such as ozone and particulate matter. Achieving significant reductions in transportation-related emissions is critical for Washington and the Puget Sound region in particular. At Sea-Tac, we continue to focus on promoting and incenting the use of public transit and high occupancy vehicles among employees and passengers. In addition, we intend to work closely with state and local governments in designing and implementing new strategies that reduce vehicle miles traveled.



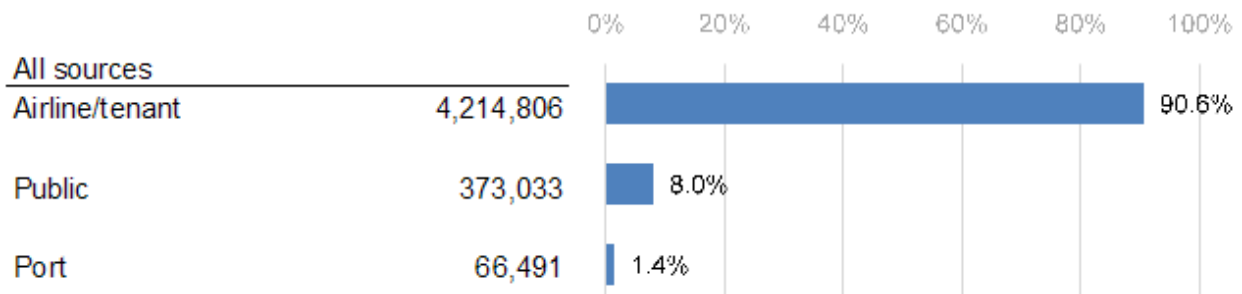
Sea-Tac Airport, Mount Rainier in the background

Climate Change

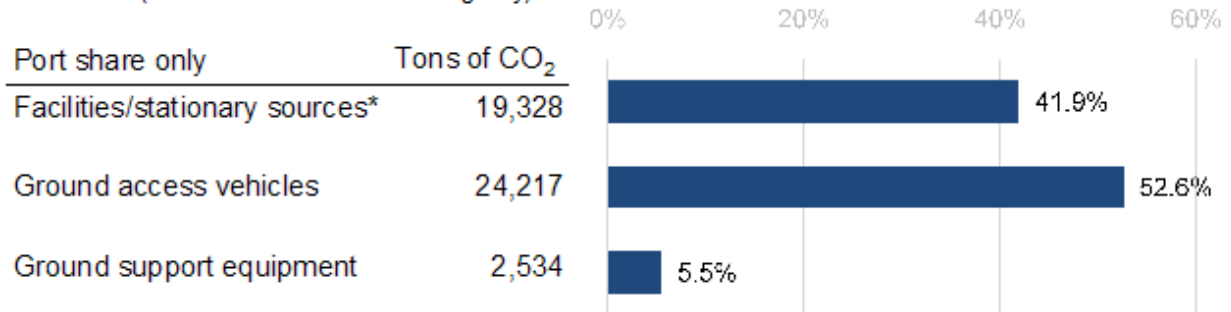
In 2006, Sea-Tac became one of the first airports in the country to conduct a greenhouse gas emissions inventory. The inventory provides benchmark data for greenhouse gas emissions at the airport. The inventory revealed that nearly 4.7 million tons of carbon dioxide (CO₂) were emitted in 2006 as a result of direct and indirect airport activities. Of the total, Port owned and controlled emissions accounted for less than 1.5%. Port emissions primarily come from electricity and natural gas use at the airport and vehicle use (both passenger and Port employee) on airport roads. Aircraft operations account for the largest source of emissions at the airport, representing 4.2 million tons or approximately 90%. Passenger and employee vehicles traveling on public roads account for the third major source of airport emissions; 8%.

The Port is a founding member of the Climate Registry, and as such is committed to continue reporting airport greenhouse gas emissions. Sea-Tac intends to use these inventories to identify emission reduction opportunities and measure progress towards emission reduction goals.

2006 Baseline Data



2008 Data (as submitted to Climate Registry)



Source: Seattle-Tacoma International Airport, 2006 and 2008 Data.

Since completing its initial inventory in 2006, Sea-Tac has worked with its business partners to implement a variety of actions that reduce airport emissions. For example:

- Fuel hydrant system - delivers fuel to each passenger airline gate via underground pipes instead of tanker trucks laden with fuel. CO2 savings is 980 tons per year.
- Centralized pre-conditioned air - allows aircraft to hook up to cooled or heated air at gates, enabling aircraft to shut down their auxiliary power units.
- Gate electrification - provides airlines the option to power their on-aircraft electrical infrastructure by plugging in at the gate.
- All taxis serving Sea-Tac have been converted to either CNG vehicles or gas-electric hybrids.
- Sea-Tac has converted much of its vehicle fleet to CNG, electric or gas-electric hybrid vehicles (16 buses, two sweepers and 60 light-duty vehicles).

PERFORMANCE METRICS

Fuel Use by Type	2006	2008
Gasoline	144,268 gal	127,094 gal
Diesel	16,745 gal	20,218 gal
Compressed Natural Gas (CNG)	179,710 gge	168,675 gge

GHG Emissions	2006	2008
POS emissions (metric tons)	66,491	46,079*
POS emissions per passenger (lbs)	4.89	2.86
Airlines/Tenant emissions (metric tons)**	4,214,806	N/A
Public emissions (metric tons)**	373,033	N/A

*Reduction between 2008 and 2006 is attributed to a utility specific emission factor.

** Will be inventoried every 5 years at a minimum.

Transportation	2008
Average # of occupants per vehicle trip	2.6
% employees using high occupancy transit	-

Goal 1a: Air Quality

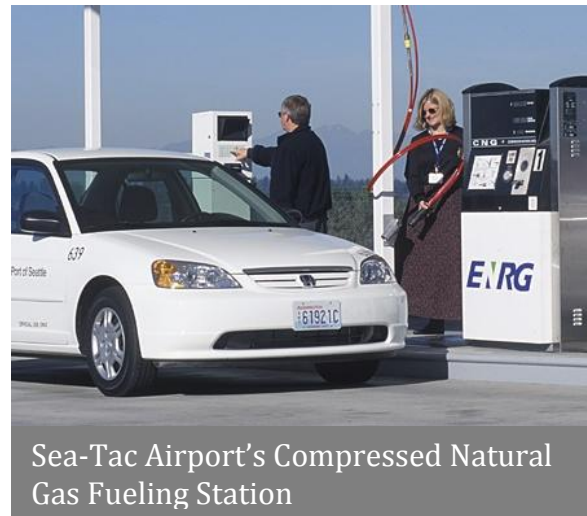
Sea-Tac will improve the overall efficiency of its vehicle fleet by 30 % over 2006 levels by 2015.

Goal 1b: Air Quality

Sea-Tac will continue to work with its business partners to consolidate trips, reduce vehicle miles travelled, and promote clean vehicles from taxis, shuttles, buses, construction vehicles, service equipment, and ground support equipment.

Objectives:

- Routinely audit and update the Port's Clean Fleets Policy
- Monitor and track the airport's fuel and energy use
- Create opportunities to share vehicle resources more efficiently, thereby minimizing fleet assets
- Identify opportunities to procure more fuel efficient vehicles



Sea-Tac Airport's Compressed Natural Gas Fueling Station

Goal 2: Greenhouse Gas Emissions

Sea-Tac will reduce airport owned and controlled greenhouse gas emissions by 15% below 2005 levels by 2020.

Objectives:

- Inform service providers and public of actions that can be taken to help maintain clean air
- Collaborate with local governments, air agencies and stakeholders to implement cost-effective emission reductions actions
- Where viable, set minimum requirements that reduce emissions from airport service providers such as courtesy vans and taxis.
- Implement strategy to reduce single occupancy vehicle traffic to the airport 5% by 2015

Achieving Sea-Tac's GHG Emission Reduction Goals

Sea-Tac is committed to developing a comprehensive approach to climate change that recognizes the environmental imperative associated with reducing emissions, as well as the economic considerations required to grow in a carbon-constrained economy. In February 2009, Sea-Tac staff recommended to the Port of Seattle Commissioners the following GHG reduction goals for the airport:

Port Owned/Controlled Emissions

By 2020, reduce emissions by 15% below 2005 levels

Airline Owned/Controlled Emissions

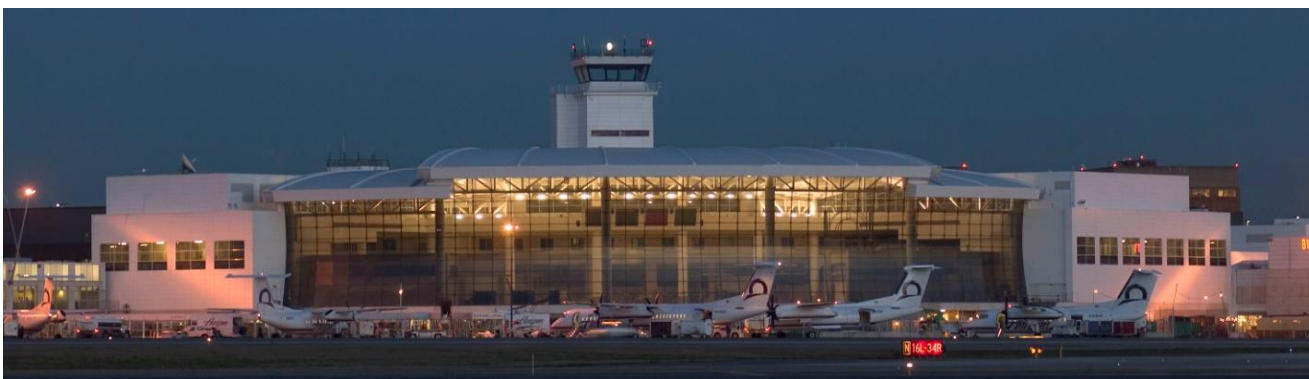
Work with airline partners to identify and implement cost effective emission reduction strategies

Public Owned/Controlled Emissions

Assist the state and local governments in meeting the statewide transportation specific climate goal of reducing total vehicle miles traveled 18% by 2020, 30% by 2035 and 50% reduction by 2050

Achieving these goals will require a sustained commitment from the Port. To plan for this effort, Sea-Tac is in the process of developing a Climate Action Plan that will identify and evaluate feasible and effective actions and policies to reduce GHG emissions. It will be, in essence, the roadmap for achieving the emission reduction goals. The Climate Action Plan will focus on:

- Improving collection and analysis of emissions data
- Prioritizing and implementing emission reduction projects
- Adopting climate friendly policies/guidance
- Engaging business partners, employees, and the public to take action on climate change
- Evaluating the feasibility of long-term carbon neutrality



Sea-Tac Airport, Central Terminal

Goal 3: Transportation

Sea-Tac will increase the average occupancy of passenger vehicles accessing the airport from 2.6 in 2009 to 3.6 in 2015.

Objectives:

- Develop and implement a plan to achieve a 5% mode shift by passengers from single occupancy vehicles to higher occupancy/shared-ride airport access modes by 2015
- Inform the traveling public and employees of the benefits of choosing public transit and high occupancy vehicles
- Leverage tenants to promote increased use of public transit and ridesharing by employees
- Work with state and local transportation officials to identify and implement actions that reduce vehicle miles traveled to and from the airport



Sea-Tac Airport “pay on foot” parking program. - less idling, less pollution.

Goal 4: Adaptation Planning

Sea-Tac will complete a risk analysis of the potential climate change impacts and implications for the airport and develop a strategy plan for avoiding/mitigating risks.

Objectives:

- Conduct a risk analysis to identify Sea-Tac’s vulnerability to climate change impacts
- Set preparedness goals and develop a climate change preparedness plan
- Begin implementation of a climate change preparedness plan

What is Adaptation Planning?

Adaptation planning encompasses measures that are taken in response to the actual or expected changes in climate to negate or mitigate their impact. These measures reduce the vulnerability of the local, natural or human systems to the effects of climate change by increasing the system's resilience to it. Adaptation response measures generally have four categories:

- Loss prevention – actions to reduce vulnerability to climate change
- Loss sharing – spreading the risk of loss among a wider population (e.g. insurance)
- Behavior modification – eliminating the activity or behavior that causes the hazard

- Relocation – moving vulnerable populations or systems away from hazards induced by climate change

Adapting to climate change *is not* about drafting lots of new policies. It is concerned with understanding how climate change may affect the world around us and then routinely integrating that understanding to make better decisions. Decisions about spatial planning and development, social justice, value for money and public safety will all be affected, positively or negatively, by climate change. Decisions with long-term implications will tend to be more affected by climate change as their outcomes will experience more climate change. It is essential that decisions taken today do not constrain adaptation options in the future.

—London Climate Change Adaptation Strategy



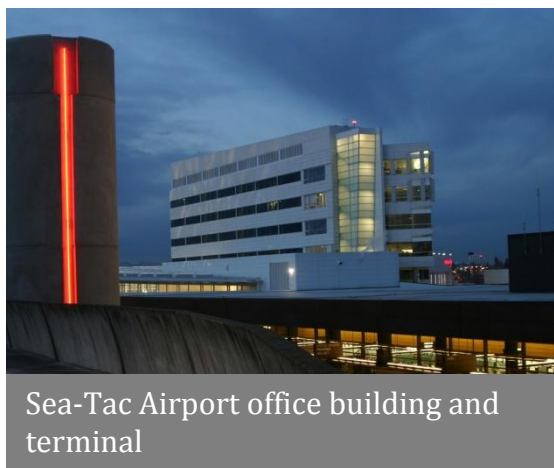
Sea-Tac Airport



Energy Use and Conservation

Summary of Trends and Current Conditions

Airports are major consumers of electricity, often among the largest in the community. In 2008, Sea-Tac consumed more than 148,000,000 kWh of electricity; nearly the equivalent of 14,000 homes. However, because Sea-Tac purchases most of its electricity from the Bonneville Power Administration (BPA), which generates approximately 85% of its power from non-greenhouse-gas-producing hydroelectric facilities, the climate change impacts of Sea-Tac's electricity use is less than that of other similarly sized airports. Nevertheless, Sea-Tac is continually looking for opportunities to reduce energy use through conservation and the implementation of new technologies. Energy conservation leads to cost savings, reduces the need for regional power plant expansions, and decreases regional air emissions.



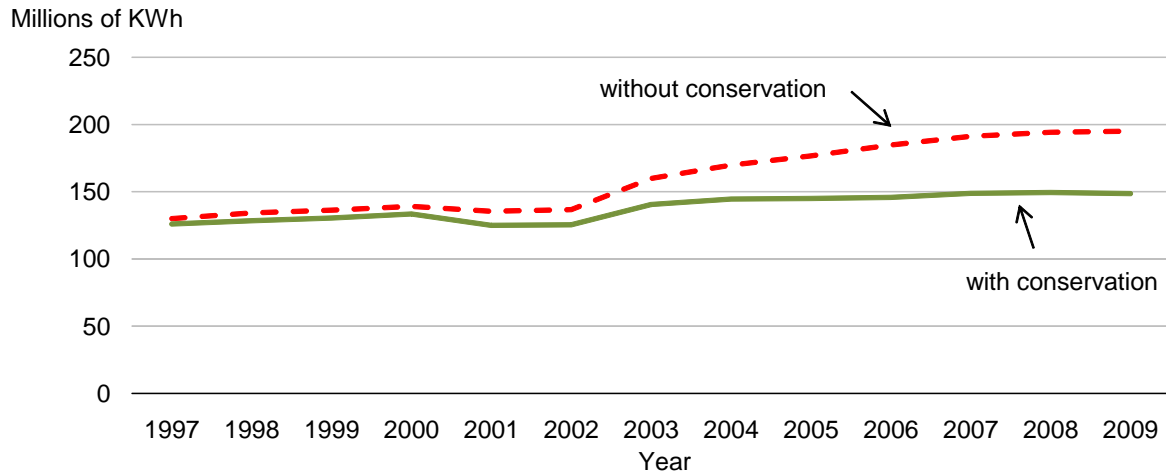
Sea-Tac Airport office building and terminal

Over the past decade, conservation efforts at Sea-Tac have resulted in a savings of more than 46,000,000 kWh of electricity, nearly 25% of total demand. In addition to helping the environment, these conservation measures saved Sea-Tac more than \$1.5 million annually in electricity costs. Significant conservation accomplishments include:

- Lighting retrofits;
- Heating, ventilation and air conditioning improvements; and
- Thermostat adjustments.

The table on the following page illustrates the annual energy savings achieved by Sea-Tac through conservation efforts over the past dozen years:

Annual energy usage with and without conservation savings



Source: airport data.

In 2006, in an effort to further reduce the environmental impact from its electricity use and to promote the development of renewable energy sources, Sea-Tac began purchasing Renewable Energy Certificates (RECs) from BPA. A REC represents energy generated by a renewable power source. Purchase of the certificates allows Sea-Tac to claim that it uses “green power” for more than 25% of its electricity power load. In the future, Sea-Tac intends to meet all new electricity demand either through conservation or through the acquisition of clean, non-fossil-fuel generated power.

Natural Gas

Not all of Sea-Tac’s energy needs are met with electricity. Sea-Tac also operates three natural gas fired boilers for its heating system. In recent years, Sea-Tac completed a number of mechanical system upgrades to improve the efficiency of these boilers, including:

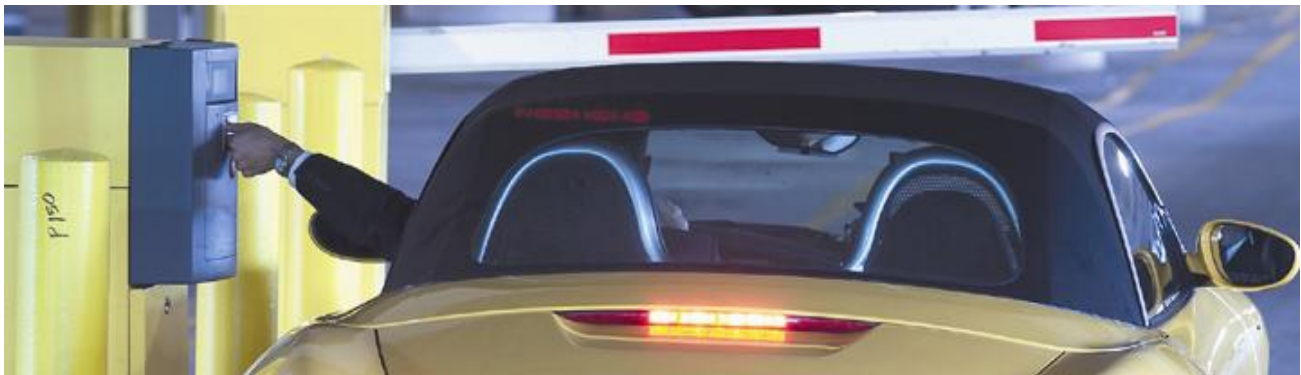
- A more efficient boiler that reduced particulate matter emissions;
- Installation of variable air volume valves; and
- Adding oxygen sensors to improve combustion efficiency

As a result of these actions, Sea-Tac reduced its demand for natural gas by approximately 587,000 therms, which represents about 20% of the airport’s total natural gas demand. Sea-Tac is in the process of conducting a second phase upgrade to its mechanical systems that is expected to provide additional reductions in natural gas use. Going forward, Sea-Tac will seek to identify efficiency and infrastructure improvements to further reduce natural gas demand. We also will look for new technologies and facility design opportunities that would allow us to reduce or eliminate the need to heat and cool our facilities with fossil fuels.

Technology Deployment

Information and communications technology is indispensable for Port employees and airport users. The type of technologies that we use and manner in which we use them, however, can have major impacts on energy use and the environment. The Port and Sea-Tac strive to be on the leading edge of technology and process improvements that increase efficiency and reduce energy consumption. Recent improvements include:

- Adopt a Server Virtualization Strategy resulted in an 88% reduction in server electricity use and an 86% reduction in heat output; and
- Equipping employees with laptops provided an 80% savings in power consumption.
- Development of Web conferencing capabilities helps reduce the need for employees to travel to meetings.



Sea-Tac Int'l Airport's automated parking pay system. Less wait, less pollution.

PERFORMANCE METRICS

Electricity Use (kWh)	2000	2005	2008
Total kWh of electricity used	133,508,734	145,087,553	148,715,000
kWh per passenger	4.70	4.95	4.62

Conservation

Total kWh/yr. of energy saved	46,282,904
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Renewable Energy

"Green Power" (purchased/used as a % of total energy use)	0%	0%	25%
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Natural Gas Use (Therms)

Total therms used	2,375,219	2,476,400	2,813,851
Therms per passenger	0.083	0.085	0.087
Therms per sq. ft. of terminal	1.03	0.81	0.92

Goal 5: Electricity Use

Sea-Tac will meet all future load growth through conservation measures and renewable energy.

Objectives:

- Identify cost-effective conservation projects through a comprehensive resource efficiency study
- Continue to build on existing programs that provide incentives and assistance for customers (tenants)
- Identify opportunities to increase the purchase/use of renewable energy
- Require all new capital projects to undergo a LEED™ or equivalent energy efficiency review
- Educate employees and tenants on energy efficiency practices
- Continue to fund a comprehensive preventive maintenance program
- Annually collect data to determine greenhouse gas emissions associated with electricity purchases
- Identify internal and external funding for conservation efforts



Central Terminal - using natural light

Goal 6: Natural Gas Use

Sea-Tac will continue to reduce natural gas consumption per square foot of terminal space through cost-effective conservation and efficiency measures.

Objectives:

- Identify conservation projects through a comprehensive resource efficiency study
- Identify heat recovery opportunities
- Identify internal and external opportunities to fund conservation efforts
- Seek opportunities to displace natural gas use with other more environmentally friendly fuels or technologies
- Maximize boiler efficiency through preventive maintenance

Goal 7: Technology Deployment

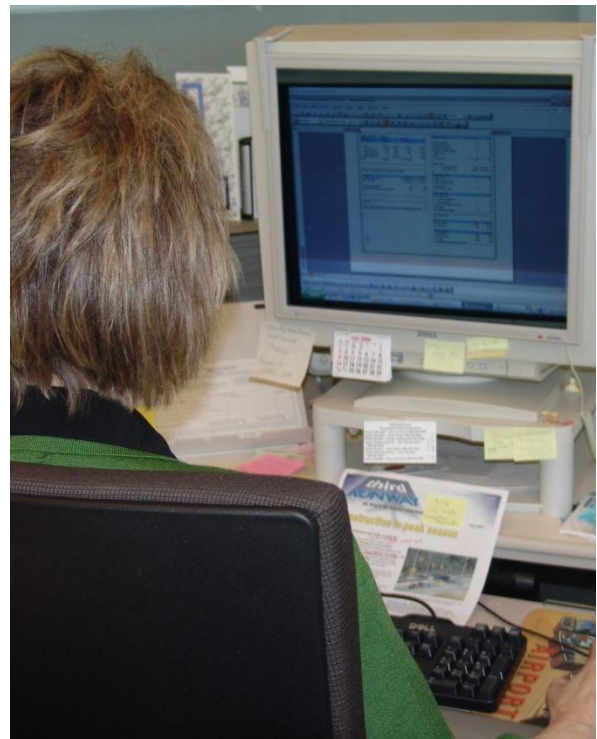
Sea-Tac will serve as a leader in identifying and implementing leading-edge technologies and process improvements that reduce energy demand and improve efficiency.

Objectives:

- Continue implementation of Green Data Center Strategy
- Develop employee procedures/training that maximize energy efficiency of existing and newly implemented technologies
- Explore opportunities to increase the common use of facilities where it is cost effective and environmentally beneficial
- Continue researching new energy-efficient technologies and seek opportunities to test feasibility through pilot projects



Sea-Tac Airport purchases 25% renewable energy



Sea-Tac Airport's telecommuting saves energy and increases efficiency



Buildings and Infrastructure

Summary and Current Trends

At Sea-Tac, planning, design, construction, operation, maintenance, renewal, and demolition of facilities and infrastructure are constantly being altered based on changing conditions, requirements, and desires of our business partners and airport users. These alternatives provide an opportunity to integrate environmental and efficiency improvements into the design, building, operation and maintenance of our facilities.

In 2007, Sea-Tac began to concentrate on environmentally and economically sustainable development by addressing the total cost of ownership for all development and modifications of infrastructure. This effort focused on:

- Integrating life-cycle cost analysis into asset investment decisions;
- Rationalizing and understanding initial costs;
- Reducing ongoing operating and maintenance costs; and
- Incorporating Best Management Practices that integrate environmental and financial performance.

Sea-Tac has integrated these objectives into a variety of projects that include:

- Runway reconstruction of the easternmost runway-16L/34R;
- Delta Crown Room, LEED™ Silver Certification;
- Consolidated Rental Car Facility/Bus Maintenance Facility, LEED™ pilot project; and
- Mechanical and systems upgrades (heating, ventilation and air conditioning).

Over the next five years, Sea-Tac will further integrate environmental and sustainability principles into design and construction conditions. This incorporation will advance the integration of total cost of ownership, assimilate LEED™ or similar green building models into all projects, and identify additional opportunities for performance-enhancing facility upgrades. We also intend to further develop and improve Sea-Tac's Facilities Condition Index as a tool to maximize the life and value of our existing facilities.

PERFORMANCE METRICS

	2008
Square feet green buildings or LEED™ rated buildings*	1,225 million
Number of capital, tenant, or concessions projects achieving or proposed for LEED™ certification*	3
Facility condition index	25.39%

* LEED™ stands for Leadership in Energy and Environmental Design. The United States Green Building Council (USGBC) created LEED™ as a rating system (i.e. Certified, Silver, Gold, and Platinum) for green building.

Goal 8: Sustainable Buildings

Sea-Tac will integrate LEED™ or other “green” building performance measures into all projects.

Objectives:

- Complete implementation of Sea-Tac’s Sustainable Asset Management Policy
- Identify opportunities for high density, joint use for all new construction
- Identify opportunities to integrate environmental and sustainable cost accounting into all Port capital, tenant, and concessions projects
- Adopt a sustainability master plan that integrates Sea-Tac’s environmental and sustainability goals into future capital development plans
- Maximize environmental and sustainable performance of buildings and infrastructure through cost-effective improvements to design, construction, operations, and maintenance practices



Sea-Tac Airport’s Consolidated Rental Car Facility will seek LEED™ certification upon completion

Goal 9: Asset Management

Sea-Tac will continue to improve its asset management practices in a manner that minimizes the total cost of owning and operating facilities and maximizes environmentally-sustainable development.

Objectives:

- Conduct a complete facility condition assessment
- Create a reporting tool to convey asset management results
- Integrate asset management with long-range comprehensive strategies that support maintenance, renewal, and replacement
- Establish a renewal/replacement strategy for each asset/system
- Integrate asset management data into current computerized maintenance management system



What is a Facility Condition Index?

A Facility Condition Index (FCI) is a strategic capital planning tool used to compare the relative condition of a facility. The FCI is expressed as a ratio of the cost of remedying maintenance deficiencies to the current replacement value. The FCI provides a corresponding rule of thumb for the annual reinvestment rate (funding percentage) to prevent further accumulation of deferred maintenance items, plus projected values of capital renewal requirements. The FCI is represented on a scale of zero to one, or 0% to 100%, with higher FCI values representing a poorer facility's condition. While each asset owner establishes specific standards, a "fair to good facility" is generally expressed as having an FCI of less than 10-15%.

What is Total Cost of Ownership?

Total cost of ownership or "life-cycle costs" refers to the sum of all recurring and non-recurring capital and expense costs incurred over the life of a facility or system, from planning through demolition. It includes the following components:

Operational - Utilities, Operations, Maintenance and Repair

Capital - Initial Cost, Component Renewal



Materials Use And Recycling

Summary of Trends and Current Conditions

Solid Waste and Recycling

At Sea-Tac, we believe that recycling is not just good for the environment but also good business. In 2001, we implemented a large-scale solid waste recycling program to collect mixed paper, plastic, cardboard, and aluminum from Port offices, concessions, and public areas. Since 2001, the recycling program has expanded to include diversion of glass, wood, coffee grounds and cooking oil for conversion to biodiesel. In 2008, the airport recycled more than 1,300 tons of material a year including 880 tons of mixed paper, cardboard, aluminum cans and plastic; 140 tons of glass; and 145 tons of organic waste (including coffee grounds) - all of which was composted.

Why do we do all of this? Because in addition to saving landfill space, recycling conserves natural resources such as timber, water and minerals. It also saves energy and decreases the emissions from greenhouse gases that contribute to global warming. Since 2001, our recycling program has reduced greenhouse gas emissions by approximately 800 tons - the equivalent of taking 138 cars off the road.



Sea-Tac Airport's coffee
composting program

In addition to the environmental benefits, Sea-Tac's recycling program also saves money. Combined cost savings and revenue from recycling totaled \$170,000 during 2008. A significant portion of these cost savings, approximately \$145,000, was a direct return to tenants. Sea-Tac's recycling program also supports local businesses that provide goods and services to the recycling and reuse industries and contributes to growth of our regional economy.

Even with our significant recycling accomplishments, we believe that more can be done. That is why we have set a goal to more than double our current recycling rate from 21% in 2008 to 50% by 2013.

Hazardous Materials

The Port’s Hazardous Waste Program is designed to ensure proper management of hazardous waste streams through education, collection and technical assistance efforts that emphasize the reduction, recycling and reuse of the hazardous waste streams. Training courses and onsite instruction on proper collection, handling and accumulation methods; government requirements; and current Best Management Practices. Over the past 10 years, Sea-Tac has successfully reduced the amount of hazardous waste generated by 80%. Going forward, we intend to continue reducing airport hazardous materials usage through better tracking and management of these materials.



Sea-Tac Airport off-aircraft recycling program

Environmentally Preferable Products

In 2009, the Port adopted an Environmental Purchasing Policy. The policy aims to reduce the adverse environmental impacts of our purchasing decisions by buying goods and services that improve public health and safety, reduce pollution, and conserve natural resources. While the Port already has made substantial gains in purchasing environmentally preferable products, there remain significant opportunities to improve our performance in this area. Toward that end, we intend to focus on robust implementation of the new policy so that in the near future, environmental considerations will be part of normal purchasing practice, consistent with such traditional factors as price, performance and availability.

PERFORMANCE METRICS

Municipal Solid Waste	2001	2004	2008
Generated (tons)	3546	5700	6350
Landfilled (tons)	3238	5000	5030
Recycled (tons)	308	700	1320
Recycling Rate	8.6%	12.3%	21%

Hazardous Waste	2001	2004	2008
Hazardous waste generated (lbs.)	7,351	3,773	1,842

Environmentally Preferable Products (as a % of total purchased)	2008
Paper	40%
Office products	25%

Goal 10: Recycling

Sea-Tac will increase the solid waste recycling rate from the current 21% in 2008 to 50% by 2014.

Objectives:

- Develop a solid waste management plan that documents program infrastructure and accomplishments, summarizes applicable regulatory environment, and establishes stream-specific reduction targets
- Identify new waste streams to recycle
- Expand recycling infrastructure into areas not served by existing program
- Provide educational outreach to the public on the recycling options available at the airport
- Increase participation of airlines and tenants in airport recycling programs
- Replace non-recyclable materials with recyclable or compostable materials
- Develop policies that promote or incent Port staff, airport tenants, and business partners to reduce, reuse or recycle



Goal 11: Construction Debris

Sea-Tac will implement Best Management Practices (BMP) that reduce construction, demolition and land clearing debris generated by the airport and its contractors.

Objectives:

- Update construction specifications to include guidelines for the sustainable management of construction, demolition, and land clearing (CDL) debris
- Track and monitor the generation, management and fate of CDL debris through implementation of reporting requirements

Goal 12: Hazardous Materials and Waste

Sea-Tac will continue to reduce its use of hazardous materials and the generation of hazardous wastes.

Objectives:

- Develop a tracking system to determine volume of hazardous materials purchased
- Develop a reduction plan that establishes a consumption baseline and proposes reduction targets
- Review the airport's approved chemical list and identify opportunities to replace the most hazardous materials with less hazardous alternatives



Sea-Tac Airport off-aircraft coffee composting program.

Goal 13: Environmentally Preferable Products

Sea-Tac will increase the use of green products throughout the organization by implementing a robust environmental purchasing program.

Objectives:

- Develop an environmental purchasing outreach program to educate employees
- Assist staff in identifying environmental purchasing opportunities
- Develop a database program or modify current systems to track green purchasing and the resulting benefits
- Promote pilot testing of environmentally preferable products
- Collaborate with other local governments on environmental purchasing best practices

What is Environmental Purchasing?

Although different organizations may define environmental purchasing in somewhat different ways, it generally refers to buying products and services that have a lesser or reduced effect on human health and the environment when compared with other products that serve the same purpose. In practice, environmental purchasing considers a product's environmental attributes along with traditional buying factors such as performance, quality, service and price when selecting or developing specifications for a product or service.

The Port's Environmental Purchasing Policy is founded on the principle that environmental considerations should become part of normal purchasing practice, consistent with traditional factors such as price, performance, and availability. Where opportunity exists to purchase goods and services that are less harmful to the environment and these represent value for money, we will do so. When comparing cost, the Port will not focus exclusively on the initial price. Instead we will, to the extent feasible, calculate and compare total cost over the life cycle of the item, which includes the initial cost along with maintenance, operation, insurance, disposal, replacement, and potential liability costs. Examining life cycle costs will save money by ensuring we are quantifying the total cost of ownership before making purchasing decisions.



Anthony's Restaurant, one of the many Sea-Tac tenants using green practices that include recycling and composting programs



Water Resources And Wildlife

Summary of Trends and Current Conditions

Water Quality

Water resource issues can affect virtually every area of operations and development at the airport. Airport operations as well as passenger facilities exposed to rainfall can have significant effects on the quality and quantity of stormwater and wildlife habitat. Runoff generated from runways and roads and other pollution-generating surfaces is collected, detained, treated and discharged in a way that keeps ponded water off the airfield, while not causing adverse impact to creeks and wetlands or the significant creation of hazardous wildlife attractants that could compromise aviation safety.

Sea-Tac collects stormwater leaving the airport property through two systems: the Industrial Wastewater System (IWS) and our Stormwater Drainage System. The IWS treats stormwater runoff potentially contaminated during aircraft fueling, deicing or maintenance before it is discharged to the Puget Sound. When aircraft deicing is performed, the water is segregated and sent to the regional sewage treatment plant for biological treatment of the glycol-containing water. Since January 2007, the amount of glycol discharged from the airport to Puget Sound has been reduced by 98%.

All discharges of water from the airport are governed by a National Pollution Discharge Elimination System (NPDES) permit, which places extensive monitoring requirements and strict compliance standards on the Port. In early 2009, Sea-Tac received a new NPDES permit that will govern stormwater and industrial wastewater management for the next five years. In addition to the NPDES permit, water resources activities must be completed in compliance with a variety of other local, state, and federal permits, including Federal Aviation Administration (FAA) requirements for Sea-Tac to maintain its operating certification.



Sea-Tac Airport stormwater pond

While staff from a variety of departments work on these issues, Aviation Environmental, Aviation Facilities and Infrastructure and Airport Operations provide coordination and directional support to meet or exceed goals related to water resource and wildlife management and conservation priorities, respectively.

Future actions to improve water quality at Sea-Tac will focus on compliance with the new NPDES permit as well as increasing the installation of water quality and flow control Best Management Practices at airport facilities. In addition to stewardship of our own water resources, the Port intends to continue to actively participate in local basin planning groups that advance continual improvements in regional water resources and the health of the Puget Sound.

Wildlife

Wildlife management is an important concern for Sea-Tac as substantial wildlife-related aircraft damage can occur when some bird species and aircraft collide. The associated risks to human health and safety are real and are therefore addressed by the Port's Wildlife Hazard Management Plan. This FAA-regulated document places emphasis on mitigating hazardous wildlife attractants, especially with respect to eliminating wetland habitat types containing numerous open-water areas. While the Port is committed to improving wildlife habitat for some native species, it must do so in a manner that does not conflict with aviation safety. For wildlife that put aviation safety at risk, it may be in the best interest of all for the Port to create or enhance habitat for these more hazardous animals such as waterfowl far from Sea-Tac. Going forward, the Port intends to continue developing biologically sound approaches for managing hazardous wildlife.



Installation of coyote deterrent fence

Water Conservation

Although water is abundant in the Puget Sound area, our supply of clean drinking water is a limited and finite resource. Taking actions to use this precious resource wisely will ensure that we have enough fresh drinking water for future generations. At Sea-Tac, we have been doing exactly that. Water conservation has been an ongoing activity and goal of Sea-Tac for many years as the terminal and surrounding buildings have developed. Since 2005, potable water use at the airport has been reduced by 18%, or almost 52 million gallons per year, through a number of programs such as restroom fixture upgrades and drought-resistant landscaping.

Sea-Tac remains committed to further reducing its potable water usage. However, additional conservation efforts pose a challenge for the airport in the form of increased sewer treatment costs and surcharges. Reduction in potable water use at the airport results in a decrease in the volume of water and increase in the concentrate of the waste stream that Sea-Tac sends to neighboring treatment facilities. As a result, the airport is assessed additional fees for the treatment of its waste stream. While Sea-Tac is committed to continued water conservation and sustainability of water resources over the next five years, a balance must be established between the benefits of water conservation and the environmental and economic impact of sewage treatment.

PERFORMANCE METRICS

Water Consumption		2006	2007	2008
Potable water use (gallons)		261,131,288	282,660,224	229,232,828
Potable water use per passenger (gallons)		8.71	9.03	7.12

Water Quality	2003	2004	2005	2006	2007	2008
% acreage with water quality BMPs	47%	47%	47%	49%	78%	100%
% acreage with flow control BMPs	0%	0%	0%	7%	58%	85%
Non-compliance notifications to Ecology	-	-	-	-	-	18

Goal 14: Water Quality

Sea-Tac will achieve and maintain Best Management Practices for water quality treatment and flow control over 100% of airport industrial areas.

Objectives:

- Maintain high-quality stormwater runoff that ensures adequate water quality and quantity to meet beneficial uses in local streams, lakes, wetlands and Puget Sound
- Develop and maintain wetland habitat that provides vital ecological function
- Preserve, protect and enhance in-stream resources vital for native fish populations
- Promote and manage all water resources while minimizing wildlife-related hazards that could threaten air safety

Goal 15: Wildlife Habitat

Sea-Tac will identify and implement actions to:

(a) improve wildlife habitat and protections for native species not in conflict with aviation safety, and

(b) develop biologically sound approaches for managing hazardous wildlife in the context of reducing the need for direct control actions such as scare devices (e.g., pyrotechnics).

Objectives:

- Record the presence of non-hazardous wildlife species on aviation property
- Develop a species diversity index by location and conservation status for potential low-cost preservation actions
- Enhance reptile and amphibian habitat
- Explore opportunities to introduce Western Pond Turtle on wetland mitigation sites
- Continue to improve the existing Raptor Strike Avoidance Program
- Install wildlife deterrent fencing



Goal 16: Water Conservation

Sea-Tac will reduce the potable water consumption rate 5% below 2008 levels by 2015.

Objectives:

- Implement comprehensive water metering to better understand potable water usage patterns.
- Develop a water-use reduction plan that identifies conservation opportunities and update the plan biannually.
- Evaluate and promote optimal use of Port of Seattle-owned water right for maximum environmental and economic benefit.
- Work with treatment facilities to establish a wastewater fee structure that does not discourage the implementation of water conservation measures



NOISE

Summary of Trends and Current Conditions

A Part 150 Noise and Land Use Study is a voluntary process recommended by the FAA to engage with the community in developing airport noise programs and land use controls. The Part 150 Study is designed to reduce the impact aircraft noise has on the surrounding community and determine eligibility for noise reduction grant funds. In 1985, the Port completed the first Sea-Tac Airport Part 150 Study. Since that time there have been two other updates to the Study in 1993 and 2002. Through our Part 150 programs and 1990 Noise Mediation Project, the Port has been a national leader in both noise abatement and sound mitigation. To date, the Port has spent more than \$500 million on total mitigation programs including home and school insulation, property acquisition and relocation. Noise Abatement programs aggressively phased out older stage II aircraft prior to the federal ban in 2000; maintained noise abatement flight corridors, which are established headings and altitudes for airplanes to fly that help minimize community noise impacts; and deployed a comprehensive flight tracking and noise monitoring system. The next Part 150 will begin at the end of 2009. Some of Sea-Tac's more significant sound mitigation programs include:

- Sound insulated 9,315 out of 10,222 identified single family homes
- Sound insulated 6 out of 15 noise affected schools in the Highline School District
- Sound insulated 12 Highline Community College Buildings
- Sound insulated 5 condominium complexes
- Acquired 5 mobile home parks and relocated the residents
- Acquired and relocated residents from 80 homes in the Approach Transition Zone of the new 3rd runway



PERFORMANCE METRICS

There are no metrics identified for this indicator

Goal 17: Noise Mitigation

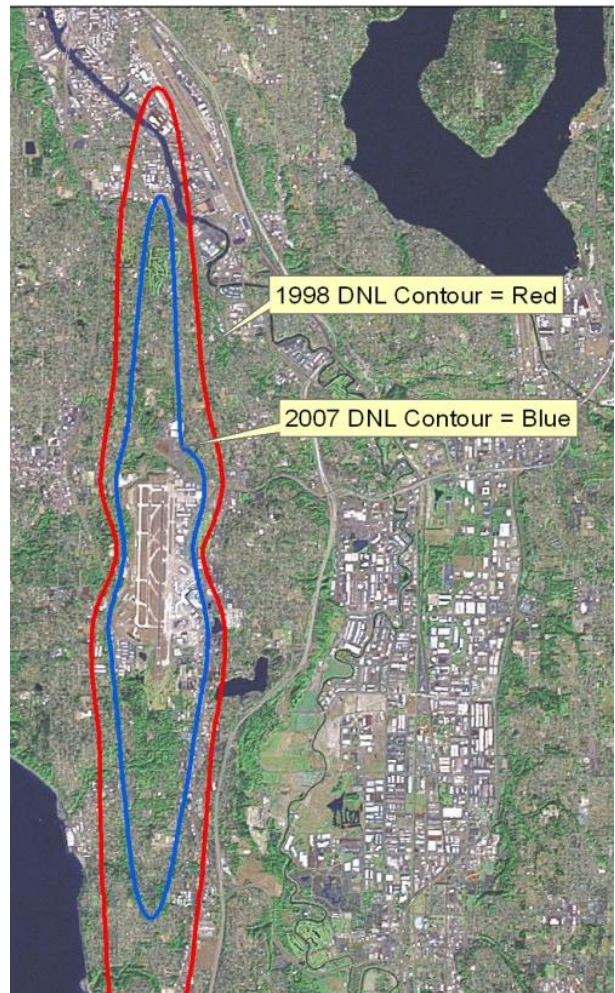
Sea-Tac will complete the Part 150 update including FAA review and approval by the end of 2011.

Objectives:

- Evaluate existing noise abatement programs
- Evaluate existing contours, future 5-year forecasted contours, and compatible land use
- Provide recommended actions for any potential mitigation or noise reduction programs
- Continue with existing noise remedy program which includes:
 - a. 56 single family homes
 - b. Up to 11 community college buildings
 - c. 9 schools in the Highline School District

What is DNL?

Day/night noise level is a cumulative metric that averages noise levels over time and penalizes noise occurring between 10:00 p.m. and 7:00 a.m. by adding 10 dB to each event. DNL is often expressed as an annual average noise level.



The acreage within the 65 DNL contour has been significantly reduced since 1985 through Sea-Tac noise programs.

- 1985 → 19,008 Acres
- 1993 → 14,128 Acres
- 1998 → 9,092 Acres
- 2007 → 4,118 Acres



Education And Integration

Summary of Trends and Current Conditions

Environmental Education

At Sea-Tac, we view environmental education as a key strategy in achieving our vision of a sustainable airport. Sea-Tac occupies a unique place in the community, with an opportunity to educate employees, business partners, passengers and the local community about the need for improving environmental performance. Our current environmental education campaigns aim to promote environmental stewardship and to instill an understanding of the importance of the airport and the aviation industry in the region's economic and environmental future. Some of Sea-Tac's more significant recent programs include:

- Development of an environmental curriculum for Aviation High School
- A passenger environmental education campaign entitled Teaching Environmental Stewardship in Terminals
- Sustainability Month and Earth Day Events for employees

In the next five years, we intend to continue to grow our environmental outreach programs. Our focus will be on improving the environmental and sustainability literacy of employees, business partners, the community and travelling public, and building a better understanding about the relationship between improved environmental practices and the long-term success and prosperity of the organization.



Sea-Tac Airport staff working with local high school students

Integration

The ultimate success of any sustainability initiative is found when sustainability-based thinking, perspectives, and behaviors are incorporated into the everyday operating procedures and culture of the organization.

EDUCATION AND INTEGRATION

Sea-Tac has come a long way in its understanding of sustainability and what it requires of the organization in the future. Through educational programs, training, adoption of new policies, and direction from the Port Commission and senior management, Sea-Tac has taken some important initial steps in its quest to become a sustainable airport. We intend to continue integrating sustainability into the core structures of the organization so that environmental and sustainability considerations become part of normal business process and practices.

Working with Business Partners

Sea-Tac has a history of working with its tenants and business partners on environmental improvements and sustainability measures. Many of Sea-Tac's most significant environmental achievements simply would not be possible without the help and cooperation of its business partners. Whether reducing emissions, improving recycling practices, or implementing energy efficiency measures, collaboration with tenants and business partners is essential if Sea-Tac is to achieve its sustainability vision.



Sea-Tac Airport working with vendors for a food composting program

PERFORMANCE METRICS

There are no metrics identified for this indicator

Goal 18: Education and Community Outreach

Sea-Tac will institute an environmental education campaign to promote environmental stewardship and raise awareness of airport environmental and sustainability initiatives.

Objectives:

- Educate the community, traveling passengers, employees, tenants and business partners about the benefits of improved environmental performance and sustainability initiatives
- Interact with local communities and develop outreach programs that promote environmental responsibility
- Develop partnerships and work collaboratively with local communities, other airports, industry groups, local governments and non-government organizations to coordinate and develop environmental and sustainability practices

Goal 19: Integration

Sea-Tac will integrate environmental and sustainability considerations into core business operations.

Objectives:

- Continue to integrate environmental and sustainability considerations into investment decisions
- Track progress and continually refine environmental and sustainability performance metrics
- Integrate cost accounting into the evaluation of environmental programs, projects and initiatives
- Clearly and regularly communicate environmental priorities to employees and business partners

Goal 20: Working with Business Partners

Sea-Tac will work with its business partners to extend environmental and sustainability initiatives beyond its own operations.

Objectives:

- Provide business partners with educational resources and technical assistance in support of environmental and sustainability programs
- Identify opportunities to collaborate with business partners on environmentally beneficial projects and actions

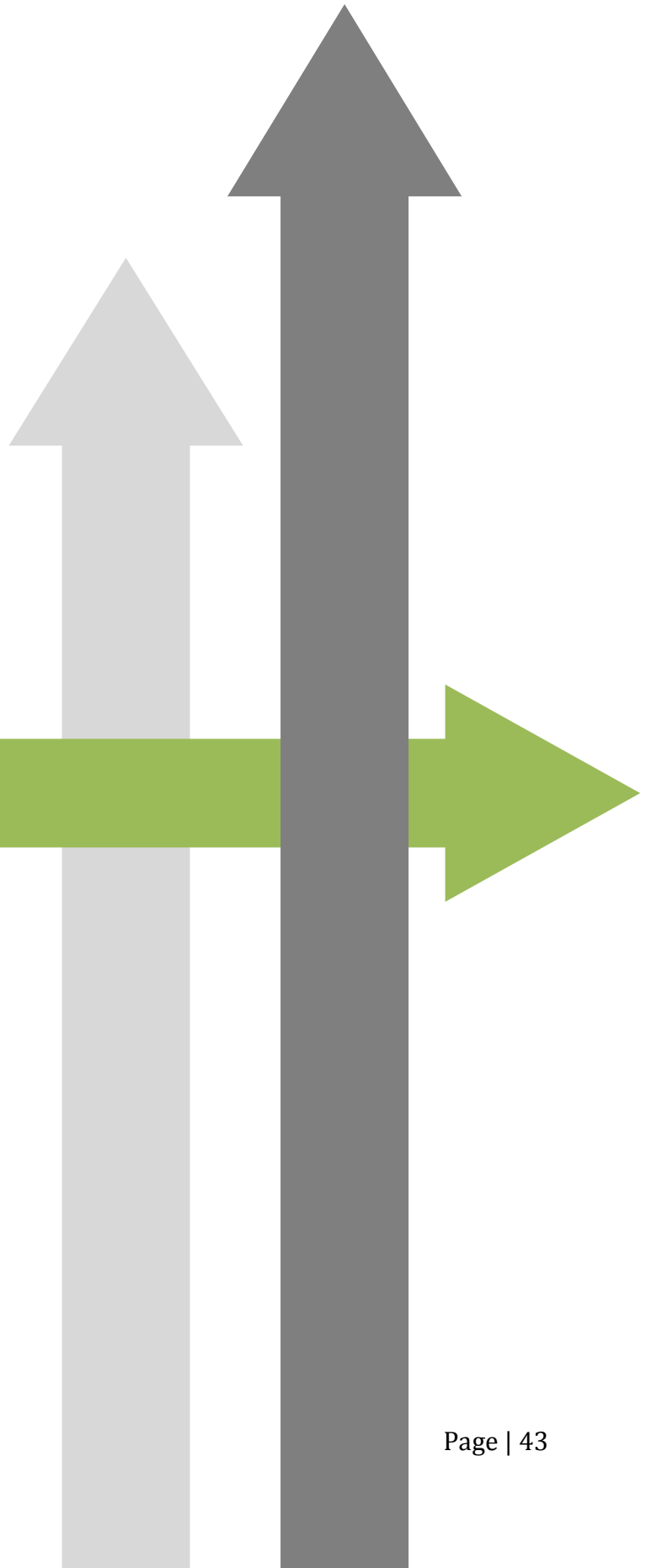


Sea-Tac Airport proposed recycling campaign

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Air Quality and Climate Change

Fuel Use by Type	2000	2006	2008
Gasoline		144,268 gal	127,094 gal
Diesel		16,745 gal	20,218 gal
CNG		179,710 gge	168,675 gge
Biofuel			

GHG Emissions	2006	2008
POS emissions (metric tons)	66,491	46,079
POS emissions per passenger (lbs)	4.89	2.86
Airlines/Tenant emissions (metric tons)	4,214,806	N/A
Public emissions (metric tons)	373,033	N/A

Transportation	2008
Average # of occupants per vehicle trip	2.6
% employees using high occupancy transit	



Energy Use and Conservation

Electricity Use (kWh)	2000	2005	2008
Total kWh of electricity used	133,508,734	145,087,553	148,715,000
kWh per passenger	4.70	4.95	4.62

Conservation	
Total kWh/yr. of energy saved	46,282,904

Renewable Energy			
“Green Power” (purchased/used as a % of total energy use)	0%	0%	25%

Natural Gas Use (Therms)			
Total therms used	2,375,219	2,476,400	2,813,851
Therms per passenger	0.083	0.085	0.087
Therms per sq. ft. of terminal	1.03	0.81	0.92



Buildings and Infrastructure

Performance Metrics	2008
Square feet green buildings or LEED™ rated buildings	1,225 million
Number of capital, tenant, or concessions projects achieving or proposed for LEED™* certification	3
Facility condition index	25.39%



Materials Use and Recycling

Municipal Solid Waste	2001	2004	2008
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Environmentally Preferable Products (as a % of total purchased)	2008
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Water Resources and Wildlife

Water Consumption	2006	2007	2008
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Non-compliance notifications to Ecology						



Noise

There are no metrics identified for this indicator



Education and Integration

There are no metrics identified for this indicator



Air Quality and Climate Change

Goal 1a: Air Quality

Sea-Tac will improve the overall efficiency of its vehicle fleet by 30 % over 2006 levels by 2015.

Goal 1b: Air Quality

Sea-Tac will continue to work with its business partners to consolidate trips, reduce vehicle miles travelled, and promote clean vehicles from taxis, shuttles, buses, construction vehicles, service equipment, and ground support equipment.

Objectives:

- Routinely audit and update the Port's Clean Fleets Policy
- Monitor and track the airport's fuel and energy use
- Create opportunities to share vehicle resources more efficiently, thereby minimizing fleet assets
- Identify opportunities to procure more fuel efficient vehicles

Goal 2: Greenhouse Gas Emissions

Sea-Tac will reduce airport owned and controlled greenhouse gas emissions by 15% below 2005 levels by 2020.

Objectives:

- Inform service providers and public of actions that can be taken to help maintain clean air
- Collaborate with local governments, air agencies and stakeholders to implement cost-effective emission reductions actions
- Where viable, set minimum requirements that reduce emissions from airport service providers such as courtesy vans and taxis.
- Implement strategy to reduce single occupancy vehicle traffic to the airport 5% by 2015

Goal 3: Transportation

Sea-Tac will increase the average occupancy of passenger vehicles accessing the airport from 2.6 in 2009 to 3.6 in 2015.

Objectives:

- Develop and implement a plan to achieve a 5% mode shift by passengers from single

occupancy vehicles to higher occupancy/shared-ride airport access modes by 2015

- Inform the traveling public and employees of the benefits of choosing public transit and high occupancy vehicles
- Leverage tenants to promote increased use of public transit and ridesharing by employees
- Work with state and local transportation officials to identify and implement actions that reduce vehicle miles traveled to and from the airport

Goal 4: Adaptation Planning

Sea-Tac will complete a risk analysis of potential climate change impacts and implications for the airport, and develop a strategy plan for avoiding/mitigating risks.

Objectives:

- Conduct a risk analysis to identify Sea-Tac's vulnerability to climate change impacts
- Set preparedness goals and develop a climate change preparedness plan
- Begin implementation of a climate change preparedness plan



Energy Use and Conservation

Goal 5: Electricity Use

Sea-Tac will meet all future load growth through conservation measures and renewable energy.

Objectives:

- Identify cost-effective conservation projects through a comprehensive resource efficiency study
- Continue to build on existing programs that provide incentives and assistance for customers (tenants)
- Identify opportunities to increase the purchase/use of renewable energy
- Require all new capital projects to undergo a LEED™ or equivalent energy efficiency review
- Educate employees and tenants on energy efficiency practices
- Continue to fund a comprehensive preventive maintenance program
- Annually collect data to determine greenhouse gas emissions associated with electricity purchases
- Identify internal and external funding for conservation efforts

Goal 6: Natural Gas Use

Sea-Tac will continue to reduce natural gas consumption per square foot of terminal space

through cost-effective conservation and efficiency measures.

Objectives:

- Identify conservation projects through a comprehensive resource efficiency study
- Identify heat recovery opportunities
- Identify internal and external opportunities to fund conservation efforts
- Seek opportunities to displace natural gas use with other more environmentally friendly fuels or technologies
- Maximize boiler efficiency through preventative maintenance

Goal 7: Technology Deployment

Sea-Tac will serve as a leader in identifying and implementing leading-edge technologies and process improvements that reduce energy demand and improve efficiency.

Objectives:

- Continue implementation of Green Data Center Strategy
- Develop employee procedures/training that maximize energy efficiency of existing and newly implemented technologies
- Explore opportunities to increase the common use of facilities where it is cost effective and environmentally beneficial
- Continue researching new energy-efficient technologies and seek opportunities to test feasibility through pilot projects



Buildings and Infrastructure

Goal 8: Sustainable Buildings

Sea-Tac will integrate LEED™ or other “green” building performance measures into all projects

Objectives:

- Complete implementation of Sea-Tac’s Sustainable Asset Management Policy
- Identify opportunities for high density, joint use for all new construction
- Identify opportunities to integrate environmental and sustainable cost accounting into all Port capital, tenant, and concessions projects
- Adopt a sustainability master plan that integrates Sea-Tac’s environmental and sustainability goals into future capital development plans
- Maximize environmental and sustainable performance of buildings and infrastructure through cost-effective improvements to design, construction, operations, and

maintenance practices

Goal 9: Asset Management

Sea-Tac will continue to improve its asset management practices in a manner that minimizes the total cost of owning and operating facilities and maximizes environmentally-sustainable development.

Objectives:

- Conduct a complete facility condition assessment
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Materials Use and Recycling

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- Increase participation of airlines and tenants in airport recycling programs
- Replace non-recyclable materials with recyclable or compostable materials
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Sea-Tac will implement Best Management Practices that reduce construction, demolition and land clearing debris generated by the airport and its contractors.

Objectives:

- Update construction specifications to include guidelines for the sustainable management of CDL debris
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Sea-Tac will continue to reduce its use of hazardous materials and the generation of hazardous wastes.

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- Develop a tracking system to determine volume of hazardous materials purchased
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Sea-Tac will increase the use of green products throughout the organization by implementing a robust environmental purchasing program.

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- Promote pilot testing of environmentally preferable products
- Collaborate with other local governments on environmental purchasing best practices



Water Resources and Wildlife

Goal 14: Water Quality

Sea-Tac will achieve and maintain Best Management Practices for water quality treatment and flow control over 100% of airport industrial areas.

Objectives:

- Maintain high-quality stormwater runoff that ensures adequate water quality and quantity to meet beneficial uses in local streams, lakes, wetlands and Puget Sound
- Develop and maintain wetland habitat that provides vital ecological functions

- Preserve, protect and enhance in-stream resources vital for native fish populations
- Promote and manage all water resource while minimizing wildlife-related hazards that could threaten air safety

Goal 15: Wildlife Habitat

Sea-Tac will identify and implement actions to: (a) improve wildlife habitat and protections for native species not in conflict with aviation safety, and (b) develop biologically sound approaches for managing hazardous wildlife in the context of reducing the need for direct control actions such as scare devices (e.g., pyrotechnics).

Objectives:

- Record the presence of non-hazardous wildlife species on aviation property
- Develop a species diversity index by location and conservation status for potential low-cost preservation actions
- Enhance reptile and amphibian habitat
- Explore opportunities to introduce Western Pond Turtle on wetland mitigation sites
- Continue to improve the existing Raptor Strike Avoidance Program
- Install wildlife deterrent fencing

Goal 16: Water Conservation

Sea-Tac will reduce the potable water consumption rate 5% below 2008 levels by 2015.

Objectives:

- Implement comprehensive water metering to better understand potable water usage patterns.
- Develop a water-use reduction plan that identifies conservation opportunities and update the plan biannually.
- Evaluate and promote optimal use of Port of Seattle-owned water right for maximum environmental and economic benefit.
- Work with treatment facilities to establish a wastewater fee structure that does not discourage the implementation of water conservation measures



Noise

Goal 17: Noise Mitigation

Sea-Tac will complete the Part 150 update including FAA review and approval by the end of 2011.

Objectives:

- Evaluate existing noise abatement programs
- Evaluate existing contours, future 5 year forecasted contours, and compatible land use
- Provide recommended actions for any potential mitigation or noise reduction programs
- Continue with existing noise remedy program which includes:
 - 56 single family homes
 - Up to 11 community college buildings
 - 9 schools in the Highline School District



Education and Integration

Goal 18: Education and Community Outreach

Sea-Tac will institute an environmental education campaign to promote environmental stewardship and raise awareness of airport environmental and sustainability initiatives

Objectives:

- Educate the community, traveling passengers, employees, tenants and business partners about the benefits of improved environmental performance and sustainability initiatives
- Interact with local communities and develop outreach programs that promote environmental responsibility
- Develop partnerships and work collaboratively with local communities, other airports, industry groups, local governments and non-government organizations to coordinate and develop environmental and sustainability practices

Goal 19: Integration

Sea-Tac will integrate environmental and sustainability considerations into core business operations

Objectives:

- Continue to integrate environmental and sustainability considerations into investment decisions
- Track progress and continually refine environmental and sustainability performance metrics
- Integrate cost accounting into the evaluation of environmental programs, projects and initiatives
- Clearly and regularly communicate environmental priorities to employees and business partners

Goal 20: Working with Business Partners

Sea-Tac will work with its business partners to extend environmental and sustainability initiatives beyond its own operations.

Objectives:

- Provide business partners with educational resources and technical assistance in support of environmental and sustainability programs
- Identify opportunities to collaborate with business partners on environmentally beneficial projects and actions