

2014 PROGRESS REPORT

Seattle-Tacoma International Airport

A VISION FOR 2014 AND BEYOND

Environmental Strategy Plan 2009



2009 2010 2011 2012 2013 2014

Message from the Director

Welcome to our **2014 Progress Report**, the final progress report for our 2009 *Environmental Strategy Plan: a Vision for 2014 and Beyond*. Over the past five years we achieved a number of our 2009 goals. For example, we;

- ✓ Reduced our water consumption 5% below 2008 levels
- ✓ Achieved Best Management Practices for water quality and treatment over 100% of airport industrial services
- ✓ Introduced best management practices that reduce construction waste
- ✓ Partnered with business operators to promote clean taxis and build infrastructure to reduce aircraft-related emissions

We also made great progress in other areas during 2014 when we:

- Reduced our greenhouse gases by over 1,500 tons
- Fueled our bus fleet with renewable natural gas
- Increased our recycling rate from 23% to 31%
- Increased the number of projects seeking Leadership in Energy & Environmental Design (LEED®) certification
- Increased meal donations from 8,000 pounds to over 26,000 pounds or 500 meals per week

We will continue to build on our environmental success with our new Strategy for a Sustainable Sea-Tac (S3). S3 objectives and initiatives not only create new opportunities to reduce our environmental impact, but are part of our 20-year Sustainable Airport Master Plan (SAMP).

Finally, I'm especially proud to report that Sea-Tac was the first airport in North America to be certified Airport Carbon Accredited Level 2 under the Airports Council International (ACI) Airport Carbon Accreditation (ACA) worldwide independent program.

Elizabeth Leavitt
Director, Aviation Planning and Environmental



Port of Seattle Commissioners

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PRIORITY ACTIONS

Ongoing Strategic Priorities

Pre-conditioned Air – Continue to ensure all partner airlines use Pre-Conditioned Air (PC Air) system.

Electric Ground Support Equipment – Finish installing charging stations on Concourses A and B and in the South Satellite, and look for funding to assist airline and baggage carrier partners in purchasing electric ground support vehicles.

Energy Conservation – Continue to implement a variety of heating, ventilation, and air conditioning (HVAC) tests and upgrades, and install more efficient lighting throughout the terminal.

Terminal Composting Collection Program – Continue to evaluate options to integrate greener service ware into concession operations.

Port/Commercial Vehicle Fuel Efficiency – Identify and implement vehicle performance and emission standards that decrease environmental impacts and minimize cost impacts for new Port vehicles.

Sustainable Airport Master Plan – Continue developing the SAMP for Sea-Tac Airport and fully integrate our sustainability goals and objectives into the plan.

Sustainable Development – Continue to evaluate opportunities and integrate LEED® or other “green” building practices into aviation capital, tenant, concession, small works, expense and other projects.

Carbon Reduction – Evaluate new options to use alternative and renewable fuels as a key carbon reduction strategy for airport-owned emissions.

Solid Waste – Complete the Solid Waste Management Plan, which outlines actions to meet our 50% overall recycling goal by 2014

Highlighted Achievements

Airport Carbon Accreditation (ACA) – First airport in North America to be certified Airport Carbon Accredited Level 2 under ACI’s ACA program.

Renewable Natural Gas as a Transportation Fuel – We now use renewable natural gas from the Cedar Hills Landfill to fuel our entire bus fleet and transport passengers between Sea-Tac and the Rental Car Facility.

Education and Outreach – Re-developed our Sustainable In-Sights campaign to highlight our sustainability initiatives on the airfield and inside the terminal. Received the Excellence in Airport Marketing and Communication Award from Airports Council International – North America in the Airport’s and the Environment category for our Raisbeck High School Aviation and the Environment Curriculum.

Environmental Achievement Awards: Sea-Tac Airport’s third annual Green Gateway Environmental Excellence Awards recognized three partners for outstanding environmental accomplishments. Learn more about their accomplishments on the Port of Seattle’s [website](#).

Electric Ground Support Equipment (eGSE) – Introduced more than 200 pieces of electric ground support equipment at the northern gates of the airport.

Noise Mitigation – Completed our Part 150 Study Noise and Land-Use Study and received a Record of Approval (ROD) from Federal Aviation Administration (FAA) for our work. This means we met the airport’s noise mitigation goal set in 2009.

Strategy for a Sustainable Sea-Tac – Engaged departments throughout the airport to develop new environmental sustainability objectives and initiatives to achieve our long-term (“Century Agenda”) goals.



Air Quality and Climate Change

GOALS	STATUS	2014 PROGRESS	2015 ACTIONS
<p>Goal 1a: Air Quality</p> <p>Sea-Tac will improve the overall efficiency of its vehicle fleet by 30 % above 2006 levels by 2015.</p>		<p>Fleet gasoline and diesel use remained fairly steady compared with recent years.</p> <p>Retired 20 older vehicles and replaced with new, high-MPG models (sedans, trucks, police interceptors and SUVs).</p> <p>Improved efficiency of rental car facility buses by 9% by optimizing bus frequency. Reduced fuel use by 9,000 gallon equivalents of CNG, while carrying 295,000 additional passengers.</p>	<p>Purchase at least 3 all-electric vehicles for motor pool and security fleet.</p> <p>Examine more opportunities to maximize fleet efficiency and minimize emissions.</p> <p>Continue to provide green driver training to Port badged drivers.</p> <p>Continue to optimize Rental Car Facility bus operations.</p>
<p>Goal 1b: Air Quality</p> <p>Sea-Tac will continue to work with its business partners to consolidate trips, reduce vehicle miles traveled, and promote use of clean vehicles as taxis, shuttles, buses, construction vehicles, service equipment and ground support equipment.</p>		<p>Alaska Airlines replaced 204 pieces of gasoline/diesel ground support equipment with electric (eGSE) in northern half of airport, reducing more than 20,000 gallons of fuel consumed.</p> <p>Southwest and United airlines began pilot program for electric pushback tractors.</p> <p>Awarded \$2M to install eGSE charging infrastructure at Concourses A and Band South Satellite.</p> <p>Installed PC Air system on 63 gates.</p>	<p>Continue to install eGSE charging infrastructure at Concourses A, B and South Satellite.</p> <p>Continue to identify and pursue opportunities for grant funds for electric vehicles and charging stations.</p> <p>Add incentives for using ultra low carbon fuels in the taxi service RFP.</p> <p>Continue to optimize operation of PCAir and ground power systems, and encourage airline use of system.</p>
<p>Goal 2: Greenhouse Gas Emissions</p> <p>Sea-Tac will reduce airport owned and controlled greenhouse gas emissions by 15% below 2005 levels by 2020.</p>		<p>Reduced greenhouse gas emissions from fleet vehicles by ~2,500 metric tons by switching to renewable natural gas for our bus fleet.</p> <p>Currently at ~6% below 2005 levels, even while the number of flights and passengers increase..</p>	<p>Continue to evaluate opportunities to procure renewable natural gas for airport-owned and operated vehicles, and as a heating fuel.</p> <p>Continue to monitor carbon footprint of electricity purchased by airport.</p> <p>Begin designing efficiency improvements through Stage III Mechanical upgrade projects in Central Mechanical Plant.</p>
<p>Goal 3: Transportation</p> <p>Sea-Tac will increase the average occupancy of passenger vehicles accessing the airport from 2.6 in 2009 to 3.6 in 2015.</p>		<p>Evaluated carbon emissions on a gram per mile basis for travel modes to and from the airport. Identified environmentally-preferred modes, such as green taxis, light rail, bus and shared van to develop programs to encourage passengers to travel by these modes.</p> <p>Installed bike assembly station in baggage area based on Bicycle Facilities Plan.</p>	<p>Begin measuring and evaluating new transportation objective for environmentally preferred modes.</p> <p>Continue to implement bike plan recommendations such as increasing connection among bike lanes near the Airport.</p>
<p>Goal 4: Adaptation planning</p> <p>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.</p>		<p>Integrated adaptation planning into the SAMP.</p> <p>Developed methodology/approach for Sea-Tac Airport Climate Change Vulnerability Assessment.</p>	<p>Begin developing adaptation analysis in the SAMP.</p> <p>Conduct climate vulnerability analysis on Airport operations and infrastructure in 2015.</p> <p>Develop strategy plan in 2016 in response to vulnerabilities identified in 2015.</p>

 = Goal Achieved
  = Significant progress
  = Progress towards goal
  = No progress

Energy Use and Conservation

GOALS	STATUS	2014 PROGRESS	2015 ACTIONS
<p>Overarching Goal: Gain Full Understanding of Energy Use</p> <p>Sea-Tac will implement a comprehensive utility management system that integrates information from its main energy resources: electricity, natural gas and water.</p>	●	<p>Purchased and installed energy software program to monitor system operations.</p> <p>Continued to identify and repair water meters to ensure accurate measurements.</p> <p>Established a dashboard for all utility systems.</p> <p>Installed additional Ethernet-capable electric meters throughout airport.</p>	<p>Continue to develop baseline efficiency for electricity, water and natural gas systems.</p>
<p>Goal 5: Electricity Use</p> <p>Sea-Tac will meet all future load growth through conservation measures and renewable energy.</p>	●	<p>Verified electricity savings from Stage II Energy Conservation project, and ensured that we saved 2.7 million kWh of electricity per year.</p> <p>Installed LED lights on 8 jet bridges.</p> <p>Monitored and evaluated cost-effectiveness and technological advances in renewable energy.</p>	<p>Continue to upgrade the efficiency of the HVAC system in the main terminal</p> <p>Continue to improve the efficiency of the cooling system (chilled water system).</p> <p>Install Phase II (all floors except 1 & 4) of LED replacements throughout the Parking Garage.</p> <p>Continue to monitor the cost-effectiveness and technological advances of renewable energy for the terminal.</p>
<p>Goal 6: Natural Gas Use</p> <p>Sea-Tac will continue to reduce natural gas consumption per square foot of terminal space through cost-effective conservation and efficiency measures.</p>	●	<p>Verified natural gas reductions from Stage II Energy Conservation project, and ensured that we saved 30,000 therms of natural gas per year.</p> <p>Completed Energy audit for Stage III Energy Conservation Project.</p>	<p>Move forward with Stage III Energy Conservation Project preliminary design. Construction expected in 2016.</p> <p>Continue to update energy monitoring system to obtain better data on energy use.</p>
<p>Goal 7: Technology Deployment</p> <p>Sea-Tac will serve as a leader in identifying and implementing leading-edge technologies and process improvements that reduce energy demand and improve efficiency.</p>	●	<p>Continued to convert to more efficient servers, saving a total of 1.875 kWh of electricity per year.</p>	<p>Continue to convert to more efficient servers to reduce energy use.</p>

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Buildings and Infrastructure

GOALS	STATUS	2014 PROGRESS	2015 ACTIONS
<p>Goal 8: Sustainable Buildings</p> <p>Sea-Tac will integrate LEED® or other “green” building performance measures into all projects.</p>	●	<p>Completed planning documentation for LEED® into the North Satellite Expansion and International Arrival Facility projects. Installed ultra-low water-use fixtures, urinals and toilets in restroom upgrade projects.</p> <p>Developed a Sustainable Buildings objective for the new Strategy for a Sustainable Sea-Tac.</p>	<p>Complete design and integrate LEED® in both the North Satellite and International Arrivals Facility projects. This includes a target of 75% reduction in energy and 85% reduction in water.</p> <p>Continue to update aviation environmental design review process, specifications, and airport design standards to include environmental performance is integrated into projects.</p>
		<p>Integrated environmental sustainability in projects including:</p> <ul style="list-style-type: none"> Upgraded loading bridges by using recycled materials, no/low VOC (volatile organic compounds) paints, LED light fixtures, Energy Star computer monitors and natural ventilation. Required tenant improvement projects to recycle carpet and use Energy Star equipment, no/low VOC paints, energy- efficient lighting, low-flow fixtures, and improved waste management practices. Used energy efficient lighting, recycled concrete/asphalt, low impact development methods, and no-idling messaging in Doug Fox and Cell Phone Lot projects. 	<p>Pursue LEED® Master Site designation for integrating sustainability into new construction, existing buildings/renovations, and tenant improvements/commercial interiors.</p>
<p>Goal 9: Asset Management</p> <p>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.</p>	●	<p>Updated asset management procedures to improve inventory and condition assessments.</p> <p>Completed asset inventory of the parking garage, Transit Operations Center, international window wall and pre-conditioned air system.</p> <p>Developed a methodology to evaluate financial and environmental impacts of improving asset management in the SAMP.</p>	<p>Evaluate financial and environmental impacts of improving asset management using the SAMP model developed in 2014. Identify potential improvements in maintenance and replacement schedules and their impact on energy, environment and operational costs.</p> <p>Conduct asset inventories of the toll plazas, Central Mechanical Plant, air shafts, cooling towers, sky bridges, garage electrical rooms and Concourse B.</p>

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Materials Use and Recycling

GOALS	STATUS	2014 PROGRESS	2015 ACTIONS
<p>Goal 10: Recycling</p> <p>Sea-Tac will increase the solid waste recycling rate from the current 21% in 2008 to 50% by 2014.</p>	●	<p>Terminal waste diversion rate increased to 31%.</p> <p>Airfield waste diversion rate remained at 10%.</p> <p>Began updating Sea-Tac's 5-year Solid Waste Management Plan in the following ways:</p> <ul style="list-style-type: none"> • Obtained FAA guidance on complying with AIP recycling plan requirements; • Completed airport-wide waste characterization study; and • Completed stakeholder surveys and external research. <p>Donated 32,947 pounds of surplus concessionaire food (second highest annual total), equivalent to 507 meals per week. Total donations since program inception in 2006 reached 155,163 pounds.</p> <p>Added new waste reduction initiatives through the airport custodial service including:</p> <ul style="list-style-type: none"> • Using a green cleaning program (GreenCare) to reduce use of toxic cleaning chemicals; • Completed a secondary waste sorting pilot project; • Completed a checkpoint liquid waste study; • Expanded recycling collection services into maintenance shops, bag well areas, flight deck, toll plaza, ticketing counters, and public concourse areas; • Implemented restroom paper towel composting in airport offices and Parking Garage Toll Plaza; and • Completed annual site-specific custodial waste collection and disposal training. <p>Continued research into compostable service ware costs and incentives to encourage concessions to use compostable service ware.</p>	<p>Complete Solid Waste Management Plan, evaluate recommendations, and develop implementation plan for select waste reduction/recycling opportunities.</p> <p>Complete recommendation for compostable service ware and mandatory recycling strategy, including proposed implementation options, incentive packages and schedule.</p> <p>Evaluate results of checkpoint liquid waste pilot project.</p> <p>Audit green cleaning program and obtain documentation from U.S. Green Building Council that GreenCare meets LEED® certification standards.</p>

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Materials Use and Recycling

GOALS	STATUS	2014 PROGRESS	2015 ACTIONS
<p>Goal 11: Construction Debris</p> <p>Sea-Tac will implement Best Management Practices that reduce construction, demolition and land clearing debris generated by the airport and its contractors.</p>	●	<p>Developed a Construction Waste Management (CWM) database to document performance and analyze project waste diversion rates.</p> <p>Identified specific projects with high diversion potential: South Satellite Carpet Replacement Project and 16C/34C Runway Reconstruction Project.</p> <p>Increased amount of CW diverted from landfills from 68% in 2013 to 97.7% in 2014.</p> <p>Used recycled content asphalt in paving projects around the airport, including the Cell Phone Lot.</p>	<p>Continue to review project designs, identify opportunities to recycle CW, such as carpet and other building materials. Identify potential logistical or contractual concerns during design to reduce potential for change orders or other contractual issues.</p> <p>Ensure contractor submittals comply with CW specification and track performance.</p> <p>Work with Aviation Maintenance and Port Construction Services to identify opportunities to collect/recycle CW from smaller Port projects.</p> <p>Confirm that Port specifications meet new King County Waste Management requirements for CW.</p> <p>Identify opportunities to use recycled asphalt shingles for airfield pavement per FAA requirements.</p>
<p>Goal 12: Hazardous Materials and Waste</p> <p>Sea-Tac will continue to reduce its use of hazardous materials and the generation of hazardous wastes.</p>	●	<p>Maintained medium quantity generator status generating 2,670 pounds of hazardous waste.</p> <p>Worked with Aviation Maintenance to clean out old or off-specification chemical products from shop storage areas.</p> <p>Reduced solvent and water-based chemical waste by increasing cleaning frequency to reduce build-up of toxic contaminants.</p>	<p>Continue to identify list of frequently used hazardous materials and recommend less toxic substitutes.</p> <p>Implement new chemical review process that quickly evaluates hazard classification of chemical products used by Port staff.</p> <p>Continue to evaluate waste generating processes to evaluate waste reduction opportunities.</p>
<p>Goal 13: Environmentally Preferable Products</p> <p>Sea-Tac will increase the use of green products throughout the organization by implementing a robust environmental purchasing program.</p>	●	<p>Purchased 68% recycled content copy paper. This is a decrease of 9% from 2013. This is due to the purchase of a large quantity of specialty paper.</p> <p>Maintained green products purchased at 40%.</p> <p>Continued to implement the take-back program for binders, file folders and unused office products. Unused products are distributed to local schools or recycled.</p>	<p>Execute a “green” managed print service contract for energy efficient printers, recycled content paper and non-toxic inks.</p> <p>Coordinate with Aviation Maintenance and Health and Safety to continue to identify and evaluate the efficacy of green product.</p>



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= No progress





Water Resources and Wildlife

GOALS	STATUS	2014 PROGRESS	2015 ACTIONS
<p>Goal 14: Water Quality</p> <p>Sea-Tac will achieve and maintain Best Management Practices for water quality treatment and flow control over 100% of airport industrial areas.</p>	★	<p>Designed and constructed a bio-retention swale serving the new Cell Phone Waiting Lot.</p> <p>Completed strategy for applying Low Impact Development (LID) stormwater management at the Airport.</p>	<p>Update the Stormwater Management Manual to be consistent with Ecology's 2014 guidance including Airport-specific green stormwater infrastructure.</p> <p>Develop and pilot a custom Airport-specific bioretention media mix project for enhanced metals removal.</p> <p>Convert a bioswale within the South Employee Parking Lot into a bioretention swale using a custom airport-specific bioretention media mix to provide additional water quality treatment for metals.</p> <p>Define applicability and limitations of vegetative roofs at Airport through collaboration with Airport Operations, Facilities & Infrastructure and Aviation Maintenance.</p> <p>Complete a Green Stormwater Infrastructure Feasibility Mapping tool for use in selecting GSI BMPs on Airport property while providing wildlife hazard mitigation.</p>
<p>Goal 15: Wildlife Habitat</p> <p>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), and (c) promote wildlife education.</p>	●	<p>Continued compiling wildlife use data at the Airport.</p> <p>Conducted surveys for streaked horned lark, listed as threatened under the Endangered Species Act. Survey found species was not present at the Airport.</p> <p>Updated the Airport's GIS web tool with the most current stream, wetland and buffer information.</p> <p>Finalized plan to convert Tyee Golf Course site to vegetation that promotes non-hazardous wildlife while deterring species hazardous to airplanes.</p>	<p>Use Forward Looking Infrared (FLIR) for nighttime small mammal surveys to establish baseline and trends of small mammals on the airfield. Evaluate diversity of small mammal species on and around the airfield.</p> <p>Use collected wildlife data and other existing information to develop a habitat integrity index for Airport properties.</p> <p>Begin work on Habitat Management Plan. Formulate objectives, identify data gaps, and use existing information to prioritize management actions.</p> <p>Plant Tyee Golf Course with shrubs to deter waterfowl landing and grazing. Include grass and flowering plants to attract pollinators.</p> <p>Begin installing osprey nest exclusions on cell towers within 2 miles of the Airport.</p>
<p>Goal 16: Water Conservation</p> <p>Sea-Tac will reduce the potable water consumption rate 5% below 2008 levels by 2015.</p>	★	<p>Reviewed regional water conservation strategies and developed a conforming Airport conservation strategy with recognition of future increased enplanement.</p> <p>Updated mechanical standards for restrooms to include low-flow fixtures.</p> <p>Retrofitted two restrooms in Concourses B and C to updated standards.</p> <p>Conducted feasibility and cost/benefit analysis of garage rainwater capture and cooling tower reuse.</p> <p>Completed pre-design of a rainwater capture and reuse system to serve bathrooms in the new North Satellite</p>	<p>Complete water right application to change Tyee well use from irrigation to emergency potable water use.</p> <p>Evaluate the feasibility of water reuse for construction project support and attempt to secure agency approval.</p> <p>Install meters on terminal water mains allowing for analysis and conservation measure performance assessment.</p> <p>Assess the performance of 0.125 gpf test urinal flush valves.</p> <p>Identify and repair distribution system leaks.</p> <p>Complete the design of the North Satellite rainwater capture and reuse system.</p> <p>Complete the pre-design of the International Arrivals Facility rainwater capture and reuse system.</p>

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Noise

GOALS	STATUS	2014 PROGRESS	2015 ACTIONS
<p>Goal 17: Noise Mitigation</p> <p>Sea-Tac will complete the Part 150 Study update including FAA review and approval by end of 2011.</p> <p>A Part 150 Study is a review and analysis of the noise impacts of the Airport on our surrounding communities. Sea-Tac will use the results from the study in our noise abatement initiatives.</p>	★	<p>Received FAA Record of Approval for the completed Part 150 Noise and Land Use Study.</p> <p>Publicly recognized three airlines, Alaska Airlines, Virgin America and Air Canada Jazz for their efforts in reducing noise as part of the Fly Quiet Program.</p> <p>Completed sound insulation of 17 single family homes. Program is free of charge and consists of installing new doors and windows to reduce interior noise levels.</p> <p>Began developing a new Noise Monitoring and Flight Tracking System.</p>	<p>Complete feasibility studies for the sound insulation of tenant occupied multi-family homes (apartments) and places of worship.</p> <p>Define the new FAA Grant funded Residential Sound Insulation program for single family homes within the current noise remedy boundary.</p> <p>Complete the existing Residential Sound Insulation program consisting of approximately 15 homes.</p> <p>Monitor operations of the Required Navigation Performance procedures developed through the Greener Skies Project.</p> <p>Continue implementing Noise Monitoring and Flight Tracking System. Replace and upgrade all 24 noise monitors and install new flight tracking software.</p> <p>Ground Run-up Enclosure included in the SAMP.</p>

Education and Integration

GOALS	STATUS	2014 PROGRESS	2015 ACTIONS
<p>Goal 18: Education and Community Outreach</p> <p>Sea-Tac will institute an environmental education campaign to promote environmental stewardship and raise awareness of Airport environmental and sustainability initiatives.</p>	●	<p>Conducted the 2014 Environmental Challenge with Raisbeck Aviation High School on recycling at the Airport. Received the Excellence in Airport Marketing and Communication Award - Aviation Education and Tour Programs, ACI-NA.</p> <p>Redesigned messaging for our Sustainable In-Sights campaign to educate travelers and employees about our sustainability initiatives.</p> <p>Integrated Sustainable Gate Holding Concept into North Satellite design.</p> <p>Awarded Environmental Excellence Awards to Alaska Airlines, HMS Host and Dufry AG for outstanding environmental accomplishments in 2013.</p>	<p>Continue to work with Raisbeck Aviation High School on the annual Environmental Challenge program to raise awareness of environmental careers within the aviation industry.</p> <p>Continue integrating our Experience Sustainability Concept into North Satellite Expansion project design.</p> <p>Complete Sustainable In-Sights redesign including integrating SEA brand where appropriate, Seattle Chamber of Commerce branding initiatives, and concession marketing campaign. Install at least one Sustainable In-Sights message in the Terminal.</p> <p>Continue to implement Airport's Environmental Excellence Awards Program.</p> <p>Integrate results from our 2014 Environmental Messaging Survey into our education and outreach strategy.</p>
<p>Goal 19: Integration</p> <p>Sea-Tac will integrate environmental and sustainability considerations into core business operations.</p>	●	<p>Began developing the first Sustainable Airport Master Plan for a large U.S. airport.</p> <p>Conducted Airport-wide stakeholder process to develop new sustainability objectives and initiatives for our <i>Strategy for a Sustainable Sea-Tac</i>, the next phase of our environmental sustainability work.</p>	<p>Complete the SAMP and finalize the accompanying <i>Strategy for a Sustainable Sea-Tac</i>.</p>
<p>Goal 20: Working with Business Partners</p> <p>Sea-Tac will work with its business partners to extend environmental and sustainability initiatives beyond its own operations.</p>	●	<p>Continued to work with our airline partners for aviation biofuels at Sea-Tac Airport.</p>	<p>Analyze economic and environmental impacts of delivering aviation biofuels to the Airport by different modes (e.g., barge, rail or truck).</p>

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Seattle-Tacoma International Airport Environmental Metrics

Waste & Recycling

Year	Solid Waste Generated (Tons)	Solid Waste Landfilled (Tons)	% Landfilled (To...)	Solid Waste Recycled (tons)	% Recycled	Hazardous Waste Gener...
2001	3,546	3,238	91%	308	9%	7,351
2002						
2003						
2004	5,700	5,000	88%	700	12%	3,773
2005						
2006	5,748	4,505	78%	1,243	22%	3,512
2007	6,594	5,300	80%	1,294	20%	5,737
2008	6,350	5,030	79%	1,320	21%	1,842
2009	5,810	4,500	77%	1,310	23%	1,599
2010	5,494	4,201	76%	1,293	24%	2,429
2011	5,704	4,180	73%	1,524	27%	2,535
2012	5,665	3,960	70%	1,705	30%	1,558
2013	5,762	4,021	70%	1,741	30%	2,607
2014	6,144	4,238	69%	1,907	31%	2,670

Environmentally Preferable Products

Year	% Green Office Suppl...	% Green Paper Produ...
2009	7%	59%
2010	43%	84%
2011	41%	82%
2012	39%	85%
2013	40%	77%
2014	40%	68%

Emissions

Year	POS Emissions (metric tons)	POS Emissions Per Passenger	Public Emissions (metric tons)	Airline/Tenant Emissions (metric tons)
2007	21,102	0.06		
2008	21,862	0.06		
2009	23,819	0.07		
2010	21,234	0.06		
2011	19,924	0.05	423,176	4,143,537
2012	21,589	0.06		
2013	22,196	0.06		
2014	20,746	0.06		

Buildings & Infrastructure

Year	2008	2009	2010	2011	2012	2013	2014
Facility Condition Index	25%	21%	24%				
Green/LEED-certified bldgs (mil. sq. ft.)	1,225	1,225	1,225	1,225	1,225	1,855	0
Projects attempting LEED certification	3	3	3	3	3	4	5

Water Consumption

Year	Potable Water use (gallons)	Potable Water Use / passenger
2006	258,924,717	8.6
2007	271,486,753	8.7
2008	227,466,888	7.1
2009	220,467,366	7.1
2010	217,428,779	6.9
2011	223,496,221	6.8
2012	201,657,593	6.1
2013	210,272,166	6.0
2014	228,888,187	6.1

Fuel Consumption

Year	Gas used (gal)	Diesel used (gal) - does..	CNG used (GGE)
2006	144,268	16,745	179,710
2007			
2008	127,094	20,218	168,675
2009	129,114	14,353	157,000
2010	117,362	17,802	123,864
2011	121,716	14,362	121,658
2012	124,127	30,499	330,089
2013	111,430	24,548	380,084
2014	118,971	25,972	366,484

Energy Use

Year	Total POS kWh used	Energy from Green Power	kWh per passenger	Total therms of natural gas..	Therms per passenger	Therms per sq ft of terminal
2000	133,508,734	0%	4.7	2,375,219	0.084	1.03
2001						
2002						
2003						
2004						
2005	145,087,533	0%	5.0	2,476,400	0.085	0.81
2006	145,885,305		4.9			
2007	148,928,000		4.8			
2008	148,715,000	25%	4.6	2,813,851	0.087	0.92
2009	147,867,000	0%	4.7	2,718,975	0.087	0.89
2010	116,390,118	0%	3.7	2,725,559	0.086	0.86
2011	114,259,552	0%	3.5	2,661,720	0.081	0.84
2012	113,479,269	0%	3.4	2,723,127	0.082	0.86
2013	109,106,374	0%	3.1	2,906,670	0.083	0.92
2014	111,965,247	0%	3.0	2,831,209	0.076	0.89

Stormwater & Runoff

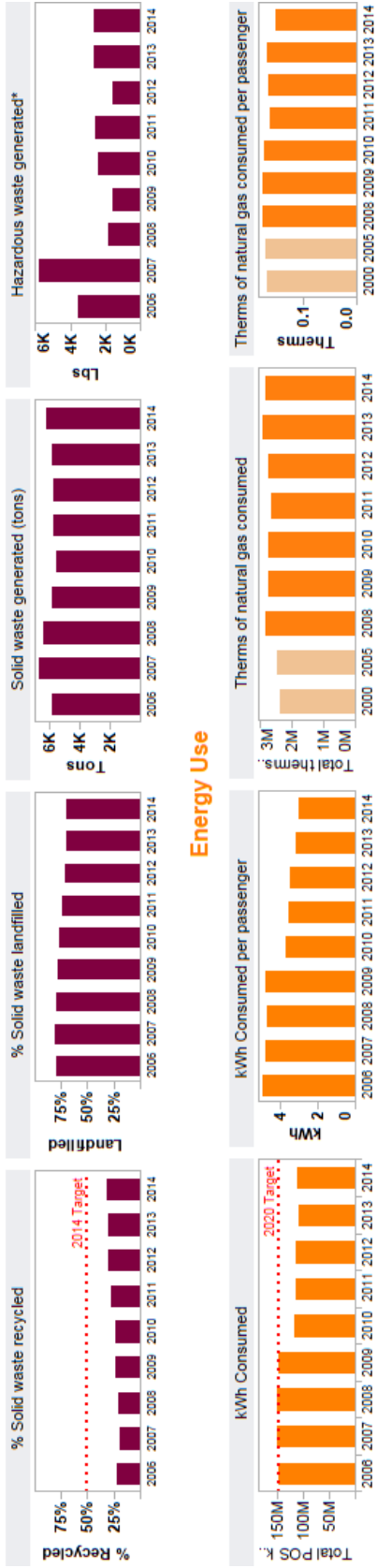
Year	2007	2008	2009	2010	2011	2012	2013	2014
Area w/ Flow Control BMPs	58%	85%	90%	100%	100%	100%	100%	100%
Area w/ Water Quality BMPs	78%	100%	100%	100%	100%	100%	100%	100%
NFDES permit exceedances	39	27	20	24	18	8	6	6

Meal Donations

2007	10,122
2008	8,487
2009	8,002
2010	8,662
2011	5,896
2012	20,049
2013	28,278
2014	26,357

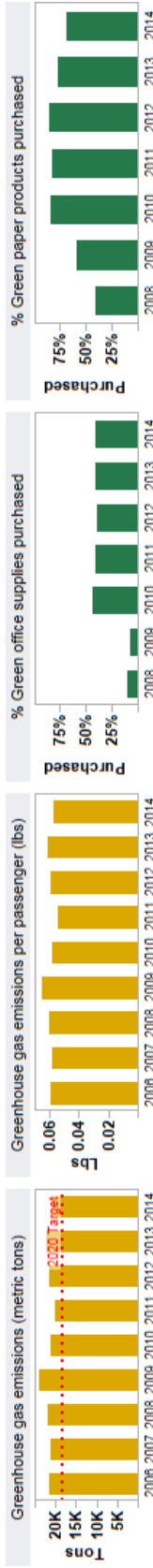
Seattle-Tacoma International Airport Environmental Metrics

Waste & Recycling



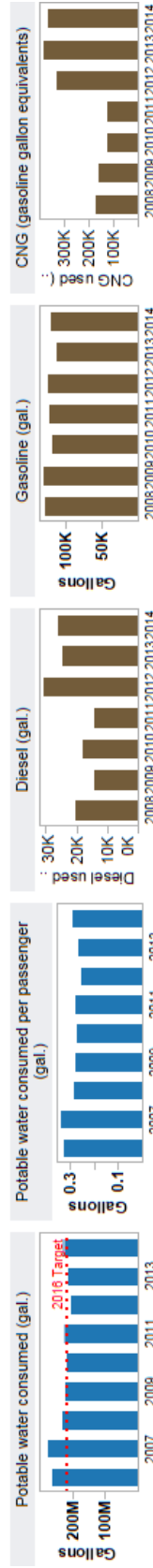
Note: Light-colored bars represent non-consecutive years

Emissions



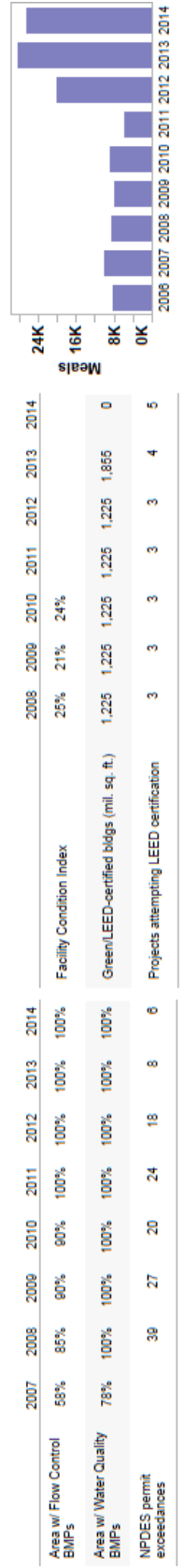
Environmentally Preferable Products

Water Consumption



Fuel Consumption

Stormwater & Runoff



Meal Donations

Note: Some 2013 and 2014 data not yet available