

# 2015 ENVIRONMENTAL PROGRESS REPORT

Seattle-Tacoma International Airport

## Strategy for a Sustainable Sea-Tac

April 2016



2009 2010 2011 2012 2013 2014 **2015**

## Message from the Director

Welcome to our **2015 Progress Report**, our first environmental report under our new *Strategy for a Sustainable Sea-Tac* or *S3*.

As shown in the report, our S3 goals and actions build on the foundation and successes of our 2009 strategy. S3 goals also reflect a broader view of sustainability, integrate with the Port's Century Agenda goals and look further into the future.

Consistent with our previous environmental reports, we're moving towards a more sustainable airport. Even while experiencing a phenomenal growth rate of over 12 percent this past year, we accomplished the following:

- Began developing a business partnership to bring renewable natural gas to the Port and reduce our carbon emissions by 70 percent.
- Achieved a 90 percent recycling rate for construction waste.
- Developed a new environmental performance indicator for transportation network companies such as Uber, Lyft and Wingz.
- Installed new outreach messages in gate holding areas that highlight sustainability initiatives on the Airfield.

We also made the following progress in other areas:

- Increased our recycling rate from 23 to 34 percent.
- Registered as a Master Site with the U.S. Green Building Council to make Leadership in Energy & Environmental Design certification easier and more efficient for airport building projects.
- Increased meal donations to over 40,000 pounds or 700 meals per week.

In addition, I would like to extend a warm thank you to Sea-Tac Airport's recently retired Managing Director Mark Reis. Mark was a champion and mentor for our environmental initiatives, and shared our passion for creating innovative projects. His commitment to the clean energy economy led us to the exciting new programs we're now pursuing.

I hope you are inspired by our vision, and enjoy learning about our programs as much as we enjoy creating them.

**Elizabeth Leavitt**



**Director, Aviation  
Planning and  
Environmental**  
Elizabeth Leavitt



**Airport Managing  
Director**  
Lance Lyttle

**Port of Seattle  
Commissioners**  
Tom Albro  
Stephanie Bowman  
John Creighton  
Fred Felleman  
Courtney Gregoire

**Chief Executive Officer**  
Ted J. Fick

## HIGHLIGHTED ACHIEVEMENTS

**Rainwater Capture Initiatives** – Began evaluating and designing rainwater capture projects to conserve water at our planned new International Arrivals Facility (IAF) and the North Satellite (NSAT), which is scheduled for renovation.

**Aviation Biofuels** – Convened Aviation Biofuels Partnership with Alaska Airlines and Boeing regarding the aviation biofuels initiative. Developed a scope of work to evaluate infrastructure necessary to bring the fuels safely to Sea-Tac Airport.

**Electric Ground Support Equipment** – Obtained more grant funds to assist airline and baggage carrier partners in purchasing electric ground support vehicles (eGSE) that will be used at Sea-Tac Airport.

**Environmental Campaign** – Finalized designs and installed our new Sustainable InSights campaign at gate holding areas throughout the Terminal. This campaign highlights and describes sustainability initiatives that passengers can see on the airfield.

**Terminal Composting Collection Program** – Began implementing a new recycling and composting program for our concessionaires to improve our rate of diversion to landfill to over 50%.

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

**Sustainable Airport Master Plan** – As part of our Sustainable Airport Master Plan (SAMP), created a computer model to simulate energy, water, and greenhouse gas emissions from proposed new construction and renovation projects at Sea-Tac.

**Sustainable Development** – Obtained Master Site Designation under the U.S. Green Building Council's (USGBC) Leadership for Energy and Environmental Design (LEED®) program to make certification of our projects more efficient and less costly. We continue to evaluate opportunities and integrate LEED® or other "green" building practices into all Aviation Division building projects.

**Carbon Reduction** – Evaluated and created new partnerships and opportunities to use renewable natural gas in our boilers as a key carbon reduction strategy for Airport-owned emissions.

**Solid Waste** – Completed the Solid Waste Management Plan, and began implementing key strategies to meet our 60% overall recycling goal by 2020.

## MORE ABOUT OUR STRATEGY FOR A SUSTAINABLE SEATAC

- Strategy for a Sustainable Sea-Tac (S3) is our plan to make the future Sea-Tac Airport as sustainable as possible. Our S3 is fully integrated into the SAMP, which will allow us to make both our built environment and our operations more sustainable over the next 20 years.
- S3 includes all three aspects of sustainability: environmental, economic and social. The environmental portion of S3 builds on our strong 2009 Environmental Strategy Plan and includes Port of Seattle's Century Agenda goals. The social portion reflects the direction set by the Port's Office of Social Responsibility, and the economic portion reflects our business plans.
- S3 was developed through a comprehensive stakeholder process that engaged employees from all departments at the Airport. The goals shown in this report are the result of a consensus-driven process that reflects practical application as well as a desire to protect and preserve our natural environment.
- S3 will be finalized in coordination with the SAMP by the end of 2016. We look forward to sharing our final strategy with you.





# Air Quality and Climate Change

GOALS	STATUS	2015 PROGRESS	2016 ACTIONS
<p><b>Goal 1a:</b></p> <p><b>Century Agenda Objective: Greenhouse Gas Emissions</b></p> <p>Reduce Airport-owned and controlled greenhouse gas emissions to 15% below 2005 levels by 2020.</p>		<p>Reduced greenhouse gas emissions from fleet vehicles by ~2,500 metric tons by using 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 for heating fuel.</p> <p>Continue to monitor carbon footprint of electricity purchased by Airport.</p>
<p><b>Goal 1b:</b></p> <p><b>Century Agenda Objective: Greenhouse Gas Emissions</b></p> <p>Reduce aircraft-related greenhouse gas emissions to 25% below 2005 levels by 2035.</p>		<p>Port worked with government partners to obtain grant funding to help airlines purchase eGSE.</p> <p>Evaluated use of Preconditioned Air (PC Air) system across different gates to inform strategy for airline outreach.</p> <p>Convened Aviation Biofuels Partnership with Alaska Airlines and Boeing to bring aviation biofuels to Sea-Tac Airport.</p> <p>Completed preliminary analysis of economic and environmental impacts of delivering aviation biofuels to the Airport by different modes (e.g., barge, rail or truck).</p>	<p>Continue to install eGSE charging infrastructure at Concourses A, B and South Satellite (SSAT).</p> <p>Continue to identify and pursue opportunities for grant funds for electric vehicles and charging stations.</p> <p>Continue to optimize operation of PC Air and ground power systems, and encourage airline use of system.</p> <p>Conduct Aviation Biofuels Feasibility Study to identify infrastructure necessary to bring aviation biofuels to Sea-Tac Airport.</p>
<p><b>Goal 2: Transportation</b></p> <p>Increase the percentage of passengers traveling to the Airport via environmentally preferred modes of transportation from 60% in 2014 to 70% by 2020.</p>		<p>Developed a new metric to evaluate carbon emissions for transportation network companies (TNCs).</p> <p>Developed environmental performance metric (45 miles per gallon or better) for new taxi Request for Proposal process.</p> <p>Developed partnership with the University of Washington and Cascade Bicycle Club to create a new bike route plan for Sea-Tac Airport.</p>	<p>Develop framework for a transportation plan aimed at increasing the percentage of passengers traveling via environmentally preferred modes.</p> <p>Finalize Bike Route Plan to identify safest and most efficient airport routes to bring bicyclists to the Terminal. This includes recommendations such as increasing connection among bike lanes near the Airport.</p> <p>Evaluate carbon emissions from new TNC services for our passengers traveling to and from the Airport.</p>
<p><b>Goal 3: Adaptation planning</b></p> <p>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>Conducted first workshop to identify vulnerabilities in operations during typical flood events.</p>	<p>Continue to conduct workshops with other departments to identify potential vulnerabilities.</p> <p>Begin developing strategy plan in response to vulnerabilities identified in 2015.</p>
<p><b>Goal 4:</b></p> <p><b>Century Agenda Objective: Air Quality</b></p> <p>Reduce air pollutant emissions to half of 2005 levels by 2037.</p>		<p>Fleet gasoline and diesel use remained fairly steady compared with recent years.</p> <p>All-electric vehicles now introduced into Airport fleet.</p>	<p>Continue to purchase all-electric and more efficient vehicles for motor pool fleet.</p> <p>Examine more opportunities to maximize fleet efficiency and minimize emissions.</p>

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

# Energy Use and Conservation

GOALS	STATUS	2015 PROGRESS	2016 ACTIONS
<p><b>Goal 5:</b></p> <p><b>Century Agenda Objective: Energy Use</b></p> <p>Sea-Tac will meet all increased energy needs through conservation and renewable sources.</p>	●	<p>Completed audit of electricity savings from Stage II Energy Conservation Project, and confirmed our annual savings are:</p> <ul style="list-style-type: none"> <li>• 2,722,289 kilowatt hours (kWh) electricity.</li> <li>• 30,143 therms of natural gas.</li> <li>• \$141,804.</li> </ul> <p>Identified potential partners to purchase renewable natural gas from sources in Washington.</p> <p>Finalized plans for Stage III Energy Conservation Project. Estimated annual savings are:</p> <ul style="list-style-type: none"> <li>• 591,165 kWh of electricity.</li> <li>• 84,324 therms of natural gas.</li> <li>• \$128,572.</li> </ul>	<p>Continue to upgrade the efficiency of the heating, ventilation and air conditioning (HVAC) system in the Terminal.</p> <p>Continue to improve the efficiency of the chilled water cooling system.</p> <p>Install Phase II (all floors except 1 &amp; 4) of light-emitting diode (LED) replacements throughout the Parking Garage.</p> <p>Analyze technologies and costeffectiveness of two different sources of renewable natural gas for the Terminal. If appropriate, make a recommendation to pursue a formal partnership to bring gas to Sea-Tac.</p> <p>Begin construction on Stage III Energy Conservation Project.</p>

# Buildings and Infrastructure

GOALS	STATUS	2015 PROGRESS	2016 ACTIONS
<p><b>Goal 6:</b></p> <p><b>Sustainable Buildings</b></p> <p>Seek the following for all buildings or portions of buildings owned by, operated by, leased by, and financed through the Port:</p> <p>USGBC LEED®Silver Certification for new construction, additions and major renovations; and LEED®Silver Certification for minor renovations that involve substantial modifications to mechanical, electrical and plumbing systems.</p> <p>Use the LEED® certification framework for minor renovations and encourage LEED® certification for tenant improvements and Port-owned leased-land development.</p>	●	<p>Began documentation for LEED® certification (version 2009) for the NSAT project. This included the evaluation of rainwater capture, energy reduction strategies and the use of sustainable materials.</p> <p>Began documentation for LEED® certification (version 4) for the IAF project.</p> <p>Registered the Airport under the USBCG's Master Site program for new construction projects. Began evaluation of potential Master Site credits to support the pursuit of LEED®.</p> <p>Continued evaluation of ultra-low-water-use fixtures for the NSAT, IAF and the Airport's restroom modernization project.</p> <p>Integrated environmental performance in projects including:</p> <ul style="list-style-type: none"> <li>• Recycled carpet for the SSAT renovation.</li> <li>• Energy efficient LED lighting for the Parking Garage.</li> <li>• Re-used concrete, used fly ash within concrete mix, and LED lighting for the 16C/34C (center) runway replacement project.</li> <li>• Upgraded two loading bridges by using recycled materials, no/low volatile organic compounds (VOC) paints, LED light fixtures, Energy Star® computer monitors and natural ventilation.</li> <li>• Worked with tenants including Anthony's, Starbucks and Hudson News, to use Energy Star® equipment, no/low VOC paints and adhesives and low-flow fixtures.</li> </ul>	<p>Complete LEED® review for design phase of the NSAT project. This is a phase one of two for LEED® certification review.</p> <p>Continue documentation for LEED® certification for IAF. Develop strategies for energy and water conservation, and environmentally friendly building materials for IAF.</p> <p>Complete the USGBC Master Site evaluation and obtain eligible credits to support current and future LEED® projects.</p> <p>Complete a new Airport Design Standard that maximizes water conservation opportunities within restrooms, minimizes Operations and Maintenance activities and supports a positive customer experience.</p> <p>Continue to integrate environmental performance into projects in the following ways:</p> <ul style="list-style-type: none"> <li>• Evaluate energy savings through upgrades to HVAC, energy efficient lighting and use of Energy Star® rated equipment</li> <li>• Assess opportunities to minimize or reuse water through rainwater capture or using WaterSense equipment.</li> <li>• Continue to encourage tenants to use no/low VOC paints and adhesives and recycled content materials.</li> </ul>

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 ● = No progress



# Water Resources and Wildlife

GOALS	STATUS	2015 PROGRESS	2016 ACTIONS
<p><b>Goal 7: Water Quality</b></p> <p>Achieve and maintain best management practices (BMPs) for water quality treatment and flow control over 100% of Airport industrial areas.</p>	★	<p>Developed a custom Airport-specific bioretention media mix project for enhanced metals removal.</p> <p>Completed an Infiltration Feasibility Assessment to serve as a mapping tool for Green Stormwater Infrastructure (GSI) development on Airport property</p> <p>Expanded filter strip BMPs to treat stormwater runoff as part of the center runway reconstruction.</p>	<p>Complete stormwater site plans for all new and redevelopment projects in accordance with state guidelines.</p> <p>Convert a ditch within the South Employee Parking Lot to a bioretention swale to provide additional water quality treatment for metals.</p> <p>Complete a guidance document for applying GSI on the airport ramp areas and other aviation industrial areas, consistent with Federal Aviation Administration (FAA) land use requirements.</p> <p>Integrate Airfield GSI Guidance and Infiltration Feasibility Assessment into a programmatic guide to implement GSI on Airport properties.</p> <p>Implement water quality and flow control BMPs as appropriate on redevelopment projects including the NSAT.</p>
<p><b>Goal 8: Wildlife Habitat</b></p> <p>Identify and implement actions that will: improve wildlife habitat and protections for native species not in conflict with aviation safety; manage hazardous wildlife in a biologically sound way that reduces the need for direct control actions such as scare devices (e.g., pyrotechnics); and promote wildlife education.</p>	●	<p>Began using forward-looking infrared (FLIR) system for nighttime surveys to establish baseline and trends of small mammals on the Airfield, compared to using live traps. These efforts will help us evaluate the diversity of small mammal species on and around the Airfield.</p> <p>Began work on Habitat Management Plan. Formulated objectives, identified data gaps, and used existing information to prioritize management actions.</p> <p>Planted Tye Golf Course with shrubs to deter waterfowl landing and grazing. Included grass and flowering plants to attract pollinators.</p> <p>Began installing osprey nest exclusions on cell phone towers within two miles of the Airport.</p> <p>Conducted 2015 Wildlife Hazard Assessment surveys.</p>	<p>Conduct small mammal surveys to establish baseline and trends of small mammals on the Airfield using data from the FLIR system.</p> <p>Use collected wildlife data and other existing information to develop a habitat inventory for Airport properties.</p> <p>Expand the Raptor Strike Avoidance Program by trapping and translocating bald eagles to Skagit County, and improve barn owl trap success by modifying existing Swedish goshawk traps to house rodents .</p> <p>Complete 2015 Wildlife Hazard Assessment Report.</p> <p>Begin Avian Trapping and Husbandry contract to trap and remove invasive bird species such as European starlings, rock doves and house sparrows.</p> <p>Host event and open house to celebrate 40th anniversary of the Wildlife Program.</p>
<p><b>Goal 9: Water Conservation</b></p> <p>Reduce the potable water consumption rate to 5% below 2008 levels by 2015.</p>	★	<p>Evaluated the feasibility of water reuse for construction project support, and secured regulatory agency approval.</p> <p>Assessed the performance of 0.125 gallons/flush valves.</p> <p>Identified and repaired distribution system leaks.</p>	<p>Complete a Water Use Reduction Plan.</p> <p>Continue to evaluate low-flow fixtures with respect to Operations and Maintenance impacts, and finalize environmental performance standards for restrooms.</p> <p>Complete design for a rooftop rainwater collection and reuse system as part of the NSAT renovation project.</p> <p>Complete the pre-design of the IAF rainwater capture and reuse system.</p>



= Goal Achieved



= Significant progress



= Progress towards goal



= No progress



# Materials Use and Recycling

GOALS	STATUS	2015 PROGRESS	2016 ACTIONS
<p><b>Goal 10:</b></p> <p><b>Waste Reduction and Recycling</b></p> <p>Divert 60% of the solid waste generated in the Terminal and 15% of the solid waste generated on the Airfield.</p>	●	<p>The Terminal waste diversion rate increased to 33%, and Airfield waste diversion rate declined to 9%.</p> <p>Completed Sea-Tac's 5-year Solid Waste Management Plan update, which does the following:</p> <ul style="list-style-type: none"> <li>Complies with new FAA recycling plan requirements.</li> <li>Identifies compostable service ware and mandatory recycling as key strategies to achieve goal.</li> </ul> <p>Airport concessionaires donated 44,410 pounds or 683 meals per week of surplus food to the local food bank and Airport USO.</p> <p>Continued implementing waste reduction initiatives through Airport custodial services including the following actions:</p> <ul style="list-style-type: none"> <li>Used green cleaning program (GreenCare) to reduce use of toxic cleaning chemicals.</li> <li>Began composting paper towels in employee areas throughout the airport (Airport Office Building, GarageToll Plaza, USO, Airport Jobs Office and Airport Fire Station).</li> <li>Expanded recycling into bag well, airline ticketing areas and tenant office spaces.</li> <li>Conducted waste audit of Airport Office Building and determined 66% office waste diversion rate.</li> <li>Increased concessionaire participation in recycling to 70% and composting to 78%.</li> </ul> <p>Researched compostable service ware and recycling costs and developed plan to implement in 2016.</p>	<p>Continue implementing mandatory recycling and service ware requirements for concessionaires.</p> <p>Reconsider implementing checkpoint liquid waste sorting project in light of increased passenger and waste volume.</p> <p>Obtain GreenCare documentation to support LEED® certification for capital improvement projects.</p> <p>Evaluate options for Zero Waste certification for the Airport Office Building</p> <p>Continue working with Maintenance, cargo operators and airlines to improve recycling at hangers, in Maintenance work areas and other remote work locations.</p>

★ = Goal Achieved    
 ● = Significant progress    
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 ● = No progress





# Materials Use and Recycling

GOALS	STATUS	2015 PROGRESS	2016 ACTIONS
<p><b>Goal 11: Construction Debris</b></p> <p>Divert 85% of construction debris (CD) and demolition waste by 2020, 90% by 2025, and reach Zero Waste by 2035.</p>	●	<p>Diverted over 95.5% of construction waste from landfills in 2015: 95% from Airfield, 36% from Terminal and 100% from Landside projects.</p> <p>Recycled three tons of carpet from SSAT Carpet Replacement Project.</p> <p>Reused or recycled 95.5% of the 469,138 tons of waste from the Cargo Hardstand.</p> <p>Expanded construction waste collection for operations, diverting an additional 49 tons of waste from grounds maintenance work.</p> <p>Confirmed Port specifications meet new King County construction waste management requirements.</p>	<p>Continue to review project designs and identify opportunities to recycle CD, such as carpet and other building materials.</p> <p>Work with construction teams to ensure construction waste efforts meet LEED® certification credit.</p> <p>Continue to review contractor submittals for compliance with CD specifications and track performance.</p>
<p><b>Goal 12: Hazardous Materials and Waste</b></p> <p>Reduce the volume of hazardous waste generated by Port Maintenance and Operations to meet requirements for Small Quantity Generator status by 2020.</p>	●	<p>Maintained Medium Quantity Generator status by generating 2,114 pounds of hazardous waste.</p> <p>Generated less than 220 pounds of hazardous waste in each of 10 months in 2015.</p> <p>Worked with Maintenance to clean out 815 pounds off-specifications paint and 125 pounds off-specifications adhesives.</p> <p>Reviewed 17 new chemical product requests, approved 15 and rejected two. Fewer hazardous alternatives were suggested to and accepted by Maintenance.</p>	<p>Work with Maintenance shops to identify replacements for outdated solvent and water-based parts washer units with versions that are more effective and generate less waste.</p> <p>Revise monthly waste tracking procedure to improve consistency.</p> <p>Continue to build our list of frequently used hazardous materials and recommend fewer toxic substitutes.</p>

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 ● = No progress





## Noise

GOALS	STATUS	2015 PROGRESS	2016 ACTIONS
<p><b>Goal 13: Noise Mitigation</b></p> <p>Increase the number of noise compatible parcels within the noise remedy boundary to 95% through the year 2030.</p>	★	<p>Received FAA Record of Approval for the completed Part 150 Noise and Land Use Study.</p> <p>Publicly recognized Alaska Airlines, Virgin America and Jazz Aviation for their efforts in reducing noise as part of the Fly Quiet Program.</p> <p>Completed sound insulation of 24 single-family homes. This program consists of installing new doors and windows to reduce interior noise levels.</p> <p>Installed a new Noise Monitoring and Flight Tracking System. Replaced and upgraded all 24 noise monitors.</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 two homes.</p> <p>Monitor operations of the Required Navigation Performance procedures developed through the Greener Skies Project.</p> <p>Include Ground Run-up Enclosure in the SAMP.</p>

## Education and Integration

GOALS	STATUS	2015 PROGRESS	2016 ACTIONS
<p><b>Goal 14: Education and Community Outreach</b></p> <p>Introduce an environmental education campaign that uses contemporary and emerging communication strategies to raise awareness of sustainability initiatives, and promote environmental stewardship among our passengers, tenants and employees.</p>	●	<p>Conducted the 2015 Environmental Challenge with Raisbeck Aviation High School on transportation to and from the Airport.</p> <p>Completed Sustainable InSights campaign redesign and installed new messaging at 14 terminal locations to educate travelers and employees about Airport sustainability initiatives.</p> <p>Integrated sustainability into NSAT design by including plans for a living wall, permanent sustainability messaging, and environmentally inspired art features.</p> <p>Awarded Environmental Excellence Award to HMSHost for outstanding environmental accomplishments in 2015.</p> <p>Updated Port website with airport environmental content to highlight recent progress reports and initiatives.</p>	<p>Continue to work with Raisbeck Aviation High School on the annual Environmental Challenge program to raise awareness of environmental careers and help develop the aviation industry workforce.</p> <p>Ensure that sustainability concepts are included in NSAT project design and explore IAF opportunities.</p> <p>Install our Sustainable InSights campaign column wraps, explore adding new elements, and develop new messaging strategies.</p> <p>Continue to implement Airport's Environmental Excellence Awards Program.</p>



= Goal Achieved



= Significant progress



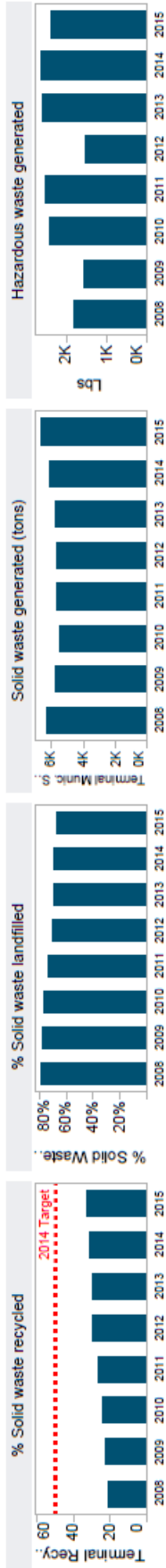
= Progress towards goal



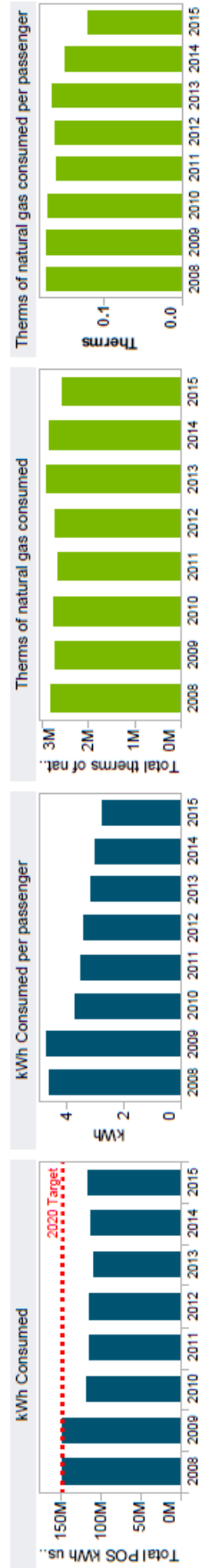
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# Seattle-Tacoma International Airport Environmental Metrics

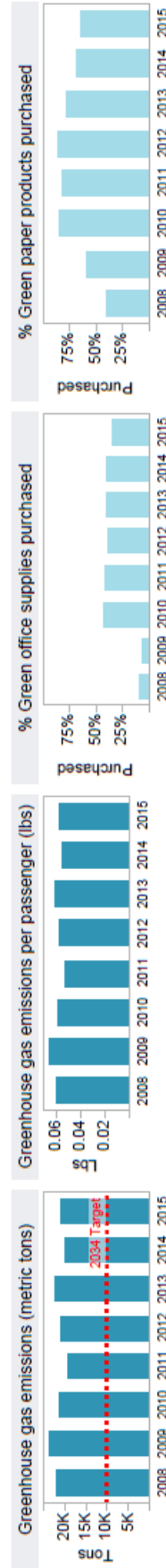
## Waste & Recycling



## Energy Use



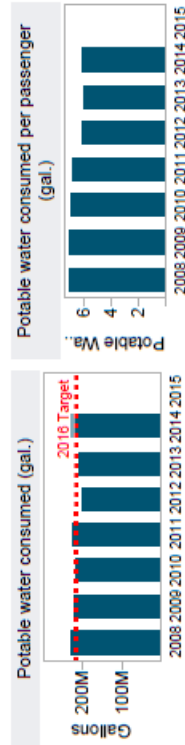
## Emissions



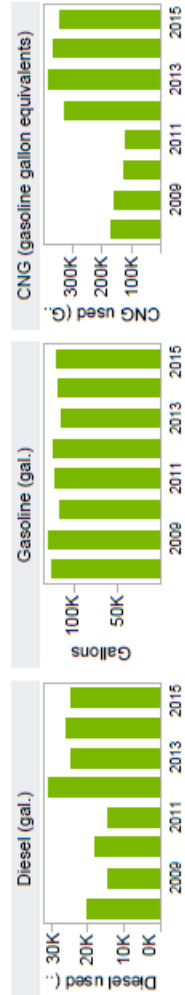
## Environmentally Preferable Products



## Water Consumption



## Fuel Consumption



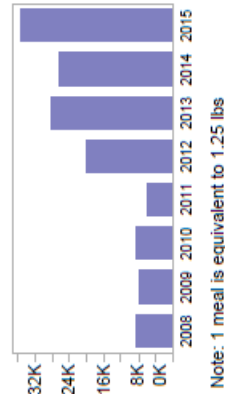
## Stormwater & Runoff

Year	Area w/ Flow Control BMPs	Area w/ Water Quality BMPs	NPDES permit exceedances	Year
2008	85%	100%	39	2008
2009	90%	100%	27	2009
2010	90%	100%	20	2010
2011	100%	100%	24	2011
2012	100%	100%	18	2012
2013	100%	100%	8	2013
2014	100%	100%	6	2014
2015	100%	100%	22	2015

## Buildings & Infrastructure

Facility	Condition Index	Green/LEED-certified bldgs (mil. sq. ft.)	Projects attempting LEED certification
Terminal	25%	1,225	3
Concessions	21%	1,225	3
Meals	24%	1,225	3
Other		1,225	3
Other		1,855	4
Other		0	5
Other		0	5

## Meal Donations



Wetlands & Environment Targets: 100% BMPs

Note: 1 meal is equivalent to 1.25 lbs

# Seattle-Tacoma International Airport Environmental Metrics

## Waste & Recycling

Year	Terminal		% Solid Waste		Terminal		% Solid Waste		Hazardous	
	Munic. Solid ...	Munic. Solid ...	Landfilled Ter...	Recycled Ter...	Munic. Solid ...	recycled Term...	Waste Gener...	Waste Gener...	Waste Gener...	
2008	6,350	5,030	79%	21%	1,320	21%	1,842			
2009	5,810	4,500	77%	23%	1,310	23%	1,599			
2010	5,494	4,201	76%	24%	1,293	24%	2,429			
2011	5,704	4,180	73%	27%	1,524	27%	2,535			
2012	5,665	3,960	70%	30%	1,705	30%	1,558			
2013	5,762	4,021	70%	30%	1,741	30%	2,607			
2014	6,144	4,238	69%	31%	1,907	31%	2,670			
2015	6,692	4,477	67%	33%	2,215	33%	2,411			

## Water Consumption

Year	Potable Water use (gallons)		Potable Water Use / passenger
	2008	2009	
2008	227,466,888	220,467,366	7.1
2009	217,428,779	223,496,221	7.1
2010	201,657,593	210,272,166	6.9
2011	228,888,187	210,272,166	6.8
2012	228,888,187	210,272,166	6.1
2013	228,888,187	210,272,166	6.0
2014	228,888,187	210,272,166	6.1
2015	228,888,187	210,272,166	6.1

## Fuel Consumption

Year	Gas used (gal)		Diesel used (gal) - does..		CNG used (GGE)	
	2008	2009	2010	2011	2012	2013
2008	127,094	129,114	117,362	121,716	124,127	115,430
2009	127,094	129,114	117,362	121,716	124,127	115,430
2010	127,094	129,114	117,362	121,716	124,127	115,430
2011	127,094	129,114	117,362	121,716	124,127	115,430
2012	127,094	129,114	117,362	121,716	124,127	115,430
2013	127,094	129,114	117,362	121,716	124,127	115,430
2014	127,094	129,114	117,362	121,716	124,127	115,430
2015	127,094	129,114	117,362	121,716	124,127	115,430

## Environmentally Preferable Products

Year	% Green Office Supplies Purchased		% Green Paper Products Purchased	
	2008	2009	2010	2011
2008	10%	7%	43%	39%
2009	10%	7%	43%	39%
2010	10%	7%	43%	39%
2011	10%	7%	43%	39%
2012	10%	7%	43%	39%
2013	10%	7%	43%	39%
2014	10%	7%	43%	39%
2015	10%	7%	43%	39%

## Energy Use

Year	Total POS kWh used	Energy from Green Power	kWh per passenger	Total therms of natural ga...	Therms per sq passenger	Therms per sq ft of terminal	
							2008
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	111,985,247	0%	3.0	2,831,209	0.076	0.89	
2015	111,985,247	0%	3.0	2,831,209	0.076	0.89	

## Emissions

Year	POS Emissions (metric tons)		Public Emissions (metric tons)		Airline/ Tenant Emissions (metric tons)	
	2008	2009	2010	2011	2012	2013
2008	21,862	23,819	0.06	0.07	423,176	4,143,537
2009	21,862	23,819	0.06	0.07	423,176	4,143,537
2010	21,862	23,819	0.06	0.07	423,176	4,143,537
2011	21,862	23,819	0.06	0.07	423,176	4,143,537
2012	21,862	23,819	0.06	0.07	423,176	4,143,537
2013	21,862	23,819	0.06	0.07	423,176	4,143,537
2014	21,862	23,819	0.06	0.07	423,176	4,143,537
2015	21,862	23,819	0.06	0.07	423,176	4,143,537

## Buildings & Infrastructure

Year	Facility Condition Index	Green/LEED-certified bldgs (mil. sq. ft.)	Projects attempting LEED certification	
			2008	2009
2008	25%	1,225	3	3
2009	21%	1,225	3	3
2010	24%	1,225	3	3
2011		1,225	3	3
2012		1,225	3	3
2013		1,855	4	4
2014		0	5	5
2015		0	5	5

## Stormwater & Runoff

Year	Area w/ Flow Control BMPs		Area w/ Water Quality BMPs		NPDES permit exceedances
	2008	2009	2010	2011	
2008	85%	90%	100%	100%	39
2009	85%	90%	100%	100%	27
2010	85%	90%	100%	100%	20
2011	85%	90%	100%	100%	24
2012	85%	90%	100%	100%	18
2013	85%	90%	100%	100%	8
2014	85%	90%	100%	100%	6
2015	85%	90%	100%	100%	22

## Meal Donations

2008	8,487
2009	8,002
2010	8,662
2011	5,896
2012	20,049
2013	28,278
2014	26,357
2015	35,528