

# Strategy for a Sustainable Sea-Tac

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# Strategy for a Sustainable Sea-Tac (S3)

- Sustainability objectives
- Basis for sustainability goals of SAMP
- Proposes actions/initiatives
- Builds on 2009-2014 Environmental Strategy Plan
- Includes all three components of sustainability:
  - › Environmental
  - › Social (Office of Social Responsibility)
  - › Economic (business goals/objectives)



# Integrating Sustainability into the Master Plan

- SAMP tasks that include sustainability
  - › Setting goals and objectives
  - › Screening concepts and alternatives
  - › Analyzing sustainability in proposed buildings in the preferred alternative (e.g., energy options)
  - › Identifying key management initiatives
  - › Finalizing long-term development and management plans

# Environmental Goals and Directives



*“Be the greenest and most energy efficient port in North America”*

*“Lead US airport industry in environmental innovation and minimize the airport’s environmental impacts”*

# Leading in Environmental Innovation

- Focus on areas with greatest environmental impacts
- Benchmark leading initiatives
  - › Surveyed 18 US and international airports with strong sustainability programs
  - › Supplemented with staff knowledge/research
- Airport Working Groups



# Sustainability Focus Areas

- Carbon Reduction
- Energy
- Transportation (passenger vehicles)
- Climate Adaptation
- Air Pollution
- Water Quality
- Green Buildings
- Water Conservation
- Waste
  - › Construction waste
  - › Hazardous waste
  - › Terminal and airfield waste
- Fish and Wildlife
- Noise
- Social responsibility
- Economic sustainability

# Century Agenda Goals

## Be the greenest, and most energy efficient port in North America

- Meet all increased energy needs through conservation and renewable sources
- Meet or exceed agency requirements for storm water leaving Port-owned or operated facilities
- Reduce air pollutants and carbon emissions, specifically:
  - › Reduce air pollutant emissions by 50 percent from 2005 levels
  - › Reduce carbon emissions from all Port operations by 50 percent from 2005 levels and reduce aircraft-related carbon emissions at Seattle-Tacoma International Airport by 25 percent
- Anchor the Puget Sound urban industrial land use to prevent sprawl in less developed areas
- Restore, create, and enhance 40 additional acres of habitat in the Green/Duwamish watershed and Elliott Bay

# Carbon Reduction

## 2009 Objective

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

## 2015 Objective

Reduce airport owned and controlled greenhouse gas emissions by 15% below 2005 levels by 2020, and 50% by 2035.

Reduce aircraft-related greenhouse gas emissions by 25% below 2005 levels by 2035

## Accomplishments

- 1<sup>st</sup> airport in North America to receive Airports Carbon Accreditation certification.
- Renewable natural gas in rental car facility buses.
- Energy efficiency upgrades of Central Mechanical Plant

## Proposed Actions

- Replace fossil natural gas with renewable natural gas in boilers and fleet vehicles (leading)
- Develop aviation biofuels strategy
- Increase use of Pre-Conditioned Air and electric GSE among airline partners
- Evaluate renewable energy for new/renovation projects (e.g. NSAT)



# Energy

## 2009 Objectives

- Sea-Tac will meet all future load growth through conservation measures and renewable energy
- Sea-Tac will continue to reduce natural gas consumption per sq ft through cost-effective conservation measures

## 2015 Objective

- Sea-Tac will meet all future growth in energy demand through the most practical and cost-effective conservation measures and renewable energy

## Accomplishments

- Reduced electricity consumption by 7% while airport passenger load grew by 10% (2010 to 2013)
- Commenced central mechanical plant upgrades which will increase natural gas use efficiency
- LED lighting replacement in parking garage.

## Proposed Actions

- Conduct EnergySTAR audit of facilities to track current energy use, certify if possible (leading).
- Conduct annual energy reviews to examine energy use, and develop strategies to mitigate demand growth
- Evaluate opportunities for renewables such as biomethane, solar, etc. (leading)

# Transportation: Passenger Vehicles

## 2009 Objective

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

## Accomplishments

- Developed bike plan through partnership with University of Washington
- Installed bike support equipment near baggage claim area



## 2015 Objective

Increase the percentage of passengers accessing the airport via environmentally-preferred modes of transportation from 60% in 2014 to 70% in 2020

## Proposed Actions

- Increase outreach to help travelers use greener modes
- Increase bike facilities and safe access (leading)
- Partner with transit agencies to increase access to buses
- Examine costs and benefits of tolling airport drives
- Increase electric vehicle charging stations (leading)
- Improve environmental benefits of each mode, where practicable (leading)

# Climate Adaptation

## 2009 & 2015 Objective

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



## Proposed Actions

- Develop a risk analysis examining aspects of airport operations with the potential to be affected by a changing climate (leading)
- Develop a strategic plan to mitigate the climate change risks track current energy use, certify if possible (leading).

# Air Pollution

## 2009 Objective

Sea-Tac will increase the overall efficiency of its vehicle fleet by 30% over 2006 levels by 2015 and continue to work with business partners to reduce VMT, and promote clean vehicles from taxis, shuttles, buses, GSE, etc.

## Accomplishments

- Implemented Clean Taxi Program
- Electrification of Ground Support Equipment (GSE) with Alaska Airlines
- Government Green Fleet Award 2010
- Installed pre-conditioned air at 63 of 73 possible gates

## 2015 Objective

Reduce air pollutant emissions by 50% from 2005 levels by 2037



## Proposed Actions

- Complete installation electric ground support equipment (eGSE) charging stations and work with airlines to procure eGSE (leading)
- Evaluate practicality of banning APU use at gates (leading)
- Port-owned fleet
  - Improve vehicle utilization
  - Modernize fleet

# Water Quality

## 2009 Objective

Achieve and maintain Best Management Practices (BMPs) for water quality treatment and flow control over 100% of airport industrial property

## 2015 Objective

Contribute to the restoration of Puget Sound and local receiving waters by providing **water quality treatment, flow control, and using green stormwater infrastructure** (where feasible) for airport industrial stormwater

## Accomplishments

- Achieved objective in 2011
- Reduced pollutant discharges below permit requirements
- Built green infrastructure test project at cell phone lot (bio-retention)

## Proposed Actions

- Water quality and flow control compliance
- Green Stormwater Infrastructure
  - Develop airport specific guidelines (leading)
  - Green roof evaluation (leading)
  - Infiltration
  - Rainwater harvesting and reuse (leading)

# Buildings and Infrastructure

## 2009 Objective

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

## 2015 Objective

Seek LEED Silver for new construction, additions, and major renovations and minor renovations that modify mechanical, electrical, and plumbing systems, and encourage LEED certification for tenant improvements

## Accomplishments

- Consolidated Rental Car Facility LEED Silver Certification
- Transit Operations Center LEED Certified
- Updated environmental master specifications and airport design standards

## Proposed Actions

- Create an environmental performance design manual
- Pursue USGBC’s Master Site designation for the airport (leading)
- Create a voluntary Tenant Improvement Project Environmental Performance Program (leading)

# Water Conservation



## 2009 Objective

Reduce the potable water consumption rate 5% below 2008 levels by 2015

## Accomplishments

- Met our goal in 2013
- Restroom renovations and fixture retrofit
- Implemented water conserving landscaping
- Optimized cooling tower efficiency

## 2015 Objective

Reduce projected future consumption by 4% in 2020 and 12% in 2030

## Proposed Actions

- Continue restroom renovations and fixture retrofit (leading)
- Rainwater capture and reuse (leading)
- IWS water reuse (leading)
- Tenant facilities



# Construction Waste (CW)

## 2009 Objective

Implement BMPs to reduce construction waste

## Accomplishments

- Established baseline recycling rate for airport CW is ~ 67%
- Developed and implemented construction waste specification (requirement) for projects.
- Now require construction waste plans for projects

## 2015 Objective

Divert 85% of construction waste by 2020; 90% by 2025 and reach zero waste by 2035

## Proposed Actions

- Identify projects with potential for high reuse and recovery of CW (leading)
- Improve on-site logistics for CW management (leading)
- Continue to require waste management plans (leading)
- Provide technical support and education on CW best practices



# Waste Reduction and Recycling

## 2009 Objective

STIA will increase the solid waste recycling rate from 21% in 2008 to 50% by 2014

## Accomplishments

- Increased recycling rate from 21% in 2008 to 33% in 2013
- Increased meals donated from ~8K in 2009 to over 25K in 2013
- Donated over 13K used cooking oil annually
- Installed liquid drain stations and water bottle refill stations to encourage bottle reuse
- Received King County Recycling Award in 2007 - 2014

## 2015 Objective

Divert 50% of terminal solid waste and 15% of airfield solid waste by 2020

## Proposed Actions

- Consider requiring recycling and compostable food service-ware for concessionaires (leading)
- Expand compost collection to all food courts (leading)
- Evaluate secondary waste sorting (leading)
- Complete “Zero Waste” demonstration project (leading)
- Maintain incentivized airfield recycling and trash system (leading)

# Fish & Wildlife Habitat

## 2009 Objective

Improve wildlife habitat and protections for native species not in conflict with aviation safety, and develop biologically sound approaches for managing hazardous wildlife

## Accomplishments

- Installed wildlife hazard (avian) radar
- Increased raptor capture and relocation efforts
- Implemented wetland mitigation program
- Enhanced in-stream habitat
- Installed bee colony

## 2015 Objective

Sea-Tac will protect, enhance and steward fish and wildlife habitat while maintaining air transportation safety



## Proposed Actions

- Develop a Habitat Management Plan (leading)
- Manage mitigation sites beyond compliance timeline (leading)
- Expand invasive species management
- Initiate restoration projects

# Noise

## 2009 Objective

Complete the Part 150 Update including FAA review and approval by end of 2001



## Accomplishments

- Insulated over 9,400 single family homes, 236 condominium units, 7 schools
- Acquired 1,400 single family homes impacted by airport operations.

## Proposed Objective

- Increase the number of noise compatible units within the noise remedy boundary to 95% through the year 2030
- Implement noise abatement programs aimed at reducing noise at the aircraft source

## Proposed Actions

- Continue to implement the Fly Quiet Program (leading)
- Construct the ground run-up enclosure (GRE) (leading)
- Continue the Sound Insulation Program (leading)
- Voluntarily acquire residential properties in the South Runway Approach Transition Zone

# Social Responsibility:

## Job Growth

- **CA Goal:** Over the next 25 years, add 100,000 jobs through economic growth lead by the Port of Seattle, for a total of 300,000 port-related jobs in the region
- **CA Objectives**
  - › Increase the proportion of funds spent by the port with **qualified small business** firms for construction, goods, and services to 40% of the eligible dollars spent
  - › Increase **workforce training, job, and business opportunities for local communities** in trade, travel, and logistics

# Social Responsibility: Small Business Participation

## CA Initiatives

- Increase port-wide small business participation by at least 1%/year over year
- Increase the amount spent with women and minority-owned businesses
- Improve metrics and processes to track and report participation of small businesses in Port contracts, including ownership by ethnicity and gender of Port's direct contractors and subcontractors
- Implement a business incubator/accelerator concept to help established and qualified small business firms improve their business skills and knowledge of the Port's procurement practices

# Social Responsibility: Workforce Training

## CA Initiatives

- Develop an expanded workforce development strategy to support the availability of a qualified workforce in Port related sectors including airport, maritime and construction
- Improve existing and develop new metrics including people served, people placed in jobs, apprenticeship utilization including women and minorities, etc.
- Develop the necessary RFPs to support the approved strategy
- Issue and review RFPs and award contracts
- Ensure continuity of workforce development services at SeaTac
- Continue expansion of workforce development efforts at SeaTac, maritime and construction sectors

# Economic Goals

- Per the Century Agenda, aviation business goals and strategies are designed to ensure the airport is economically sustainable.
- Operate a world-class international airport by:
  - › Ensuring safe and secure operations
  - › Anticipating and meeting the needs of our tenants, passengers and the region's economy
  - › Managing Airport assets to minimize the long-term total cost of ownership
- Become one of the top ten customer service airports in North America
- Keep airline costs as low as possible without compromising operational and capital needs
- Maximize non-aeronautical net operating income consistent with current contracts, appropriate use of Airport properties and market demand

# Next Steps

- Complete analyses to fully evaluate ability to attain S3 goals and objectives within the Sustainable Airport Master Plan
- Develop S3 management plan for operational goals and objectives
- Seek policy guidance from Commission where appropriate
- Finalize S3 Q4 2015