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# Seattle-Tacoma International Airport A VISION FOR 2014 AND BEYOND

## Environmental Strategy Plan 2009



# Outline of Presentation



- **Development of the Plan**
- **Organization of the Plan**
- **Next Steps**



# Development of the Plan



**Broad cross section of staff developed goals and objectives**

## **Considerations:**

- Executive direction
- Century Agenda
- Environmental benefit
- Cost benefit analysis



# Development of the Plan



## Plan is organized into three themes identifying:

- Key environmental indicators
- Goals
- Objectives
- Performance metrics
- Actions and strategies



### Moving People and Goods Efficiently



Air Quality and Climate Change  
Energy Use and Conservation  
Buildings and Infrastructure



### Managing Natural Resources Wisely



Materials Use and Recycling  
Water Resources and Wildlife



### Promoting Sustainable Communities



Noise  
Education and Integration



# Energy Use and Conservation

Goals

Objectives

Metrics

## Structure of Plan

### **Goal: Electricity Use**

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

### **Goal: 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: 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.



# Energy Use and Conservation

Goals

Objectives

Metrics

## Structure of Plan

### Goal: 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



# Energy Use and Conservation

## Goals

## Objectives

## Metrics

### Electricity Use (kWh)

	2000	2005	2008
Total kWh of electricity used	133,508,734	145,872,733	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



# Air Quality and Climate Change

## Goals

## Objectives

## Metrics

### **Goal 1a: Air Quality**

Sea-Tac will improve the overall efficiency of its vehicle fleet 30 percent above 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

## Goals

## Objectives

## Metrics

### **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.



# Building and Infrastructure

Goals

Objectives

Metrics

## **Goal 8: Sustainable Buildings**

Sea-Tac will integrate 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.



# Materials Use and Recycling

## Goals

## Objectives

## Metrics

### **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 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

## Goals

## Objectives

## Metrics

### **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.

# Noise

Goals

Objectives

Metrics

## **Goal 17: Noise Mitigation**

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



# Education and Integration

Goals

Objectives

Metrics

## **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's Environmental Footprint 2008



## Environmental Performance Indicators

<b>Gasoline</b>	127,094 gallons
<b>Diesel</b>	20,218 gallons
<b>Compressed Natural Gas</b>	168,675 gge
<b>Electricity</b>	148,715,000 kWh
<b>Natural Gas</b>	2,813,851 therms
<b>Greenhouse Gases</b>	46,079 tons
<b>Potable Water</b>	229,232,828 gallons
<b>Solid Waste</b>	6,350 tons
<b>Hazardous Waste</b>	1,842 lbs
<b>Noise</b>	4,118 acres in 65 dB day-night average sound level



# What is Next



- **Communicate the vision and goals**
- **Set priorities and allocate planning resources**
  - No costs associated with plan at this time
  - Each project/strategy must undergo individual cost benefit and obtain necessary Port Commission approvals
- **Create accountability structures**
- **Annual reporting**



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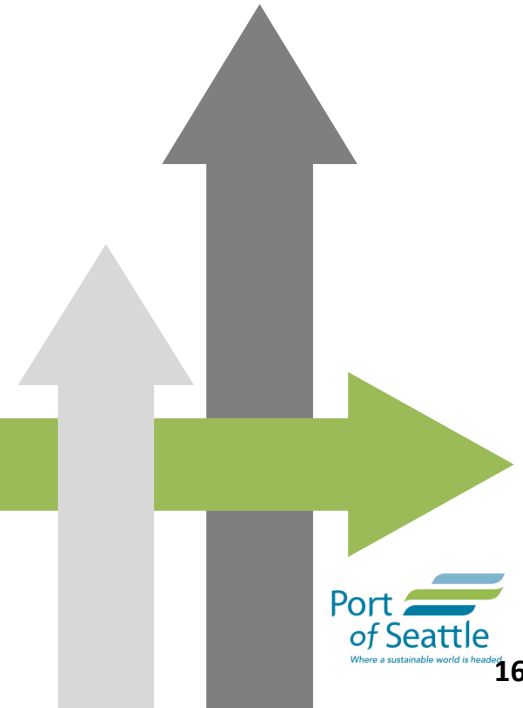
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# Questions



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