



# Seattle-Tacoma International Airport Third Runway Project

Developed for the

FAA Northwest Mountain  
Region Airports Conference  
April 21-23, 2008

# Project Scope

- ❖ 8500 foot long runway, 1700 feet west of the Airport's westernmost runway.
- ❖ 8 connecting Taxiways
- ❖ Full length parallel Taxiway
- ❖ Full expansion of all existing Runway Safety Areas
- ❖ 13 million cubic yards of embankment
- ❖ 3 million cubic yards of common excavation
- ❖ 6 MSE retaining walls from 40 ft – 130 ft in height
- ❖ Relocation of Miller Creek
- ❖ Relocation of over a mile of public road



**West Wall**

# Project History

- ❖ 1992 - Puget Sound Regional Council authorization
- ❖ 1996 - Environmental Impact Statement
- ❖ 1997 - Supplemental Environmental Impact statement
  - Began the Property Acquisition program and construction
- ❖ 2001 - Received 401 Water Quality Certification from Washington State Department of Ecology
- ❖ 2002 - Received 404 Permit from the US Army Corps of Engineers
- ❖ 2004 – Restarted construction

# Environmental Challenges

An aerial photograph of a large-scale construction project. A wide, winding river or canal flows through the center of the site, with various construction areas and infrastructure visible on both sides. The surrounding landscape includes residential neighborhoods, commercial buildings, and green spaces. The overall scene depicts a complex urban or suburban development project.

❖ Embankment Fill Requirements

❖ Air Quality

❖ Construction Stormwater

❖ Haul Issues

# Environmental Challenges

## ❖ Embankment Fill Requirements

- Strict geotechnical requirements
- Testing and certification of all fill sources required with the Construction Bid Proposal
  - Phase 1 Environmental Review
  - Sampling & analysis program for each fill source

# Environmental Challenges

## ➤ Chemical Characterization of Fill Material

- Antimony
- Arsenic
- Barium
- Beryllium
- Cadmium
- Chromium
- Copper
- Lead
- Mercury
- Nickel
- Selenium
- Silver
- Thallium
- Zinc
- TPH

# Environmental Challenges

## ❖ Embankment Fill Testing

- About 40 samples were required for the average fill source
- Fill Material Sampling/Testing required 60 days and ~\$100K per site
- Since 2004, 19 fill sources were tested and submitted for approval
- 16 sources were certified by the Port and Ecology as meeting the criteria
- 13 sources were actually used to supply the 9 MCY of fill since 2004

# Environmental Challenges



## ❖ Air Quality

- Requirement for the use of 1998 and newer trucks
- Requirement for the use of Ultra Low Sulfur Diesel
- Control of fugitive dust



**Embankment Construction 2004**



**Embankment Construction 2005**

# Environmental Challenges

An aerial photograph of a large-scale construction or industrial site. A prominent feature is a long, winding road or canal that cuts through the site. Various buildings, parking lots, and construction equipment are visible. The surrounding area includes some residential or commercial buildings and trees.

## ❖ Haul Issues

- Over 560,000 truck trips importing about 9 million cubic yards since 2004
- Over 29 million truck miles
- Temporary Interchanges
- Overweight trucks
- Sediment Trackout

# 509 Temporary Interchange



# 518 Temporary Interchange





**Truck Wash**



# Where We Are Today

An aerial photograph of an airport construction site. The image shows a large runway under construction, with various taxiways and aprons. The surrounding area includes some existing airport buildings, parking lots, and residential areas. The text is overlaid in bright yellow.

❖ Paving complete

❖ NAVAIDS and Visual Aids in construction

❖ Part 139 Inspection in September

❖ Runway opening in November 08



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SKY-PIX  
800.325.4342