

Northwest Ports Clean Air Strategy

Presentation to:

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Innovative Approaches to Port
Challenges

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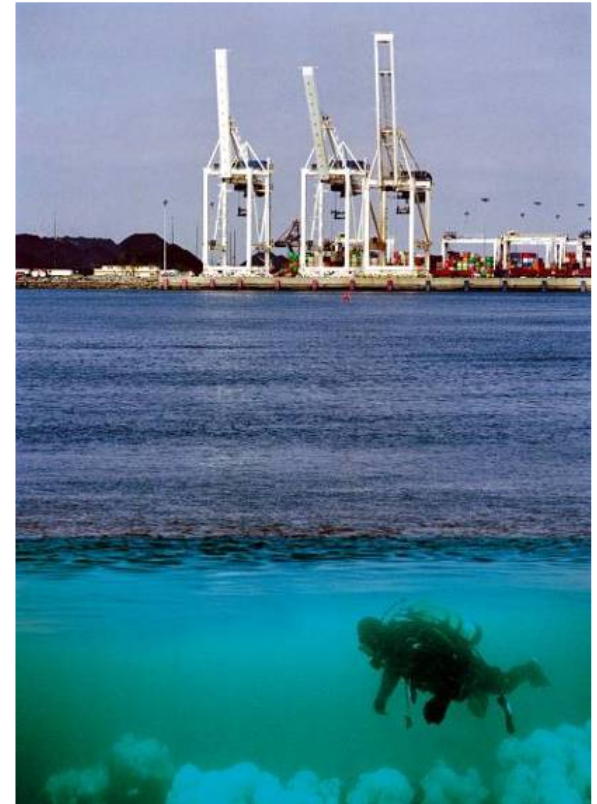
Northwest Ports Clean Air Strategy Participants

The Three Ports

- Port Metro Vancouver
- Port of Seattle
- Port of Tacoma

Agency Partners

- Environment Canada, Puget Sound Clean Air Agency, United States Environmental Protection Agency, Washington Department of Ecology and the British Columbia Ministry of Environment



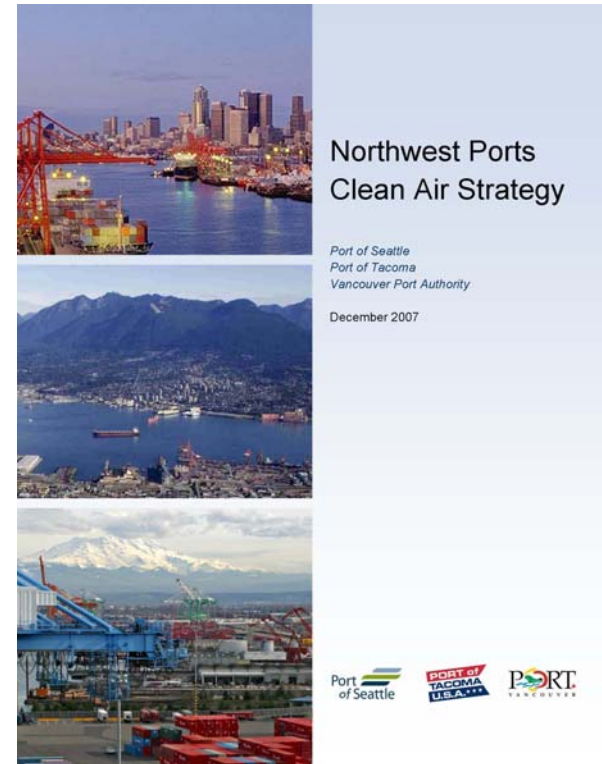
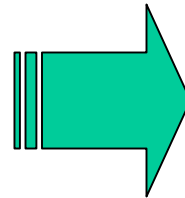
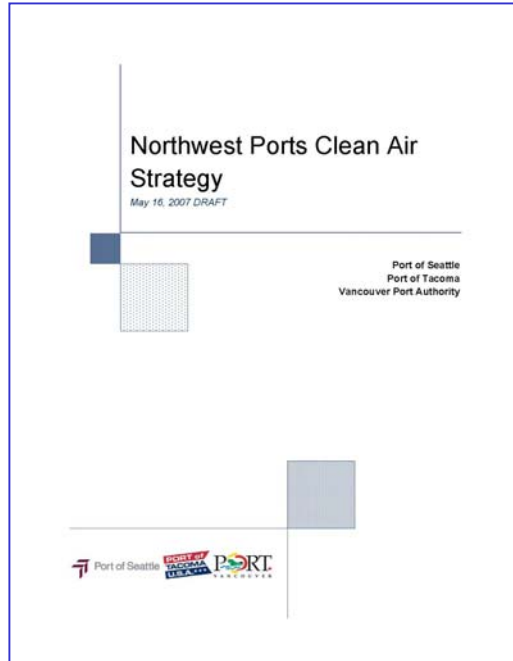
Common Ground

All three ports

- make significant economic contributions to the region
- have plans and expect significant investments for continued port development
- are committed to improving the environment, public health, and the regional economy by reducing their impacts on air quality and climate change



Northwest Ports Clean Air Strategy



Consultation with industry,
public, federal,
provincial/state and local
governments and First
Nations



Scope of Strategy

- Goals and objectives:
 - Reduce maritime and port-related air quality impacts on human health, the environment and the economy
 - Reduce contribution to climate change through co-benefits associated with reducing air quality impacts
 - Help the Georgia Basin-Puget Sound airshed continue to meet air quality standards and objectives
- *Voluntary* participation by stakeholders
- Annual reporting



Map by Environment Canada

Performance Targets for 2010 and 2015



Strategy Sectors: Ports as Lead

- Ocean going vessels
- Cargo handling equipment
- Trucks and vehicles
- Port administration



Strategy Sectors - Agencies as Lead

- Harbour vessels
- Rail



Ocean Going Vessels (OGVs) -Performance Measures

- ***By 2010:***
 - Equivalent PM reduction of using distillate fuels with max 0.5% sulphur for all hotelling auxiliary engine operations.
 - Use of fuels with max 1.5% sulphur or use equivalent PM reduction measures for all hotelling main or diesel electric engine operations.
- ***By 2015:***
 - Compliance with performance measures that the IMO adopts in accordance with the IMO schedule (similar to the US proposal of equivalent reduction from use of 0.1% sulphur fuel and 80% reduction in NOx emissions in defined coastal areas).

Ocean Going Vessels (OGVs) -Annual Tracking and Reporting

- Type of fuel used and % sulphur content
- Other emission reduction measures used
- % of frequent callers using distillate or an alternative out of total frequent callers
- % of frequent calls relative to total calls

Cargo Handling Equipment (CHE) -Performance Measures

- **By 2010:**
 - Port-wide equivalent PM reduction of Tier 2/3 engines operating with ULSD or a biodiesel blend with equivalent sulphur and promote early implementation prior to 2010.
 - All new terminals to have new CHE meeting highest practical standards at time of purchase.
- **By 2015:**
 - Port-wide equivalent of Tier 4 engines for 80% of CHE and retrofit remainder of CHE with best available verified retrofits.
 - Purchase cleanest CHE practical at time of scheduled upgrades.

Cargo Handling Equipment (CHE) -Annual Tracking and Reporting

- # pieces of CHE by type and identify those with Tier 0, 2, 3, or 4 engines
- # and kind of emission reduction retrofits
- Type of fuel being used
- Any technologies used that may reduce emissions through improved efficiencies
- Other relevant information

Rail - Performance Measures

- **By 2010:** In BC work with industry and regulatory agencies to develop a BC Locomotive and Rail Air Quality Work Group in 2008, to collaborate on efforts to reduce rail emissions. At the Ports of Seattle and Tacoma expedite the implementation of the SmartWay Partner commitments
- **By 2015:** Compliance with US EPA Proposed Locomotive and Marine Diesel Engine Rule (reduces PM from new locomotives by 90%)

Rail - Annual Tracking and Reporting

- # of switcher locomotives in local fleets and # with Tier 0, 1, 2, or 3 engines
- # and types of emission reduction retrofits
- Fuel being used
- Other relevant info

Trucks and Vehicles - Performance Measures

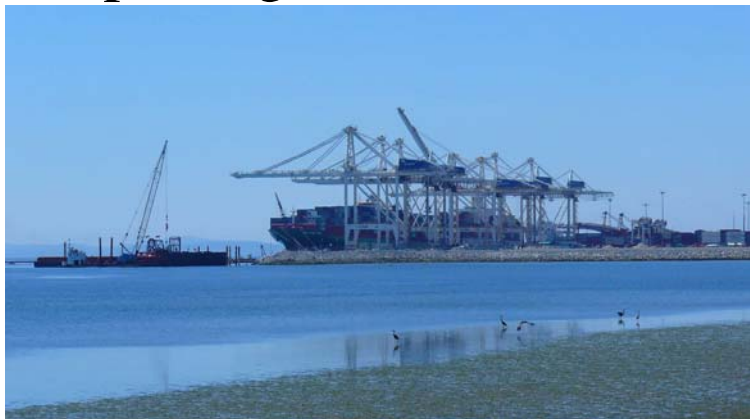
- By 2010: Minimum 1994 or equivalent PM emissions for all container trucks
- By 2015: Minimum 2007 or equivalent PM emissions for 80% of container trucks. All gates to have automated system using best available technology to reduce wait times
- By 2017: Minimum 2007 or equivalent PM emissions for all container trucks

Trucks and Vehicles - Annual Tracking and Reporting

- # trucks meeting 1994 and 2007 standards

Harbour Vessels - Performance Measures

- Regulatory agencies to take lead
- Ports will work with regulatory agencies to implement an outreach strategy to work with owners and operators of harbour vessels to raise awareness and support implementation of emission reductions
- Develop performance measures through stakeholder group for Performance, Management, Verification and Reporting



Harbour Vessels - Annual Tracking and Reporting

- # of engines and how many have Tier 0, 1, 2, or 3 engines
- # and types of emission reduction retrofits
- Fuel being used
- Other relevant information

Port Administration - Performance Measures



- Work with continual improvement and best available technology to reduce port administrative emissions
 - E.g. Use of cleaner technology or alternative fueled vehicles
 - Employee programs to facilitate sustainable commuting options
 - Leadership in Energy and Environmental Design (LEED) certification for buildings
 - Energy audits

Port Administration

-Annual Tracking and Reporting

- # of on- and off-road vehicles and vessels in port fleet and how many have Tier 0, 1, 2, 3 or 4 engines
- # and types of emission reduction retrofits
- Quantity and type of fuel
- Report on programs such as commute reductions, green buildings, energy efficiency etc..
- Other relevant information

Acknowledgements

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Thank You

