Northwest Ports Clean Air Strategy Implementation

Charlie Sheldon
Seaport Managing Director

Stephanie Jones Stebbins
Senior Manager, Seaport Environmental Programs

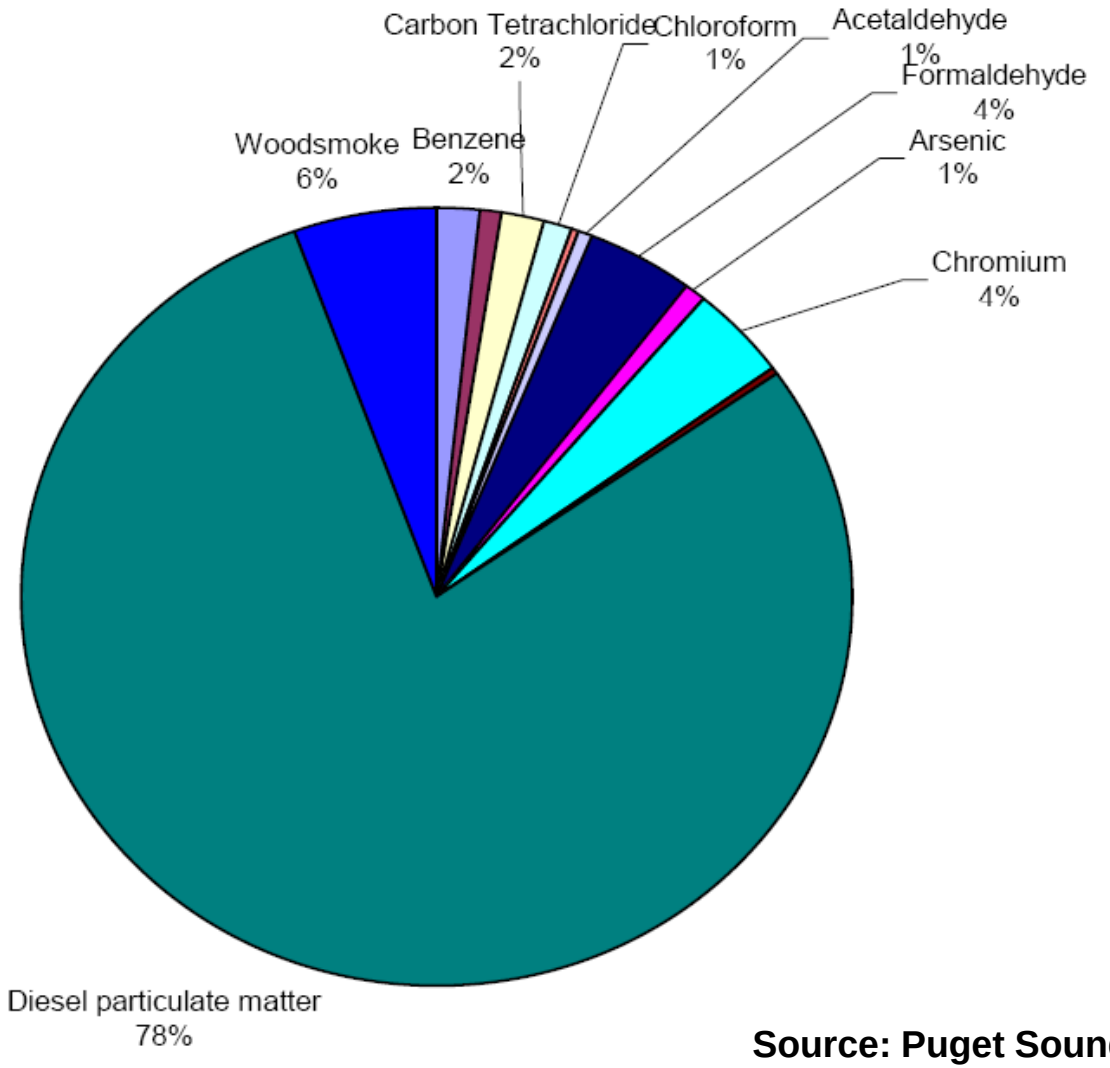
Sarah Flagg
Seaport Air Quality Program Manager

Briefing Overview

- Background: The Data
- Northwest Ports Clean Air Strategy
- Strategy Implementation:
  - Ocean-going vessels
  - Cargo-handling equipment
  - Rail
  - Harbor Vessels
- Clean Truck Program

Puget Sound Region Air Toxics Risk Apportionment

Figure ES-2: Contributions to Potential Cancer Risk at Beacon Hill (2001)



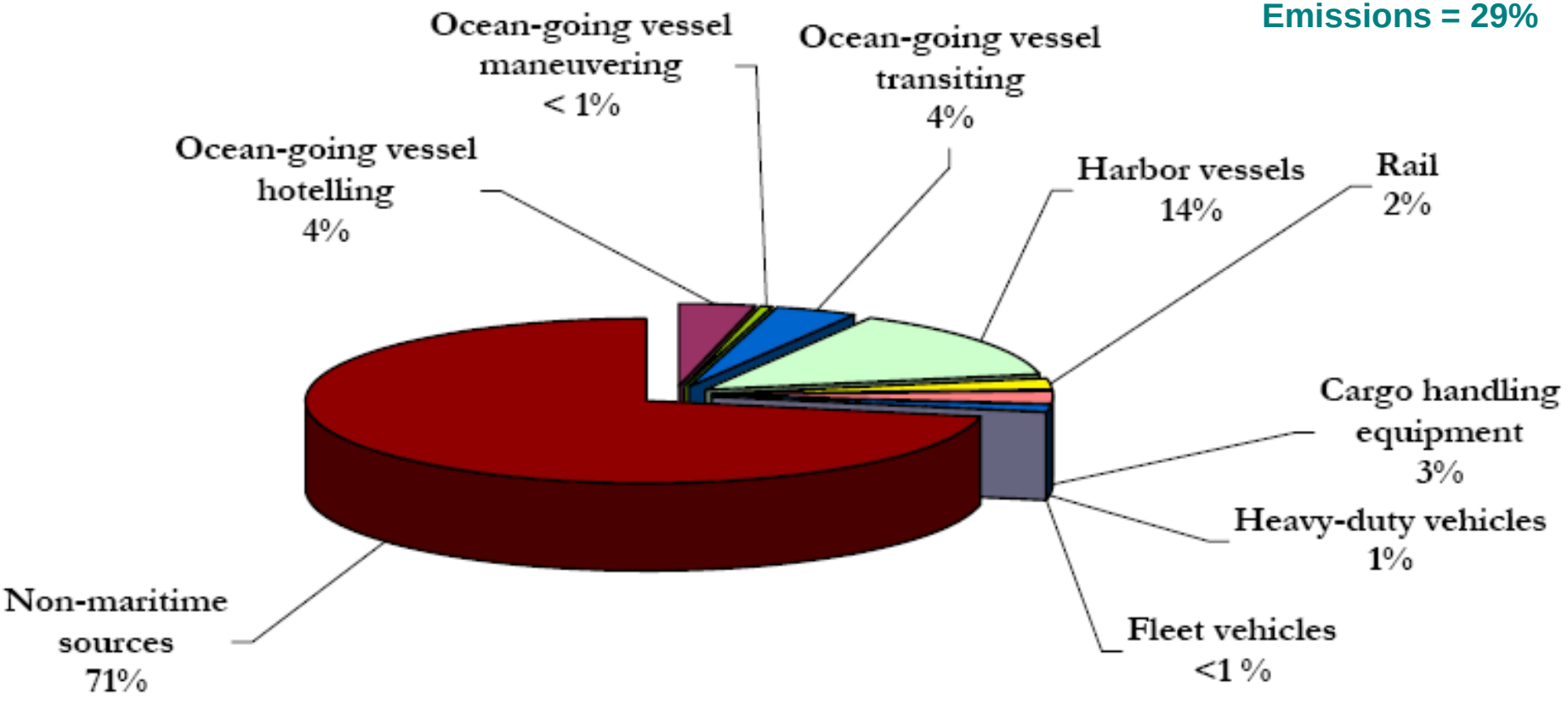
Source: Puget Sound Clean Air Agency

Puget Sound Maritime Air Emissions Inventory

- 2005 activity-based inventory
- Spans ~140 miles south-to-north; 160 miles west-to-east
- Close coordination with Canada
- First to include greenhouse gases

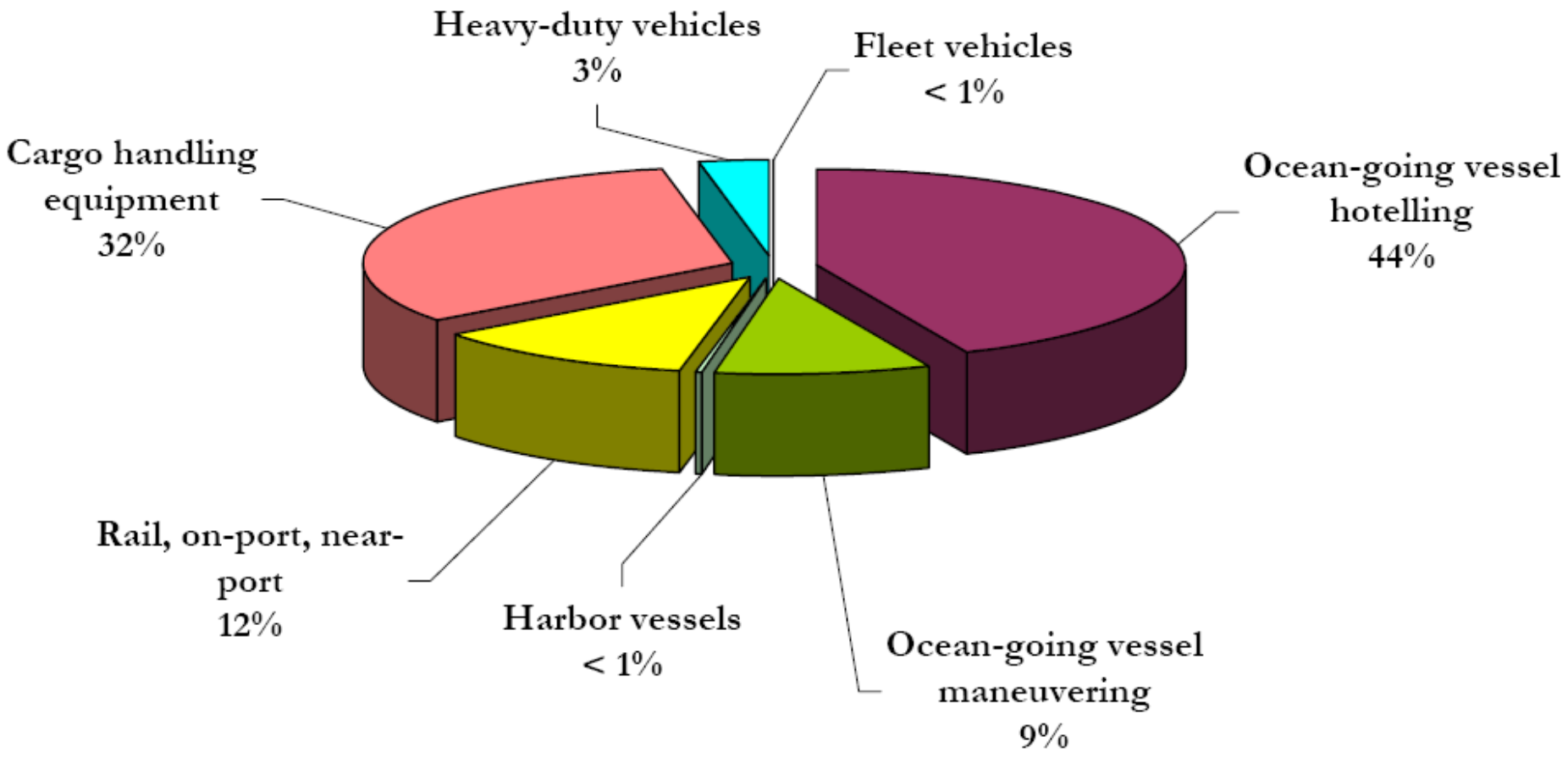
Diesel Particulate Matter
Puget Sound Clean Air Agency Region

Maritime Emissions = 29%



Source: 2005 Puget Sound Maritime Air Emissions Inventory

Diesel Particulate Matter
Port of Seattle Seaport



Source: 2005 Puget Sound Maritime Air Emissions Inventory

Northwest Ports Clean Air Strategy

Port of Seattle
Port of Tacoma
Vancouver Port Authority

December 2007

Port of Seattle

PORT of TACOMA U.S.A.

PORT METRO vancouver

Puget Sound Clean Air Agency
pscleanair.org

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON STATE DEPARTMENT OF ECOLOGY

Environment Canada

Environnement Canada

Strategy Approach

- Focused on diesel particulate matter and greenhouse gases
- Clear, measurable performance measures
  - Ocean-going vessels (OGV)
  - Cargo handling equipment (CHE)
  - Trucks
  - Rail
  - Harbor vessels
- Encourage ongoing innovation instead of mandated solutions
- Short Term (2010) and Long Term (2015) targets

Greenhouse Gas Reductions

- GHG reductions will be achieved through co-benefits associated with reducing diesel particulate matter
- Co-benefit actions include:
  - Switching to electricity or alternative fuels
  - Operational efficiency improvements
- Support goals established by State, Provincial, and Federal governments

Strategy Performance Measures

	2010	2015
Ocean-Going Vessels	Use distillate fuels at berth	Meet IMO standards
Cargo-Handling Equipment	2000 model year engine or better	Best available emission control devices
Rail	Expedite EPA SmartWay standards	Comply with EPA's 2007 locomotive rules
Trucks	1994 or better emission standards	80% to meet 2007 emission standards
Harbor Vessels	Low-sulfur fuels, new technologies	Advanced technology pilot projects

Implementation Commitments

- Develop implementation details with stakeholders
- Verification and reporting requirements
  - 2008 report expected mid-2009
- Identify and secure funding for incentives
- Port Metro Vancouver stakeholder consultation 2008; adoption to be considered in 2009
- Begin implementing the Strategy, seek to accelerate performance standard schedules

Implementation Status
Ocean-Going Vessels

- Shore power for Princess Cruises and Holland America Line vessels
- At-Berth Clean Fuels Vessel Incentive Program
  - Pilot program with Puget Sound Clean Air Agency
  - $1,500 incentive for use of 0.5% sulfur fuel in auxiliary engines while at a Port of Seattle berth
  - Will reduce emissions of SO_2 by 95% and PM by 60%
  - 3 lines participating
    - Hapag-Lloyd
    - Matson
    - APL
- Continue to support EPA proposal to IMO for a Sulfur Emission Control Area (ECA)

Implementation Status
Cargo-Handling Equipment

- Cleaner Fuels
  - All terminals use ultra-low sulfur diesel fuel
  - 2 terminals use a 20% biodiesel blend
- Electrification
  - 26 electric ship to shore cranes
  - 2,560 plug-ins for refrigerated containers
- Equipment Retrofits
  - 169 Level 1 retrofits installed (all eligible equipment)
  - Recently received a U.S. EPA grant for advanced retrofits
- Equipment Replacement
  - Terminals specifying on-road engines for new equipment

Implementation Status
Rail

- BNSF SIG Yard Electrification
  - First in North America to install wide-span, electric rail mounted gantry cranes
- SmartWay participation at rail yards
- Support U.S. EPA Locomotive and Marine Diesel Engine Rule

- Encourage railroads to retrofit switcher locomotives and to use ultra-low sulfur diesel

Implementation Status
Harbor Vessels

- Focusing on harbor tug operations
- Cleaner fuels
  - Foss Maritime and Crowley voluntarily switched to lower sulfur fuels in tug operations
- Cleaner engines
  - Foss Maritime is developing a hybrid tug engine

Clean Truck Program

Clean Truck Program

Other Port Clean Truck Efforts

- Port of Oakland
  - Implementing California Air Resources Board Drayage Truck Rule
  - Pulled $5 million in funding due to declining revenue
- Ports of Los Angeles and Long Beach
  - Currently in litigation
  - Significant funding issues
    - Clean Truck fees delayed by Federal Maritime Commission
    - Prop 1B state funding delayed due to collapse of bond market and state budget deficits
  - California Air Resources Board Drayage Truck Rule as a backstop

Clean Truck Program
Overview

- Industry Situation
- Drayage Facts
- Strategy Performance Measures
- Stakeholder Outreach
- Program Options
- Replacement Options
- Removal Options
- Legal
- Small Business Assistance
- Parking
- Next Steps

Clean Truck Program
Industry Situation

- Cargo volumes are declining worldwide
- Port of Seattle volumes are price sensitive
  - Increasing cost $30 per FEU would divert 30% of cargo (Leachman study, 2007)
- Cargo diversion would result in loss of family wage jobs
  - 30% cargo diversion is equivalent to 2,700 jobs lost

POS Ten-Year TEU History

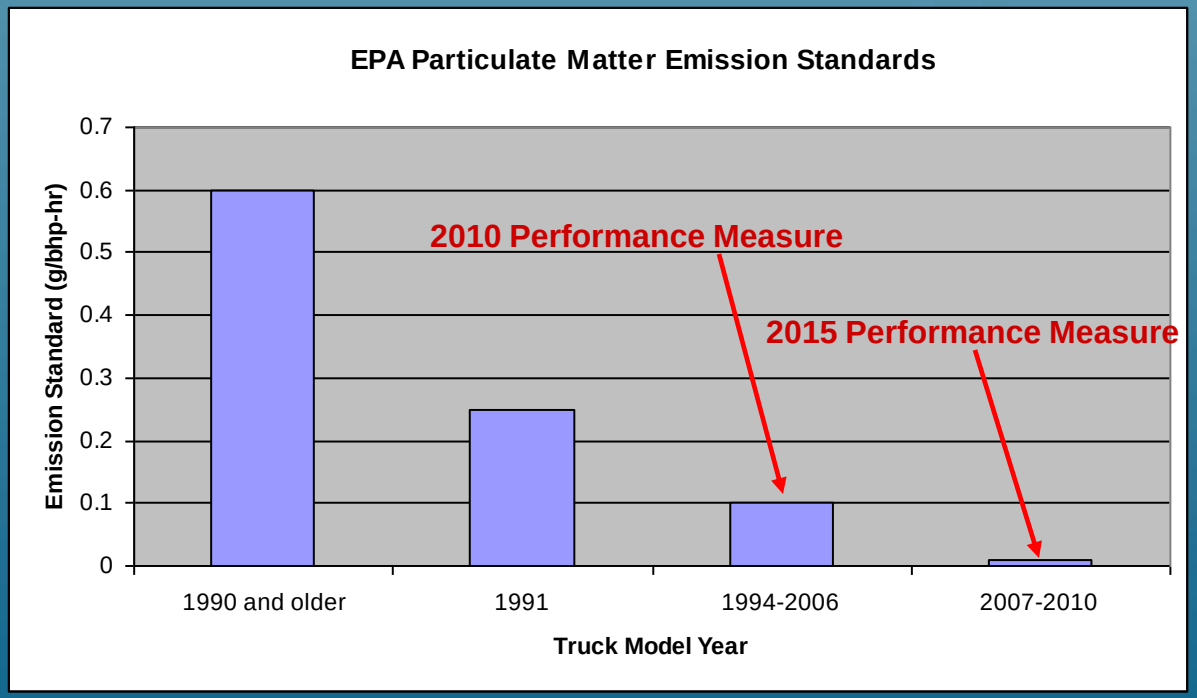
Clean Truck Program
Drayage Facts

- Estimated fleet size: 1,800 - 2,000 trucks
- Average model year (2008)
  - Port of Seattle: 1996
  - Statewide: 1996
  - PSCAA Region: 1998
- 20%-25% of drayage trucks are older than 1994

Clean Truck Program

Strategy Performance Measures

- 2010:
  - All trucks must be 1994 or newer
- 2015:
  - 80% of trucks must be 2007 or newer (100% in 2017)



Clean Truck Program

Program Options

- Industry meets 2010 standard with no funding assistance or container fees
- Outside financial assistance provided to industry to meet 2010 standard through loans/grants/container fees
- Implement a licensing or employee model to meet 2010 standard and support costs through loans/grants/container fees
- Port purchases and operates 400 drayage trucks supported through direct Port investment in new trucks

Clean Truck Program
Replacement Options

- Cascade Sierra Solutions
  - Bridge to a Better Future low interest lease program
  - Recondition and retrofit MY 2001-2004 trucks scheduled for scrap in California
  - Monthly lease payment is $350-$450
    - $100 goes to a savings plan to purchase a 2007 or newer truck
  - 15%-25% fuel savings and lower maintenance = $5k savings
  - Up to 60% emission reductions from pre-1994 trucks
- Loans
  - Investigating low-interest loan options
- Grants
  - Possibility of State and/or Federal grant funding

Clean Truck Program
Removal Options

- Scrap pre-1994 trucks
- Issues
  - Prevent relocation of old trucks to other areas
  - How are owners compensated for asset and at what value?
  - Possible legal challenges
  - Estimated cost $2-$4 million
- Possible Mechanisms
  - Puget Sound Clean Air Agency develops program to scrap pre-1994 trucks
  - Seeking grant opportunities for a truck buy-back program
  - Ask owners to scrap pre-1994 trucks when they purchase a newer truck
- Aggressively seek grant funding assistance

Clean Truck Program
Legal

- Southern California ports' programs are currently involved in two separate pieces of litigation
  1. Federal district court in southern California involving the American Trucking Association
  2. Federal court in D.C. against the Federal Maritime Commission
- Port of Seattle doesn't have statutory authority to regulate truck air emissions

Clean Truck Program
Legal

- Port leases its terminals to terminal operators
- Terminal operators are granted occupancy and control of their leasehold areas for the term of their leases
- Terminal operators are able to control who comes onto their leaseholds and they can turn away non-compliant drayage trucks

Clean Truck Program
Stakeholder Outreach

- Advisory Group
  - Purpose: to provide input on Clean Truck Program implementation options
  - Members include industry, regulatory agencies, labor, community groups, and environmental organizations
  - 3 meetings to date (11/21, 12/17, 1/20)
- Evening Drayage Driver Workshops
  - Purpose: to get input from drivers and share program information
  - Held at South Seattle Community College Georgetown campus on 1/14, 1/22, and 1/26
- Ongoing discussion throughout with owner/operators, trucking companies, shippers, carriers, environmental groups, labor groups, regulatory agencies, and other ports.

Clean Truck Program
Small Business Assistance

- Led by Office of Social Responsibility
- Identifying and coordinating small business resources and financing
- Established a Trucker Liaison position
  - Organize resources and information
  - Provide one-on-one assistance to truckers

Truck Parking

- South Harbor Truck Parking Work Group
  - Purpose: To provide input on south harbor neighborhood parking and routing issues.
  - Partners include City, SDOT, community, industry, labor, and environmental groups.
  - 5 meetings to date
- Completed recommendations
- Status of Terminal 10 interim truck parking facility
- Selection of a temporary site at Terminal 25 South
  - 3 acres
  - Available August 2009
  - Likely free or virtually free

Clean Truck Program
Next Steps

- Implement Strategy Performance Measures
  - 2010: Assist in industry replacement of pre-1994 trucks
    - Work with Cascade Sierra Solutions (where practical)
  - 2015: Continue to evaluate long-term Clean Truck Program options with Advisory Group
- Develop and coordinate small business assistance resources
- Maintain stakeholder partnerships
- Continue to seek collaborative solutions with industry
- Aggressively seek grant funding assistance