



# 2011 Puget Sound Maritime Air Emission Inventory

Overview and Progress Update

West Coast Collaborative Port Sector Call

27 October 2011

# 2011 Puget Sound Maritime Air Emission Inventory

## Steering Committee Members

- American Lung Association of the Mountain Pacific
- BNSF Railway,
- Northwest Clean Air Agency,
- Northwest CruiseShip Association,
- Olympic Region Clean Air Agency,
- Pacific Merchant Shipping Association,
- Port of Anacortes,
- Port of Everett,
- Port of Seattle,
- Port of Olympia,
- Port of Tacoma,
- Puget Sound Clean Air Agency,
- US Environmental Protection Agency,
- Washington State Department of Ecology,
- Washington State Ferries, and
- Western States Petroleum Association.



# 2011 Puget Sound Maritime Air Emission Inventory

## Project Organization



- Port of Tacoma serves as the Project Manager
- Steering Committee selected Starcrest Consulting Group as the Project Consultant
- Similar methodology w/updated data & emission factors
- Data collection performed by the participating members with support from Starcrest

# 2011 Puget Sound Maritime Air Emission Inventory

## Data Collection



## Inventory Data Managers (IDMs) –

IDM for each participating member is responsible for data collection

## Workgroup-Lead

- Ocean Going Vessel - Starcrest
- Harbor Crafts – Puget Sound Clean Air Agency
- Cargo Handling Equipment –Port of Everett
- Heavy-Duty Trucks and Light-Duty Vehicles, – Port of Seattle, Port of Tacoma and Puget Sound Regional Council
- Rail – Port of Tacoma
- Communication -To Be Convened in 2012

# 2011 Puget Sound Maritime Air Emission Inventory

## Project Tasks



### Task A

- 2005 PSEI Methodology review
- Status: Completed

### Task B

- 2011 PSEI Methodology and data collection process document
- Status: Completed

### Task C

- Data Collection
- Status: Underway

### Task D

- Data Review
- Status: Underway

### Task E

- Project and Air Forum Meetings
- Status: As needed

### Task F

- Emission Inventory Preliminary Draft Report-May 28, 2011
- Final Report-June 29, 2011

# 2011 Puget Sound Maritime Air Emission Inventory

## Data Collection



- Activity Year – 2011
- Same Puget Sound Air Basin geographical boundary
- Same subject pollutants
- Same source categories
- Same methodology-activity-based



# 2011 Puget Sound Maritime Air Emission Inventory

## Ocean Going Vessel (OGV)



- Starcrest obtains 2011 Vessel Activity Data from the Puget Sound Marine Exchange
- Update transit routes
- Update emission reduction activities (Fuel Switching, Shore Power, etc.)
- Conduct limited vessel boardings
- Use same methodology w/updated auxiliary & propulsion engine load information based on previous & current Starcrest Vessel Boarding Programs.

# 2011 Puget Sound Maritime Air Emission Inventory

## Harbor Crafts (HC)



- 2011 Activity update collected by Harbor Crafts Workgroup
- Update for repowers, fleet changes, fuel types, etc.
- May develop scaling factors for some HC categories (fishing vessels, recreational marine, etc.)
- Same emission estimating methodology

# 2011 Puget Sound Maritime Air Emission Inventory

## Cargo Handling Equipment (CHE)



- 2011 Activity update collected by CHE Workgroup
- Update for repowers, fleet changes, fuel type, emission reduction strategies, etc
- Similar emission estimating methodology – Reconcile with participating Air Agencies

# 2011 Puget Sound Maritime Air Emission Inventory

## Rail



- 2011 Activity update for Line Haul (LH) & Switching (SW) collected by Rail Workgroup
- Update for repowers, fleet changes, fuel type, emission reduction strategies, etc
- Similar emission estimating methodologies
  - ❑ On-Terminal – Energy consumption (LH), fuel consumption (SW)
  - ❑ Off-Terminal – Fuel consumption estimates (LH), fuel consumption (SW)

# 2011 Puget Sound Maritime Air Emission Inventory

## Trucks; Heavy-Duty and Light Duty



- 2011 Activity update collected by Trucks Workgroup and Inventory Data Managers
- Update for clean truck programs, fuel types, fleet turnover, etc.
- Similar emission estimating methodology-consistent with protocol of participating Air Agencies

# 2011 Puget Sound Maritime Air Emission Inventory

## Basis for Clean Air Initiatives



- 2011 PSEI Final Report issuance on June 30, 2012.
- Use same emission estimating methodology to have meaningful comparison against 2005 baseline.
- Estimate with updated methodology, form 2011 baseline for future comparison.
- Quantify emission reduction initiatives implemented by Ports.
- 2011 PSEI as basis for future clean air strategy planning.



# Question?

Puget Sound Maritime Air Forum Website:

[http://www.pscleanair.org/programs/dieselsolutions/Maritime\\_Forum.aspx](http://www.pscleanair.org/programs/dieselsolutions/Maritime_Forum.aspx)

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