Ports and Air Quality

Dennis McLerran, Regional Administrator, EPA Region 10
Emissions from Diesel Engines

- Diesel engines emit some 7.3 million tons of nitrogen oxides and 333,000 tons of particulate matter, or soot, annually.
Diesel Health Concerns

- Degrades air quality
  - Particulate Matter
  - Ozone
- Exacerbates asthma, respiratory & cardiac illness
- Possible human carcinogen
  - over 70% of the cancer risk from all air toxics
- Contributes to climate change
Community Impacts


• Recommendations fall into the following categories:
  – Effective Community Involvement
  – Health Research Gaps and Educational Needs
  – Technology, Regulatory and Enforcement Mechanisms
  – Environmental Planning, Performance, and Management
  – Land-use Planning and Environmental Review
  – Resources, Incentives, and Financing
What EPA is doing to help

• Coordinated strategy for Ocean Going Vessels
  – Clean Air Act standards; international standards (MARPOL Annex VI); and designation of U.S. coasts as an Emission Control Area (ECA).
  – By 2030, this coordinated strategy is expected to reduce annual emissions of NOx in the United States by about 1.2 million tons and PM emissions by about 143,000 tons.
2020 Potential ECA PM$_{2.5}$ Reductions
2020 Potential ECA Ozone Reductions

Ozone (Smog) reductions from the proposed ECA reach well into the U.S. interior.
Diesel Engine Regulations

Heavy-Duty Highway
sales 800,000 / yr
40B gallons / yr
final rule 2000
fully phased in 2010

Nonroad Diesel
sales over 650,000 / yr
12B gallons / yr
final rule 2004
fully phased in 2015

Locomotive/Marine
sales 40,000 marine engines,
1,000 locomotives / yr
6B gallons / yr
final rule 2008
fully phased in 2017
Voluntary Diesel Programs

For in-use, long lived diesel engines

- EPA Grant Money Awarded Under the National Clean Diesel Campaign:
  - DERA- $230 M (total 2008-2011)
  - ARRA- $300 M (one time 2009)
- SmartWay Transport Partnership
  - Freight carriers and shippers commit to benchmark operations, track fuel consumption and improve performance annually.
Helping Businesses and Creating Jobs

• SmartWay has helped businesses save $6.1 billion to date
  – Part of the American Trucking Associations’ strategy to ensure a sustainable trucking industry
• Cascade Sierra Solutions helping Ports and Truckers Implement the program
• The Clean Diesel and Clean Fuel Technology Innovation and Industry continues to grow.
What Ports are Doing to Help

- Many ports are showing leadership by developing clean air strategies.
- Partnering with terminal operators and third parties to reduce emissions.
- Meeting with community members to discuss and resolve concerns.
What AAPA can do.

- Challenge all member ports to meet a common set of environmental goals and provide appropriate recognition for those that do
- Help change the paradigm of freight competition from least cost to most sustainable