

# NEDC Goods Movement Work Group

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QUALITY ASSURANCE &  
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# Starcrest

- Port Authority of New York New Jersey
- Port of Houston Authority
- Puget Sound Maritime Air Forum (Ports of Seattle, Tacoma, Everett, Olympia)
- Port of Los Angeles
- Port of Long Beach
- Port of San Diego
- Panama Canal Authority
- U.S. Corps of Engineers

# Lessons learned from other Ports

- Technology Advancement Program
- New technology tested at terminals
- Load, fuel consumption, emissions analysis
- Cost effectiveness, practicability
- Incentive and voluntary programs work

# Puget Sound Maritime Air Forum

- Voluntary association from private and public maritime organizations
- Top priority is to reduce and minimize maritime-related emissions
- Working together, voluntary efforts, without regulations
- Port of Seattle spearheaded effort, but work very closely with nearby ports and local agencies

# Puget Sound Maritime Air Forum

- The first product was the Puget Sound Maritime Air Emissions Inventory
- Tenants, private companies, maritime groups were included from the beginning
- Report summarized emissions by Port
- Tenant emissions and activity were kept confidential

# Emission Reduction Strategies for Ocean-Going Vessels

- Reduced speeds to save fuel
- Use of lower sulfur fuels at berth for auxiliary engines
- Fuel Efficient Slide Valves
- New Waste Heat Recovery System
- Newer vessels - IMO-compliant engines and equipped with fuel slide valves
- Shore power

# Emission Reduction Strategies for Cargo Handling Equipment

- Electrical cranes – most major ports in U.S. already equipped with them
- Equipment retrofits
- Other electrical CHE – forklifts, RMGs
- Use of lower sulfur fuel
- Equipment with alternative powered engines
- Hybrid yard tractors and RTG cranes
- Fuel saving technology

# Emission Reduction Strategies for Harbor Craft

- Replace older engines with newer fuel efficient engines
- Use of lower sulfur fuel and/or alternative fuel
- New hybrid tugboat
- Use of shore power while at home berth



# Emission Reduction Strategies for Rail Locomotives

- Equip switch engines with idling limit devices
- New and cleaner technology for locomotives are now available
- On-dock or near port rail

# What lies ahead for East Coast Ports?

- Expect growth in trade in most U.S. ports
- Expect air quality to become a priority for East Coast ports
- Include environmental strategies for new terminals or Port expansions
- Develop a baseline inventory of air emissions
- Implement voluntary emission reduction strategies that work for that Port