

***Clean Ships:
Advanced Technology For Clean Air
February 8, 2007***

Panel on
“Marine Port Air Quality Programs”

Bill Nurthen

Port Authority of New York and New Jersey



THE PORT AUTHORITY
OF NEW YORK & NEW JERSEY

Environmental Stewardship Programs

Third Largest in US

Landlord Port, 3000 Acres, 89 Tenants

- Containers, Autos, Bulks, Warehouses

2005: 4.7M TEU, 7% Increase

Projected Cargo at 7% Growth Rate

- 2010: 6.4M TEU
- 2016: 10.0M TEU

Economy: 233K Jobs, \$12B Wages, \$6B Taxes

Triple Bottom Line

- Regional Prosperity + Financial Return + Environment and Security

Environmental Stewardship Programs

Air Quality

Harbor Restoration

- \$60M Environmental Site Acquisition
- \$9M Hudson-Raritan Estuary Restoration Project (HRE)
- Wetland Creation
- \$31M Contaminant Studies and Reduction Strategies
- Harbor Roundtable

Beneficial Reuse of Dredge Material

- Artificial Reefs
- Shoreline Restoration
- Brownfields Site Remediation

Portfields

- Warehouse/DC

Green Port Program

- EMS, Green Practices Task Force, Tenant Training



Air Quality Programs

- **Rail Enhancement:**
 - \$600M infrastructure – 1M Lift Capacity 2009
 - On Dock Rail Elizabeth, Newark, Staten Island
 - Expanded Support Yard – Accommodate 2 Mile Train
 - Reactivation of Staten Island RR and Arthur Kill Lift Bridge
 - \$50M to NY and NJ for Off Port Rail Improvements
- **Infrastructure for Electric Cranes**
- **Marine Tenant Actions**
 - Installed Electric Cranes
 - Reoriented Footprints
 - Installed Electronic Gates
 - Extended Hours
 - Modernized CHE: Over 30% Reduction Across All Pollutants
 - Ultra Low Sulfur Fuel for Non-road Equipment
 - Use of Propane and Electrical Forklifts



Air Quality Programs

- **Pilot Projects**
 - Active DPF Yard Tractors (NYCT)
 - Kim Hot Start on Switcher (NYCT)
 - Caterpillar Retrofits (APM/Maher)
- **Ferry Retrofit and Marine Vessel Engine Replacement**
 - \$14M - Over 400 Tons/yr NOx Reduction
- **Voluntary No Idle Policy**
- **Biodiesel Heating Fuel**
- **Virtual Container Yard (\$100K)**
- **Promoting SmartWay Partnership**



Air Quality Programs

- **Detailed Emissions Inventories**
 - **Commercial Marine Vessel Emissions Inventory**
 - **Hotelling Emissions Inventory**
 - **Analysis of Offset Reduction Measures**
 - **Cargo Handling Equipment (2002 and 2004 Fleet)**
 - **Drayage Trucks (Feb 07)**

- **Coalition Building**
 - **Northeast Diesel Collaborative (USEPA/State Governments)**
 - **Clean Ports USA (USEPA/AAPA)**
 - **Diesel Emission Risk Reduction Program (NJ DEP)**
 - **Funding Partners (NY Power Authority; NJ Board of Public Utilities)**

Air Quality Programs

New Initiatives

- **Bridgeport/Pt. Jefferson Ferry Engine Replacement**
 - Potential Reduction: 63 Tons/yr NOx, 2.3 Tons/yr PM
- **Voluntary Vessel Speed Reduction Program**
 - Potential 200 Tons/yr NOx Reduction

Actions to Advance Air Emission Reductions

- **Air Credit Banks**
- **Tax Incentives/Low Interest Loans/Rebates**
- **Regional Collaborative to Modernize Aging Truck Fleet**
- **Ratify MARPOL Annex VI – SECA**
- **Funds for Development/Evaluation of New Technologies**
 - CHE, Vessels, Rail, Trucks