



## Environmental Challenges for a Global Industry

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**Faster Freight, Cleaner Air  
Conference**

**Freight and the Environment**



## APL

- > **Sixth-largest containership operator**
  - > Over 100 vessels
  - > 700,000 TEUs of containers
- > **2005 volumes: roughly 4 million TEUs**
- > **Services connecting six continents**
- > **4,500 employees, 90+ countries**
- > **U.S. Flag (15 vessels), including (9) enrolled in the U.S. Military Security Program "MSP"**
- > **Wholly owned subsidiary of the NOL Group (listed and headquartered in Singapore)**

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## Our Environmental Approach

- > Adopt best practices and technology
- > Drive environmental friendliness wherever we operate
- > Empower staff to make responsible decisions
- > Collaborate with suppliers, external agencies and customers to promote environmental responsibility

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## Key Environmental Concerns

### INPUTS:

- > Newbuildings and existing fleet
- > Cargo, hazardous goods
- > Operational efficiency (including fuel)
- > Information

Key Areas of Focus  
Water and Air  
Quality

**A Leader in Global Ocean  
Transportation Services**



### OUTPUTS:

- > Vessel emissions
- > Ballast water
- > Yard equipment emissions
- > Care of Dangerous/Hazardous goods

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## What the industry is doing

- > Terminal development, innovation
- > Terminal handling equipment (electrification and alt. fuels)
- > Cleaner fuels
- > Voluntary vessel speed reduction
- > PierPass (Southern California)
- > Ballast water research
- > Alternate marine power
- > Aligning with Customers environmental focus (e.g., IKEA)

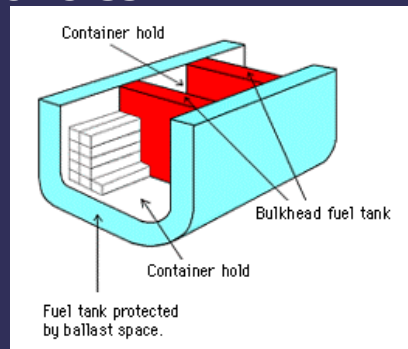


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## What the industry is doing

- > Environmental policies
- > Training
- > New technology
- > Research



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## What the industry is doing

### "Green Ships"\*

- > Designed for cleaner fuels
- > Double hull
- > Protected fuel tanks
- > High capacity "oil-water" and "grey-water" tanks
- > Alternate marine power capable
- > New under-water hull treatments



\*Evergreen Marine

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## What APL is doing



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## What APL is doing



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## Where do we go from here?

> **Collaboration**



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## Where do we go from here?



- SCAQMD
- CARB
- EPA

- CITY COUNCILS
- PORT COMMISSION
- MAYOR'S NNI TASK FORCE

- COMMUNITY GROUPS  
(PCAC)
- ENVIRONMENTAL JUSTICE  
GROUPS
- NRDC

- CAL LEGISLATURE
- GOODS MOVEMENT ACTION  
PLAN

> Collaboration

> **Clarification**

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## Where do we go from here?



> Collaboration

> Clarification

> **Simplification**

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## Cost implications

- > Shore power
- > Cleaner fuels (at sea and on land)
- > Reduced vessel speeds
- > Equipment replacement

**Other factors that continue to negatively impact costs;**

- > Protracted time frames to develop much needed expansion of transport infrastructure
- > Effect of layered and/or conflicting regulations



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## Improving the Infrastructure



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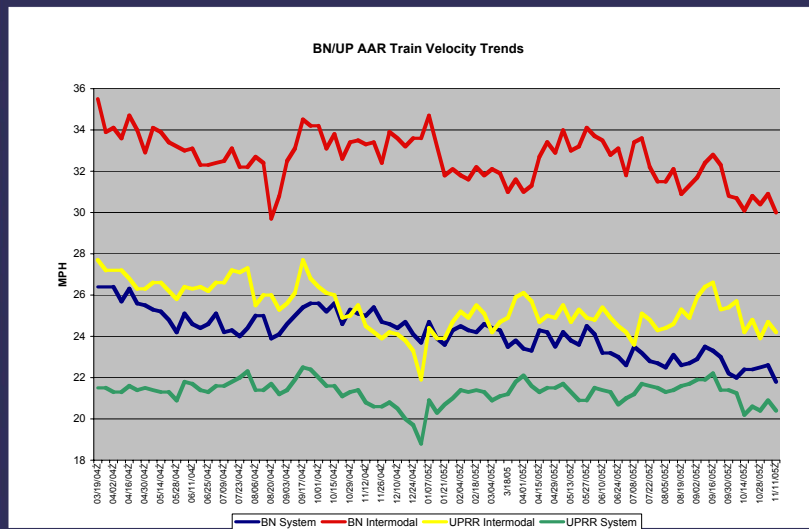
## Rail Performance

- Any improvement in port transfer facilities pushes problems to next choke point....rail
- Inland terminals suffer from insufficient capacity and bunching/surges of cargo
- Shortages of locomotives still occurring at times as locomotives are trapped in a less fluid rail network
- Updated velocities reflect continuing deterioration even with avoidance of LA/LB

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## Rail Performance - Deteriorating



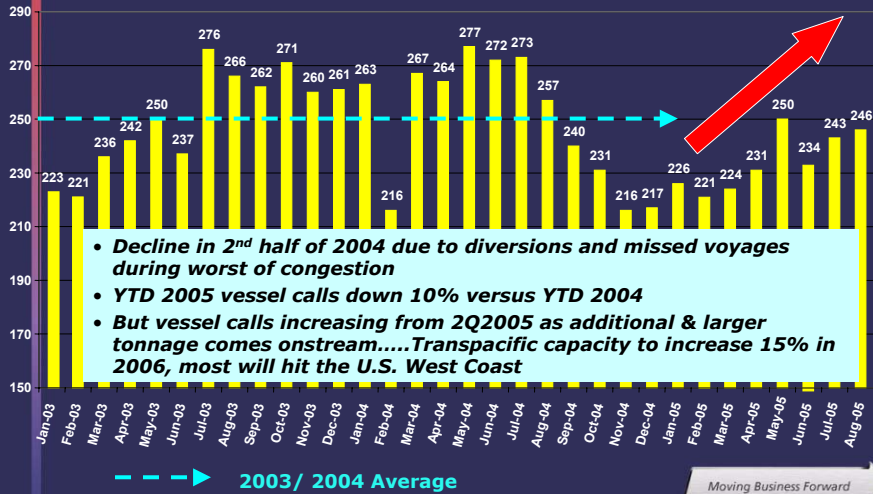
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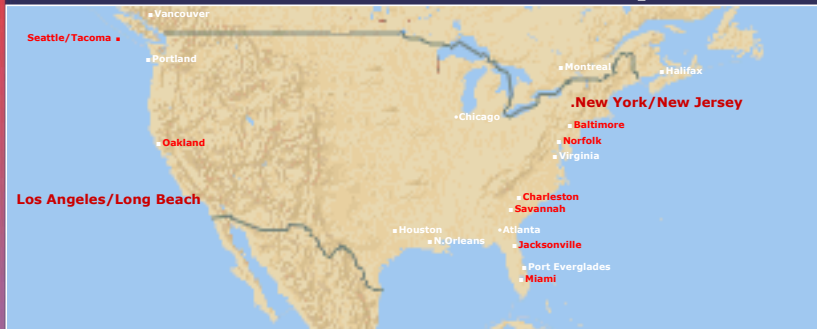


# Vessel Calls, Southern CA

Vessel Arrivals: Los Angeles/Long Beach  
The Most Critical Intermodal Gateway to the U.S.



# Port and Terminal Development



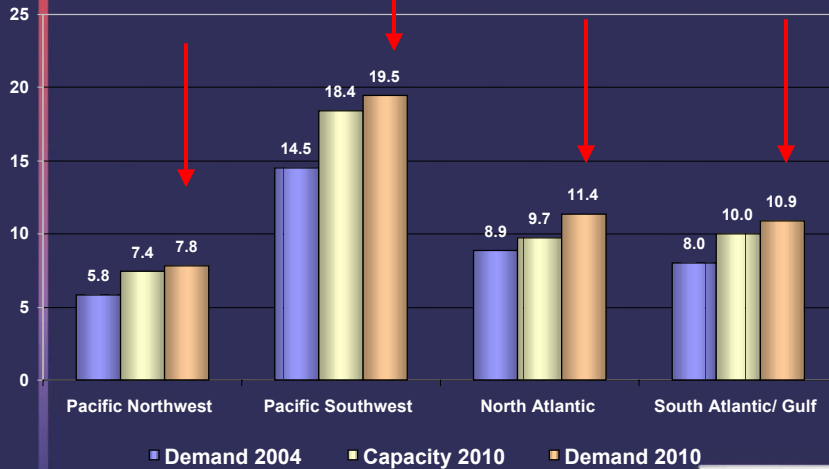
- Approx. 20 major port and terminal development projects currently in the pipeline.
- Approx. value US\$2.4 billion
- Will increase port capacity by around 12 million TEUs between now and 2012.

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## Forecast U.S. Port Capacity & Demand

Demand in 2010 forecasted to outstrip capacity however W/Coast terminals should cope with 2006 growth without major disruptions – problems will continue to be the rail



Modern Terminals Limited millions of TEUs

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## Productivity

*We need to find a solution to enable increased levels of productivity at Marine Terminals in the U.S.*

Result would be;

- Less land and equipment required to handle trade growth
- Less congestion at Marine Terminals that results in truck idling
- Faster vessel turn-around.....less port time

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## Summing up

- > We are developing a better understanding of the issues
- > The industry has begun to address those within its control
- > Solutions will take time and result in higher costs (until we can be significantly more efficient)
- > We need a common and consistent set of International environmental standards and regulations
- > It is critical that we find a means of enabling more rapid development of U.S. Transportation Infrastructure
- > It will take a collaborative effort

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Thank you

