

Responsible and Profitable Port Development, Expansion & Operation

Desarrollo Portuario, Expansión y
Operación Responsables y Provechosos

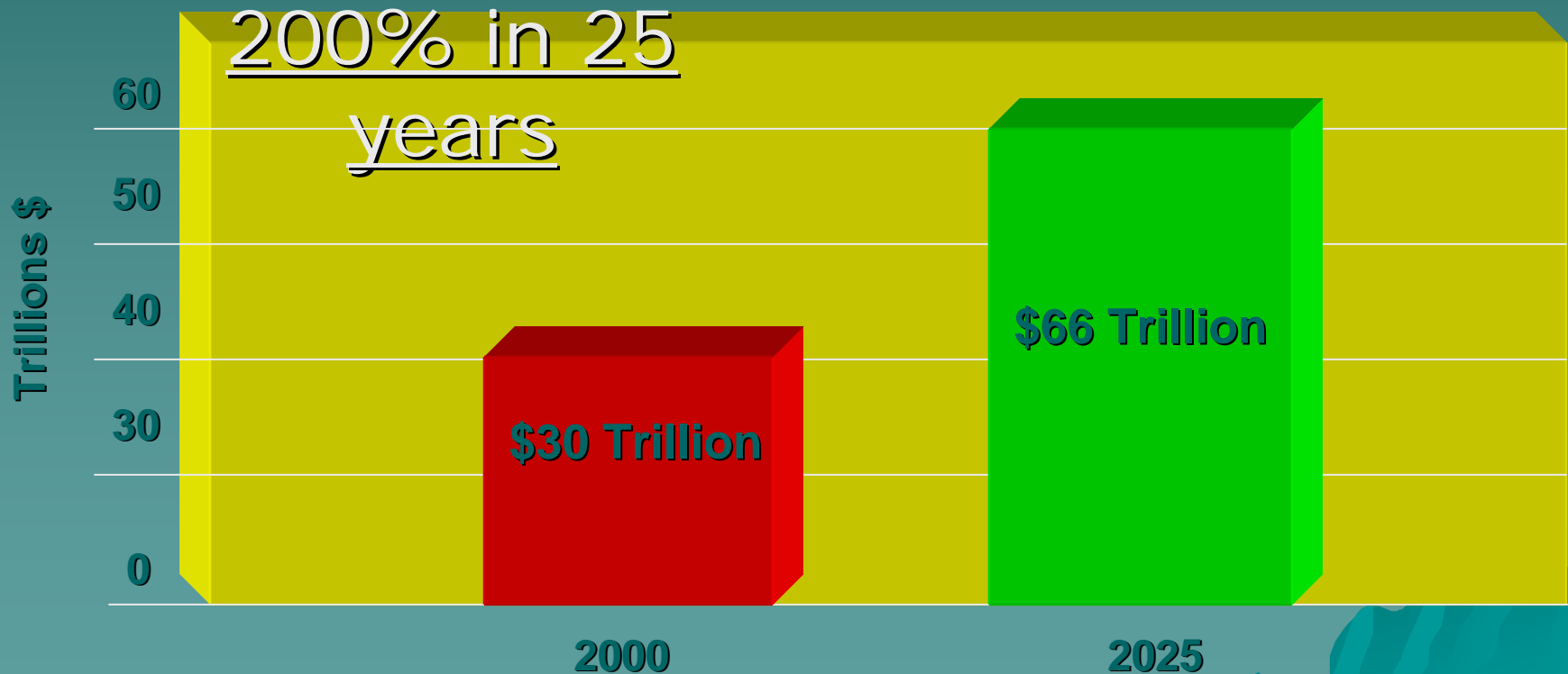
CIUDAD PANAMA
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RIAQM, RMI, CIPS, CUO

World Bank's 2025 "Global Economic Prospects"

World Output will
increase over
200% in 25
years



Global Market Economic Shifts (Country GDP Rank)

	2000	2010	2020	2030	2040	2050
#1	USA	USA	USA	USA	USA	CHINA #1
	Japan	Japan	CHINA	CHINA	CHINA	USA #2
	Germany	Germany	Japan	Japan	INDIA	INDIA #3
	UK	UK	Germany	INDIA	Japan	Japan
	France	CHINA	UK	Russia	Russia	Brazil #5
	Italy	France	INDIA	UK	Brazil	Russia
#7	CHINA	Italy	France	Germany	UK	UK
#8	Brazil	INDIA	Russia	France	Germany	Germany
#9	INDIA	Russia	Italy	Brazil	France	France
	Russia	Brazil	Brazil	Italy	Italy	Italy

Source: Global Insight, 2005

North American Maritime Container Current and Future Trade Growth

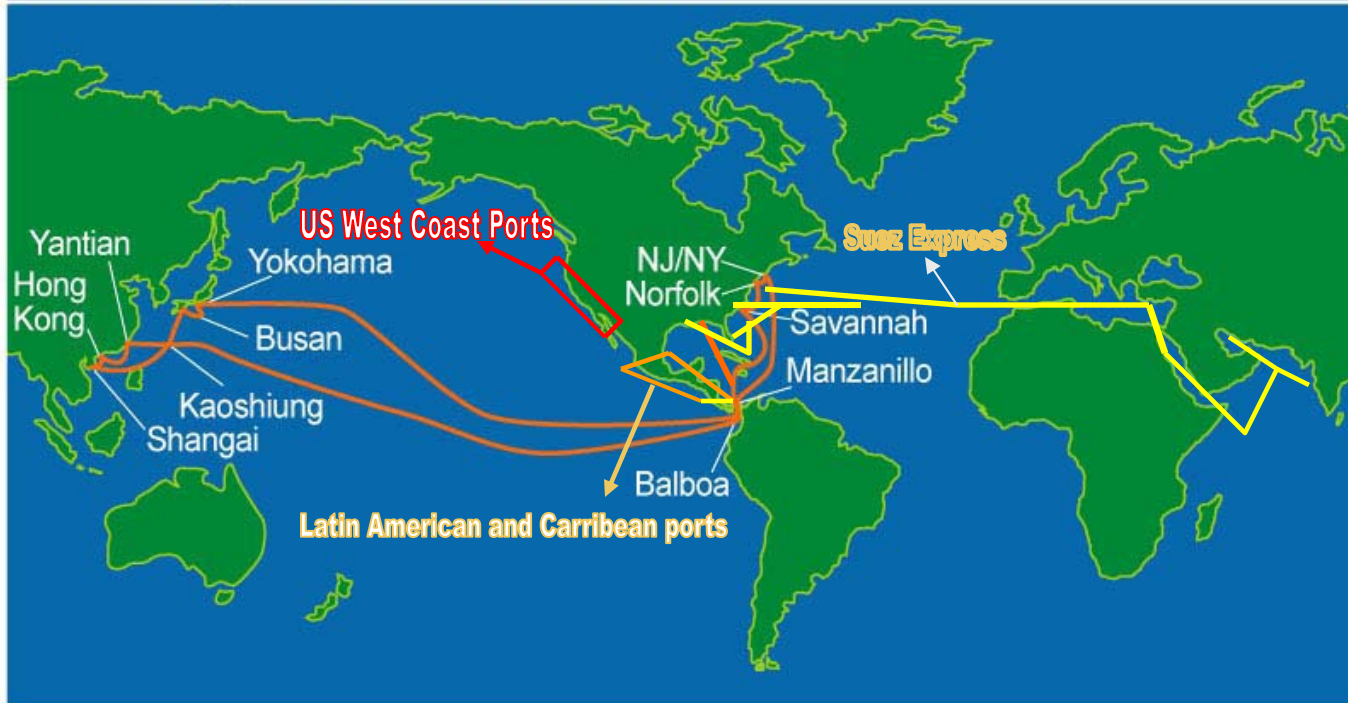


Panama Canal Dynamics/Limitations

- ◆ Panama Canal to reach capacity by 2009 to 2012
- ◆ By 2011, 40% of the container fleet will not fit through the canal
- ◆ Needs to be expanded to keep up with competing routes
 - **Suez Canal**
 - **US Intermodal**

ARE WORLD AND US PORTS PREPARED?

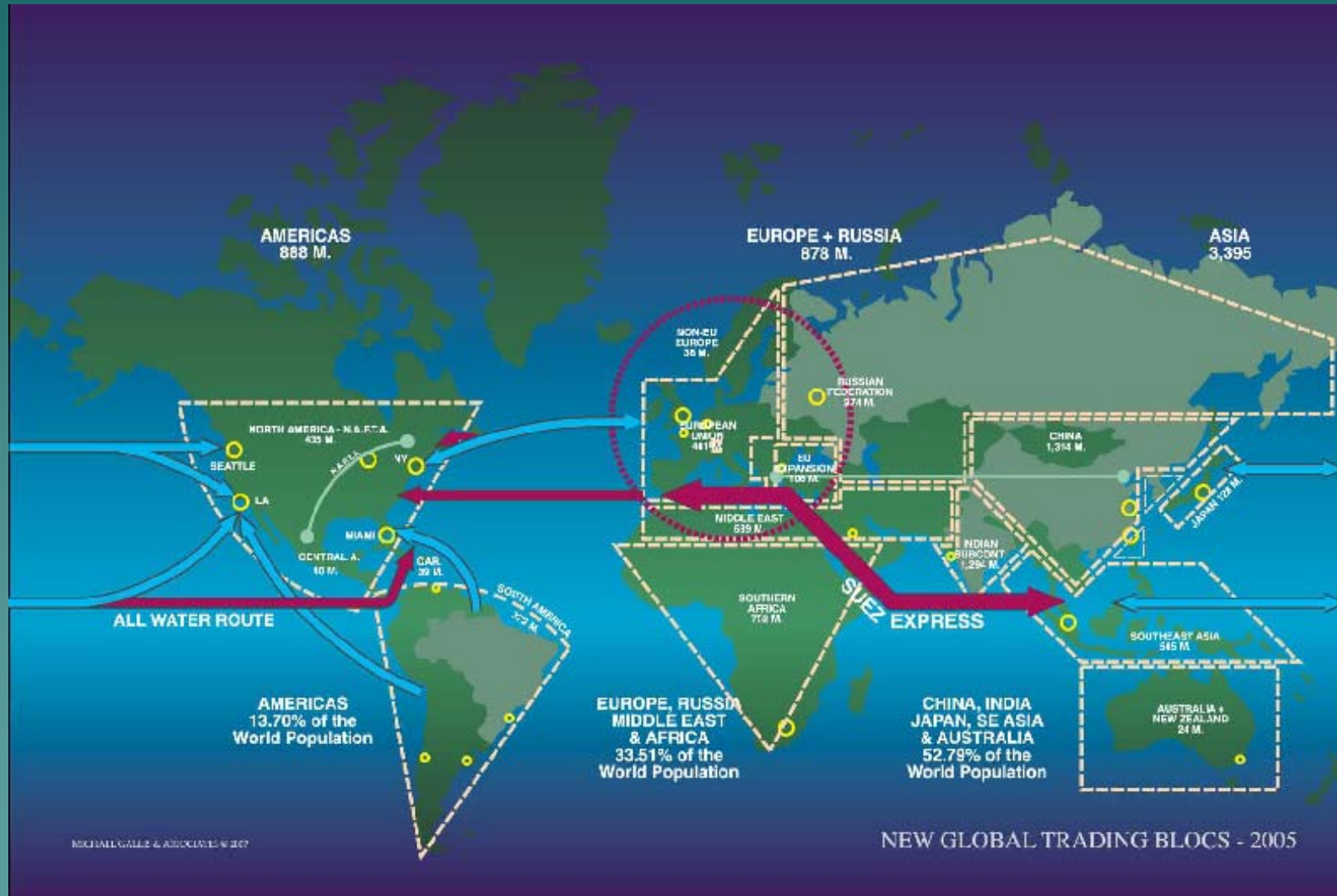
A Service from Asia to the U.S. East Coast Represents
104 Yearly Transits (NYX Service)



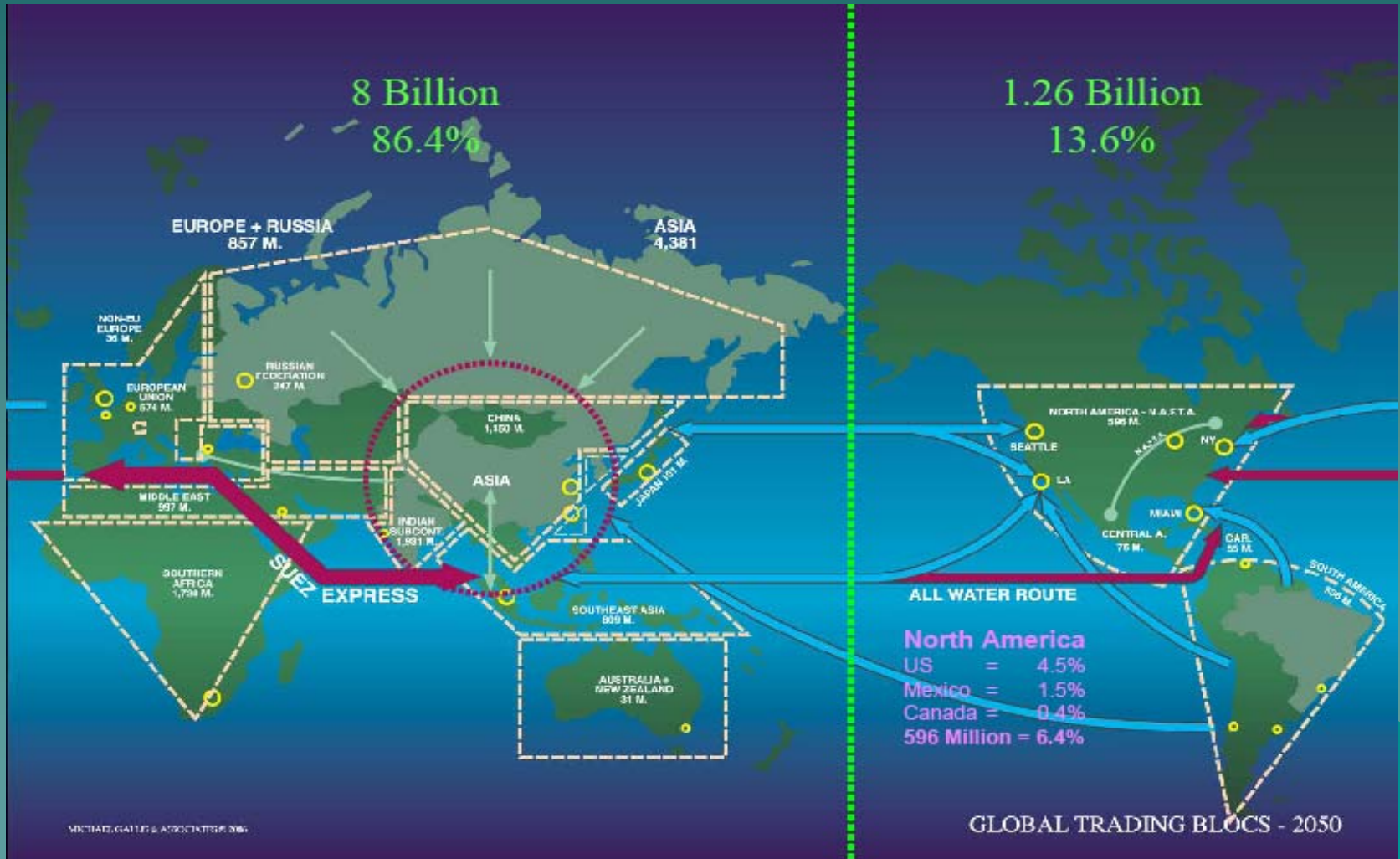
Impact on the Canal
Yearly transits: 104

Frequency 7 days
8 vessels - Average 4,320 TEUs

Trading Blocks Dynamics



NAFTA, CAFTA & Columbian Free Trade Agreements



MICHAEL BAKER & ASSOCIATES INC.

Pressures Create a set of Opportunities/Challenges For American and World Ports:

- ◆ Meet cargo demand and Vessel Traffic by:
- ◆ Expanding and upgrading marine cargo handling facilities & infrastructure:
- ◆ Adequate depth in navigation channel (47-50' MLLW) to accommodate post-panamax vessels
- ◆ New vessel berths and docks that can accommodate post-panamax vessels
- ◆ New post panamax cranes
- ◆ Other support infrastructure

Pressures Create a set of Opportunities/Challenges For World and American Ports:

- Vessel traffic, ports expansion/ infrastructure growth translates into:
- Air Quality Issues
- Water Quality Issues
- Invasive Species Issues
- Other Environmental Management Issues

What are the Solutions For Ports?

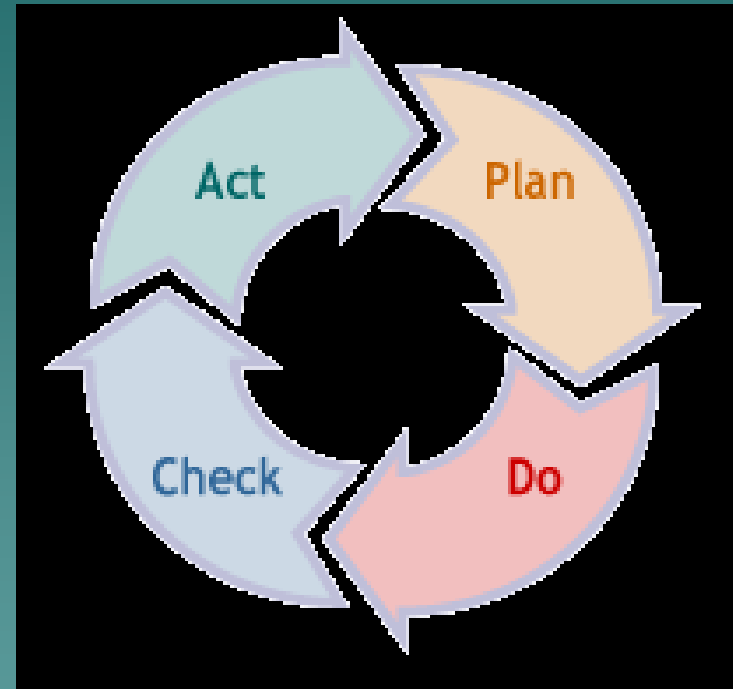
- ◆ Grow and expand in a sustainable way across the board:
- ◆ Green and sustainable dredging practices
- ◆ Carbon efficient marine cargo handling facilities & infrastructure
- ◆ Green and carbon efficient buildings
- ◆ Sustainable methods to manage construction projects

What are the Tools to Help Implement Solutions?

- ◆ ISO 14001: Environmental Management Systems (EMS)
- ◆ Sustainability Policy and Program Development
- ◆ Combination of the EMS and Sustainability

EMS: “Sistema De Gerencia Ambiental”: Plan, Haga, Verificar, Tomar Accion

- ◆ ISO 14001 Standards
- ◆ An Environmental Management System (EMS) is a set of processes and practices that enable an organization to reduce its environmental impacts and increase its operating efficiency.
- ◆ Can be successfully used to help guide the ports' master plan and capital expansion plans



Sustainability: *Sostenibilidad*

- A balance among economy, ecology And social equity.
- A port sustainability policy can support the port's:
 - Master plan developments in a Responsible And profitable way
 - The responsibility factor refers to the Environmental and social responsibility And Profitability to the economy.
- Also, sustainability principles can be used in the day to day operations of the port



EMS AND SUSTAINABILITY

- ◆ They can be drivers of one another
- ❖ An EMS is the framework – a set of processes and tools for effective mission accomplishment.
- ◆ Sustainability is a guiding principle to keep us on track as we execute EMS
- ◆ Sustainability the guiding compass for the installation EMS
- ◆ The EMS is a mission enabler.



PROJECT EXPERIENCE

CASE STUDIES

EXPERIENCIA DEL PROYECTO
Estudios De Caso



Port of LA Sustainability Initiatives: Puerto Del Los 'Angeles: Iniciativas Sostenibilidad

- ◆ Port of LA is first US port in TEU.
- ◆ Port's sustainability is envisioned by the Mayor of The City of Los Angeles and the Port leadership.
- ◆ Sustainability principles to be integrated into the port's initial phases of a planned 10-year capital improvement program.
- ◆ The port has assembled an executive committee to determine the scope of sustainability as well as annual reporting



Mayor's Task Force on Sustainability

PORT SUSTAINABILITY



Integration Tools

- ECA
- EMS
- Adv. Tech
- CEQA

GREEN Buildings
GREEN Terminals
GREEN Infrastructure
GREEN Construction

Port Authority of New York and New Jersey Sustainability Initiatives

Autoridad portuaria de Nueva York y de Nuevo-Jersey: Iniciativas Sostenibilida

- ◆ Third Largest US Port
- ◆ Implemented an Environmental Management System
- ◆ Started a Green Practices Task Force
- ◆ Designed Sustainability into New Infrastructure
 - E.g. ExpressRail Expansion and Electric Cranes
- ◆ Incorporated a Sustainable Design Policy into all New Construction and Major Renovations



THE PORT AUTHORITY OF NY & NJ

Port Freeport EMS

Puerto De Freeport, Texas

EMS

- ◆ currently ranked as the 13th largest port in the United States in terms of foreign tonnage.
- ◆ Port Freeport's vision is to develop a comprehensive EMS that would entail:
- ◆ Port and tenant operations (conformance vs. compliance) as well as an integrated database
- ◆ Port's EMS is designed to be integrated into the port's master plan to support the port's upcoming growth and expansion.



Massport

Autoridad Portuaria De Los Massachusetts

- ◆ Massport has established a commitment to sustainable design and development to minimize the environmental impact of its operations.
- ◆ Massport has achieved ISO 14001 registration at its regional airport, operating unit of international airport, port and toll bridge facilities (the first toll bridge facility....)
- ◆ Massport is in the process of adding explicit energy conservation goals to its environmental management policy.



Questions and Answers Preguntas y Respuestas

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