The Dynamics of the US Container Market and Shifting Trade Patterns – Resulting Implications

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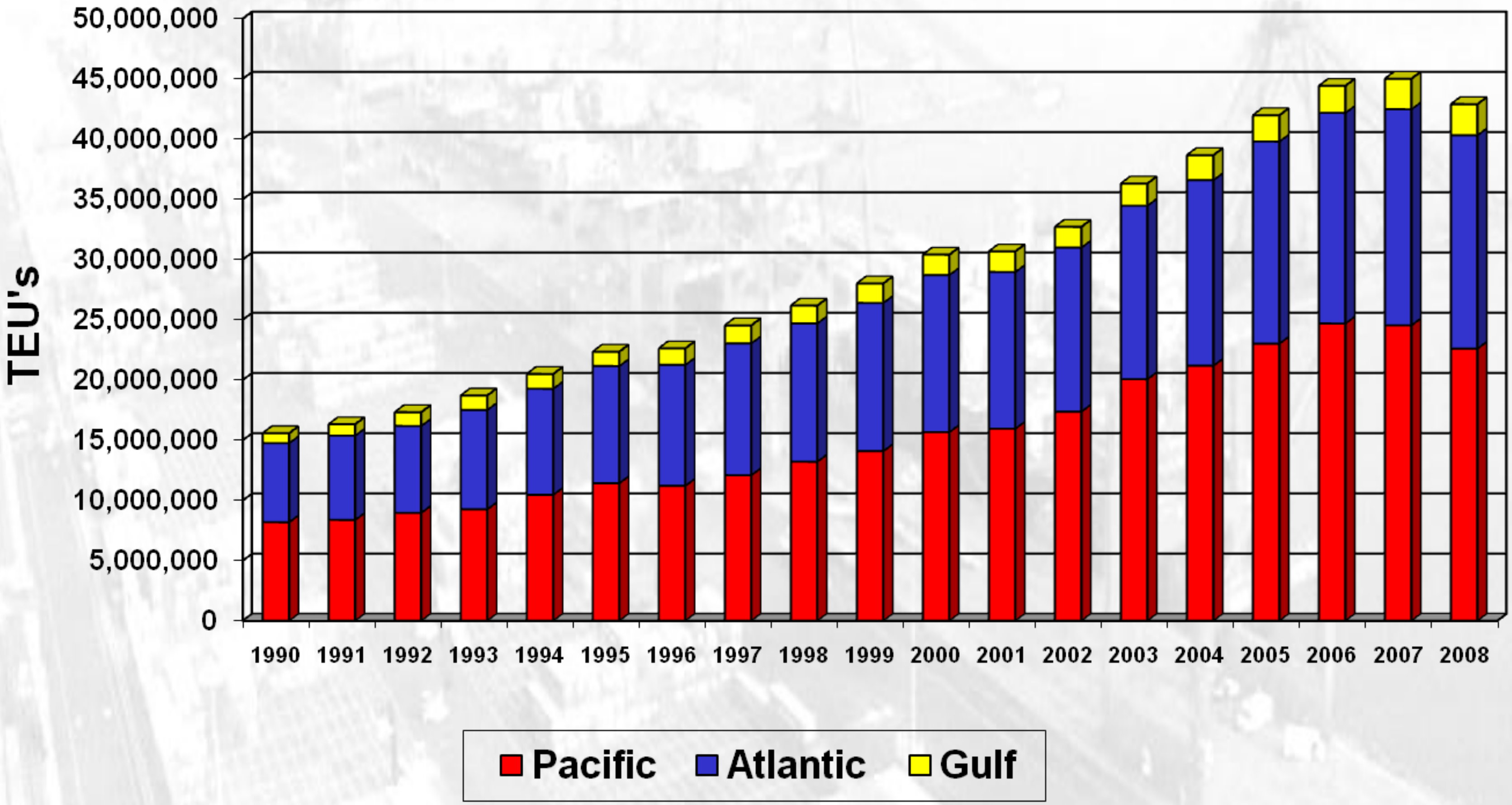
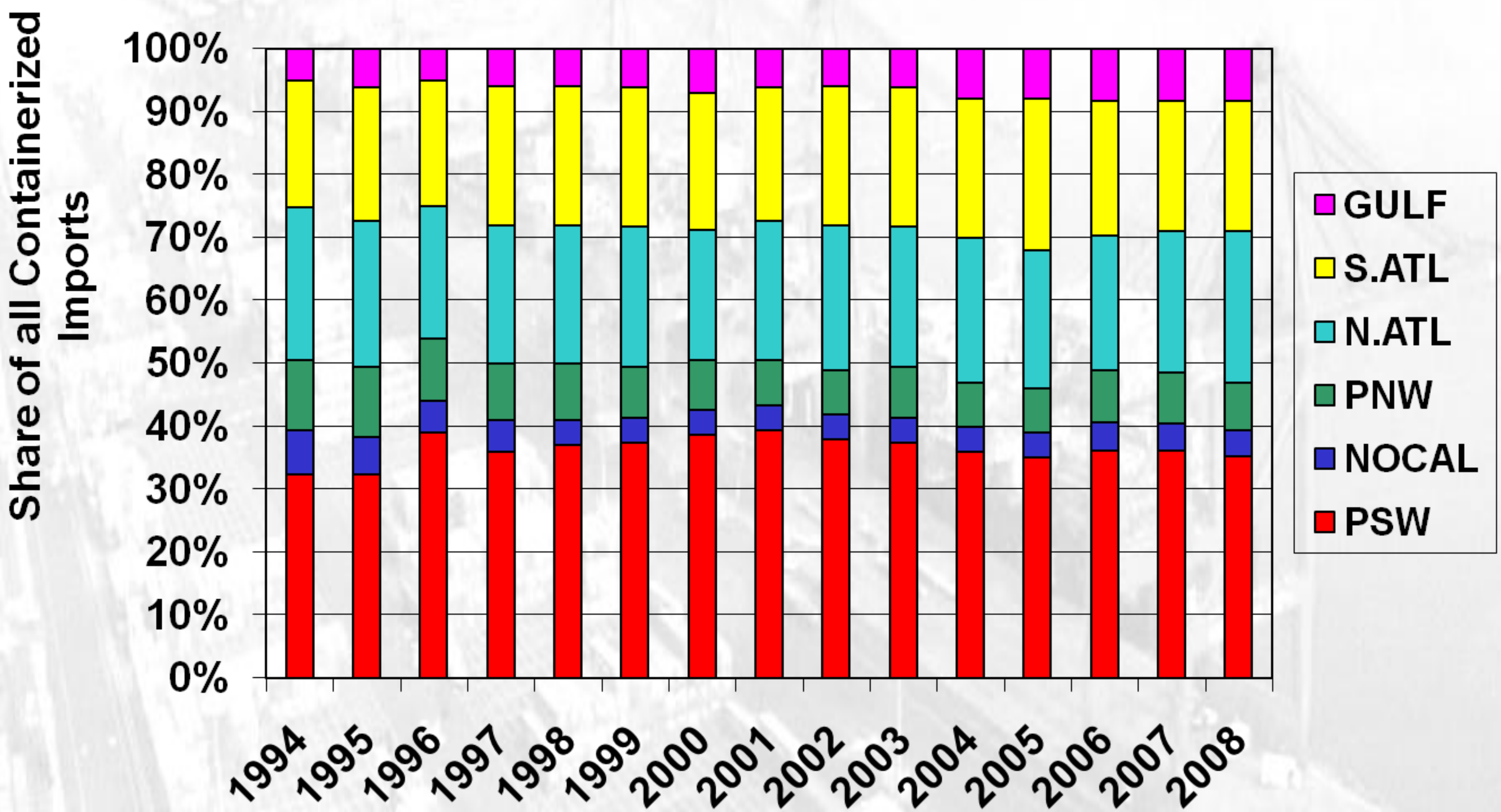
Growth in Containerized Cargo

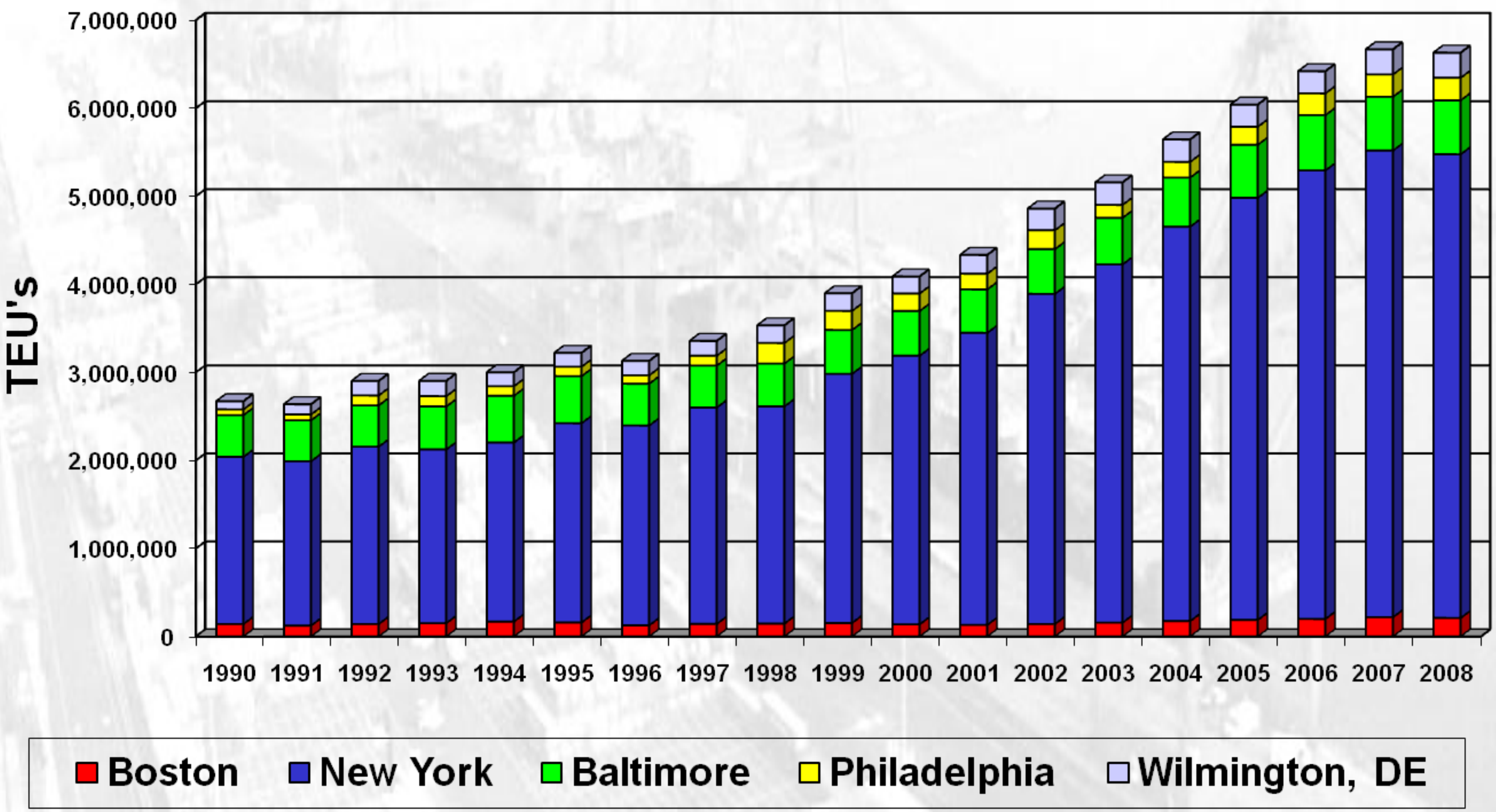


Southern California Ports (PSW) Handle About 35% of All Import Tonnage, but other Port Ranges are Growing

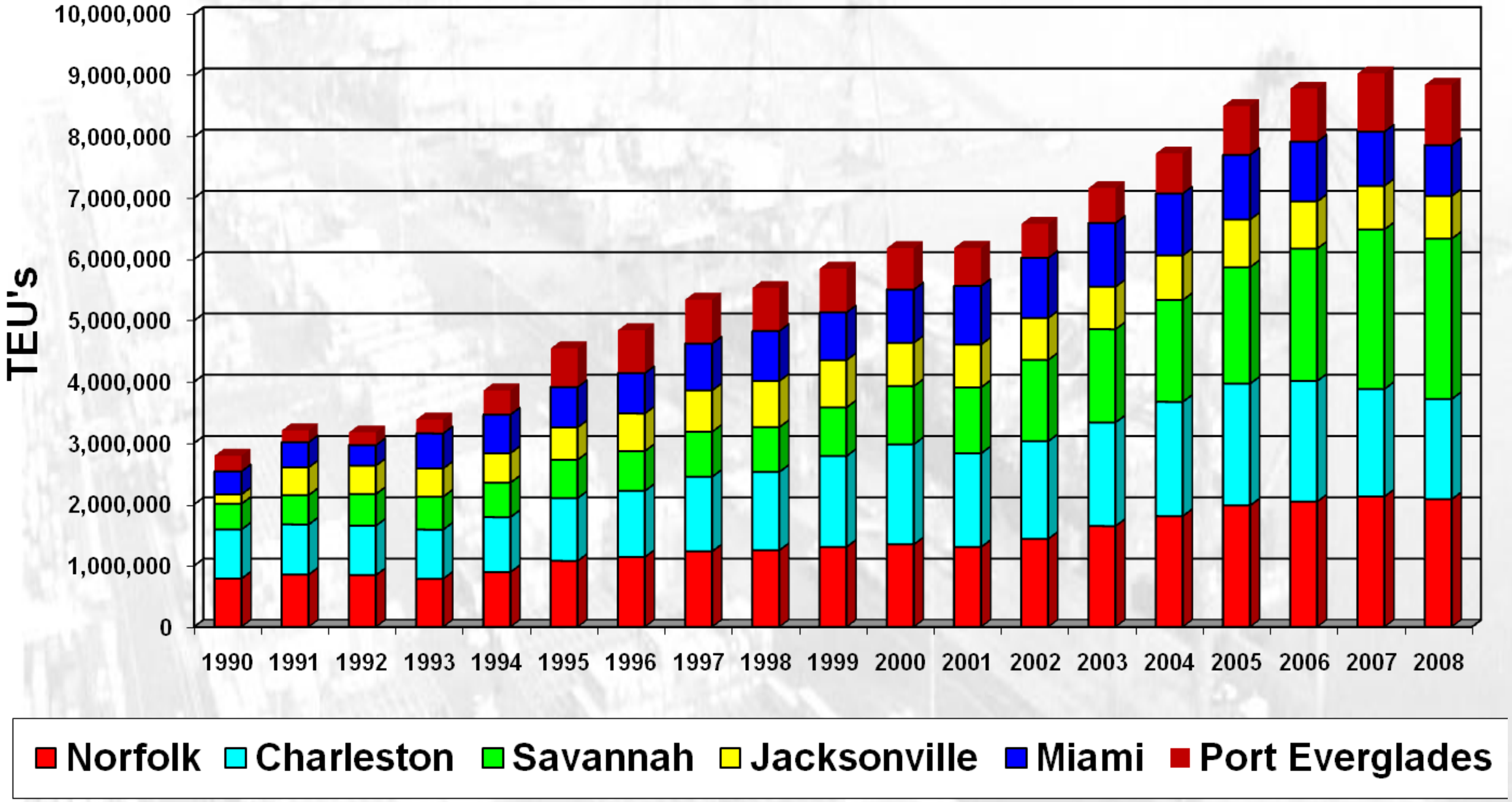


Source: US Maritime Administration

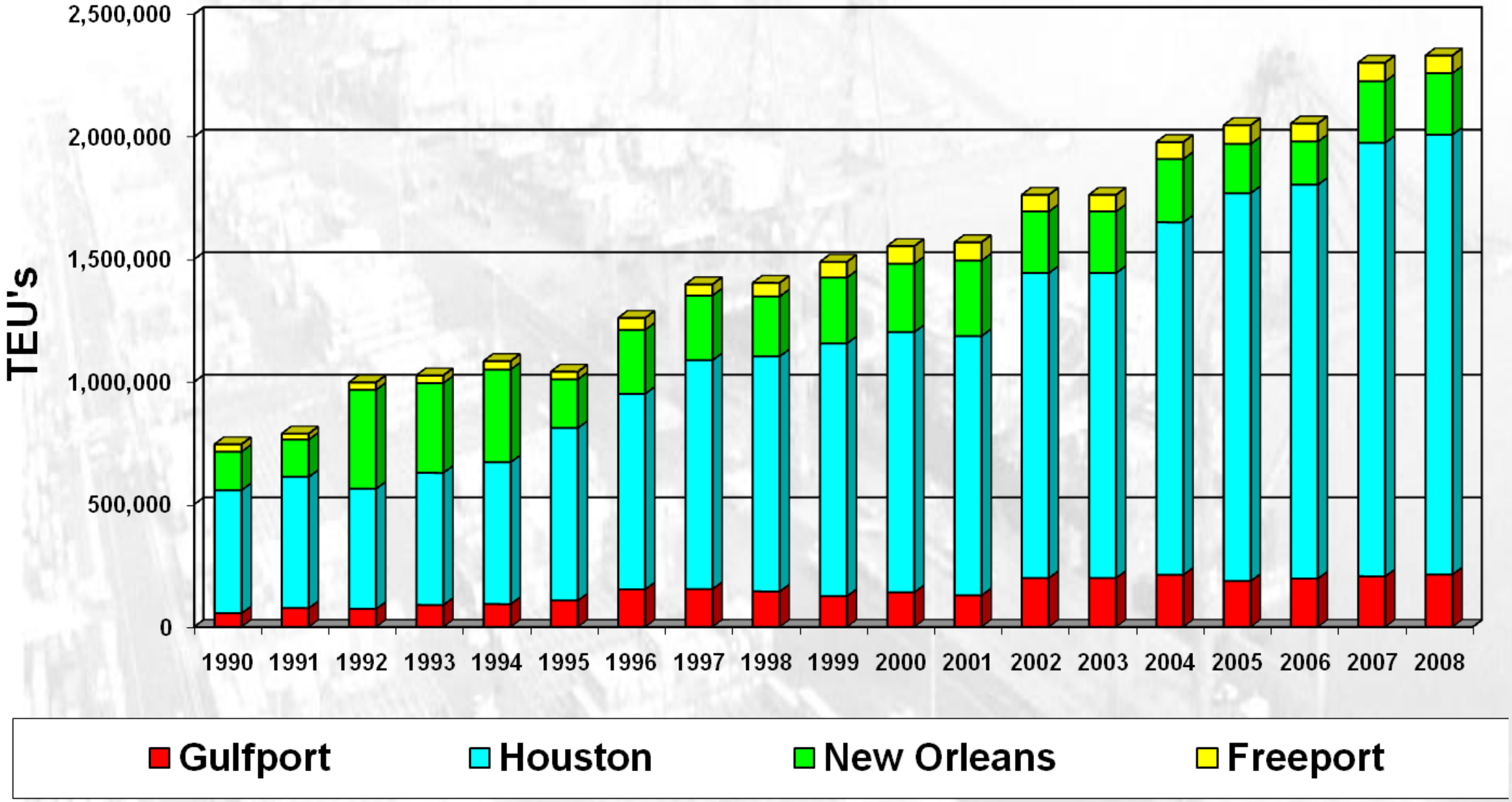
TEU's By US North Atlantic Ports



TEU's By South Atlantic Port



TEU's By Gulf Port



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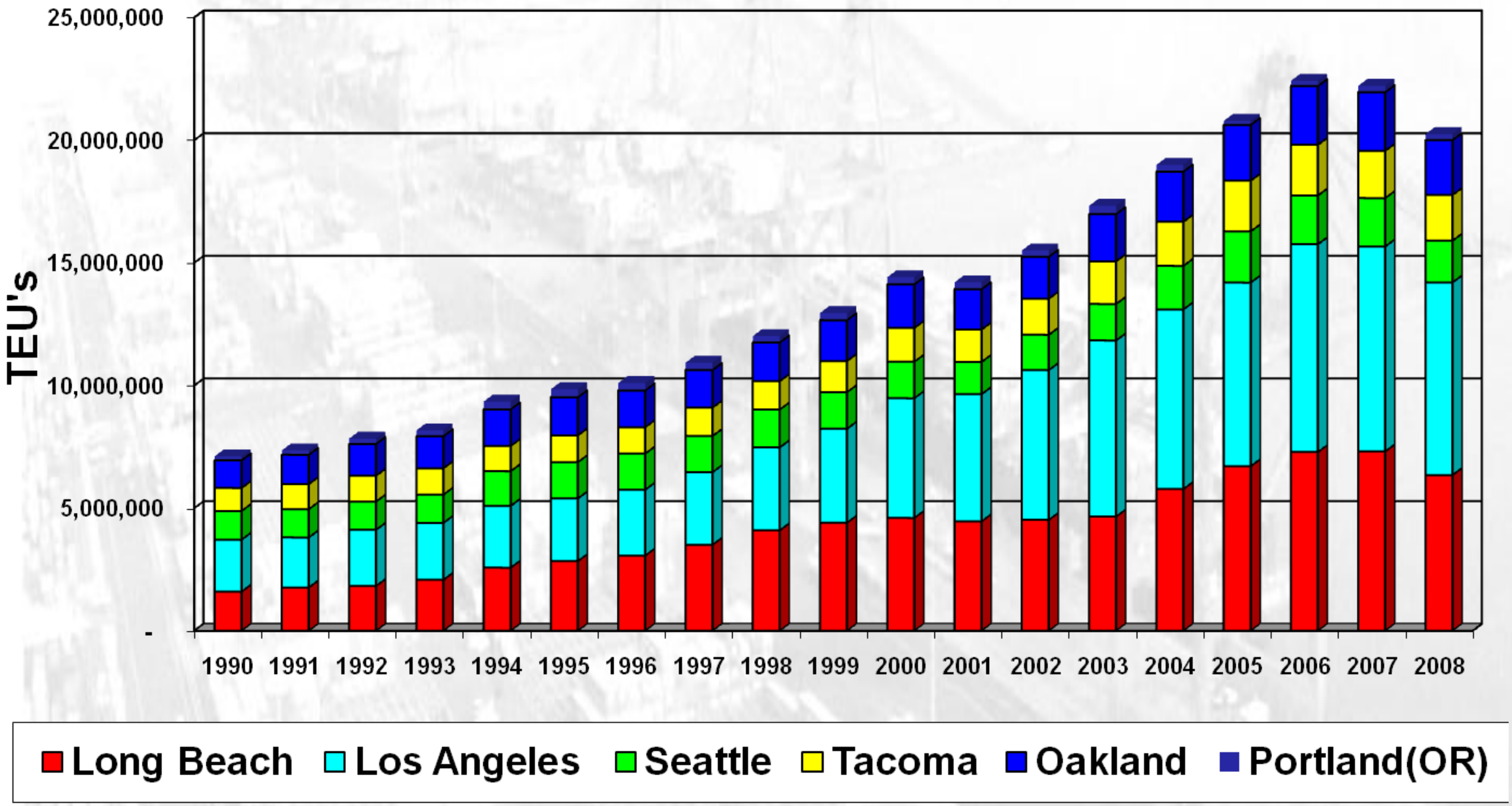
TEU's By West Coast Port



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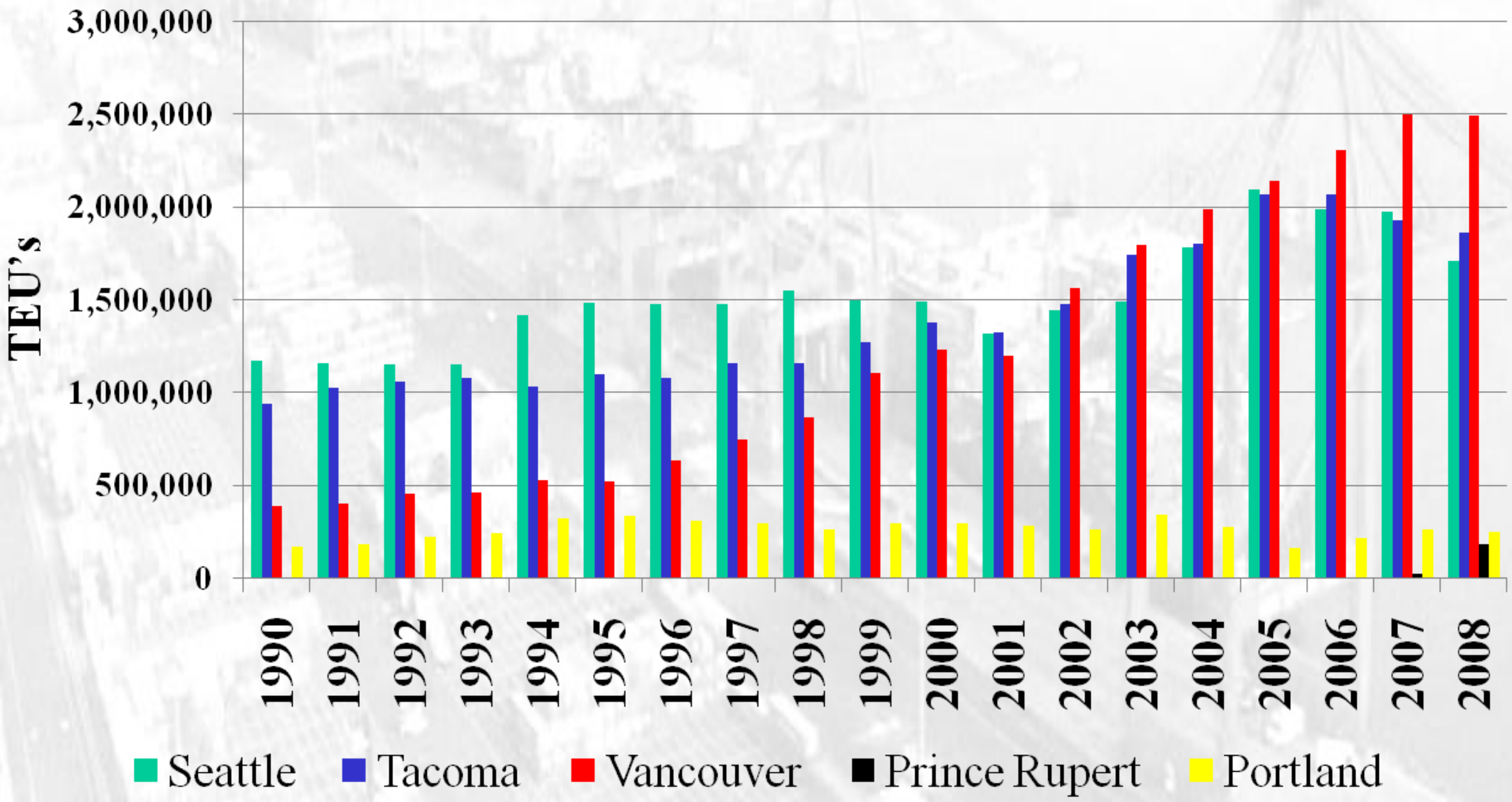
PNW Port TEU Throughput



Changes Have Occurred in the Existing Logistics Patterns of Importers

- Consolidation of imports via San Pedro Bay (Los Angeles and Long Beach) Ports -- mid 1990's
  - Distribution center growth
  - Cross-dock operations
  - Rail investments in S. Cal to Midwest routings
- But then……….
  - 9/11
  - West Coast Shutdown
  - Capacity Issues – Land and labor shortages
  - Rail and truck shortages
  - Search for alternatives
  - Shifting production centers
  - Economic crisis

All Water Routings are Growing

All Water Services are Growing

- Panama Canal:
  - Current size limitations (-)
  - New, bigger canal (+)
  - Transit time issues (-)
  - Carriers can internalize rail revenue (+)
- Suez Canal:
  - Accommodates larger vessels (+)
  - Better transit to SE Asia/India (+)
  - Political instability (-)
  - Transit time issue to Midwest (-)
  - Shifting Production to India/SE Asia (+)
  - New India-Med direct express services (+)
  - Transshipment operations in Med (+)

All Water Services are Growing

- Historical distribution and logistics infrastructure
  - Domestic/import distribution centers in S. Cal do not favor all water routings
- Transit time issues for seasonal goods, particularly from China, are a negative for all water services
- Proximity to Southern Asia/India is a positive -Suez Canal
  - Growth in Indian Port Infrastructure
- Significant growth in Distribution Centers in Gulf and Atlantic Port Ranges

In Response, Distribution Center Activity is Increasing at East Coast Ports, Driving Asian Services

- Georgia Ports Authority has attracted 19 distribution centers totaling 15 million SF including:
  - Advanced Auto Parts
  - Target (2.1 million sf)
  - IKEA (1.7 million sf)
  - Bass Pro Shops
  - Best Buy
  - Pirelli Tires NA
  - Fed Exp
  - Lowes
  - The Home Depot (1.4 million sf)
  - Wal*Mart (Savannah & Statesboro = 3.3 million sf)
  - Oneida -- Just Announced
- There are 200 DC’s within a 5 hour drive of Savannah
- Port of New York/New Jersey Portfields Initiative:
  - PONY/NJ and New Jersey Economic Development Agency committed $1.8 million to identify 20 sites for distribution center development
  - Cooperation with developers to market and develop the sites
  - Focus on “near-port” locations

Distribution Center Activity is Increasing at East and Gulf Coast Ports

- **Virginia Port Authority:**
  - **Wal*Mart Distribution center – 1 million sf initially and expanded to 3 million sf**
  - **Target - 1.5 million sf and expanding**
  - **Cost Plus expanded to 1.1 million sf**
  - **Dollar Tree**
  - **QVC**
  - **Home Depot at Front Royal**
  - **Family Dollar at Front Royal**
- **Jacksonville has experienced a significant growth in DC activity, as well as the Orlando area**

Significant Capacity is Coming on Line at East and Gulf Coast Ports

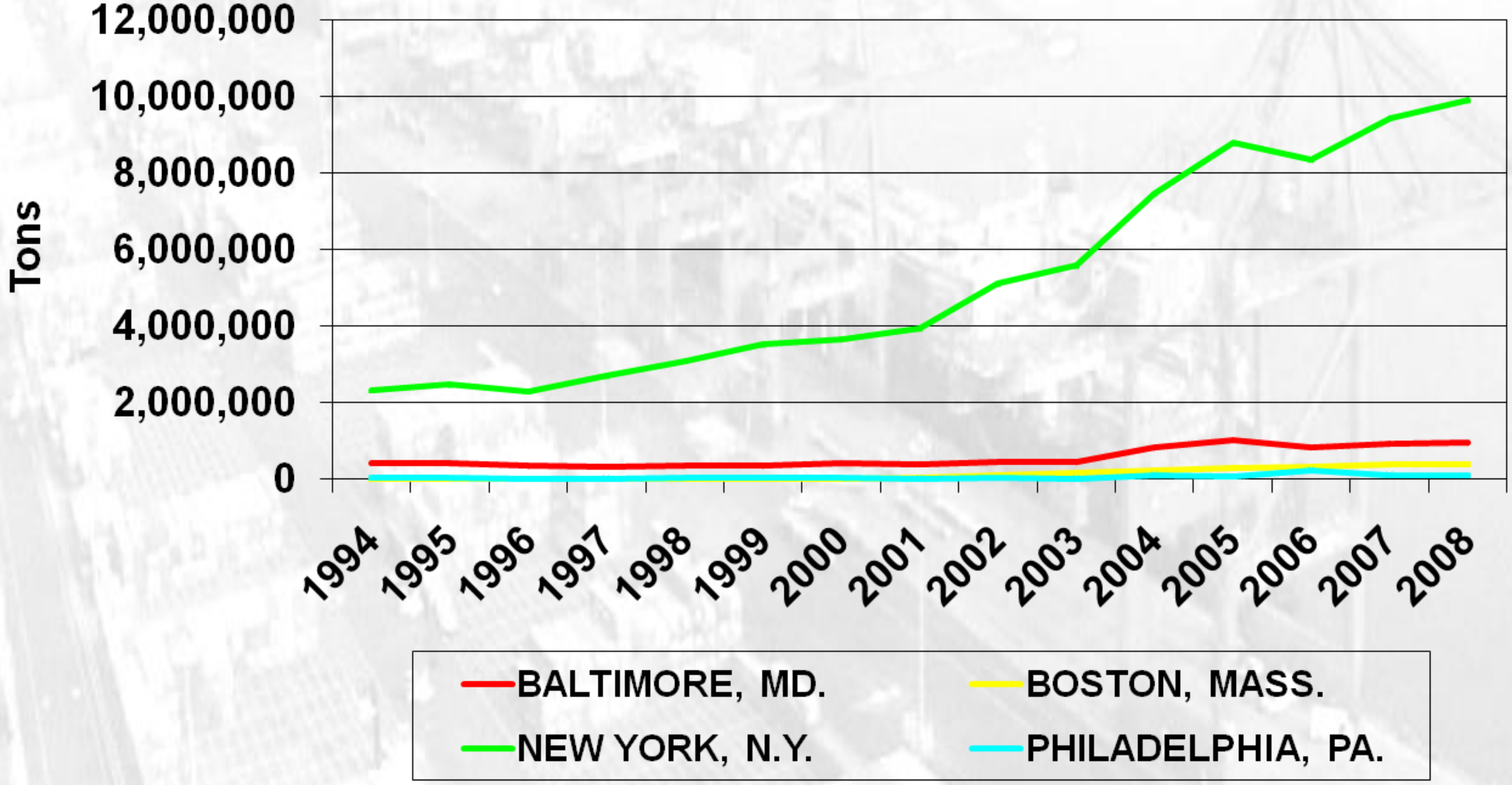
- **Mobile – Choctaw Point – 135 acres**
- **Houston – Bayport – 2.3 million TEU capacity**
- **Jacksonville – MOL/TRAPAC (200 acres Dames Point) and Hanjin (200 acres)**
- **Corpus Christi – La Quinta Terminal – about 300 acres**
- **Charleston:**
  - **286 acre, 3 berth development at Charleston Naval Base Complex**
- **Jasper County Property – Joint GPA/SCSPA development 1,800+ acres**
- **Wilmington, NC – 600 acre South Port Complex**

Significant Capacity is Coming on Line at East and Gulf Coast Ports

- **Norfolk:**
  - **291 acre APM Terminal at Portsmouth**
  - **Craney Island – 600 acres**
- **New Orleans – Napoleon Avenue Expansion– 250,000 TEU's**
- **Baltimore – 400 acres long-term development of Sparrows Point**
- **Philadelphia – Southport development (200 acres)**
- **Wilmington, DE - 200 acre terminal potential**

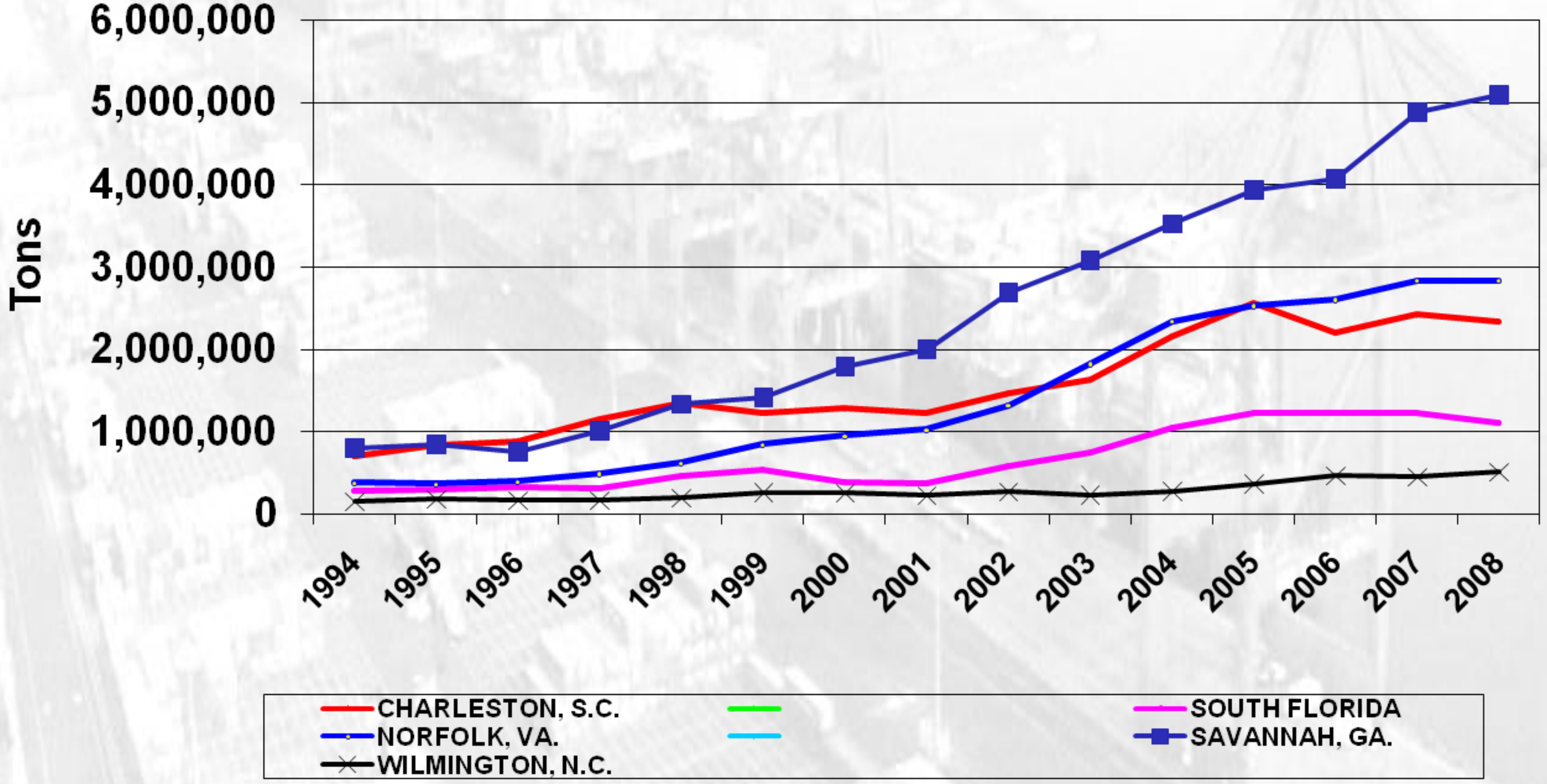
Impact of Development of All-water Service

Imported Asian Container Tonnage- US North Atlantic Port Range



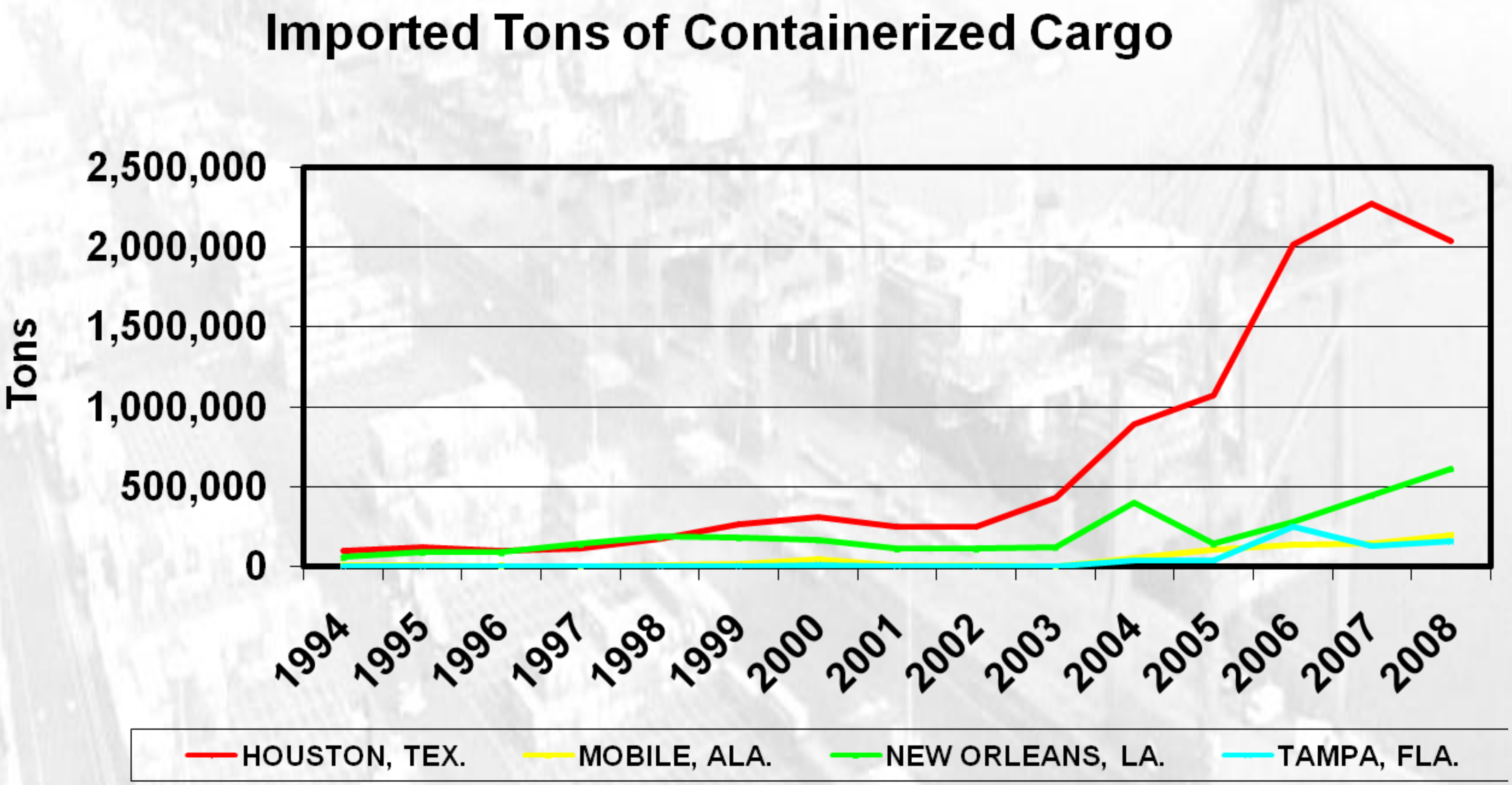
Source: US Maritime Administration

Imported Asian Container Tonnage – South Atlantic Port Range



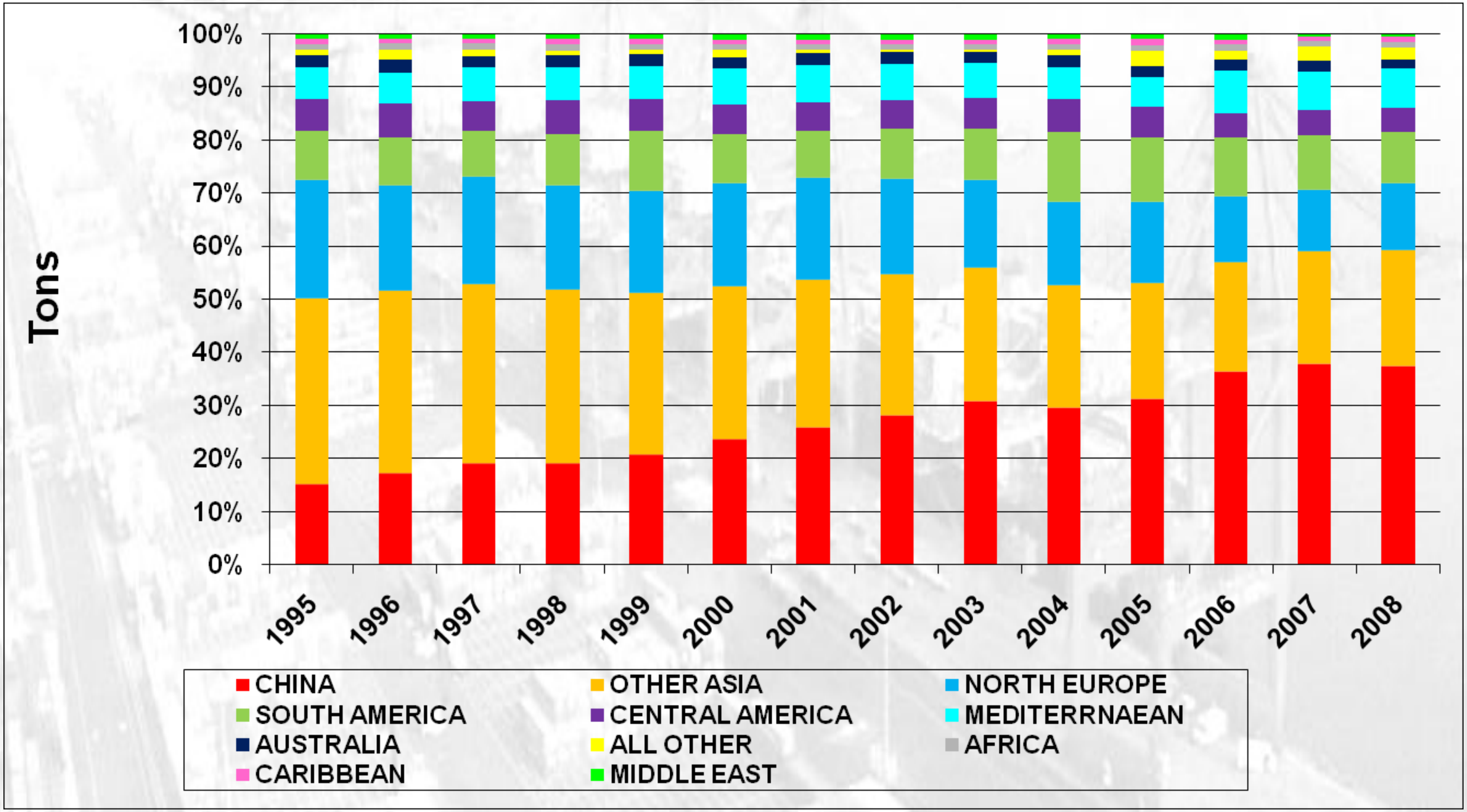
Source: US Maritime Administration

Asian Containerized Tonnage is Driving the Growth at the Port of Houston



Source: US Maritime Administration, Foreign Trade Statistics

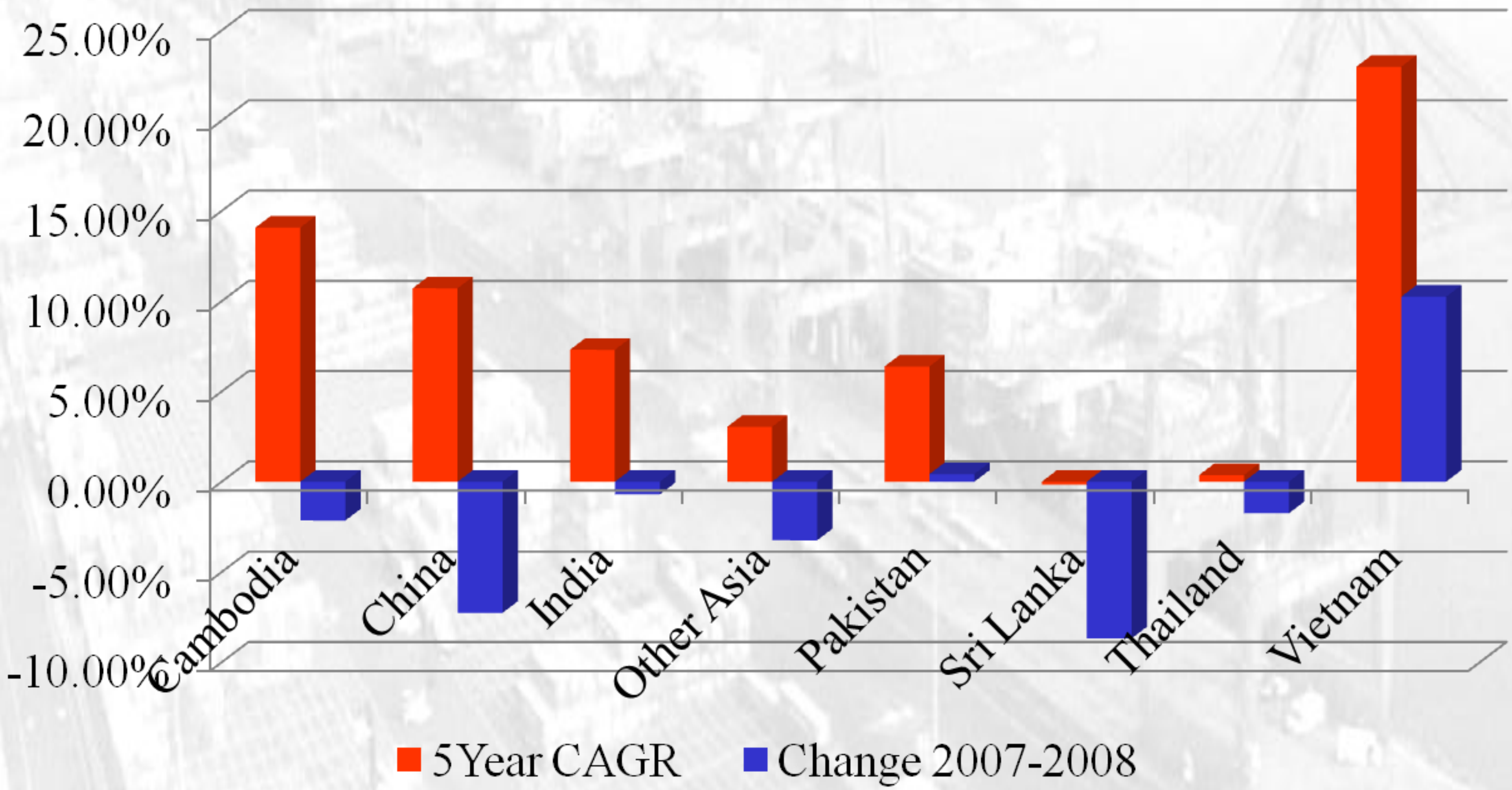
China Has Been Responsible for Nearly 40% of Imported Containerized Tonnage



US Maritime Administration

2006 data reflects new data base by MARAD

However, Asian Supply Sources are Shifting



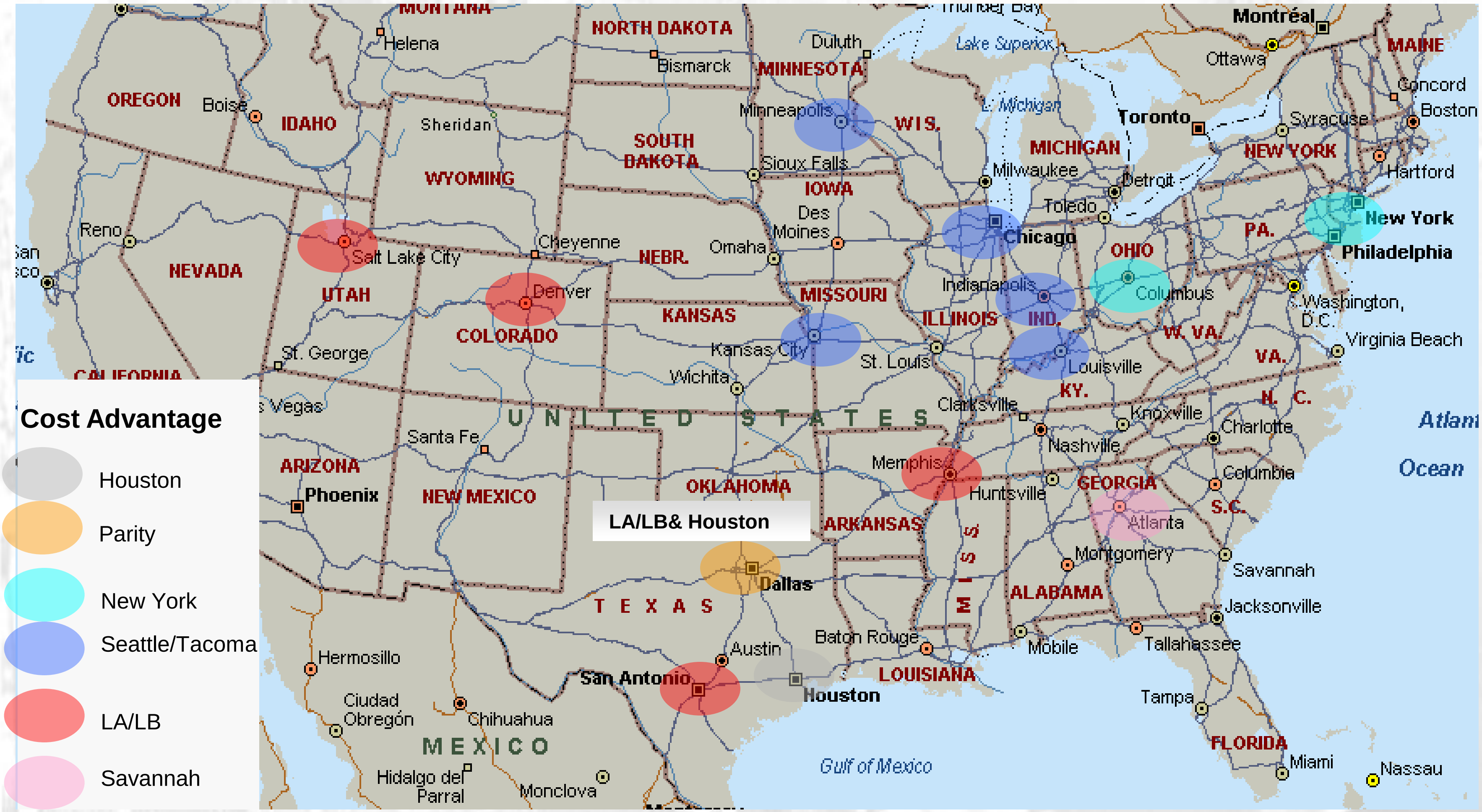
Implications for Atlantic and Gulf Coast Ports

- **Throughput growth likely to continue:**
  - Added and planned Port capacity
  - Bigger Panama Canal
  - Increased use of Suez Canal
  - Growth in India and South Asia
  - Development of transshipment centers in Med to relay cargo from SE Asia and India to North America
  - Growth in transshipment centers in Panama

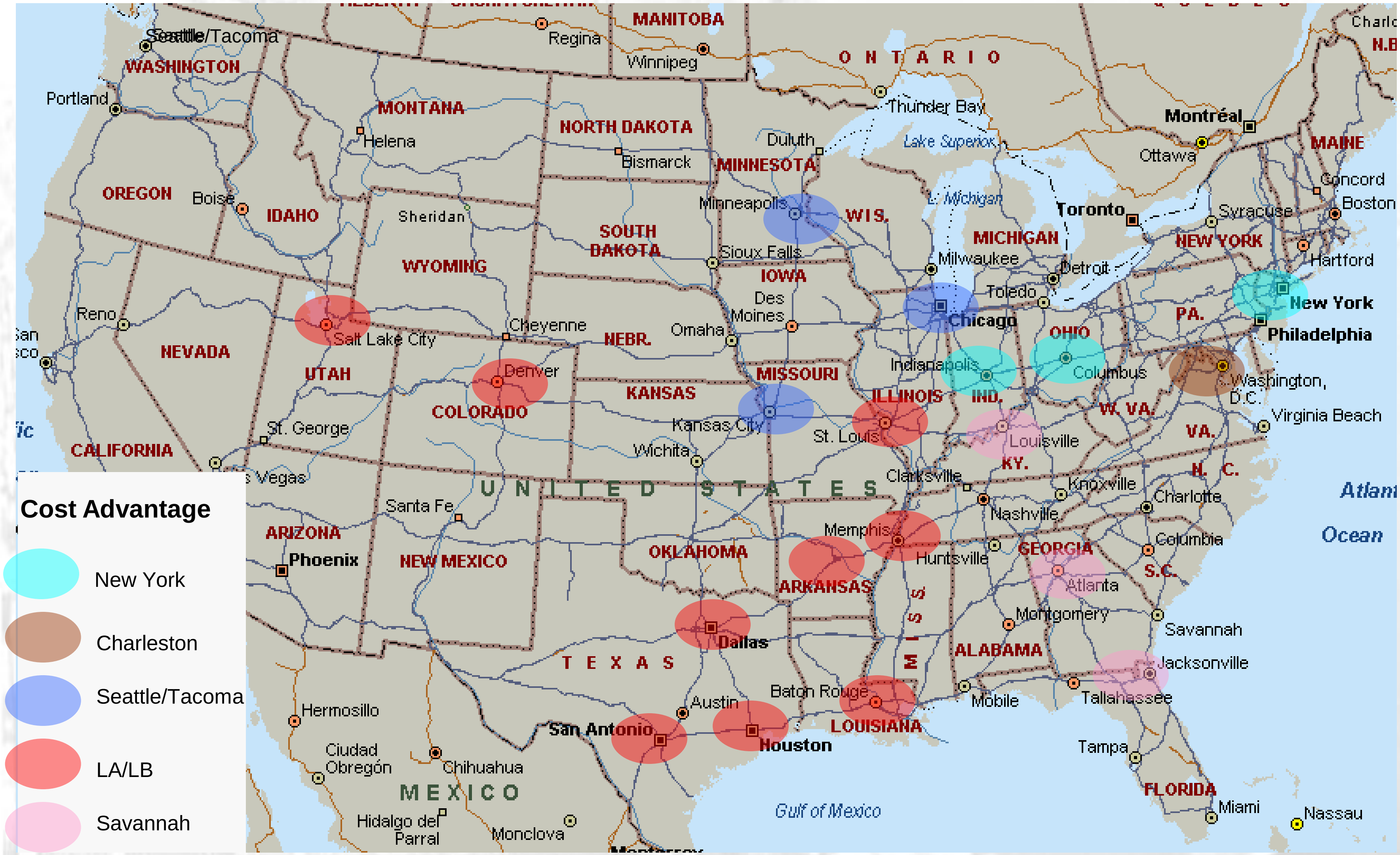
Implications for the Atlantic and Gulf Coast

- **Carriers are reducing intermodal services from the West Coast**
  - **Increase in intermodal rates from West Coast to East Coast**
  - **Control of equipment**
  - **Steamship lines can internalize revenue previously shared with railroads**
  - **Reduce cost of backhauls**
- **With Addition of Direct Services, transit time differentials are narrowing to serve Atlantic Coast ports:**
  - **18-21 days via All Water Services**
  - **18-22 days via West Coast Ports**
- **And transit time differentials are narrowing to serve Midwestern points:**
  - **14-18 days via West Coast Ports**
  - **21-26 days via All Water Services**

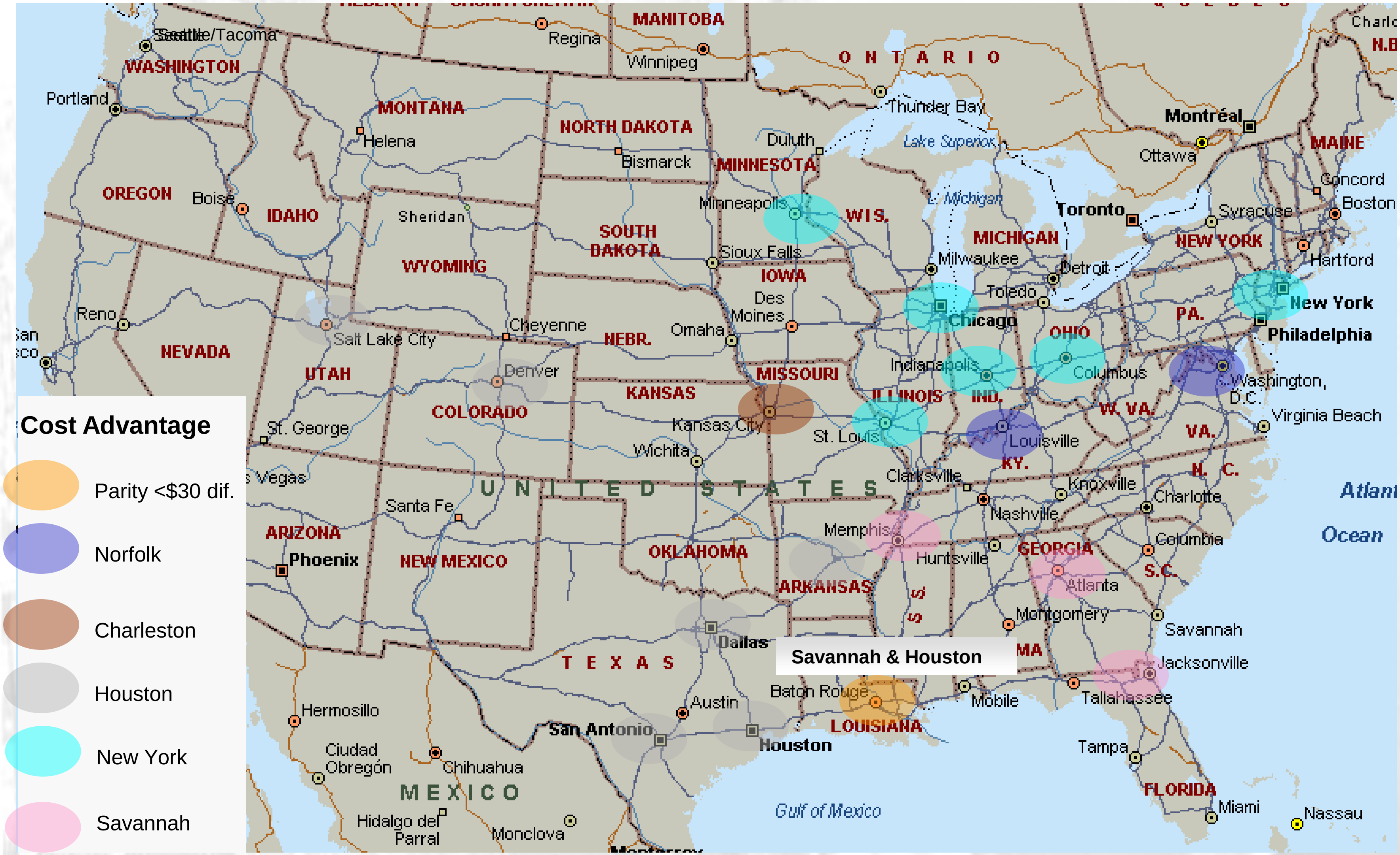
Existing Service Total Landed Cost Analysis – Least Cost Entry Ports for <u>Hong Kong</u> to US Consumption Points



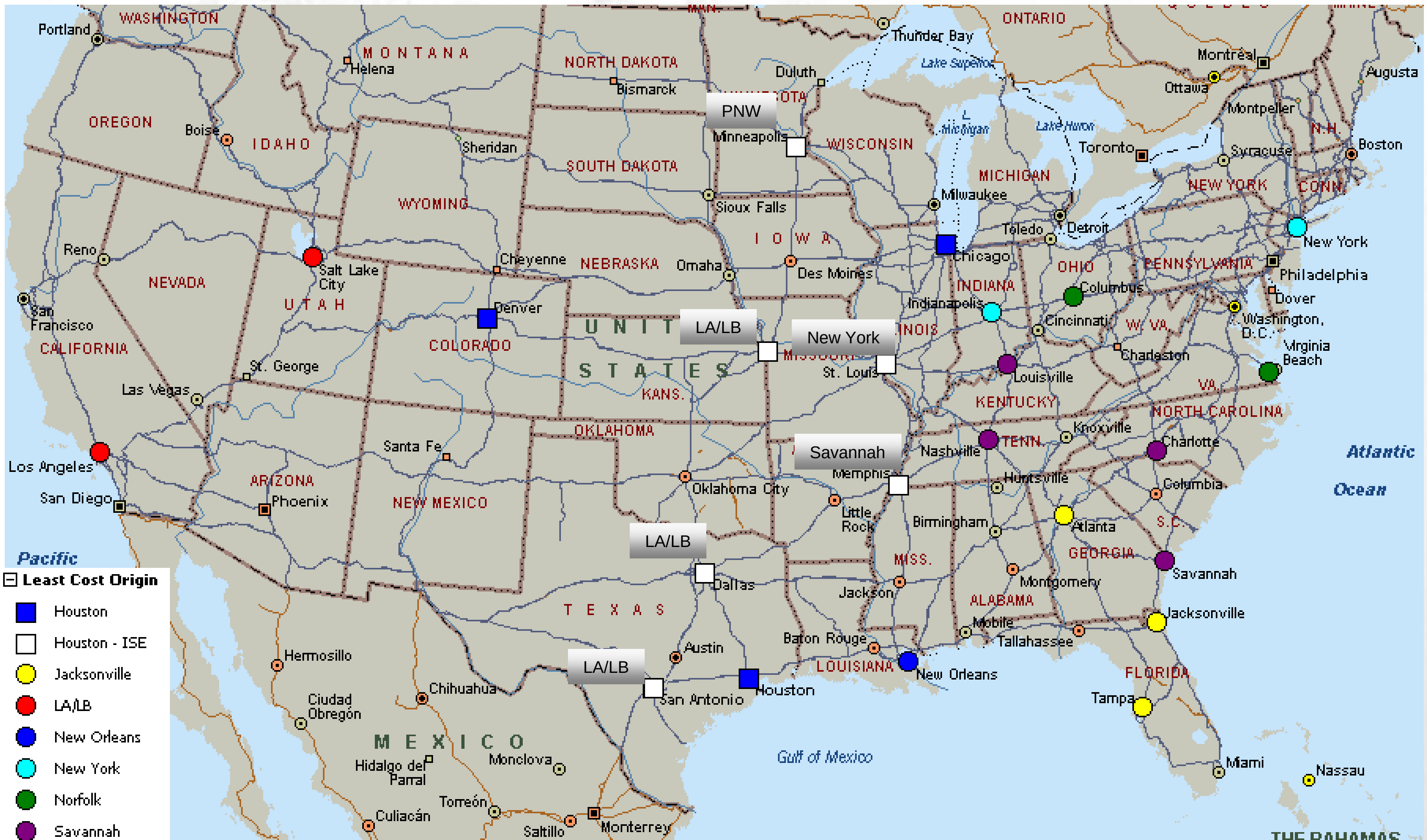
Existing Service Total Landed Cost Analysis – Least Cost Entry Ports for <u>Singapore</u> to US Consumption Points



Existing Service Total Landed Cost Analysis – Least Cost Entry Ports for Nhava Sheva-India to US Consumption Points



With The Expansion of the Canal, Larger Vessels and Increased Direct All Water Service to the Atlantic and Gulf, The Midwestern US Becomes the Battleground



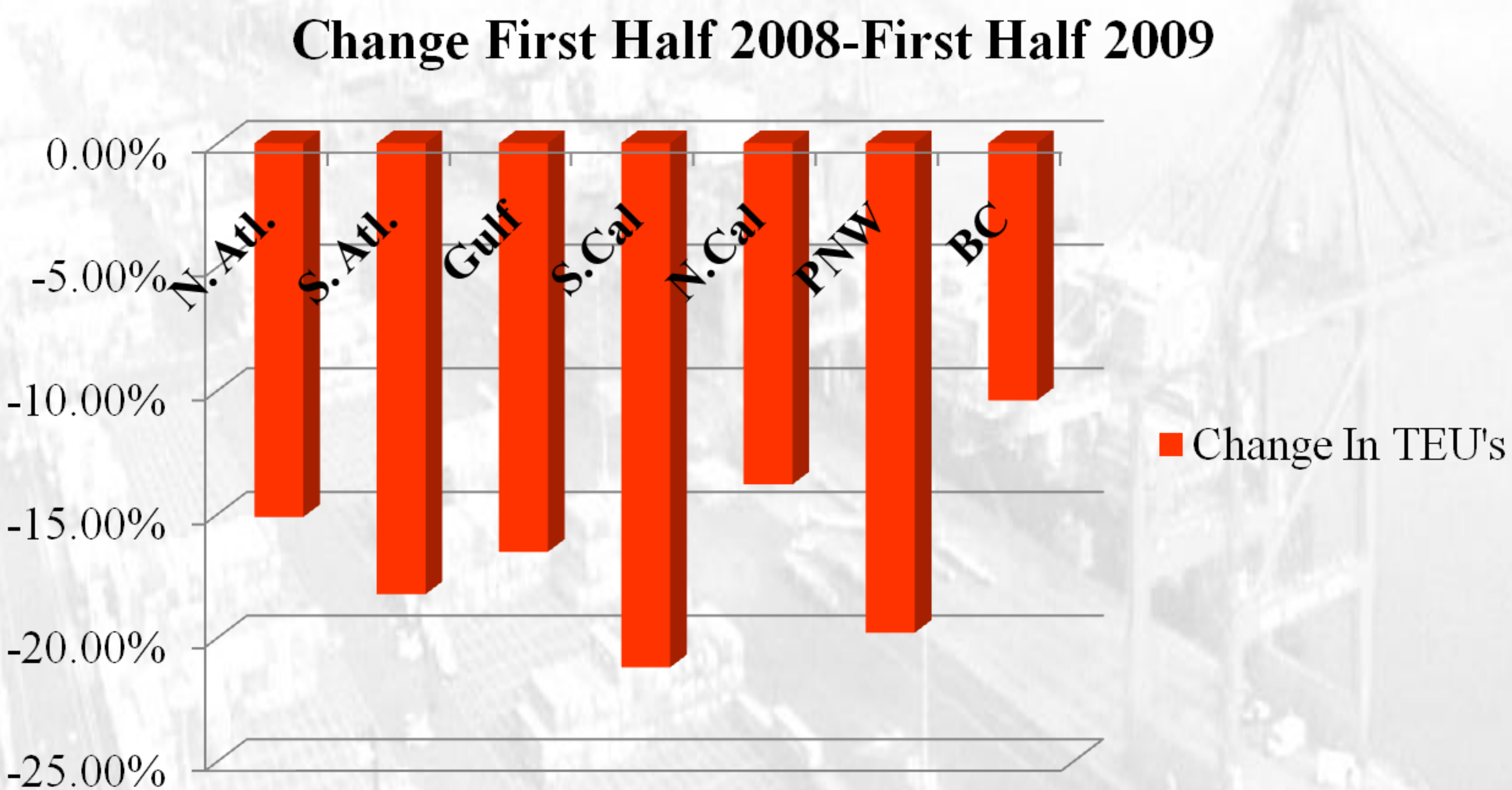
Source: Rail Costing Analysis – Horizon Mgmt – Acierto-LLC

Existing Intermodal Rates

Implications for West Coast Ports

- Ports with a high degree of discretionary cargo will be at risk
  - Shifting supply sources
  - Expansion of Canal
  - Deployment of direct services with large vessels to Gulf and Atlantic
- Improved productivity and labor dependability are necessary
- Increases in port charges and infrastructure fees, as well as regulatory issues could have a negative impact on market share
- Rail pricing will become critical

US West Coast Ports are Experiencing a Greater Decline



In Order to Handle the Anticipated Growth at East Coast Ports, Terminal Densification will Be Required

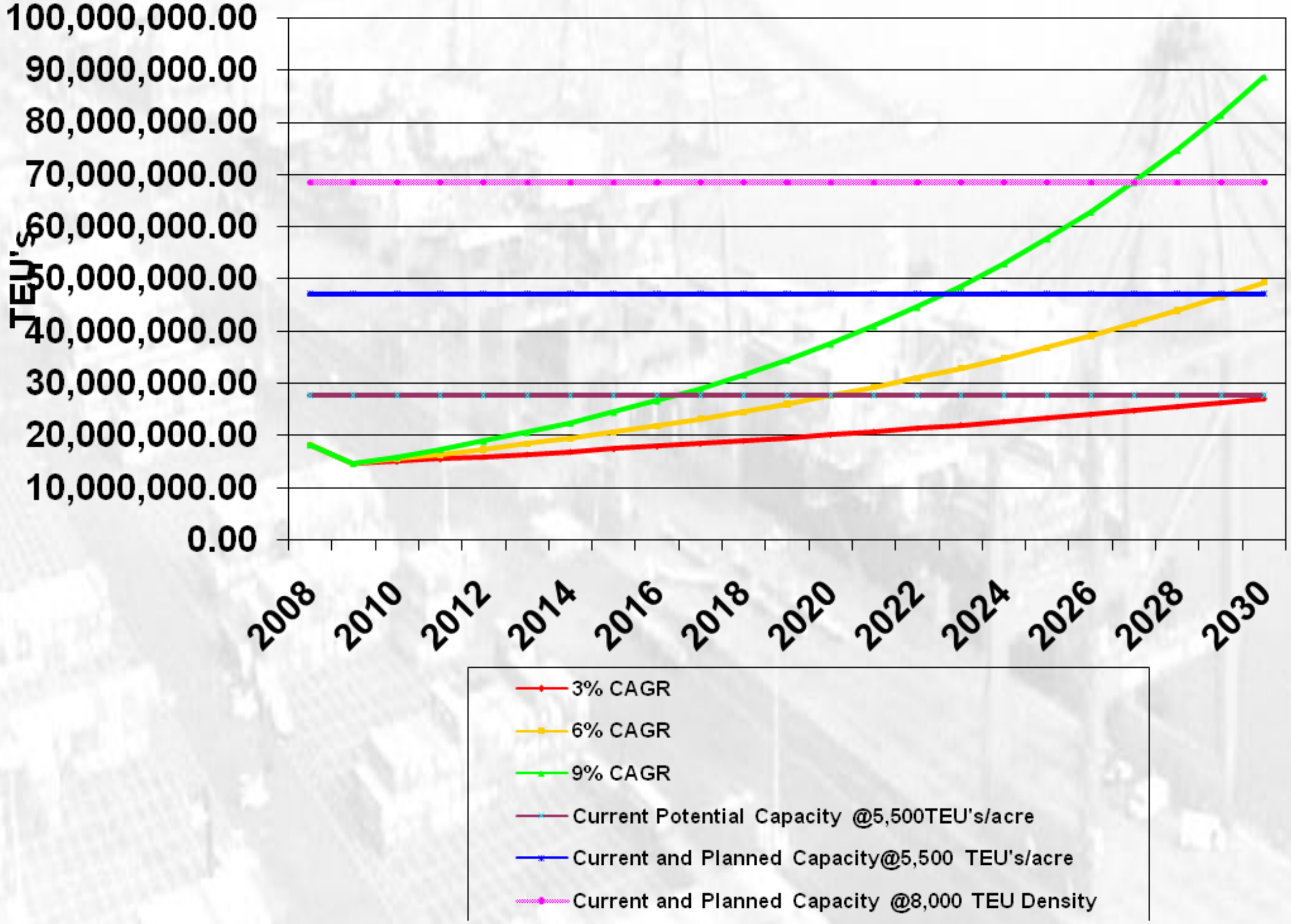
PORT	2008 TEUs	ACREAGE	TEU/ACRE
MONTREAL	1,473,914	185	7,967
HALIFAX	387,347	162	2,391
BOSTON	211,085	101	2,090
NEW YORK/NEW JERSEY	5,265,059	1,261	4,175
PHILADELPHIA	255,994	228	1,123
BALTIMORE	612,877	354	1,731
NORFOLK	2,083,278	619	3,366
WILMINGTON, NC	196,040	100	1,960
CHARLESTON	1,635,537	395	4,141
SAVANNAH	2,616,185	1,200	2,180
JACKSONVILLE	718,467	215	3,342
PORT EVERGLADES	985,095	270	3,649
MIAMI	847,809	259	3,273
TOTAL EAST COAST	17,288,687	5,349	3,232
BASED ON GROSS ACREAGE			

Terminal Capacity Implications

- Currently San Pedro Bay Ports are averaging 5,500 TEU's acre/year
  - This average has increased recently due to:
    - Reduced dwell times – through increased demurrage rates
    - PierPass - increased number of shifts (two, 8 hour shifts plus extended gate hours)
- Studies indicate that terminal density can increase to 8,000 TEU's/ acre and eventually to 11,000 TEU's /acre without major changes in operating structures and without terminal automation

East Coast Port Constraints

Assuming 5,500 and 8,000 TEU/Acre Densification



Most likely the terminals will achieve a 8,000 TEU per acre throughput in future

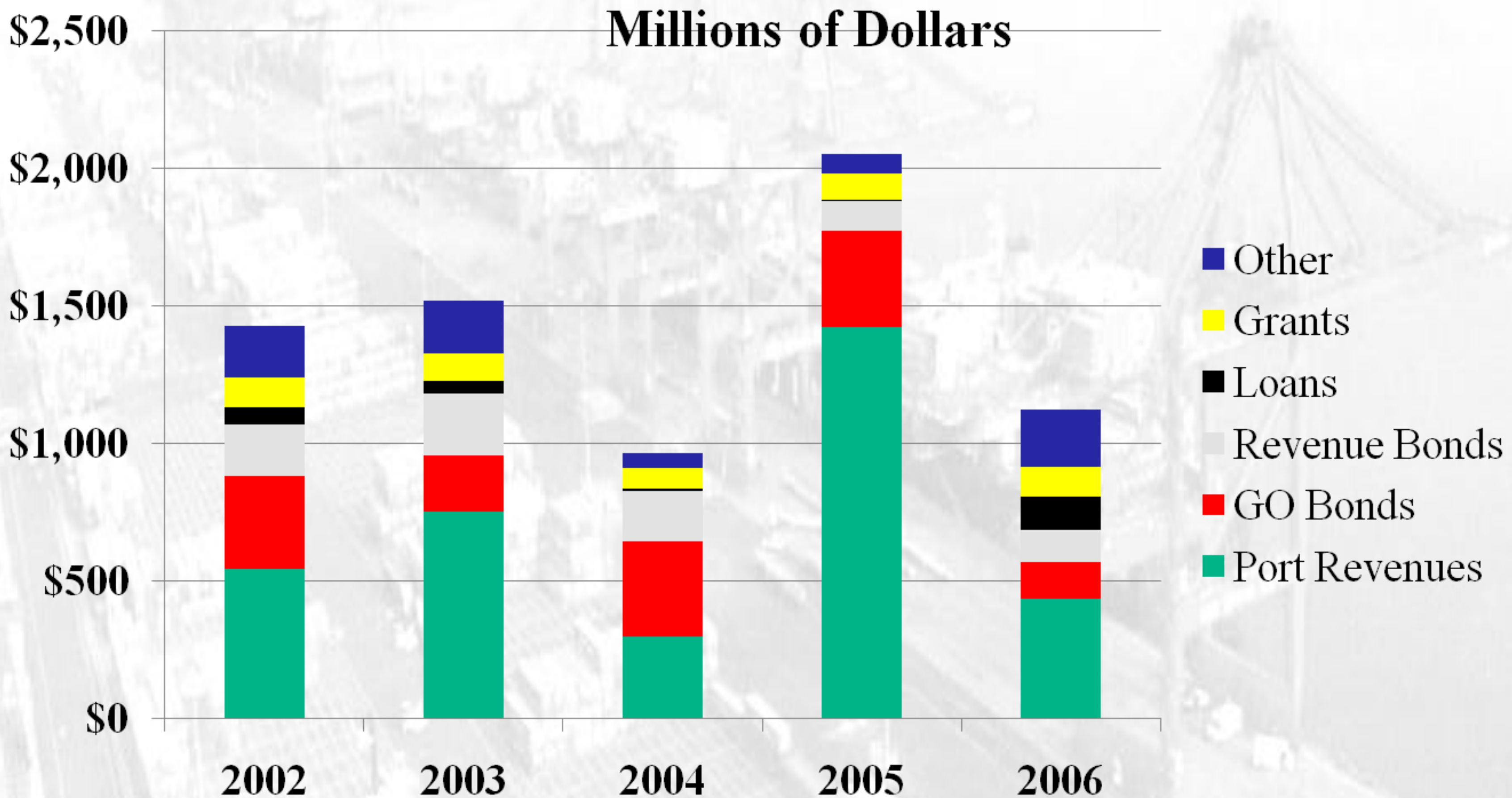
Implications on Infrastructure Funding

- **Deepwater ports have lost funding for system preservation projects:**
  - **After 9/11 - security investments competing with system preservation investments**
  - **Downturn of trade drastically reducing port revenues**
  - **Economic crisis reducing state/municipal public funding and potentially private sector participation**

More Infrastructure Funding Needed

- **Opening of expanded Panama Canal will allow 7,000 TEU plus ships to transit**
- **Only a handful of US East and Gulf Coast ports can handle next generation container ships, and growing all water services to East Coast/Gulf Coast requires channel deepening and terminal infrastructure**
- **Without deeper channels and maintenance of current channels, economies of larger ships won't be realized**
- **Maintenance dredging and deepening projects are clogged in USACE bureaucracy, combined with limited funding of projects**

Public Port Investments



Source: US Maritime Administration

Ports Area Responding in Terms of Changes in Leases and Pricing

- **Movement toward compensatory pricing**
- **Movement from operating port to landlord port:**
  - **Maryland Port Administration**
  - **Diamond State Port Corporation**
  - **Virginia Port Authority**
  - **North Carolina State Ports Authority**
  - **Port of Lake Charles**
  - **South Carolina State Port Authority**
  - **Port of Portland, OR**

Trends in Seaport Financing/Leasing

- **Increased use of municipal bonds on behalf of private entity where private party is responsible for debt service:**
  - **Jacksonville**
  - **Baltimore**
  - **Galveston**
  - **Mobile – Choctaw Point**
- **Public-private partnerships and the increase in concessions:**
  - **Lump sum up front payments - Traditional concession i.e., Maher Terminals in New York**
  - **Combination of up front payments and annual payments and MAGS, and identified private party infrastructure investment --**
    - **Ports America – Oakland**
    - **MPA Current RFQ for Seagirt**
  - **Traditional leases with private party responsible for debt service on a municipal bond**

2005 - 2007 Was the Peak of Public Private Partnerships

- **July, 2007 – Goldman Sachs acquires minority stake in Carrix -- SSA:**
  - **Multiple not known**
- **March 2007 - AIG Investment Group acquires MTC terminals - $800 million:**
  - **Multiple not known**
- **March 2007 – RREEF purchases Maher Terminals:**
  - **$2.1 billion (445 acre terminal in NYC and the Fairview Terminal in Prince Rupert, BC**
  - **(34.2 multiplier against enterprise value to last 12 months of earnings before interest, taxes, depreciation, and amortization)**
- **February 2007 Morgan Stanley purchases Montreal Gateway Terminals -- $480 million:**
  - **80% share of 2 terminals in Montreal – 1.1 million TEUs**
  - **Hapag-Lloyd has balance**
- **December 2006 – AIG purchases P&O Ports North America - $1.0 billion plus**
- **December 2006 – Ontario Teachers Pension Fund purchases OOIL Terminals:**
  - **2 in NYC**
  - **2 In Vancouver, BC**
  - **21.9 multiple**
- **November 2006 - RREEF purchases Peel Ports:**
  - **16.0 multiplier**

2005 -2007 Was the Peak of Public Private Partnerships

- **November 2006 – Macquarie purchases 72 acre Halterm terminal in Halifax:**
  - **17.0 multiplier**
- **September 2006 – Macquarie purchases 40% share of Hanjin's terminals in Oakland, Long Beach and Seattle:**
  - **Multiple not known**
- **June 2006 - Admiral Consortium purchases Associated British Ports that handle 25% of the UK cargo:**
  - **$6.4 billion**
  - **16.2 multiplier**
- **April 2006 – PSA purchases Hutchinson Port Holdings:**
  - **$7.5 billion**
  - **14.0 multiplier**
- **January 2006 – DP World purchases P&O Ports:**
  - **$8.9 billion**
  - **15.2 multiplier**
- **December 2005 - Babcock & Brown purchases PD Ports:**
  - **$1.1 billion**
  - **13.2 multiplier**

Recently, There Has Been Increased Concession Activity

- 2008 - Port of Portland Issues RFP for Terminal 6
- 2009 - Ports America enters into Port of Oakland Concession
- 2009 - CenterPoint offer for the Virginia Port Authority Terminals
- Port of Baltimore issuing RFQ for Seagirt Marine Terminal Concession
- Philadelphia Regional Port Authority issues RFP for Southport Concession
- RFQ likely from South Jersey Port Corporation – Paulsboro property
- RFQ likely from Wilmington, NC for Southport Property
- RFQ likely for Jasper County SC site

But the Concession Market Remains Uncertain

- Port of Portland pulls back RFP
- Philadelphia Southport RFP - Postpones
- Corpus Christi pulls back RFP process for La Quinta
- MPA received two responses
- Additional bids for VPA

The Ports of Seattle and Tacoma Face Significant Competitive Challenges

- **Increased deployment of all- water services**
- **Expanded Panama Canal**
- **Narrowing of transit time differentials - intermodal West Coast compared to all water services**
- **Reduced intermodal services via West Coast ports - equipment control**
- **Growth in Price Rupert -- 124% increase in first half or 2009 vs. same period in 2008**
- **Escalating intermodal rail rates**
- **Shifting Asian production centers – India and Southeast Asia**
- **Perceived labor-management issues at West Coast ports**
- **Population centers proximity to Atlantic and Gulf Coast ports**
- **Capacity availability at Gulf and Atlantic Coast ports**
- **Increased investment in rail infrastructure to serve Atlantic Coast ports:**
  - **Heartland Corridor - NS**
  - **National Gateway - CSX**

Despite the Competitive Challenges, The Ports of Seattle and Tacoma Remain Major Contributors to the PNW Economy

- About 60,000 total direct, induced and indirect jobs
- More than $5 billion of total personal wages and salaries and regional consumption expenditures
- Nearly $6 billion of direct revenue to regional businesses providing port and maritime services
- An estimated $850 million of regional purchases by businesses
- About $500 million of state and local taxes