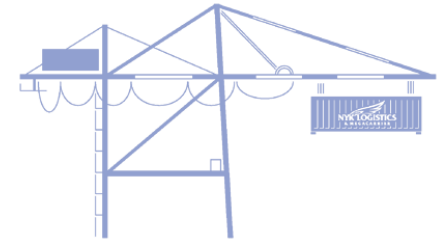
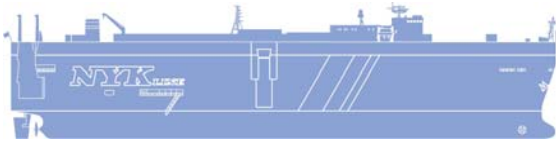


Terminal Opportunities & Challenges

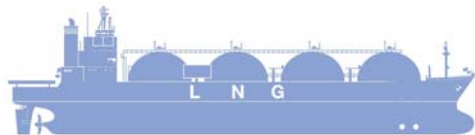
Peter I. Keller

NYK Line

April 24, 2006



First, a word about NYK



Sea–Earth–Air “Logistics Integrator”

Hardware / Assets

660 Vessels



260 Distribution Centers / 2,700 Tractors&Trailers
27 Container& RoRo Terminals



13 “B-747” Freighters



NIPPON YUSEN KAISHA

Sea

Earth

Air

Software / Services

NYK Line

114 Offices / 4,000 Employees
11,000 Seafarers

- Ocean Transportation
NYK Line, TSK Line, NYK-Hinode,
NYK Global Bulk

NYK Logistics

250 Offices / 13,000 Employees

- Freight forwarding & Transportation
- NVOCC “Double Wing Express”
- Customs Clearance and Import/Export Management
- Warehousing & Distribution
- Consolidation
- Cross Dock / De-consolidation
- Origin Cargo Order Management
- Manufacturers’ Inbound Logistics
- Auto Logistics (PDI, Transportation)
- Other Logistics Services & Consultation

Yusen Air & Sea Service

166 Offices / 4,300 Employees

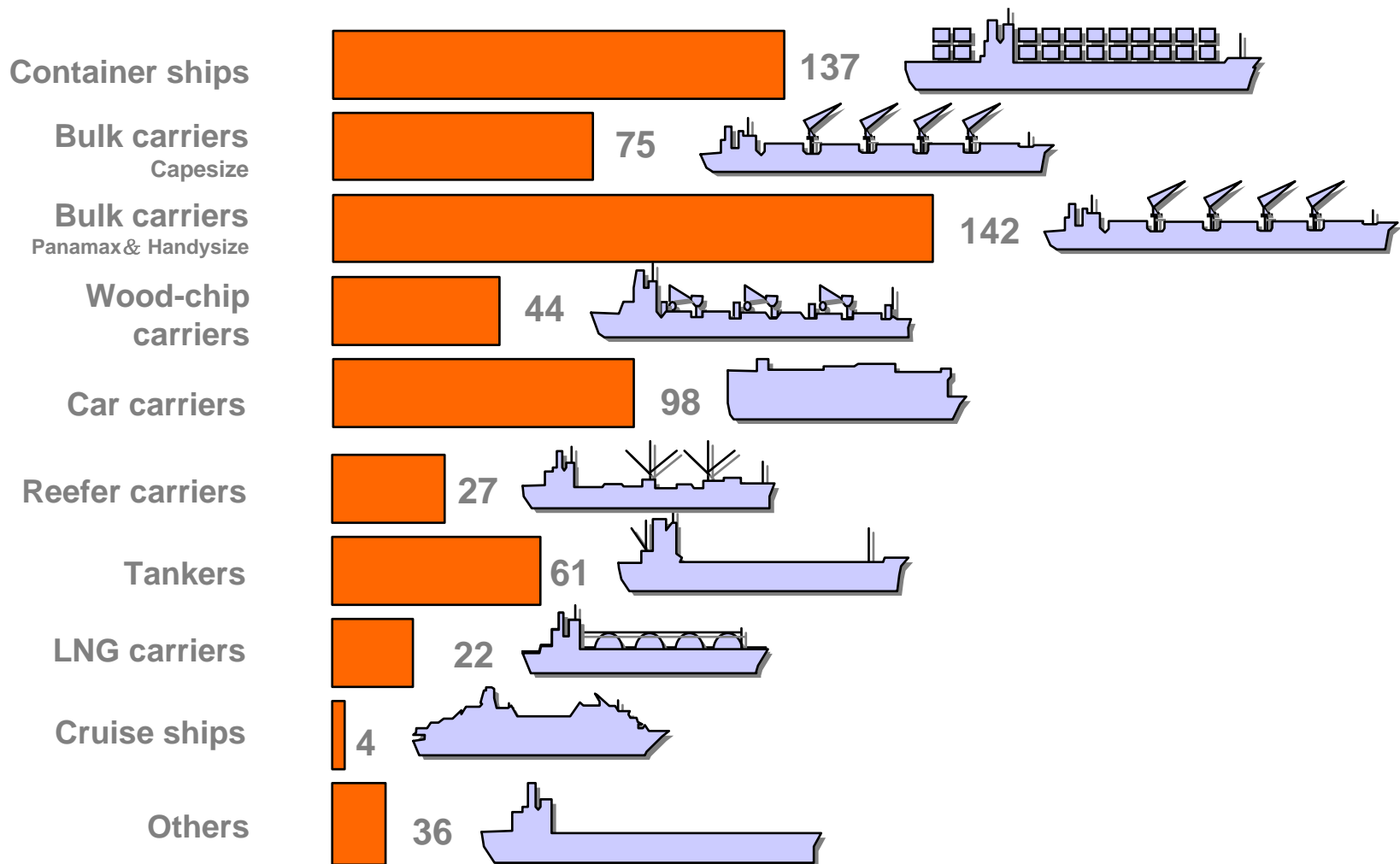
- Air Forwarding and relevant Logistics Services

Nippon Cargo Airlines

17 Offices / 750 Employees

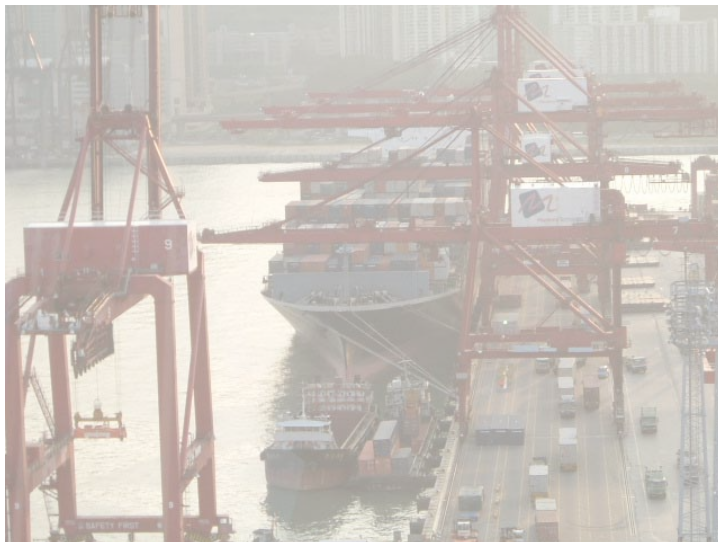
- Air Transportation

Fleet of NYK Group



646 vessels with **37.6 million DWT** (as of March 31, 2005)

Industry Challenges



Industry Challenges

Infrastructure

- Will become the most significant limiting factor for cargo movement, not supply or vessel size.
- Carriers will need to focus on offering superior terminal and operational service to offer competitive service levels.
- Cargo delivery efficiencies must be focused on to reduce cost and drive customer following.
- Terminal space utilization, cargo sequencing and reduced turn time will be critical to enable carriers/terminals to meet future demand.

North American Container Terminal Capacity Update



Container terminal capacity definitions and key assumptions: current average industry operating practices









Definitions

- Capacity: the theoretical maximum capacity of the marine container terminals
 - Assumes container terminal storage is the constraint -- as it is in most container terminals
 - Includes consideration of peaking in order to estimate the maximum theoretical capacity
- Utilization: projected throughput divided by capacity

Key Assumptions

- Base Case storage capacity: 50% 90 TEU/acre wheeled storage and 50% 135 TEU/acre toppick storage for imports. 100% 135 TEU/acre toppick storage for exports.
- Medium Density storage capacity: 100% imports/exports RTG stowed 2.5 high, 225 TEU/acre.
- High Density storage capacity: 100% imports/exports stowed 3.5 high, 315 TEU/acre.
- All Empties block stowed, 450 TEU/acre.
- **Import Dwell:**
 - **Rail – 2 days**
 - **Local – 5 days**
- **Export Dwell:**
 - **Rail – 3.5 days**
 - **Local – 7 days**
- **Empty dwell – 21 days**
- Capacities adjusted for a 20% peaking factor

Port Region Summaries

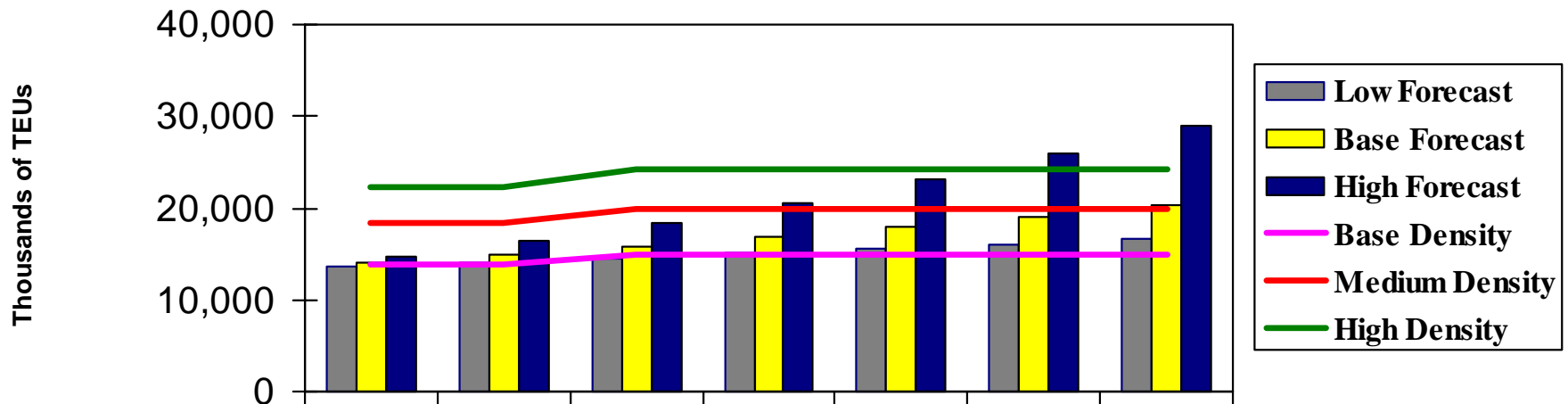
	2005 Net Position	2010 Net Position	Comments
PSW			LA/LB face significant capacity challenges during the planning horizon. Oakland has ample capacity
PNW			Existing capacity plus Tacoma's expansion potential should result in ample capacity unless major PSW diversions continue
South Atlantic			Savannah's significant surpluses and Charleston's modest surpluses provide ample capacity. Charleston's berths may pose constraints
South Florida			Port Everglade's significant surpluses drive South Florida's surpluses throughout the planning horizon

San Pedro Bay Ports' Net Position:

- **Base density:** capacity shortfall under all demand scenarios
- **Medium density:**
 - Accommodates low growth
 - Shortfalls occur under both the base and high forecast scenarios
- **High density:**
 - Accommodates low and base forecast scenarios
 - Capacity is balanced in 2009 and a shortfall occurs in 2010
- **Implications:** given current environmental issues and associated lead times, the terminals will need to significantly improve asset utilization to accommodate demand through 2010

The Southern California region*

San Pedro Bay Area Capacity Utilization



	2005	2006	2007	2008	2009	2010	Beyond
Low Forecast	13,560	14,034	14,526	15,034	15,560	16,105	16,669
Base Forecast	13,953	14,860	15,826	16,854	17,950	19,117	20,359
High Forecast	14,673	16,434	18,406	20,615	23,089	25,860	28,963
Base Density	13,738	13,738	14,884	14,884	14,884	14,884	14,884
Medium Density	18,369	18,369	19,900	19,900	19,900	19,900	19,900
High Density	22,257	22,257	24,111	24,111	24,111	24,111	24,111

Note: Bars represent projected port throughput while lines represent projected port capacity

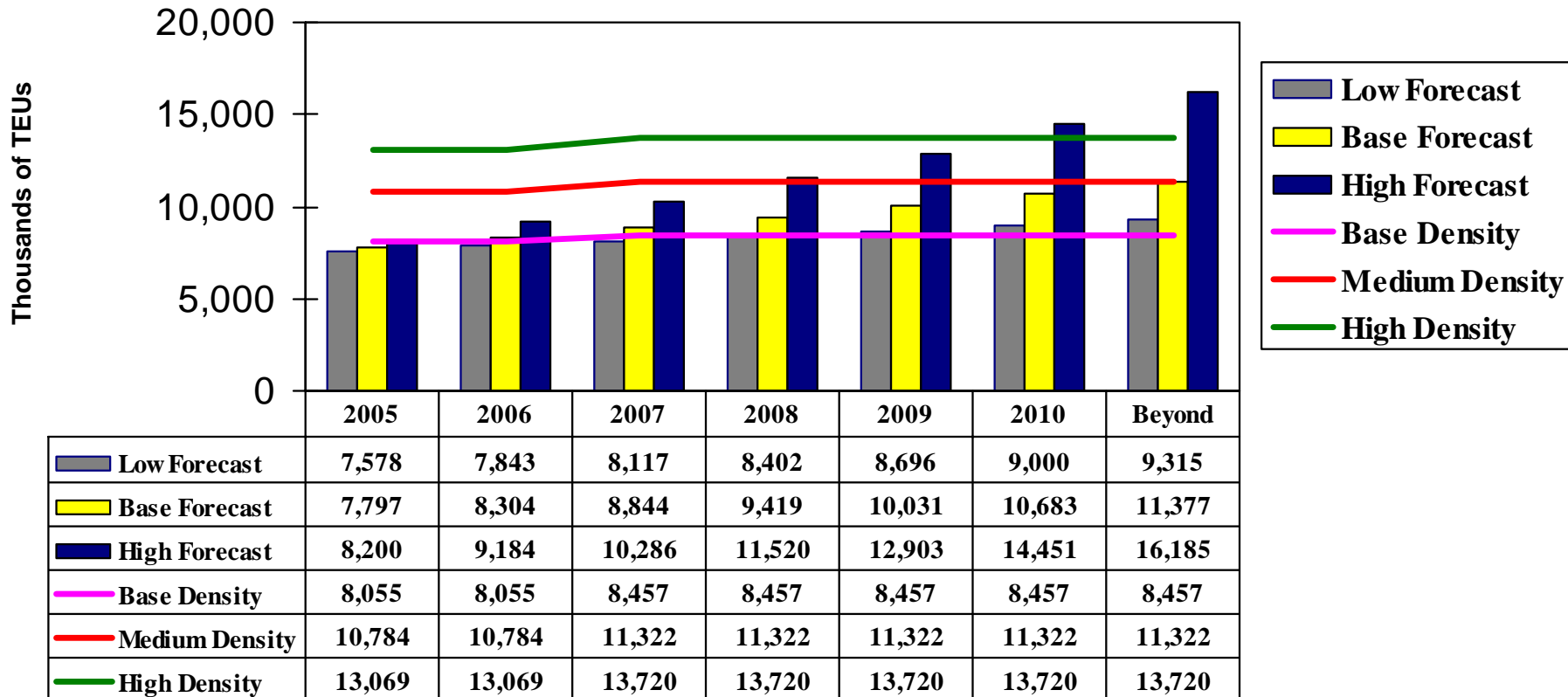
Source: Norbridge analysis.

*Includes the ports of Long Beach and Los Angeles.



Los Angeles

Los Angeles Capacity Utilization

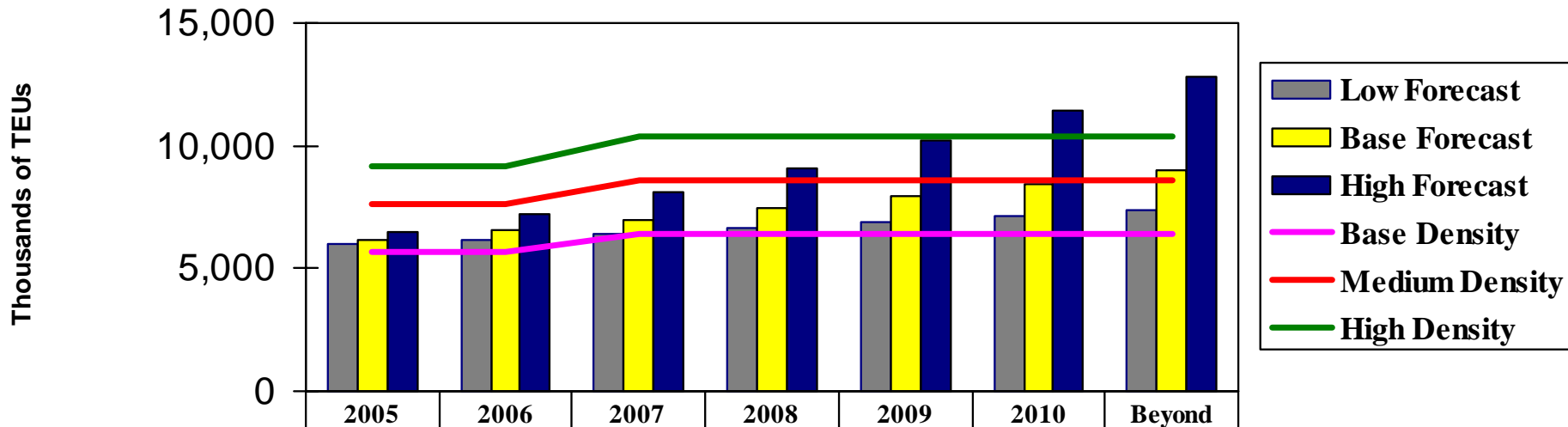








Source:Norbridge Analysis

Note: Bars represent projected port throughput while lines represent projected port capacity

Long Beach

Long Beach Capacity Utilization



	2005	2006	2007	2008	2009	2010	Beyond
 Low Forecast	5,982	6,192	6,408	6,633	6,865	7,105	7,354
 Base Forecast	6,156	6,556	6,982	7,436	7,919	8,434	8,982
 High Forecast	6,473	7,250	8,120	9,095	10,186	11,408	12,777
 Base Density	5,683	5,683	6,427	6,427	6,427	6,427	6,427
 Medium Density	7,585	7,585	8,578	8,578	8,578	8,578	8,578
 High Density	9,188	9,188	10,391	10,391	10,391	10,391	10,391

Source: Norbridge analysis.

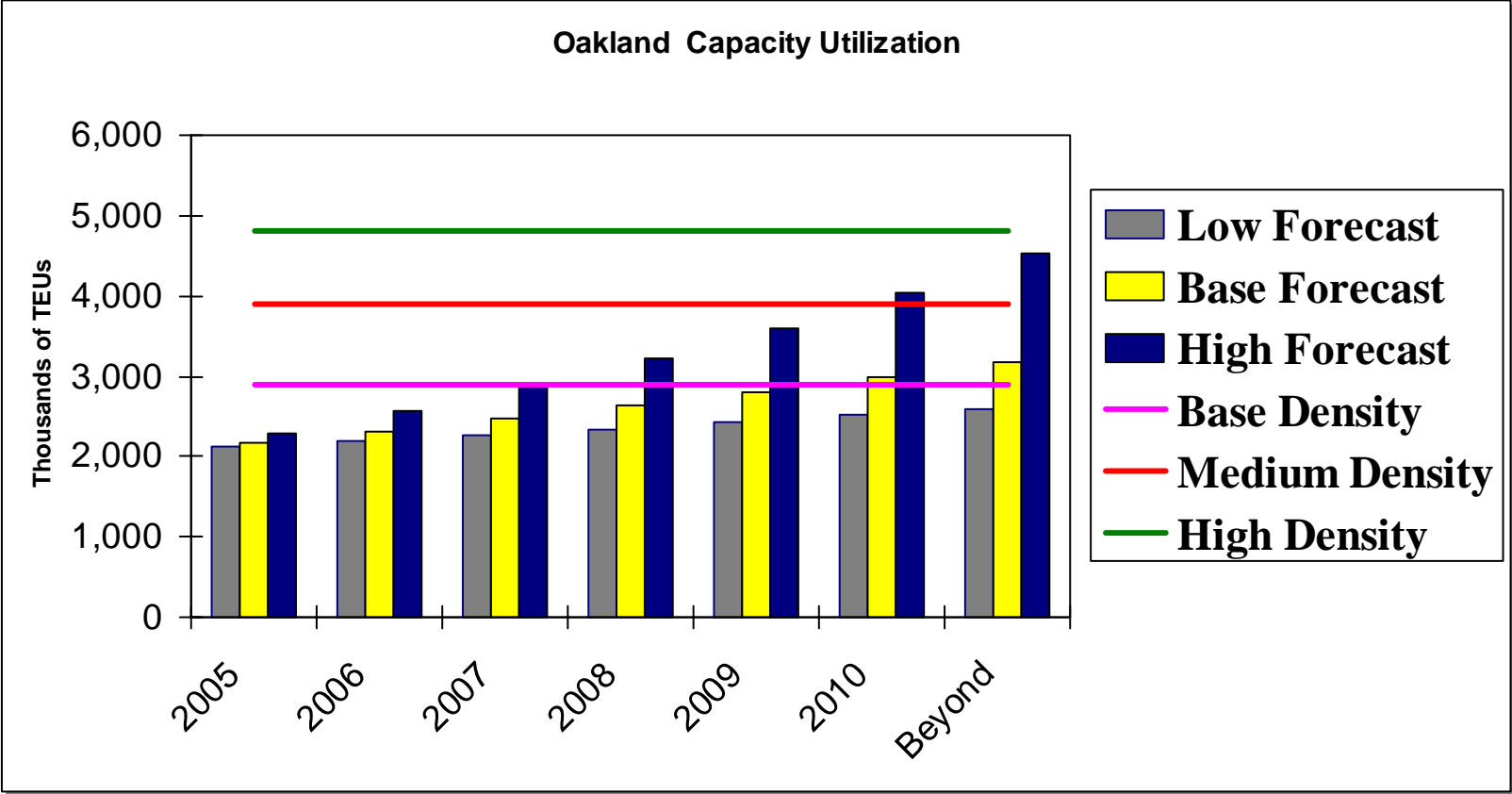


Note: Bars represent projected port throughput while lines represent projected port capacity

Oakland's Net Capacity Position:

- **Base density:** accommodates low and base demand through 2009
- **Medium density:** accommodates low and base demand beyond 2010
 - Capacity shortfall occurs in 2010 under the high forecast
- **High density:** accommodates all growth scenarios beyond the forecast period
- **Implications:** Available capacity, in combination with the expansion potential associated with the Army Base project should insure that Oakland does not face significant capacity issues during the forecast horizon

Oakland



Source: Norbridge analysis.

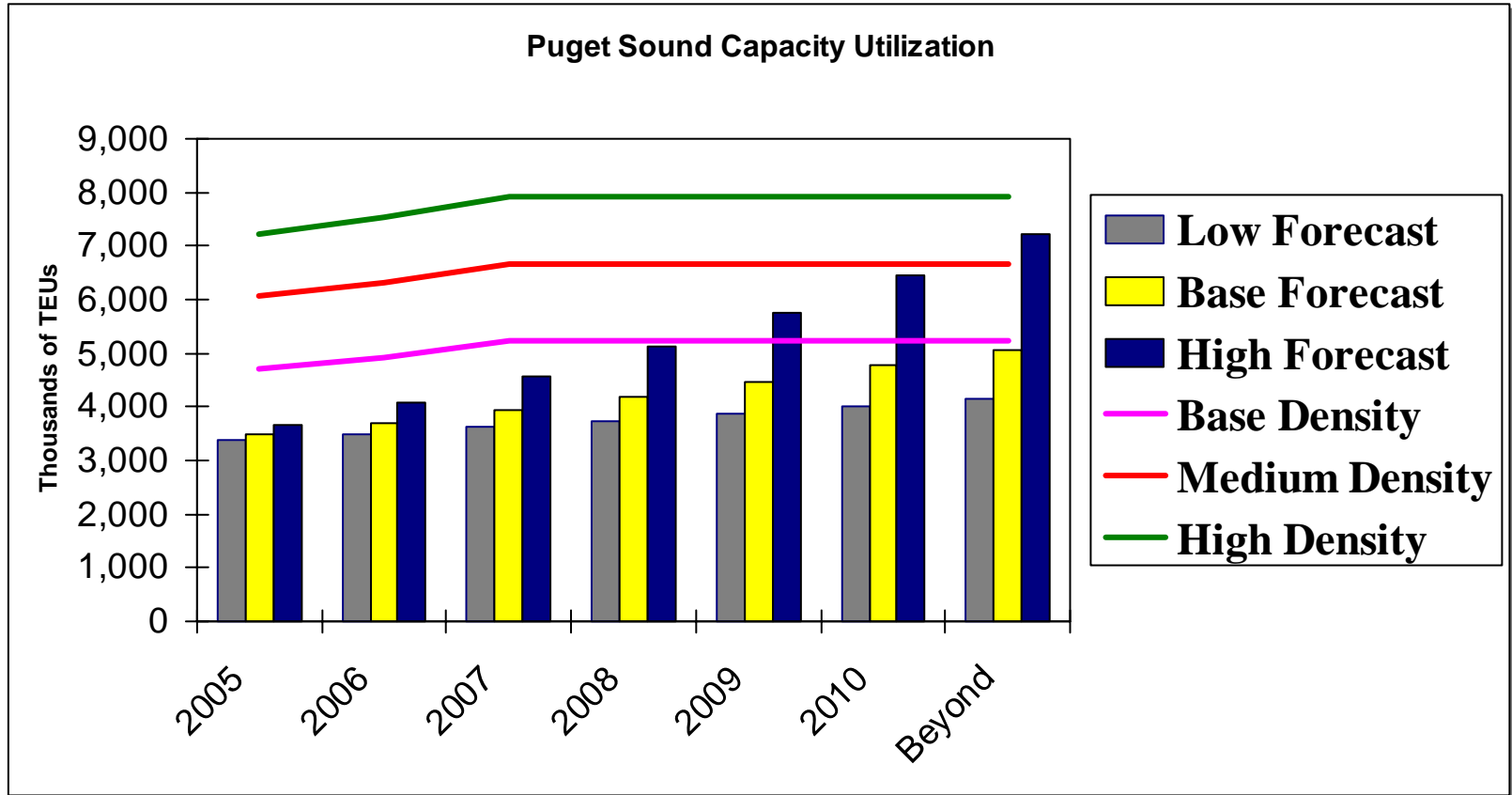
Note: Bars represent projected port throughput while lines represent projected port capacity



Puget Sound's Net Capacity Position:

- **Base density:** accommodates low and base demand throughout the planning horizon
 - Under the high forecast, shortfalls develop by 2008
- **Medium density:** accommodates low and base demand beyond 2010
 - Capacity balance occurs in 2010 under the high forecast
- **High density:** accommodates all growth scenarios beyond the forecast period
- **Implications:** Available capacity, in combination with Tacoma's expansion potential should insure that Puget Sound does not face significant capacity issues during the forecast horizon
 - This does not reflect the potential effect that continued diversion of PSW cargoes could have on the current capacity surplus

Puget Sound* Ports

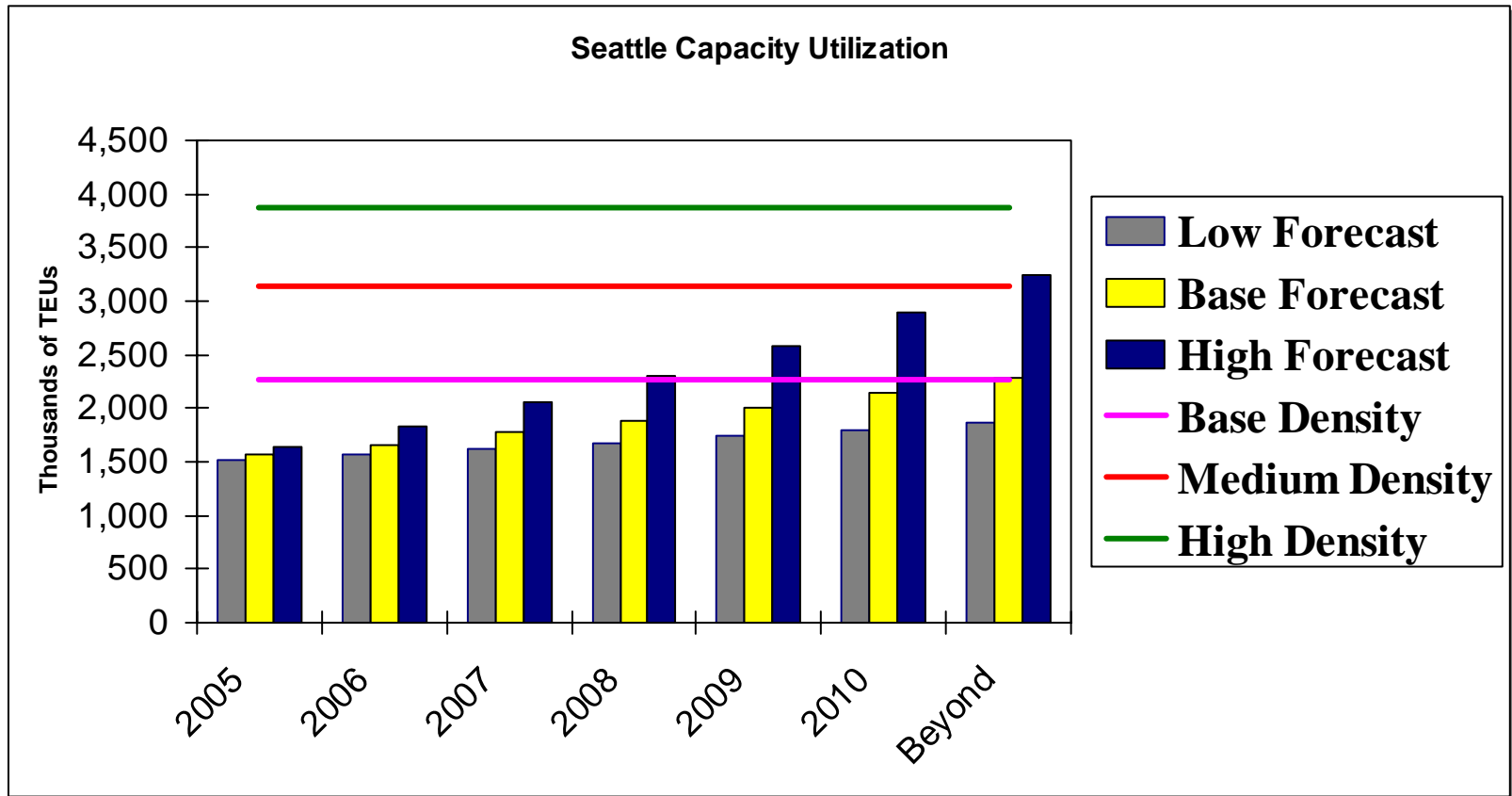


Note: Bars represent projected port throughput while lines represent projected port capacity

Source: AAPA, MARAD, and Norbridge analysis.

***Includes the ports of Seattle and Tacoma.**

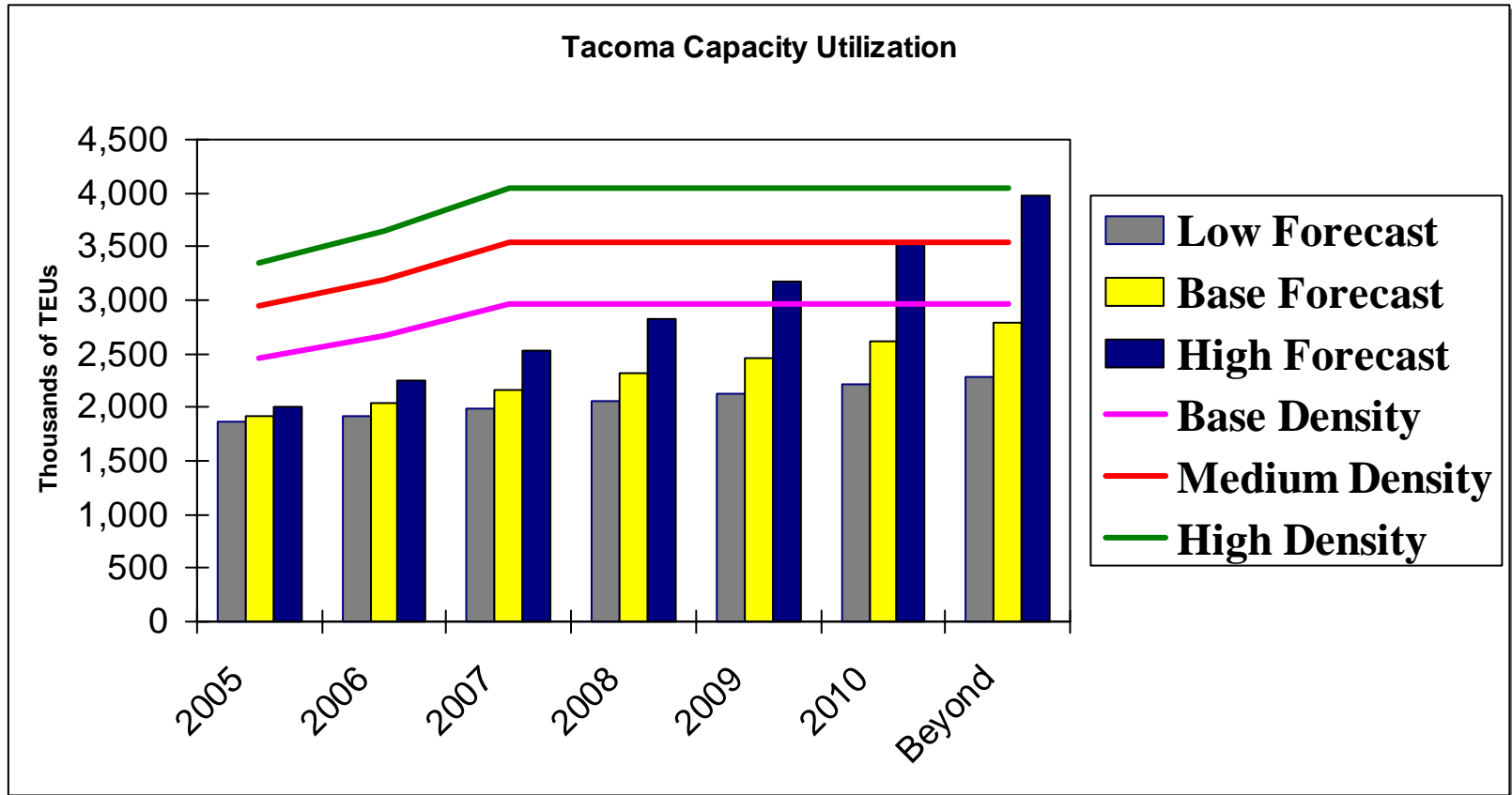
Seattle



Source: Norbridge analysis.

Note: Bars represent projected port throughput while lines represent projected port capacity

Tacoma

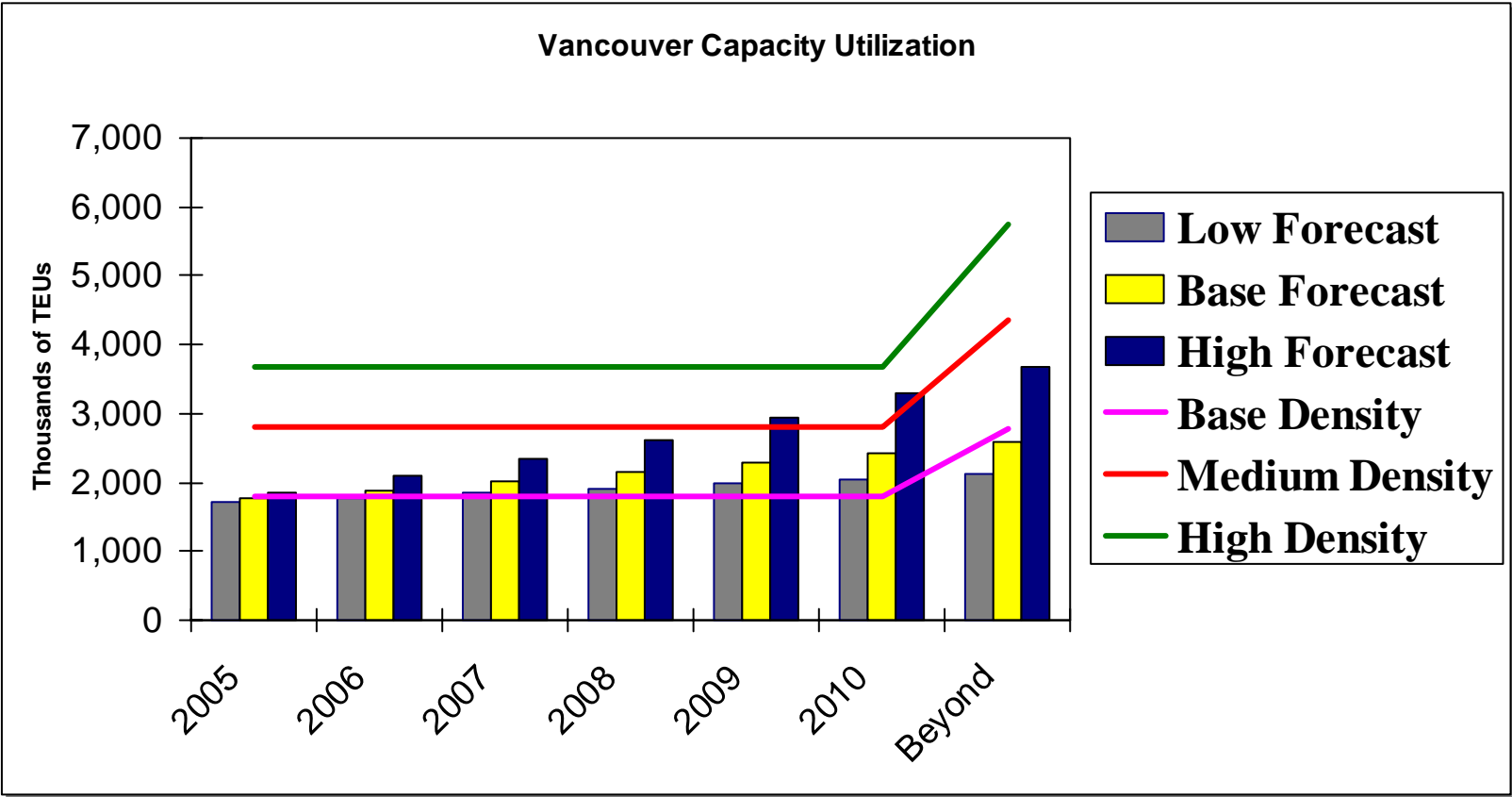


Source: AAPA, MARAD, and Norbridge analysis. Note: Bars represent projected port throughput while lines represent projected port capacity

Puget Sound's Net Capacity Position:

- **Base density:** capacity shortfalls occur under all demand scenarios
- **Medium density:** accommodates low and base demand beyond 2010
 - Capacity shortfalls develop by 2009 under the high forecast
- **High density:** accommodates all growth scenarios beyond the forecast period
- **Implications:** Vancouver could begin to experience capacity shortfalls by 2007-2008 depending on demand. The opening of Prince Rupert Phase I could offset this trend and result in a capacity surplus throughout the planning horizon

Vancouver



Source: Norbridge analysis.

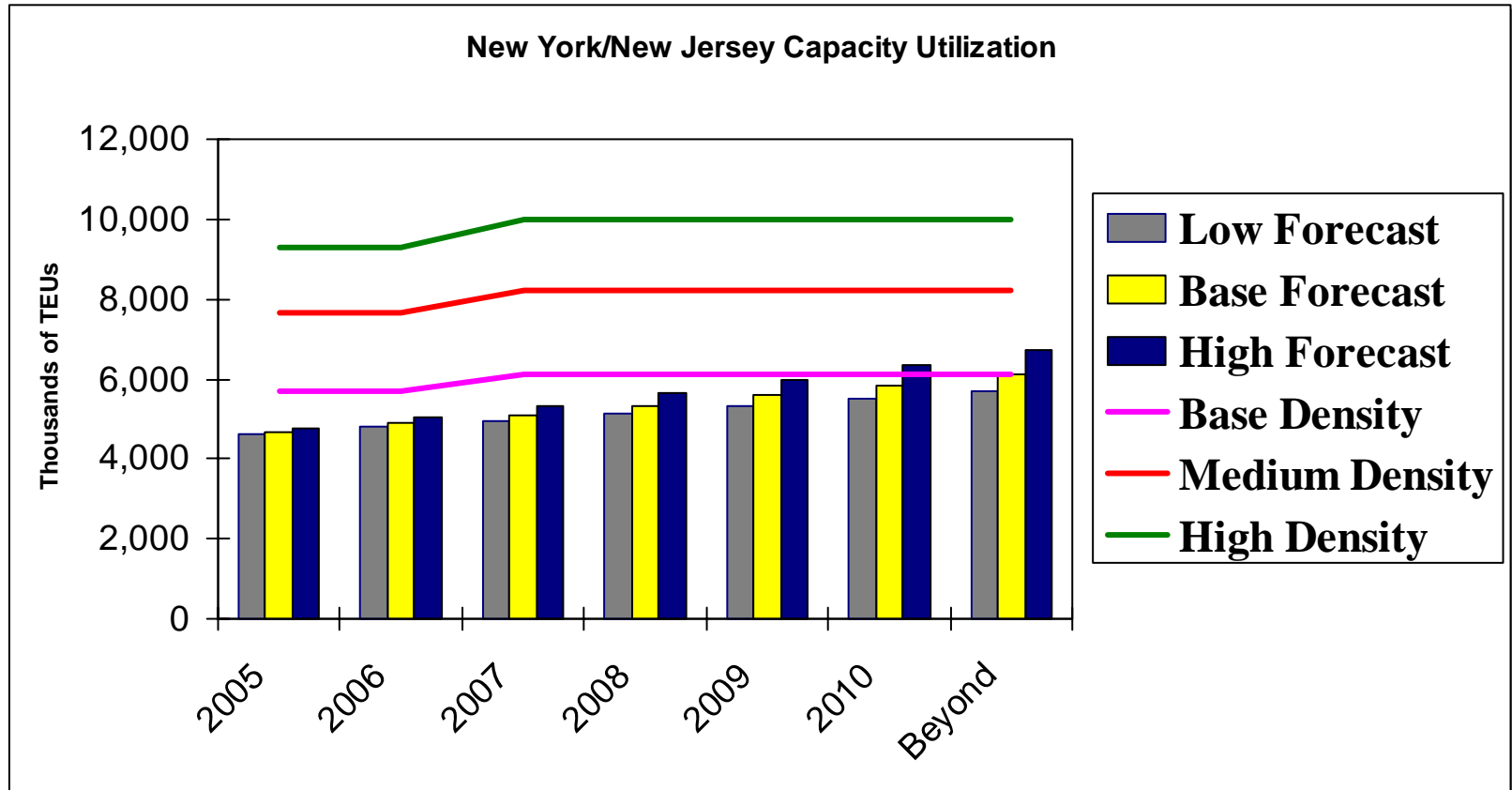
Note: Bars represent projected port throughput while lines represent projected port capacity



New York's Net Capacity Position:

- **Base density:** accommodates the low and base forecasts throughout the planning horizon
 - Capacity shortfalls develop in 2009 under the high forecast scenario
- **Medium density:** capacity significantly exceeds demand under all forecast scenarios
- **High density:** capacity significantly exceeds demand under all forecast scenarios
- **Implications:** New York is not expected to experience capacity issues throughout the forecast horizon
 - The introduction of multiple Suez services with 6,500+ TEU ships could potentially create draft and berth constraints

New York/New Jersey



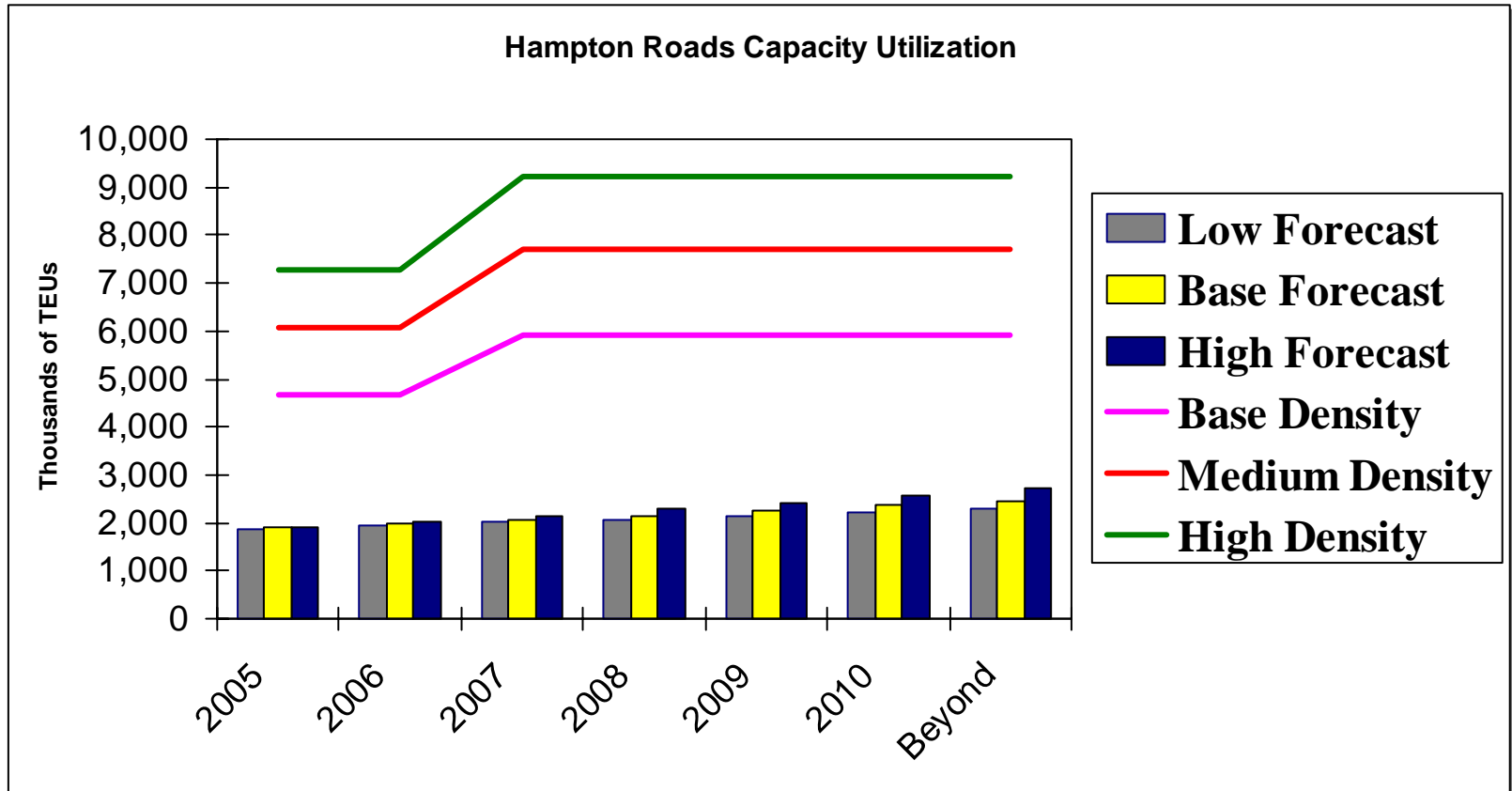
Source: Norbridge analysis.

Note: Bars represent projected port throughput while lines represent projected port capacity

Hampton Road's Net Capacity Position:

- The Maersk Cox Property development in combination with the ongoing modernization of NIT South and expansion of NIT North will provide significant surplus capacity throughout the forecast horizon
- **Suez Service Effects:** if a number of carriers were to introduce 6,500+ TEU vessel strings with Hampton Roads as the first port inbound due to its deep draft, it is possible that capacity shortfalls could develop under the base scenario

Hampton Roads



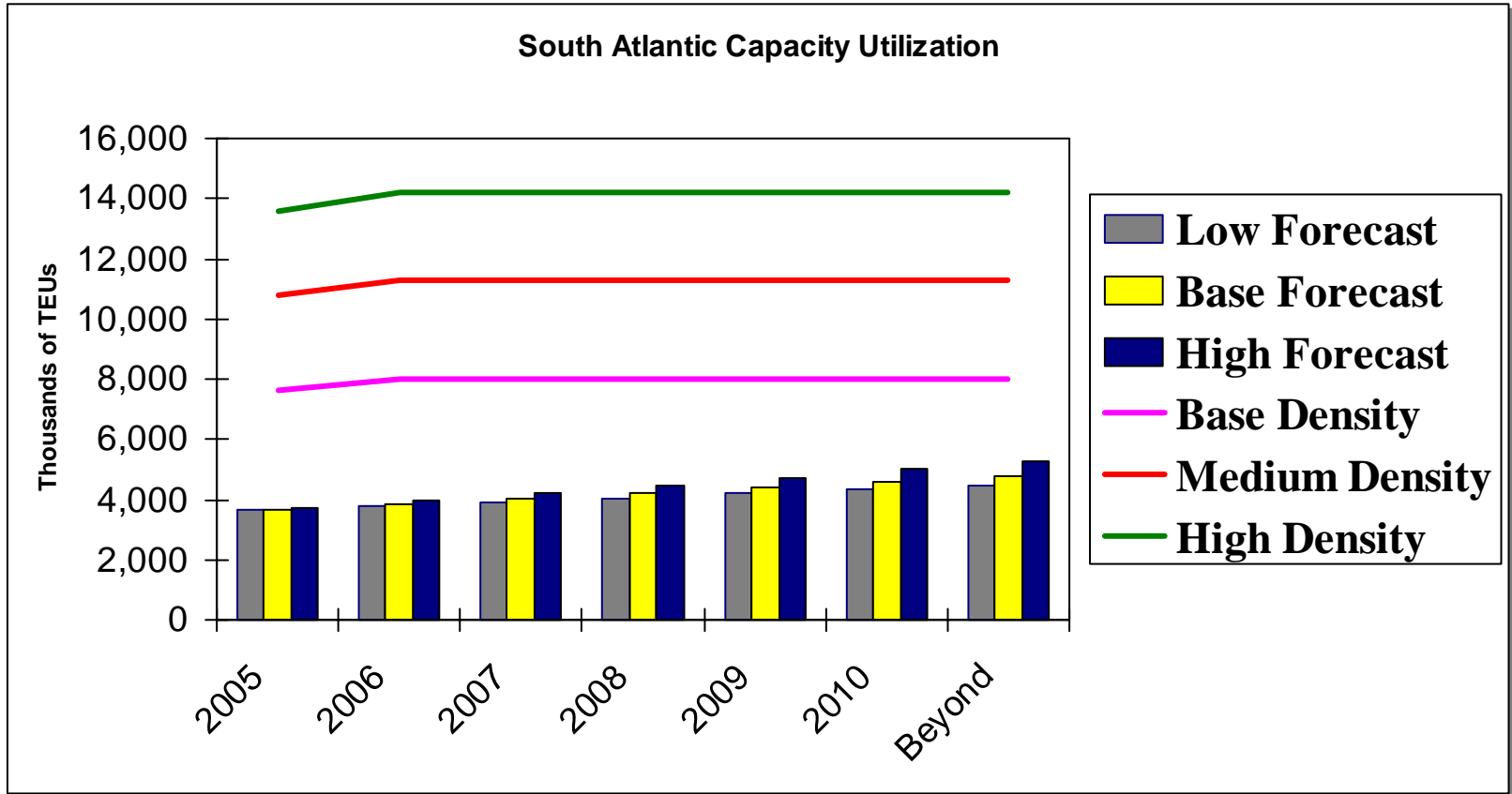
Source: AAPA, MARAD, and Norbridge analysis.

Note: Bars represent projected port throughput while lines represent projected port capacity

South Atlantic's Net Capacity Position:

- Significant capacity surpluses in Savannah offset potential berth and yard constraints in Charleston and result in a net surplus for the South Atlantic region
- The Mitsui/Trapac Jacksonville development could lead to further capacity surpluses if the NWA diverts traffic from Charleston and Jacksonville
- The introduction of Suez Services could absorb some portion of the surplus depending on the number of strings, the average size vessel deployed and the port rotations

South Atlantic*



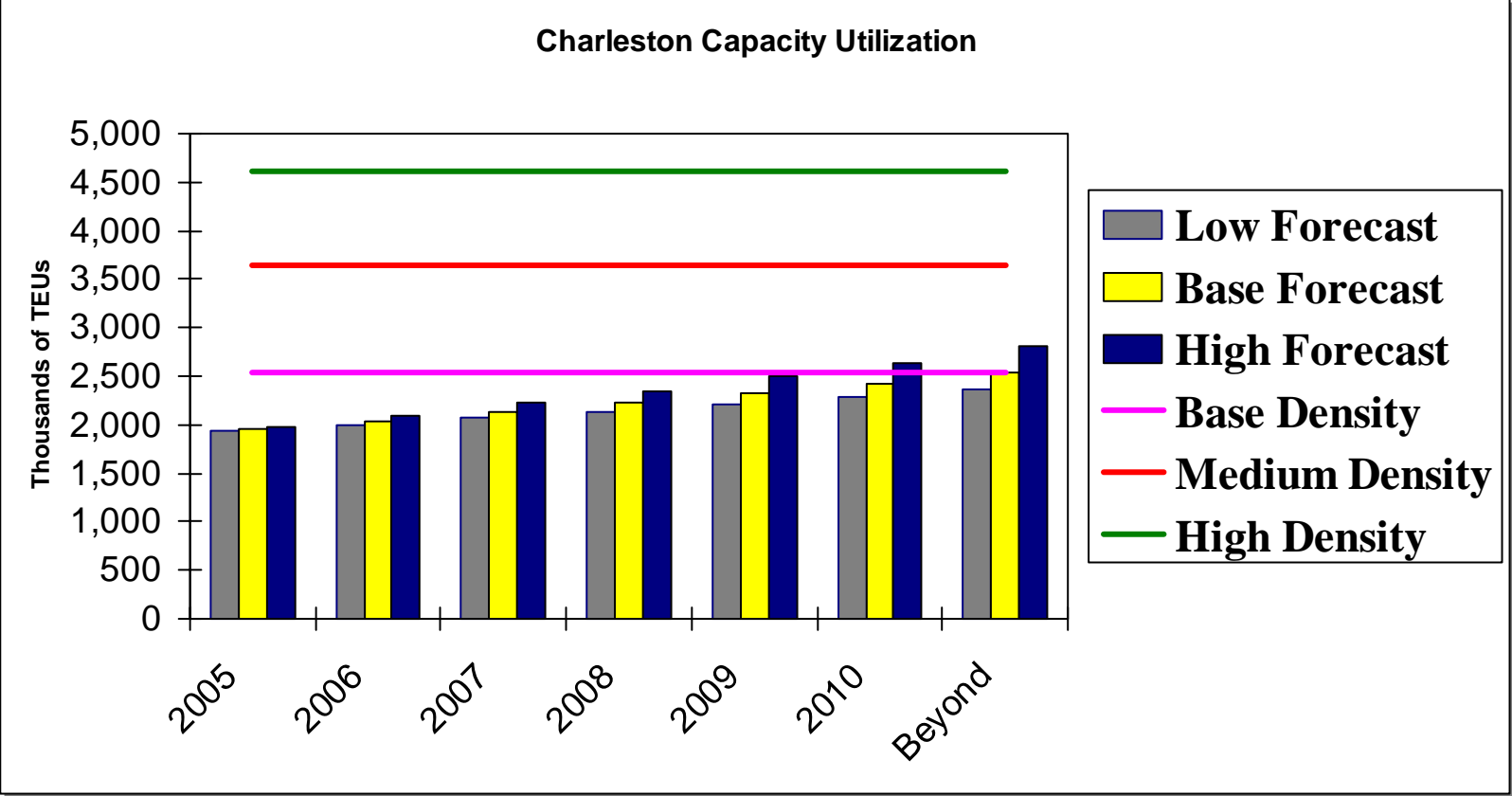
Note: Bars represent projected port throughput while lines represent projected port capacity

Source: AAPA, MARAD, and Norbridge analysis.

Charleston's Net Capacity Position: /

- **Base density:** accommodates the low and base forecasts throughout the planning horizon
 - Capacity shortfalls develop by 2009 under the high forecast
- **Medium & High Density:** both scenarios generate significant capacity surpluses throughout the planning horizon
- **Potential berth constraints:** Charleston currently experiences berth constraints at selected terminals today on peak days. Berth capacity could become a significant capacity constraint
- The Navy Base development has been excluded from the analysis

Charleston



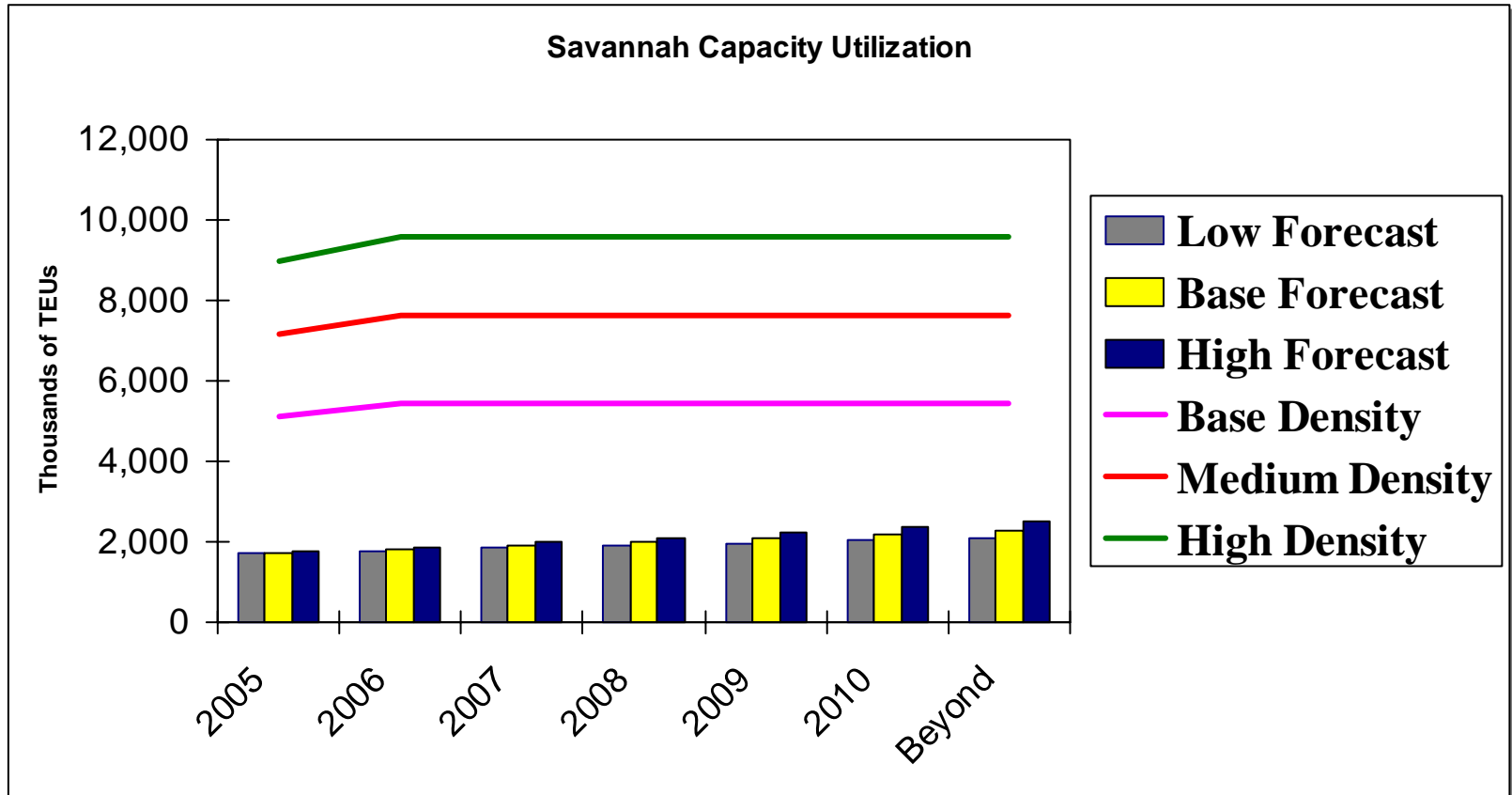
Source: Norbridge analysis.

Note: Bars represent projected port throughput while lines represent projected port capacity

Savannah's Net Capacity Position:

- Savannah has ample capacity under all operating scenarios
- The Mitsui OSK/Trapac development in Jacksonville could result in further increases if NWA traffic is diverted from Savannah

Savannah



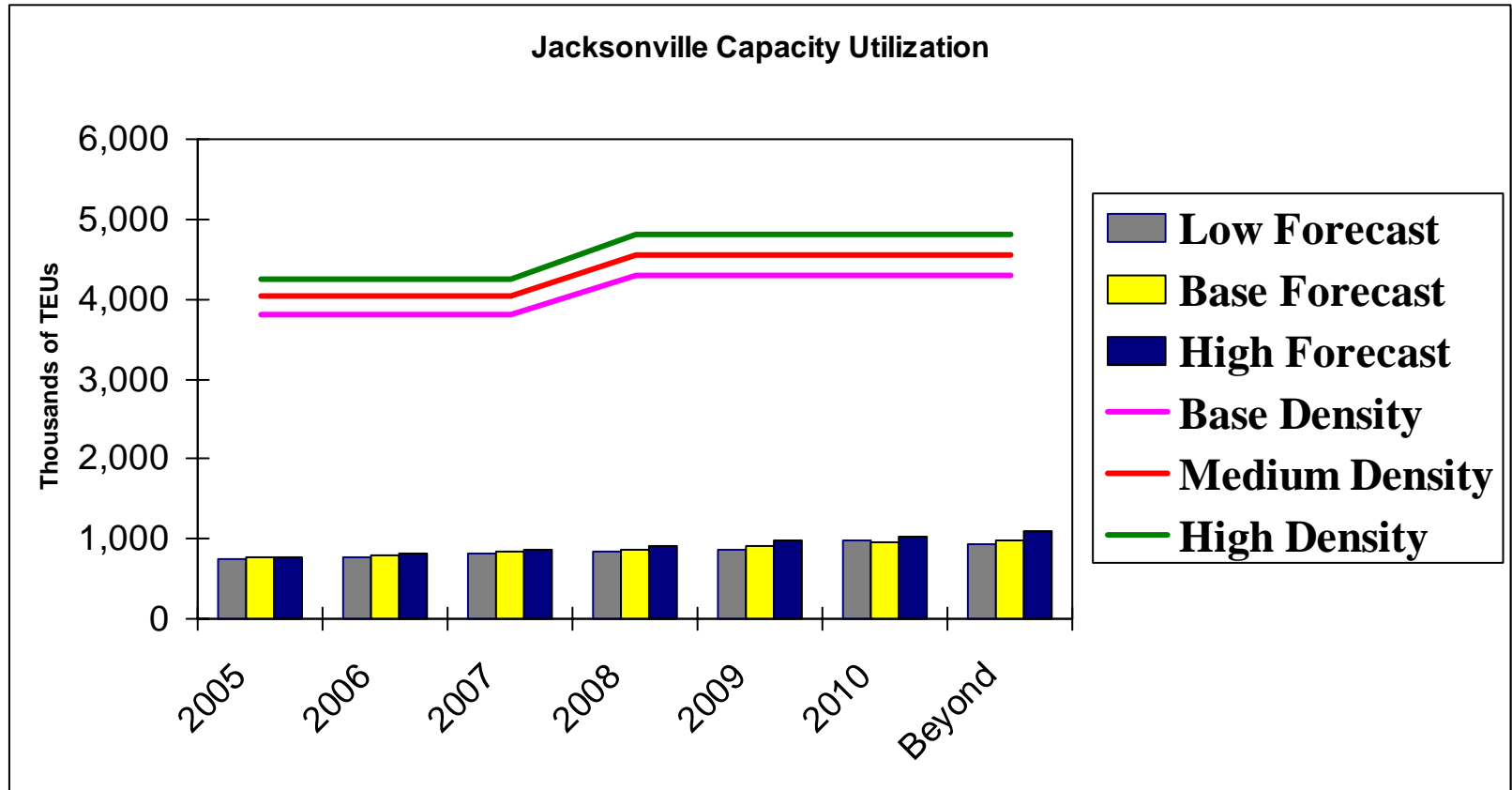
Note: Bars represent projected port throughput while lines represent projected port capacity

Source: AAPA, MARAD, and Norbridge analysis.

Jacksonville's Net Capacity Position:

- Jacksonville has ample capacity under all operating scenarios
- The demand side effects of the Mitsui OSK/Trapac development may increase the demand scenarios. However, significant capacity surpluses are still likely
- The “wheeled nature” of Jacksonville’s Puerto Rico business probably leads to an overstatement of capacity
 - Moderate overstatement under the Base Density scenario
 - Significant overstatement under the Medium and High Density scenarios
- Consequently, NYK may want to consider testing Jacksonville under a wheeled operation scenario

Jacksonville



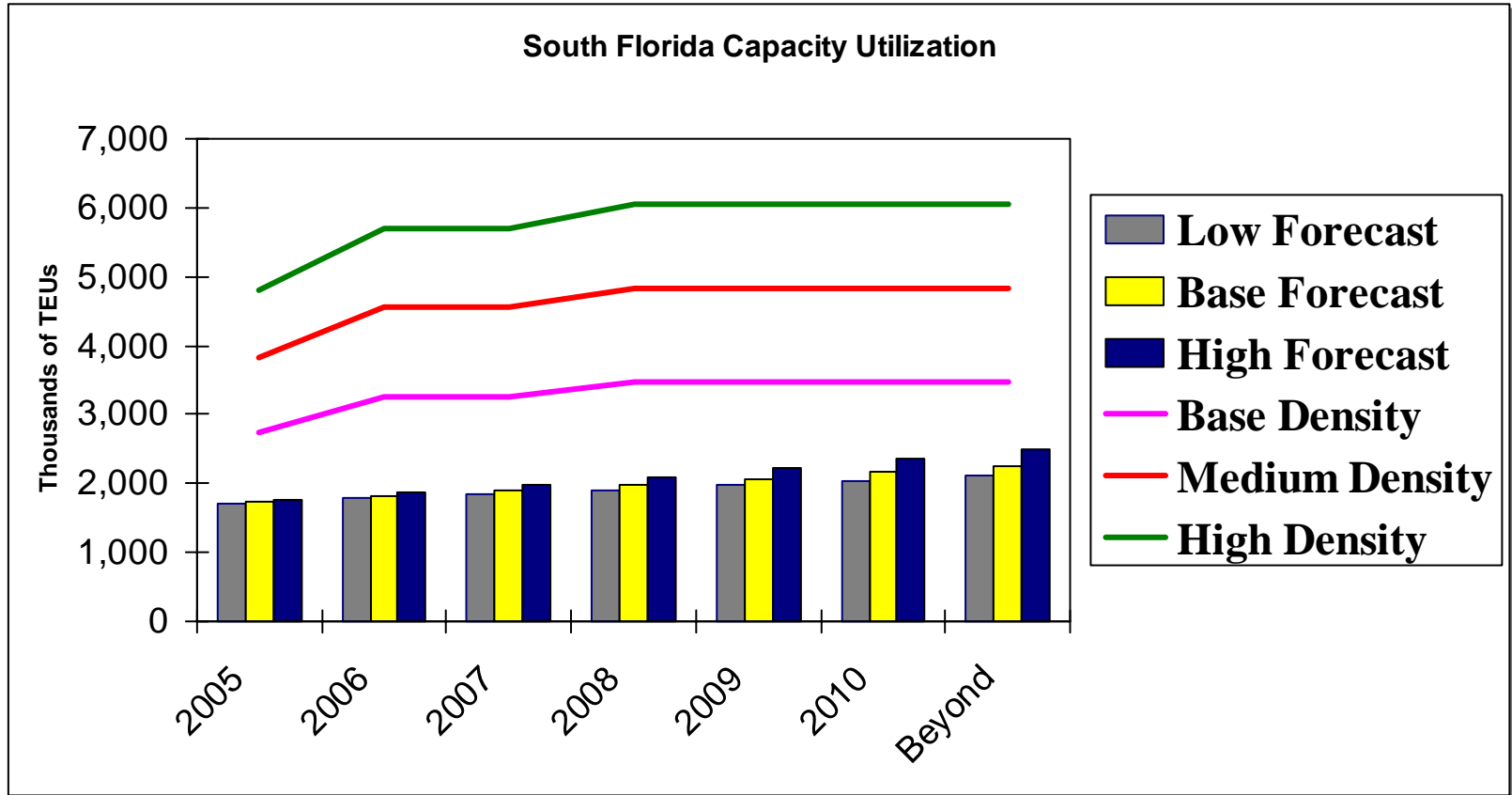
Source: MARAD and Norbridge analysis.

Note: Bars represent projected port throughput while lines represent projected port capacity

South Florida's Net Capacity Position:

- Significant capacity surpluses in Port Everglades drive the net capacity surpluses under all operating scenarios
- Miami capacity is potentially overstated due to the wheeled operations by Seaboard
 - Would reduce overall capacity, particularly under the medium and high density scenarios
 - NYK may want to consider adjusting the Miami estimates to reflect Seaboard's wheeled operations
- Additional expansion potential at Port Everglades, if developed, would increase current capacity surpluses

South Florida*

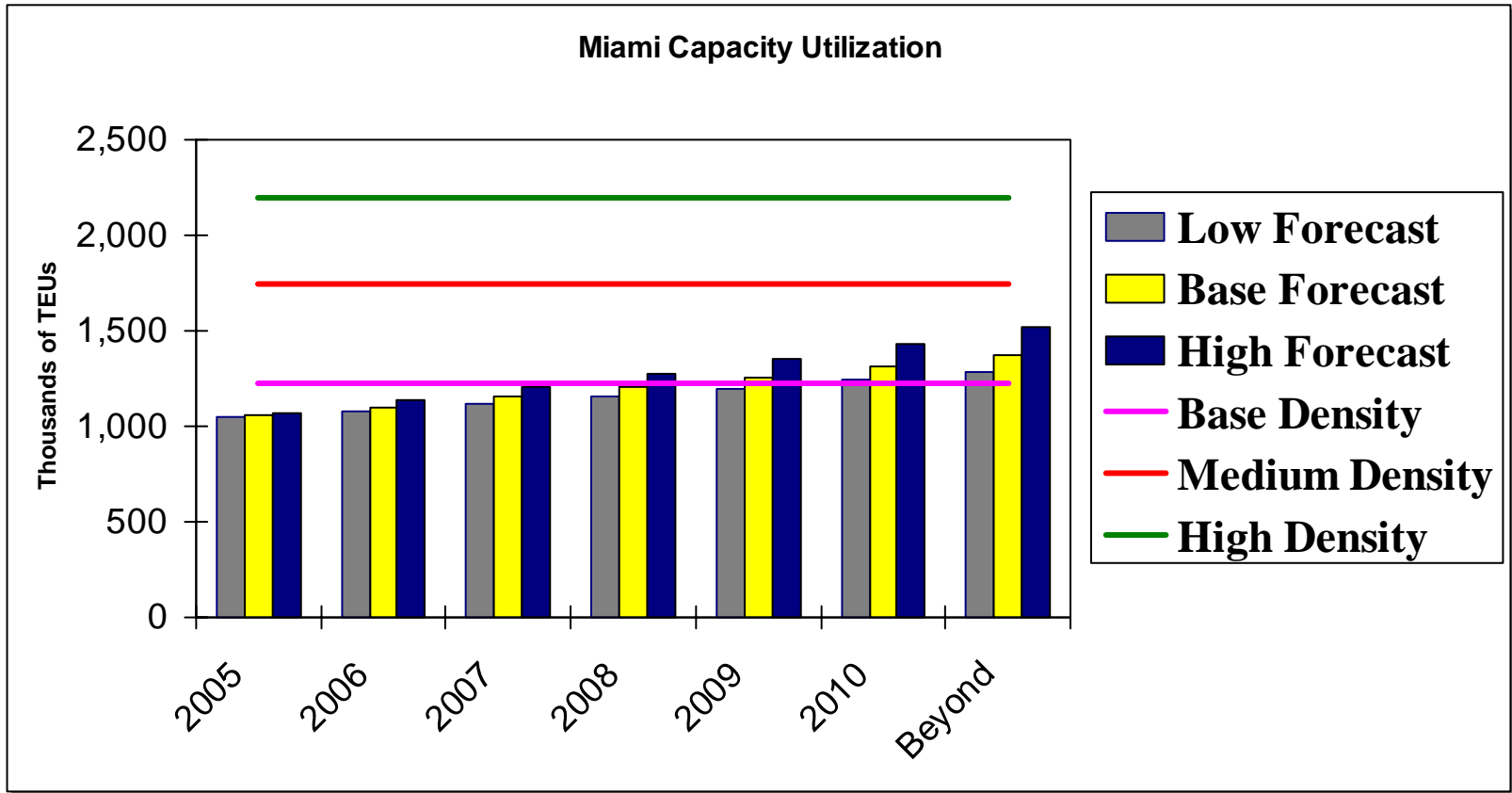


Note: Bars represent projected port throughput while lines represent projected port capacity

Source: AAPA, MARAD, TSC, and Norbridge analysis.

***Includes the the Port of Miami and Port Everglades.**

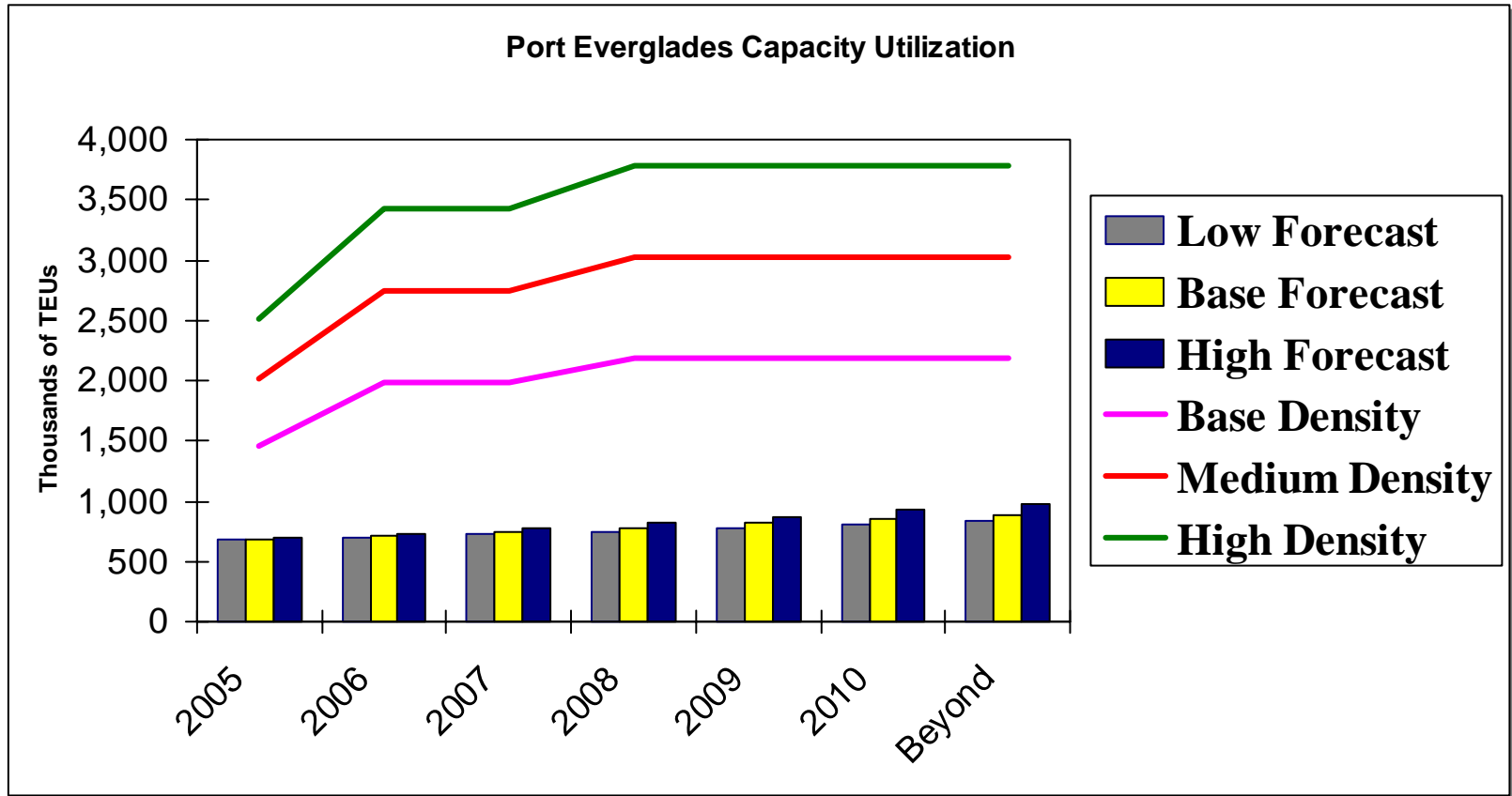
Miami



Note: Bars represent projected port throughput while

Source: TSC, AAPA, MARAD, and Norbridge analysis. lines represent projected port capacity

Port Everglades



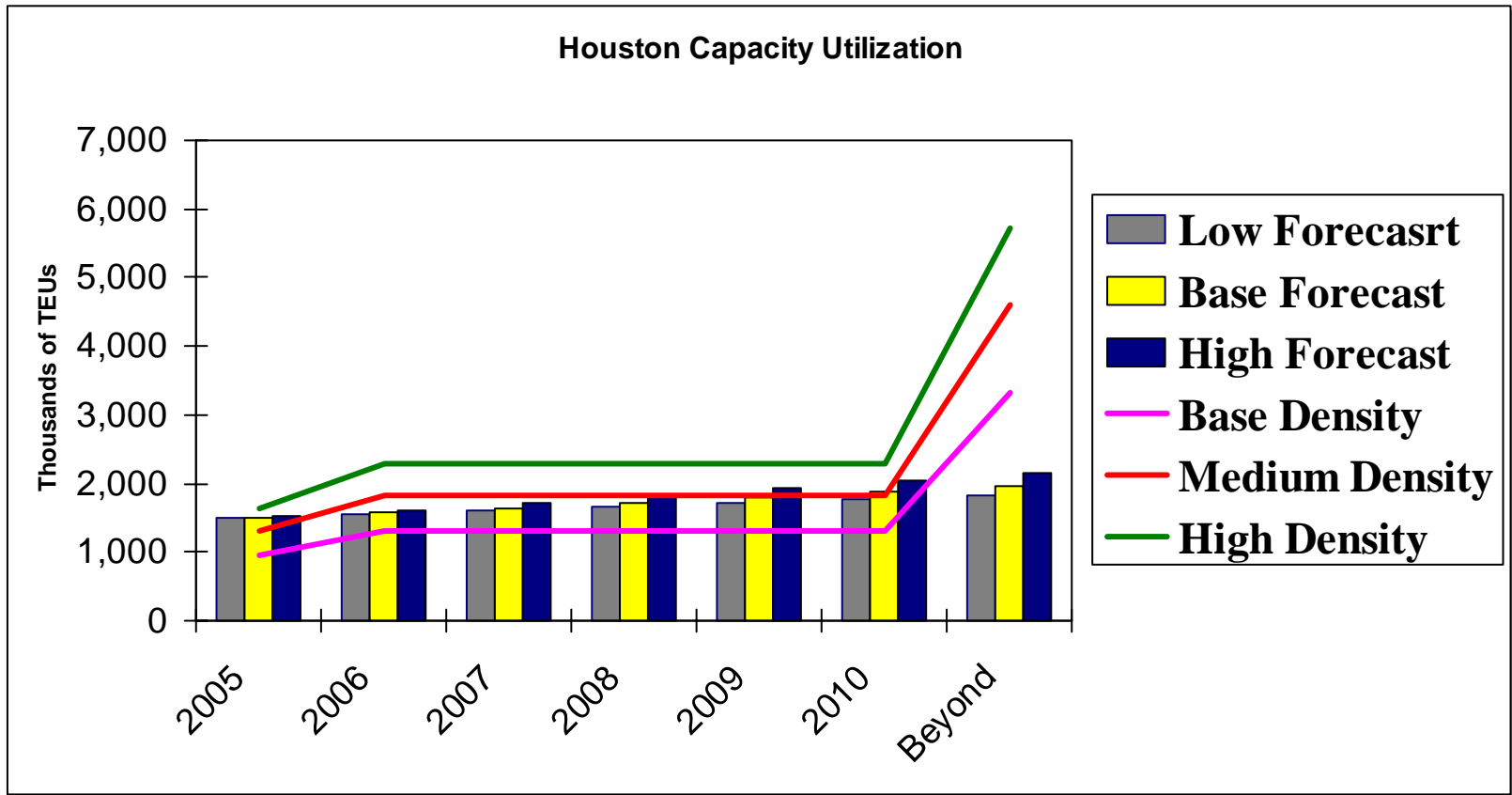
Note: Bars represent projected port throughput while lines represent projected port capacity

Source: AAPA, MARAD, and Norbridge analysis.

Houston's Net Capacity Position:

- Houston faces significant capacity challenges under the base and medium density scenarios throughout the planning horizon
- Moderate capacity surpluses occur under the high density scenario
- The development of Bayport will create significant capacity surpluses
- **Implications:** Houston faces significant challenges in accommodating growth during the planning horizon, particularly if the Wal-Mart distribution center development attracts additional direct call services

Houston



Source: AAPA, MARAD, Norbridge analysis.

Note: Bars represent projected port throughput while lines represent projected port capacity

Marine Infrastructure

Productivity

- We must be better stewards of our assets
- West Coast is getting +/- 25 moves per hour (mph). Southeast Ports get +/- 40 mph. Even a NY Terminal gets 35 mph.
- World standard in excess of 45 mph
- Dwell of assets. Shippers demand fastest service with maximum of days free from demurrage & detention.
- Vessel operations typically 24/7, balance of supply chain 8/5. Slowest link dictates velocity.
- Berth constraints possible in future
- Labor a major driver

Industry Challenges

- Inland transportation costs and depot delivery points
- Trucking service and driver availability
- Fuel cost and cost sharing to avoid carrier service or availability disruption.
- Limited expansion for inland as well as port operations
- Chassis Operations – *A new paradigm is emerging*

Intermodal Partners

- Rail capacity, service and pricing concerns to support inland distribution centers. Rail costs up 25-28%
- Rail “duopoly” and regulation/deregulation dilemma

	6-Jan	13-Jan	20-Jan	27-Jan	3-Feb	10-Feb	17-Feb	24-Feb	3-Mar	2006 Ave	2005 Ave	2004 Ave	2003 Ave
BNSF	35.5	33.4	32.3	33.3	32.4	32.2	31.3	31.8	33.0	32.8	32.0	31.37	33.4
UPSP	26.0	26.0	24.7	23.4	23.5	23.5	24.2	23.8	25.8	24.5	24.7	23.20	30.4
NS	27.7	27.7	26.9	26.4	27.4	26.9	27	27.3	27	27.1	28.6	29.32	30.2
CSXT	28.1	29.7	29.2	29.1	29.5	28.2	27.9	28.3	28.1	28.7	27.8	28.90	29.0
CN	34.3	33.7	32.7	32.6	33.2	31.6	31.0	31.0	31.1	32.4	32.0	30.80	N/A
CP	32.1	31.6	29.9	30.4	30.2	29.7	29.6	26.8	27.5	28.5	28.18	29.80	30

Intermodal Partners Opportunities

- **Utilization of alternative gateways and rails**
 - **East & Gulf Coast – More emphasis on NS & CSX**
 - **Prince Rupert via CN**
 - **Mexico via KCS**
- **Panama Canal capacity long term v/v Suez Gateway**
- **Trucking capacity and driver retention demand rails examine short & medium haulage opportunities**
- **Efficiency of truck moves (less empty hauls) and dramatic changes in chassis management**

Potholes

Does the population at large really understand how all that “stuff” gets to the Target shelves?

Transportation is seen as a congester of highways, polluter of the seacoasts, fouler of the air and maker of noise

Industry Potholes

Lack of U.S. Transportation Policy including Maritime

- U.S. Flag fleet essentially restricted to Jones Act
- Little if any understanding of importance of International trade
- US Terminal expansion severely limited
- Interstate Highway system older than Containerization
- Rail capacity and service (Now “providers of capacity, not service”)
- Short Sea the “new game”
- Entry points to US are becoming more congested with little or no Government involvement for investment

This, while Asia and other places in the world are building capacity in their transportation systems to support the new reality of International trade

Industry Potholes

**EPA and Government Regulatory limitations, at all levels,
for operations and growth**

- **No current balance between environment and growth**
- **California attempting to preempt federal jurisdictions**
- **Others will follow for political reasons**

Industry Potholes

Larger vessels will continue to create even greater challenges as we push the **“mine is bigger than yours mentality”** and we do **NOT** address productivity

- Water depths
- Berth sizes
- Crane capabilities
- We need dramatic changes as to date we have generally “paved the cow path.”

Industry Potholes

Supply Chain Security

- An imperative to protect our Nation, our Business and our Customers Brand
- Answer is **not** in the U.S., rather it is an extraterritorial matter
- C-TPAT and Container Security Initiative (CSI) are reasonable initiatives
- Technology will be helpful if properly applied to solve a defined, real problem.
- Identity of Workers essential (TWIC)

We need to stop the political posturing and listen to the real experts

The Future

- Lines that can deliver Integrated Supply Chain solutions that meet specific customer demands will dominate
- Real Productivity solutions and paradigm changes as the business continues to mature are essential, **especially in the U.S. Terminal and Intermodal segment**
- We must find competitive alternatives to keep all elements of the Intermodal process in balance
- Supply Chain Visibility & Security will be non-negotiable

Questions and Answers